SAFETY NOTICE

This manual has been prepared as a guide to correctly service and repair the 2014 Can-Am™ Commander™ as described in the model list in the *INTRODUCTION*.

This *SHOP MANUAL SUPPLEMENT* must be used in conjunction with the *2013 CAN-AM COMMANDER SHOP MANUAL* (P/N 219 100 661). Refer to this manual when a particular system is not covered in this supplement.

This edition was primarily published to be used by technicians who are already familiar with all service procedures relating to BRP products. Technicians should attend training courses given by BRPTI.

Please note that the instructions will apply only if proper hand tools and special service tools are used.

The contents of this manual depicts parts and procedures applicable to the particular product at the time of writing. Service and warranty bulletins may be published to update the content of this manual. Dealer modifications that were carried out after manufacturing of the product, whether or not authorized by BRP, are not included.

It is understood that certain modifications may render use of the vehicle illegal under existing federal, provincial and state regulations.

In addition, the sole purpose of the illustrations throughout the manual, is to assist identification of the general configuration of the parts. They are not to be interpreted as technical drawings or exact replicas of the parts.

The use of BRP parts is most strongly recommended when considering replacement of any component. Dealer and/or distributor assistance should be sought in case of doubt.

The engines and the corresponding components identified in this document should not be utilized on product(s) other than those mentioned in this document.

This manual emphasizes particular information denoted by the following wording and symbols:

⚠ WARNING

Indicates a potential hazard that, if not avoided, could result in serious injury or death.

⚠ CAUTION **Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.**

NOTICE **Indicates an instruction which, if not followed, could result in severe damage to vehicle components or other property.**

NOTE: Indicates supplementary information required to fully complete an instruction.

Although the mere reading of such information does not eliminate the hazard, your understanding of the information will promote its correct use. Always use common shop safety practices.

It is understood that this manual may be translated into another language. In the event of any discrepancy, the English version shall prevail.

BRP disclaims liability for all damages and/or injuries resulting from the improper use of the contents. We strongly recommend that any services be carried out and/or verified by a highly skilled professional mechanic.

INTRODUCTION

This shop manual covers the following BRP made 2014 Can-Am side-by-side vehicles.

COMMANDER				
YEAR	ENGINE	MODEL	MODEL NUMBER	SERIAL NUMBER
2014	800R	STD	6CEA, 6CEB, 6CEC	All
		DPS	6TEA, 6TEB	
		XT	6DEA, 6DEB, 6DEC	
	1000	STD	6AEA, 6AEB	
		DPS	6PEA	
		XT	6BEA, 6BEB, 6BED, 6BEE, 6BEF, 6BEG, 6BEH	
		XT-P	6EEA, 6EEB, 6EEC	
		LTD	6GEA, 6GEB, 6GED	

The information and component/system descriptions contained in this manual are correct at time of writing. BRP however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured.

Due to late changes, there may be some differences between the manufactured product and the description and/or specifications in this document.

BRP reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring obligation.

SERVICE TOOLS INDEX

BACKLASH MEASUREMENT TOOL
(P/N 529 035 665)

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CV BOOT CLAMP PLIER
(P/N 529 036 120)

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CV JOINT EXTRACTOR
(P/N 529 036 005)

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DIGITAL INDUCTION TACHOMETER
(P/N 529 014 500)

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ECM ADAPTER TOOL
(P/N 529 036 166)

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FLUKE 115 MULTIMETER
(P/N 529 035 868)

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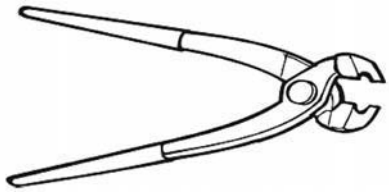
OETIKER PLIERS
(P/N 295 000 070)



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PINION NUT SOCKET
(P/N 529 036 274)

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SPANNER SOCKET
(P/N 529 035 649)

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STEERING ALIGNMENT TOOL
(P/N 529 036 059)

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TRANSMISSION ADJUSTMENT TOOL
(P/N 529 036 252)

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BREAK-IN INSPECTION

This vehicle should be serviced after the first 10 hours or 300 km (200 mi) of operation, whichever comes first, by an authorized Can-Am dealer. The break-in inspection is very important and must not be neglected.

To clear the MAINTENANCE SOON reminder message in the multifunction gauge, refer to *LIGHTS, GAUGE AND ACCESSORIES* subsection.

BREAK-IN INSPECTION CHART	INSPECT	CLEAN	LUBRICATE	TIGHTEN	ADJUST	REPLACE
ENGINE						
Engine oil and filter						X
Valve clearance	X				X	
Engine Air Filter	X					
Engine seals	X					
Engine mounting fasteners	X					
Exhaust system	X					
COOLING SYSTEM						
Radiator/cooling system leak (leak test)	X	X				
FUEL SYSTEM						
Fuel lines, fuel rails, connections, check valves and fuel tank leak test	X					
ELECTRICAL SYSTEM						
Battery connections	X					
CVT TRANSMISSION						
CVT air inlet/outlet	X	X				
CVT air filter	X	X				
GEARBOX						
Gearbox oil						X
Vehicle speed sensor		X				
DRIVE SYSTEM						
Front differential/rear final drive oil						X
Front differential/rear final drive (seals and vents)	X					
Front and rear propeller shaft joints	X		X			

BREAK-IN INSPECTION CHART	INSPECT	CLEAN	LUBRICATE	TIGHTEN	ADJUST	REPLACE
WHEEL						
Wheel nuts/studs	X			X		
Wheel bearings	X			X		
Wheel beadlock (X model)				X		
STEERING SYSTEM						
Steering system (column, bearing, etc.)	X					
Front wheel alignment	X					
BRAKES						
Brake fluid	X					
OCCUPANT RESTRAINT SYSTEM						
Seat belts	X					
Side nets	X					
BODY/CHASSIS						
Cage fasteners	X					
Upper and lower tailgates latches	X					
Seats latch	X					

PERIODIC MAINTENANCE SCHEDULE

Maintenance is very important for keeping your vehicle in safe operating condition. Proper maintenance is the owner's responsibility. The vehicle should be serviced as per the maintenance schedule.

The following message appears in the gauge after every 50 hours of operation, to remind you of maintenance requirements: MAINTENANCE SOON. To erase message, refer to *MULTIFUNCTION GAUGE (LCD)* or *MULTIFUNCTION GAUGE (ANALOG/DIGITAL)* subsections.

The maintenance schedule does not exempt the pre-ride inspection.

⚠ WARNING

Failure to properly maintain the vehicle according to the maintenance schedule and procedures can make it unsafe to operate.

EVERY 750 KM (500 MI) OR 25 HOURS OF OPERATION (WHICHEVER COMES FIRST)
Replace engine air filter (when riding in severe conditions)
Clean the CVT air inlet/outlet
Inspect and clean the CVT air filter
Inspect the brake pads
Tighten the wheel lug nuts
Inspect the drive shaft boots and protectors
Inspect passenger grab handles condition
Inspect hitch condition
Inspect driver and passenger seat latch operation
Inspect tailgates latch operation
LTD models only; inspect and clean the ACS compressor air filter (service more often if required under severe use such as dusty area, sand, snow, wet or muddy conditions)
Tighten cage fasteners

EVERY 1 500 KM (1,000 MI) OR 50 HOURS OF OPERATION (WHICHEVER COMES FIRST)
Replace the engine air filter (when riding in normal conditions)
Verify battery condition
Inspect the front differential/rear final drive oil level
Inspect the drive shaft joints condition
Inspect the front/rear propeller shaft joint condition
Grease the front/rear propeller shaft joints
Inspect the tie rod ends
Inspect shock absorbers for any leaks
Lubricate shock absorber spherical bearings (XT-P and LTD models)
Inspect and lubricate front suspension arms
Inspect brake fluid level
LTD models only; replace the ACS compressor air filter (service more often if required under severe use such as dusty area, sand, snow, wet or muddy conditions)
Clean exhaust area

EVERY 3 000 KM (2,000 MI) OR 100 HOURS OF OPERATION OR 1 YEAR (WHICHEVER COMES FIRST)
Inspect seat belts (check for any damages and proper operation)
Inspect side nets (check for any damages and they must buckle properly)
Replace the engine oil and filter
Inspect and adjust the valve clearance
Inspect and clean the muffler spark arrester
Check engine coolant strength
Inspect throttle body
Clean the fuel pump pre-filter
Inspect the fuel pump pressure
Replace fuel vent breather filter
Inspect the drive belt
Inspect, clean and lubricate the drive and driven pulleys (including the one-way bearing)
Inspect the gearbox oil level and condition
Inspect wheel bearings
Inspect the steering system (column, bearing, etc.)
Inspect and clean the brake system
Inspect frame for any damage
Replace rear final drive oil
Inspect centrifugal levers and rollers of drive pulley
LTD models only; inspect ACS shock absorbers hoses and fittings

EVERY 6 000 KM (4,000 MI) OR 200 HOURS OF OPERATION OR 2 YEARS (WHICHEVER COMES FIRST)
Replace the engine coolant
Verify the cooling system and proceed with a cooling system leak test and a pressure cap test
Verify the fuel system and perform a leak test
Replace spark plugs
Replace the front differential oil
Replace gearbox oil
Clean the vehicle speed sensor
Replace the brake fluid

PERIODIC MAINTENANCE PROCEDURES

SERVICE TOOLS

Description	Part Number	Page
TEST CAP	529 035 991	20
VACUUM/PRESSURE PUMP	529 021 800	20, 31

SERVICE PRODUCTS

Description	Part Number	Page
BRAKE FLUID	293 600 131	31
BRP PREMIXED COOLANT	219 700 362	15
COSMO RUBBER GREASE	293 550 055	30
LOCTITE 767 (ANTISEIZE LUBRICANT)	293 800 070	25
SUSPENSION GREASE	293 550 033	29
XPS 4-STROKE SYNTH. BLEND OIL (SUMMER)	293 600 121	14
XPS 4-STROKE SYNTHETIC OIL (ALL CLIMATE)	293 600 112	14
XPS BRAKES AND PARTS CLEANER	219 701 705	24, 30
XPS SYNTHETIC GEAR OIL (75W 140)	293 600 140	24, 27
XPS SYNTHETIC GEAR OIL (75W 90)	293 600 043	26
XPS SYNTHETIC GREASE	293 550 010	30

GENERAL

This subsection provides:
– Fluid level verifications
– Maintenance procedures.

The following systems should be serviced according to the *PERIODIC MAINTENANCE SCHEDULE*.

PROCEDURES

ENGINE (AIR INTAKE SYSTEM)

Air Filter Replacement

NOTICE Never modify the air intake system. Otherwise, engine performance degradation or damage can occur. The engine is calibrated to operate specifically with these components.

Air Filter Replacement Guideline

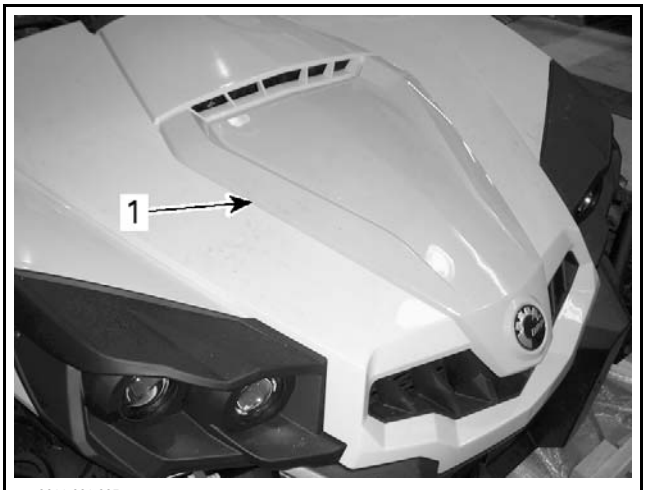
Air filter replacement should be adjusted according to riding conditions as it is critical to ensure proper engine performance and life span.

Air filter replacement frequency must be increased for the following dusty conditions:
– Riding on dry sand
– Riding on dry dirt covered surfaces
– Riding on dry gravel roads or similar conditions.

NOTE: Riding in a group in these conditions would increase even more the air filter replacement requirement.

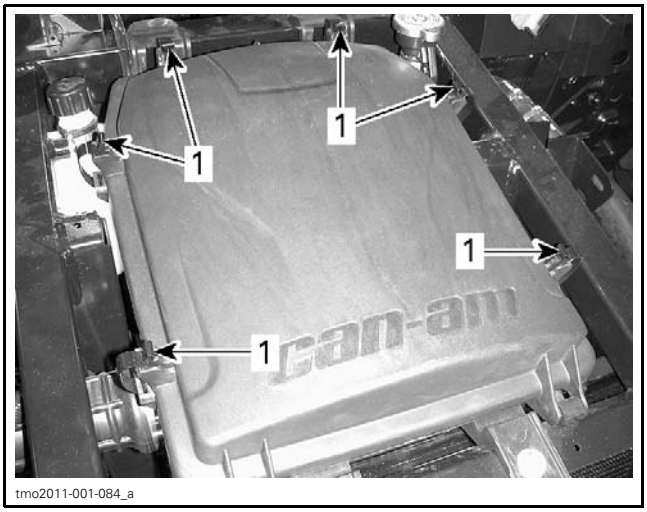
Air Filter Removal

Remove service cover.



1. Service cover

Release clamps and remove air filter housing cover.



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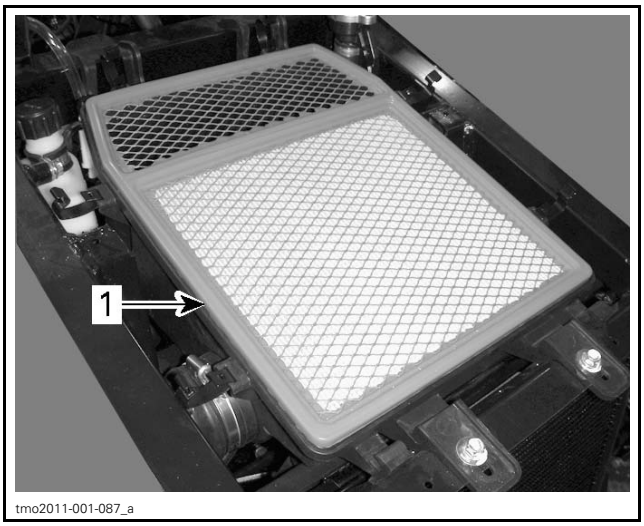
1. Release clamps

Remove air filter.



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1. Air filter

Replace air filter if clogged. Always use the recommended air filter or an equivalent.

Air Filter Installation

Inspect air filter housing for cleanliness.

NOTICE **If any sands or other particles are found in air filter housing, clean it using a vacuum cleaner.**

Install air filter.

Install air filter housing cover and latch all clamps.

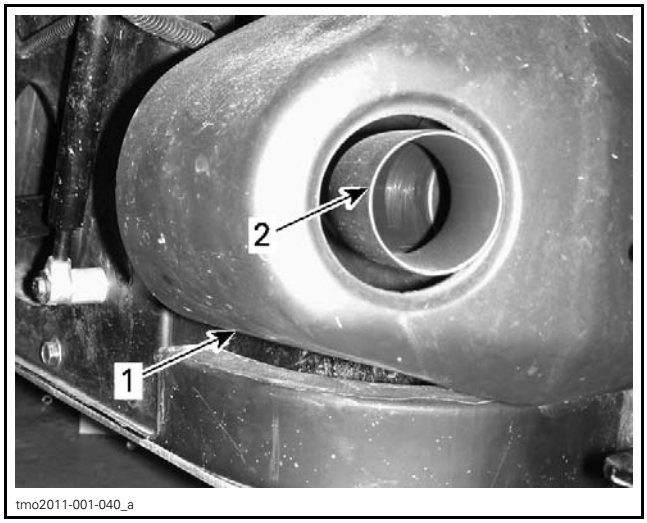
Install service cover.

ENGINE (EXHAUST SYSTEM)

Muffler Spark Arrester Cleaning and Inspection

⚠ **CAUTION** Never perform this operation immediately after the engine has been running as exhaust system is very hot.

Remove the muffler cover.



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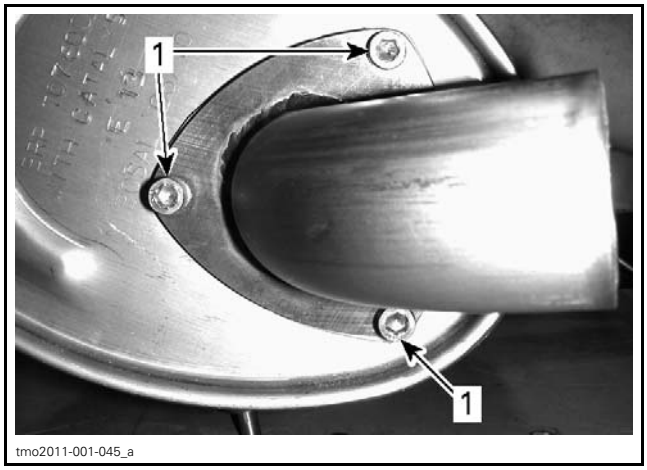
1. Muffler cover
2. Exhaust tail pipe

Remove and discard the tail pipe retaining screws.



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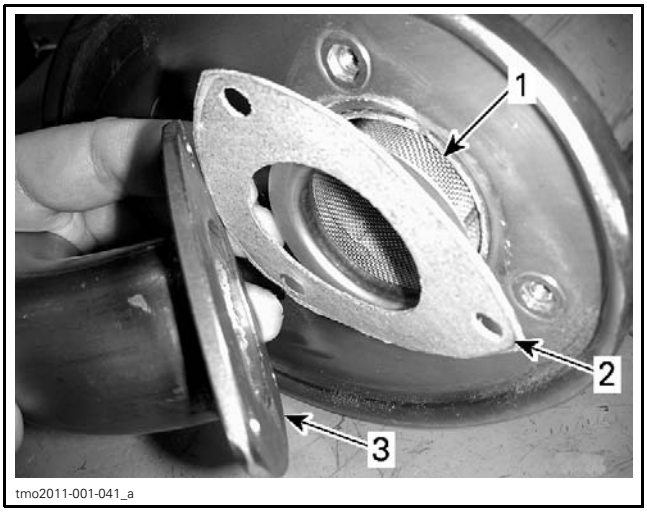
1. Retaining screws

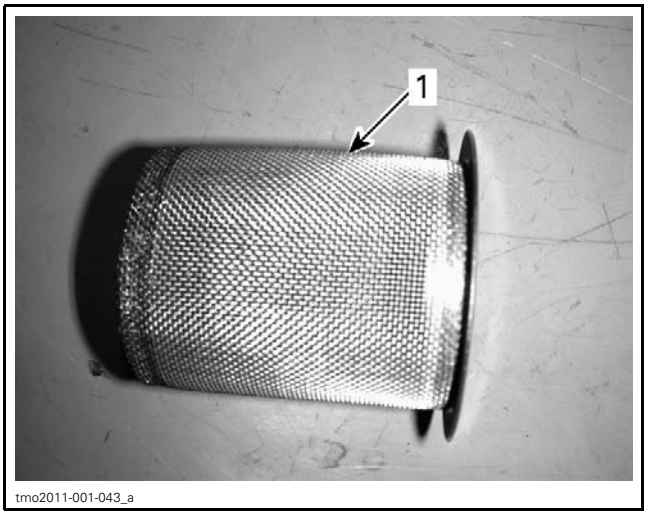
Remove exhaust tail pipe, gasket (discard) and spark arrester.



1. Spark arrester
2. Gasket
3. Exhaust tail pipe

Remove carbon deposits from the spark arrester using a brush.

NOTICE **Use a soft brush and be careful to avoid damaging spark arrester mesh.**



1. Clean spark arrester

Inspect mesh of spark arrester for any damage. Replace as required.

Inspect spark arrester chamber in muffler. Clean off any debris as required.

For installation, reverse the removal procedure. However pay attention to the following.

Install new gasket and retaining screws.

TAIL PIPE RETAINING SCREWS	
Tightening torque	11 N•m ± 1 N•m (97 lbf•**in** ± 9 lbf•**in**)

ENGINE (LUBRICATION SYSTEM)

Engine Oil Level Verification

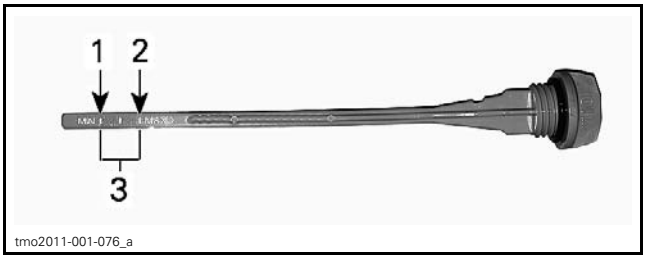
NOTICE **Operating the engine with an improper level may severely damage engine.**

With vehicle on a level surface and engine cold, check the oil level as follows:

1. Remove passenger seat.
2. Unscrew dipstick then remove it and wipe clean.

1. Dipstick

3. Reinstall dipstick, screw in it completely.
4. Remove dipstick and check oil level. It should be near or equal to the upper mark.



TYPICAL
1. MIN.
2. MAX.
3. Operating range

To add oil, remove the dipstick. Place a funnel into the dipstick tube.

Add a small amount of recommended oil and recheck oil level.

Repeat the above procedures until oil level reaches the dipstick's upper mark.

NOTE: Do not overfill. Wipe off any spillage.

Properly tighten dipstick.

Install passenger seat.

Engine Oil Change

Place vehicle on a level surface.

Oil change and oil filter replacement should be done with a warm engine.

⚠ CAUTION The engine oil can be very hot. Wait until engine oil is warm.

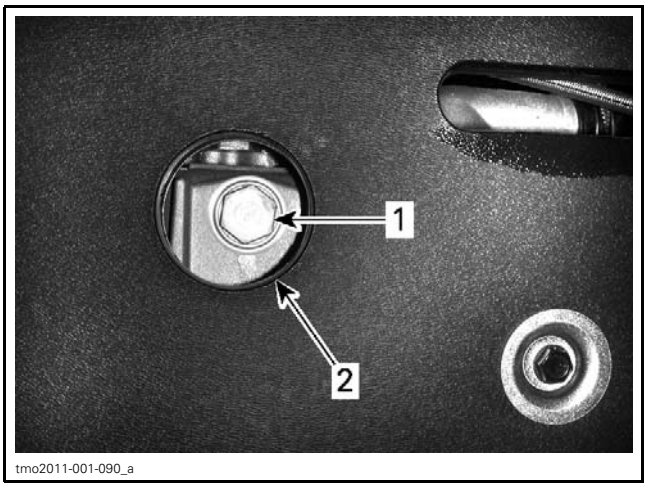
Ensure vehicle is on a level surface.

Remove dipstick.

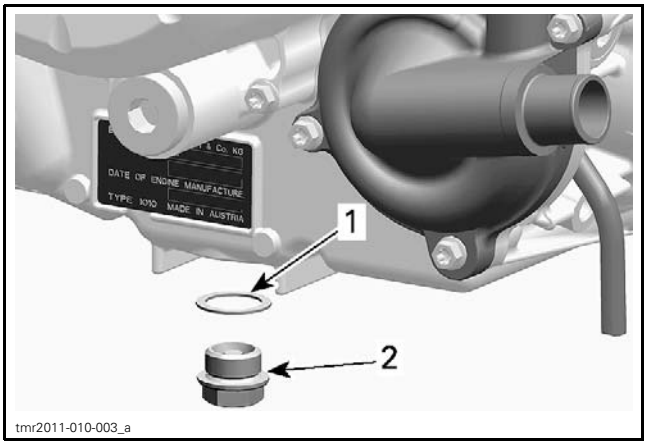
Place a drain pan under the engine drain plug area.

Clean the drain plug area.

Unscrew drain plug and discard the gasket ring.



DRAIN PLUG ACCESS
1. *Oil drain plug*
2. *Skid plate*



1. *Gasket ring*
2. *Drain plug*

Allow oil to drain completely from the crankcase.

Clean the magnetic drain plug from metal shavings and residue. Presence of debris gives an indication of internal engine damage.

Install a NEW gasket ring on the drain plug.

NOTICE Never use the gasket ring a second time. Always replace by a NEW one.

Install and tighten drain plug to the specified torque.

DRAIN PLUG	
Tightening torque	30 N•m ± 2 N•m (22 lbf•ft ± 1 lbf•ft)

Replace oil filter. Refer to *ENGINE OIL FILTER REPLACEMENT* in this subsection.

Refill engine with recommended engine oil.

ENGINE OIL CAPACITY
2.2 L (2.32 qt (U.S. liq.))

RECOMMENDED ENGINE OIL	
SEASON	TYPE
Summer	XPS 4-STROKE SYNTH. BLEND OIL (SUMMER) (P/N 293 600 121)
Winter	XPS 4-STROKE SYNTHETIC OIL (ALL CLIMATE) (P/N 293 600 112)

If recommended XPS oil is not available, use a 4-stroke SAE 5W40 engine oil that meets or exceeds the requirements for API service classification SM, SL or SJ. Always check the API service label certification on the oil container, it must contain at least one of the above standards.

After filling, check the oil level, refer to *ENGINE OIL LEVEL VERIFICATION* in this subsection.

Start engine and let it idle for a few minutes.

Ensure oil filter and drain plug areas are not leaking.

Stop engine.

Wait a while to allow oil to flow down to crankcase, then check oil level again.

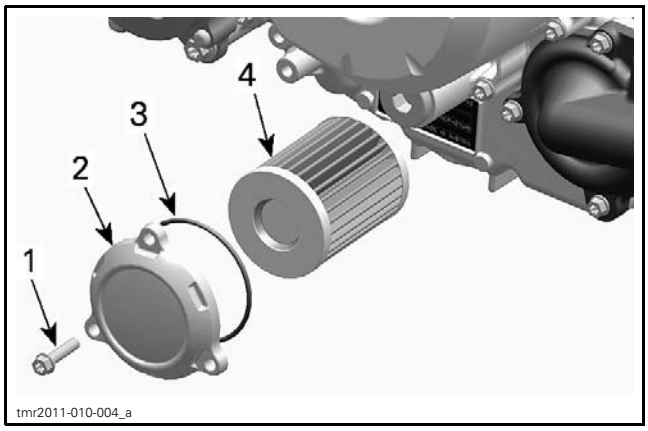
Dispose oil and filter as per your local environmental regulations.

Engine Oil Filter Replacement

Oil Filter Removal

Clean oil filter area.

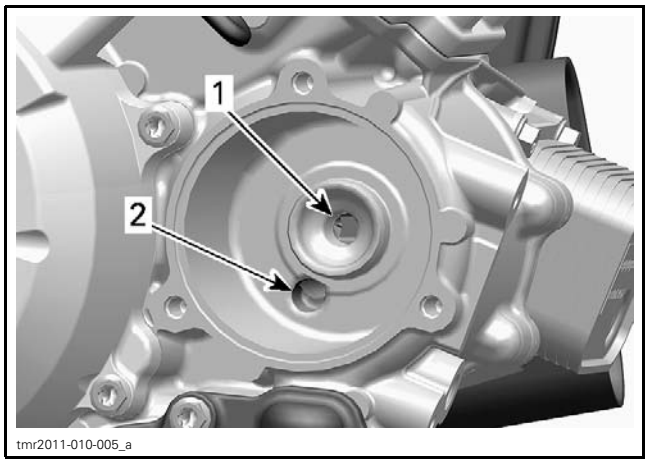
Remove:
- Oil filter cover screws
- Oil filter cover
- O-ring
- Oil filter.



1. Oil filter cover screw
2. Oil filter cover
3. O-ring
4. Oil filter

Oil Filter Installation

Check and clean the oil filter inlet and outlet area for dirt and other contaminations.

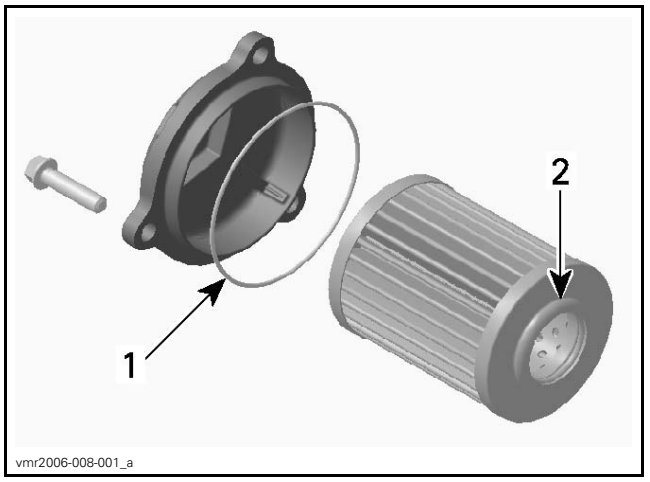


1. Outlet bore to the engine oil providing system
2. Inlet bore from the oil pump to the oil filter

Install a NEW O-ring on oil filter cover.

Install the filter into the cover.

Apply engine oil on O-ring and grease on the end of filter.



1. Slightly oil
2. Slightly oil

Install the cover on the engine.

Tighten oil filter cover screws to specification.

OIL FILTER COVER SCREWS	
Tightening torque	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

ENGINE (COOLING SYSTEM)

Recommended Engine Coolant

COOLANT	
BRP RECOMMENDED PRODUCT	BRP PREMIXED COOLANT (P/N 219 700 362)
ALTERNATIVE, OR IF NOT AVAILABLE	Distilled water and antifreeze solution (50% demineralized water, 50% antifreeze)

NOTICE **Always use ethylene-glycol antifreeze containing corrosion inhibitors specifically formulated for internal combustion aluminum engines.**

Engine Coolant Level Verification

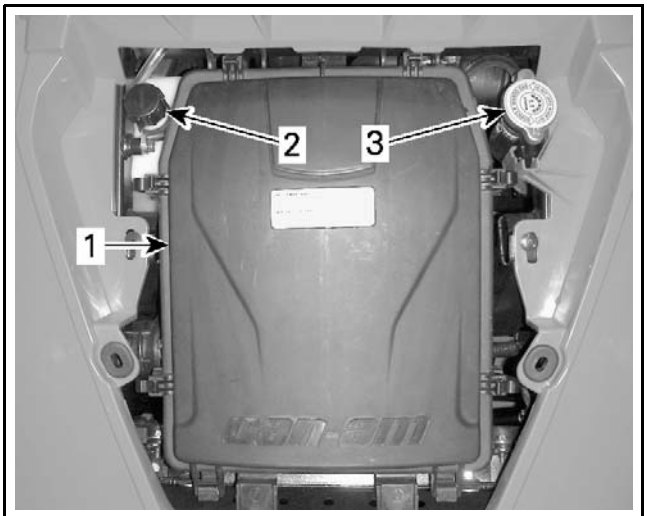
⚠ WARNING

Check coolant level with engine cold.

1. Place vehicle on a level surface.
2. Open service cover.
3. Remove the pressure cap.

⚠ WARNING

In order to avoid potential burns, do not remove the pressure cap if the engine is hot.



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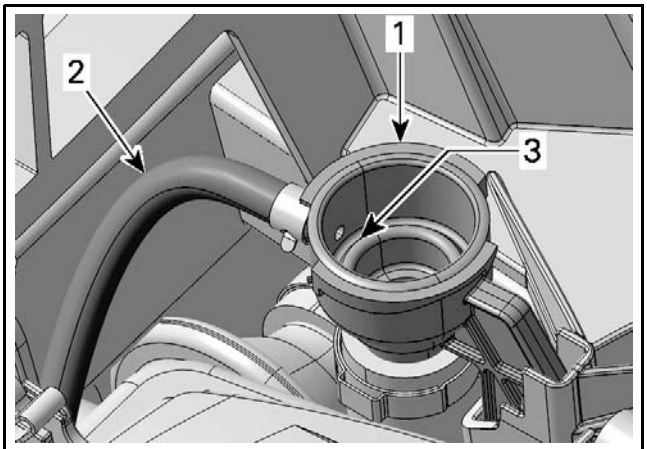
1. Air filter housing cover
2. Coolant expansion tank cap
3. Pressure cap

4. Ensure cooling system is full up to the pressure cap seat.



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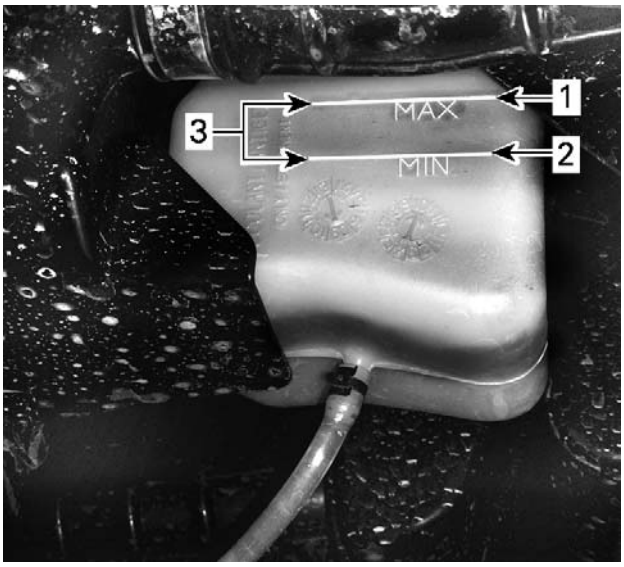
1. Cooling system refill adapter
2. Expansion tank hose
3. Coolant system full level (pressure cap seat)

5. Add coolant in system as necessary.
6. Properly reinstall pressure cap on refill adapter.
7. Check coolant level in expansion tank.

NOTE: Coolant level can be checked by looking at the side of the coolant expansion tank under the RH front fender.



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COOLANT EXPANSION TANK
1. MAX. level
2. MIN. level
3. Operating range

8. Add coolant if level is below MIN. mark. Use a funnel to avoid spillage. **Do not overfill.**
9. Properly reinstall coolant expansion tank cap.
10. Reinstall service cover.

NOTE: A cooling system that frequently requires addition of coolant is an indication of leaks or engine problems.

Engine Coolant Specific Gravity Check

Remove pressure cap.

Use an antifreeze tester to test coolant strength.

MINIMUM RECOMMENDED COOLANT STRENGTH
-30°C (-22°F)

Engine Coolant Replacement

Cooling System Draining

⚠ WARNING

In order to avoid potential burns, do not remove the pressure cap or loosen the coolant drain plug if the engine is hot.

1. Remove service cover.
2. Remove the cooling system pressure cap.

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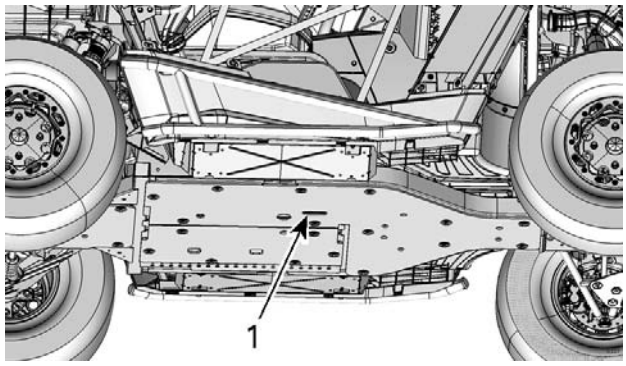
1. Pressure cap

3. Unscrew coolant drain plug and drain the coolant into a suitable container.

NOTE: The drain plug is accessible from underneath the vehicle.



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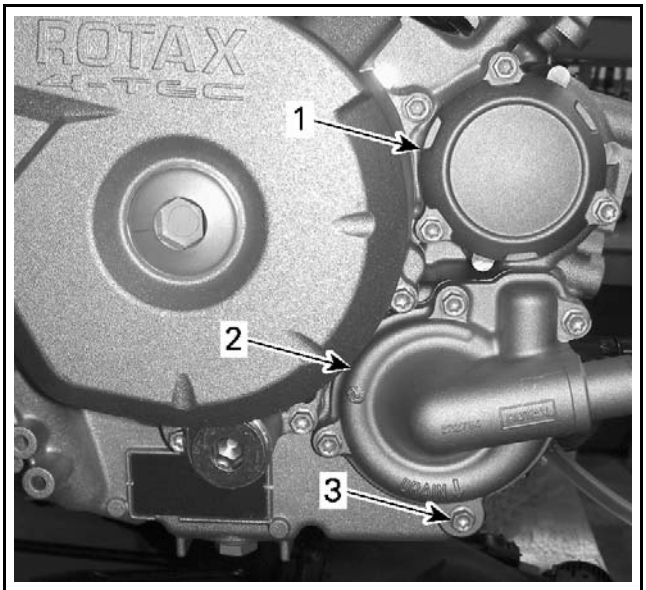
1. Cooling system drain plug access

NOTE: Do not unscrew the coolant drain plug completely.



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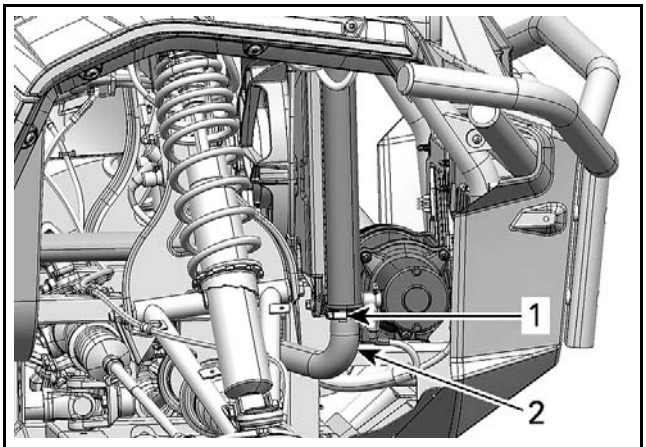
1. Oil filter cover
2. Water pump cover
3. Coolant drain plug

4. Disconnect the lower radiator hose and drain the remaining coolant into a suitable container.

NOTE: Take note of the position of the hose clamp on the lower radiator hose at the radiator.



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1. Hose clamp position to note
2. Lower radiator hose to remove

5. Drain cooling system completely.
6. Reinstall coolant drain plug.

COOLANT DRAIN PLUG	
Tightening torque	9 N•m to 11 N•m (80 lbf•**in** to 97 lbf•**in**)

7. Reinstall radiator hose as noted prior to removal.

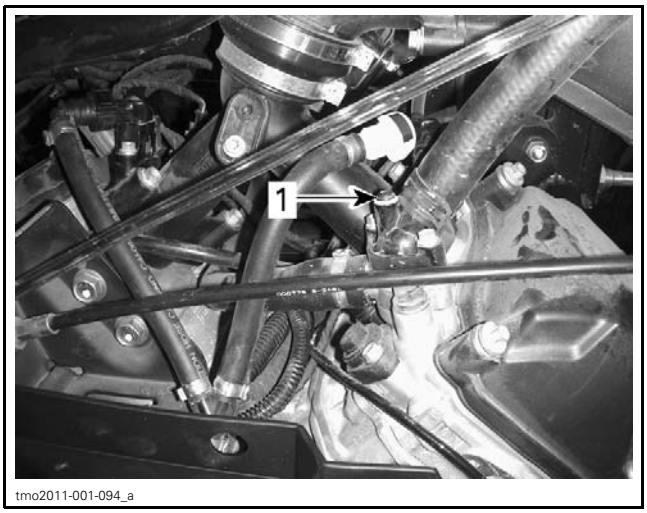
RADIATOR HOSE CLAMP	
Tightening torque	2.5 N•m to 3.5 N•m (22 lbf•**in** to 31 lbf•**in**)

8. Siphon the cooling system expansion tank.
9. Fill cooling system with coolant, refer to *COOLING SYSTEM BLEEDING* procedure.

Cooling System Bleeding

800R Models

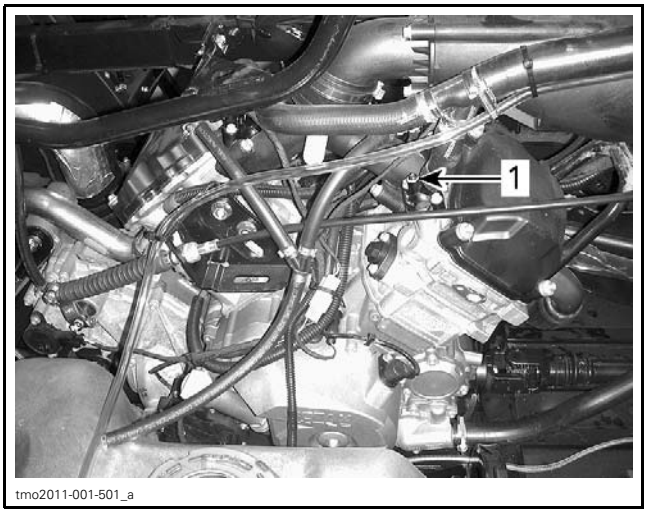
1. Unscrew bleed screw on thermostat housing cover of front cylinder.



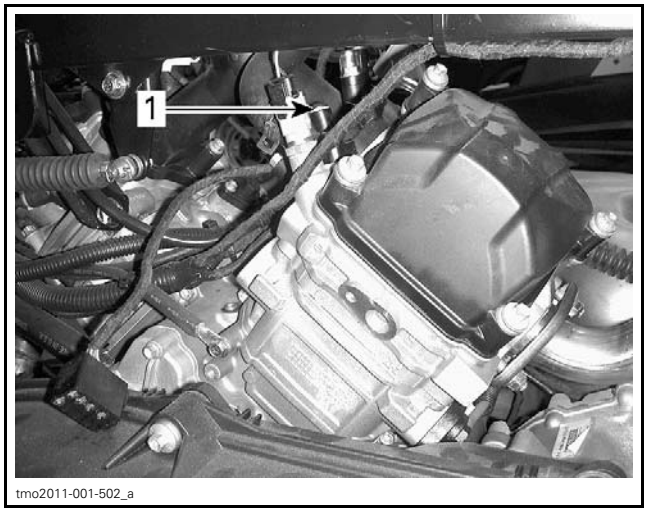
TYPICAL
1. Bleed screw

1000 Models

2. Unscrew bleed screws on thermostat housing covers of both front and rear cylinders.



1. Front cylinder bleed screw



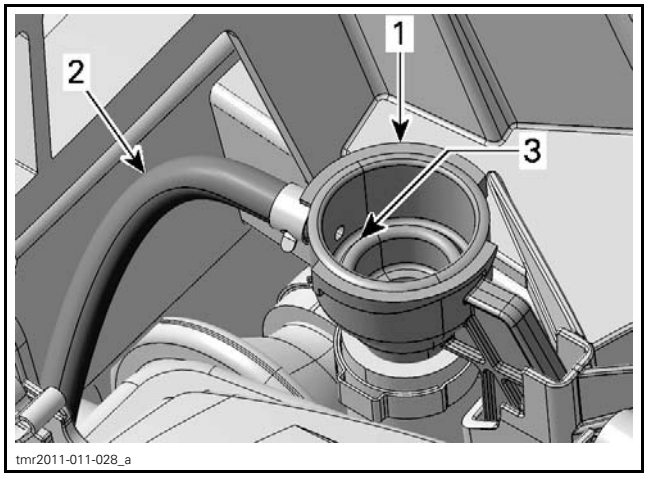
1. Rear cylinder bleed screw

All Models

3. Remove the pressure cap.
4. Fill the cooling system until coolant comes out of the bleed screw(s).
5. Install the bleed screw(s) using NEW gasket ring(s) and torque as per following chart.

BLEED SCREW INSTALLATION	
GASKET RING	NEW
Tightening torque	4.4 N•m to 5.6 N•m (39 lbf•**in** to 50 lbf•**in**)

6. Continue adding coolant until system is full up to the pressure cap seat in the refill adapter.

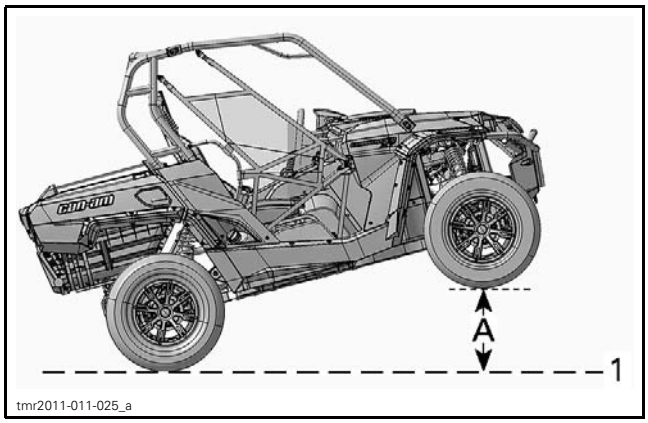


1. Cooling system refill adapter
2. Expansion tank hose
3. Coolant system full level (pressure cap seat)

7. Install pressure cap.

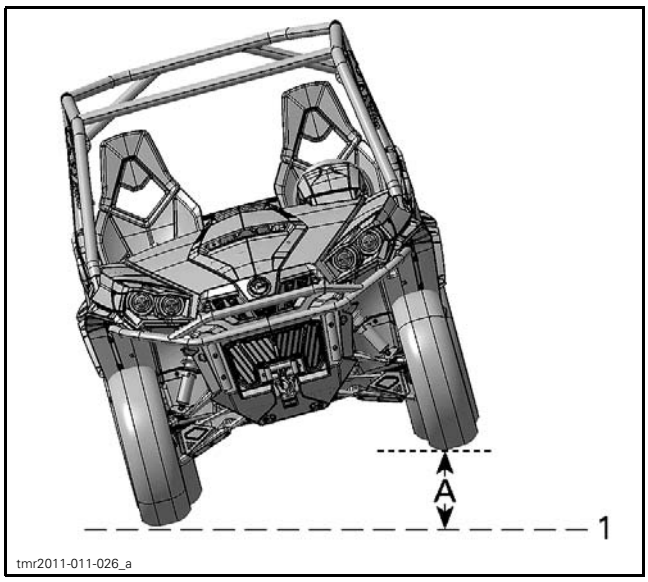
NOTICE The following steps must be carried out as specified to ensure proper cooling system bleeding in addition to the previous steps.

8. Lift the entire front end of the vehicle so the front tires are 60 cm (2 ft) above the ground for at least 1 minute.



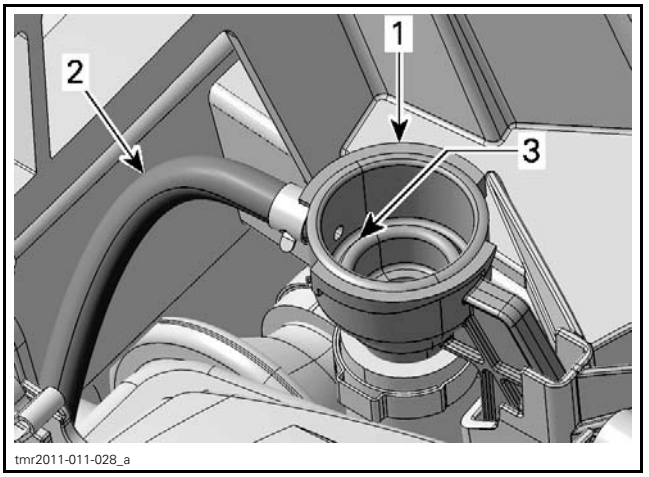
ENTIRE FRONT END LIFTED
1. Ground level
A. 60 cm (24 in)

9. Lower vehicle to the ground.
10. Remove pressure cap and add coolant as required.
11. Install pressure cap.
12. Lift driver's side of vehicle 60 cm (2 ft) above it's horizontal position for at least 1 minute.



DRIVER'S SIDE LIFTED
1. Ground level
A. 60 cm (24 in)

13. Lower vehicle to the ground.
14. Remove pressure cap and add coolant as required up to the pressure cap seat in the refill adapter.



1. Cooling system refill adapter
2. Expansion tank hose
3. Coolant system full level (pressure cap seat)

15. Install the pressure cap.
16. Check coolant level in the coolant expansion tank and fill to the MIN. level (as required).
17. Run engine at idle with the pressure cap ON until the cooling fan cycles on for a second time.
18. Stop the engine and let it cool down.

⚠ WARNING

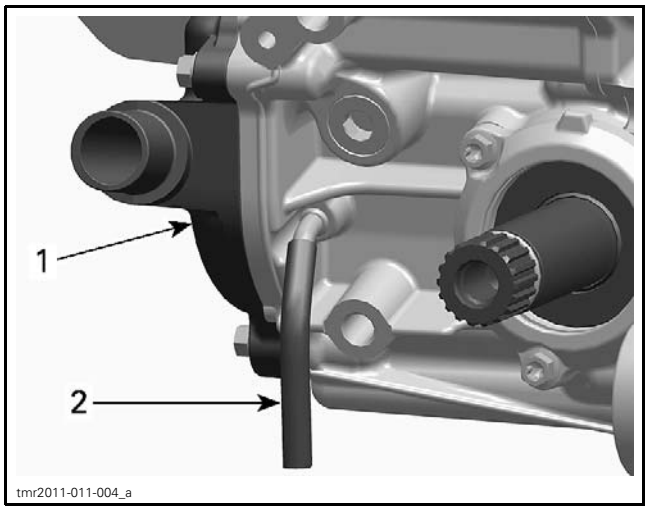
In order to avoid potential burns, do not remove the pressure cap if the engine is hot.

19. When the engine is cool, remove pressure cap and add coolant if required.
20. Install pressure cap.
21. Check coolant level in the expansion tank. Add coolant as required. Refer to *ENGINE COOLANT LEVEL VERIFICATION* in this subsection.

Cooling System Inspection

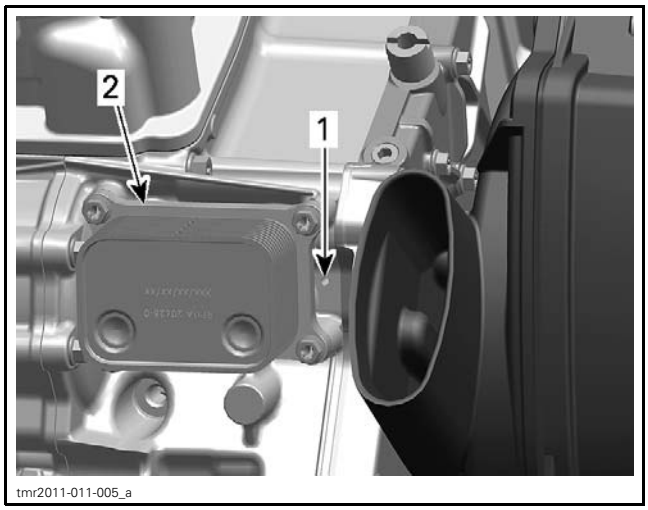
1. Check general condition of hoses and clamps for tightness.
2. Check the leak indicator hose for oil or coolant.

NOTE: Leaking coolant indicates a defective rotary seal. Leaking oil indicates a defective oil seal. If either seal is leaking, both seals must be replaced at the same time. Refer to *WATER PUMP SHAFT AND SEALS* in the *COOLING SYSTEM* subsection.



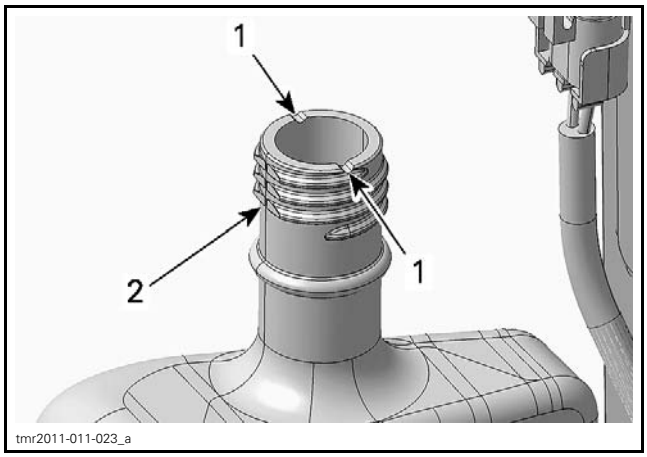
1. Water pump
2. Leak indicator hose

NOTE: Another leak indicator hole is visible on the PTO side. It provides an indication of the PTO gasket condition. If a liquid leaks from this hole, PTO gasket replacement is necessary.



1. Leak indicator hole
2. Oil cooler

3. Ensure vents on coolant expansion tank neck are not obstructed (see following illustration).



COOLANT EXPANSION TANK VENTS
1. Slots atop neck
2. Flat threadless portion on tank neck

4. Carry out an *ENGINE COOLANT SPECIFIC GRAVITY CHECK* as detailed in this subsection.
5. Carry out a *PRESSURE CAP TEST* as detailed in this subsection.
6. Replace engine coolant if contaminated.

NOTE: Engine coolant should be replaced every 2 years or if contaminated.

Cooling System Leak Test

⚠ WARNING

To avoid potential burns, do not remove the pressure cap or loosen the cooling system drain plug if the engine is hot.

1. Open service cover.
2. Remove cooling system pressure cap.
3. Install test cap on filler neck.

REQUIRED TOOL	
TEST CAP (P/N 529 035 991)	

4. Pressurize cooling system.

REQUIRED TOOL	
VACUUM/PRESSURE PUMP (P/N 529 021 800)	

COOLING SYSTEM LEAK TEST
103 kPa (15 PSI)

If there is no pressure drop after 10 minutes, there is no leak in the cooling system.

If the pressure drops, check all hoses, radiator, cylinders and engine base for coolant leaks or air bubbles.

Pressure Cap Test

Test the pressure cap using a cooling system tester.

Replace the cap if it does not hold the pressure, or if it opens at a relief pressure that is too low or too high.

PRESSURE CAP RELIEF PRESSURE
Approximately 110 kPa (16 PSI)

ENGINE (TOP END)

Engine Valve Clearance Adjustment

NOTE: Check and adjust valve clearance only when engine is cold.

Remove valve covers, refer to *TOP END* subsection.

Before checking or adjusting the valve clearance, turn crankshaft to TDC ignition of the respective cylinder, refer to *CAMSHAFT TIMING GEAR* in the *TIMING CHAIN* subsection.

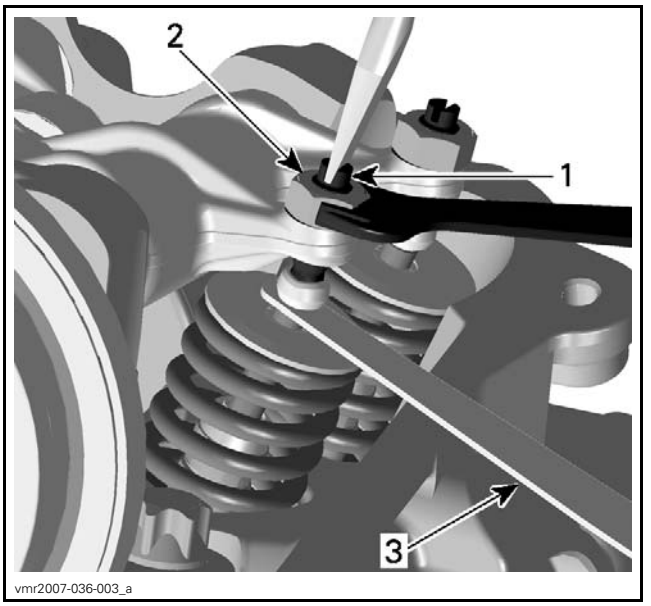
Using feeler gauge, check the valve clearance.

VALVE CLEARANCE	
EXHAUST	0.11 mm to 0.19 mm (.0043 in to .0075 in)
INTAKE	0.06 mm to 0.14 mm (.0024 in to .0055 in)

If the valve clearance is out of specification, adjust valves as follows.

NOTE: Use mean value of exhaust/intake to ensure a proper valve adjustment.

Hold the adjustment screw at the proper position and torque the locking nut.



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1. Adjustment screw
2. Locking nut
3. Feeler gauge

Repeat the procedure for each valve.

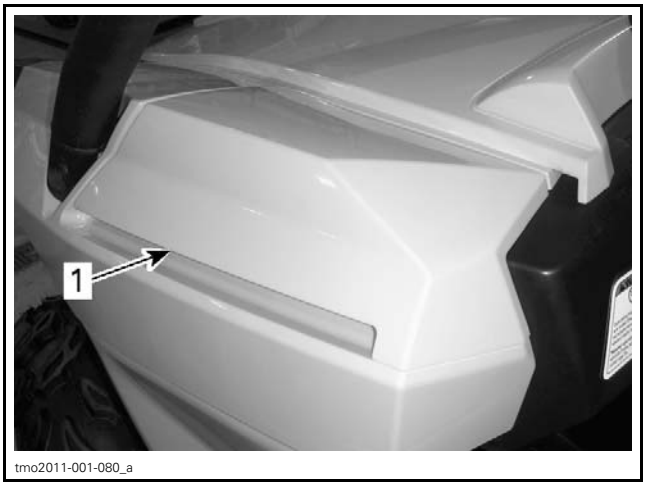
Before installing valve covers, recheck valve clearance.

CONTINUOUSLY VARIABLE TRANSMISSION (CVT)

CVT Air Filter Cleaning

CVT Air Filter Removal

1. Remove the CVT air filter plastic cover located on LH side of hood near driver.



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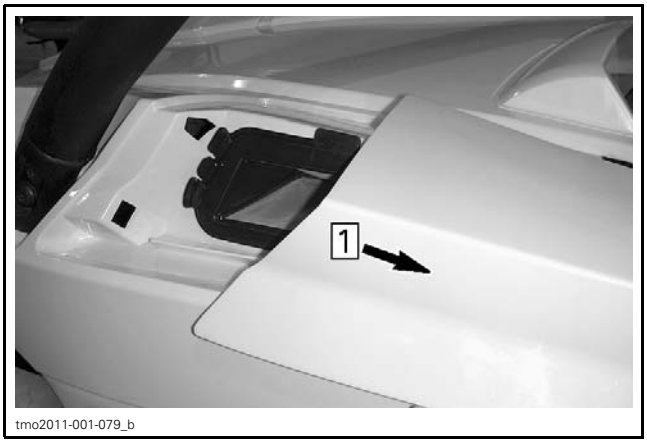
1. CVT air filter plastic cover

2. Slide the cover rearward.



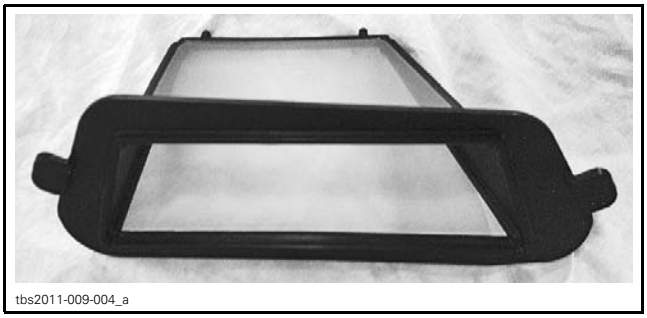
Step 1: Slide cover rearward

3. Pull CVT air filter out.

1. CVT air filter

CVT Air Filter Cleaning

1. Remove CVT air filter.



2. Inspect filter and replace if damaged.
3. Gently clean using a solution of soft soap and water, then rinse filter.
4. Dry filter completely.
5. Clean inside the CVT air inlet end.

CVT Air Filter Installation

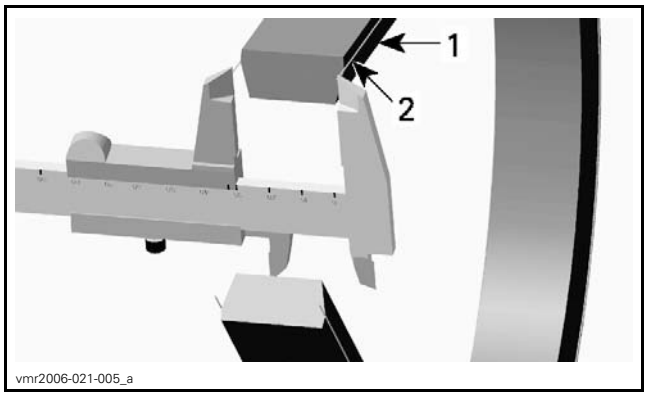
1. Install air filter on CVT inlet using retaining tabs.
2. Install CVT air filter cover by sliding in place toward front of vehicle.

Drive Belt Inspection

Inspect belt for cracks, fraying or abnormal wear. Replace if necessary.

Check drive belt width at cord level. Replace if it is out of specification (see table below).

DRIVE BELT WIDTH	
SERVICE LIMIT	30 mm (1.181 in)



1. Drive belt
2. Cord in drive belt

Drive Pulley, Driven Pulley and One-way Bearing Maintenance

Refer to *CONTINUOUSLY VARIABLE TRANSMISSION (CVT)* subsection.

CVT Air Inlet/Outlet Cleaning

1. Remove CVT cover, refer to *CONTINUOUSLY VARIABLE TRANSMISSION (CVT)* subsection.
2. Inspect and clean the air inlet and outlet openings from inside the inner CVT cover.
3. Inspect and clean the aft end of air outlet duct at rear of the vehicle.

NOTE: If a lot of debris or grime are found in the CVT system, it may be necessary to remove the ducts and thoroughly clean them.

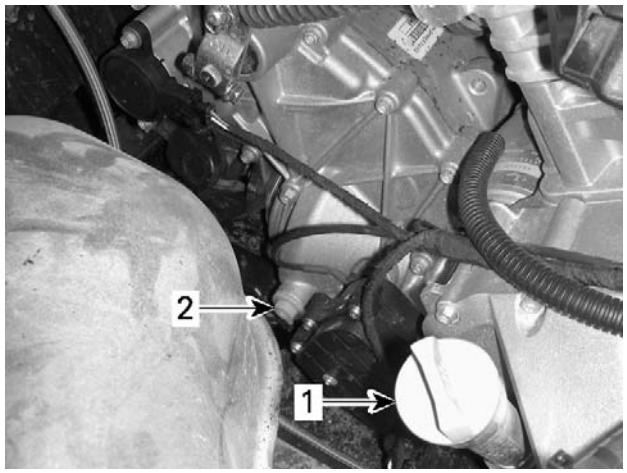
4. Reinstall CVT cover.

GEARBOX

Gearbox Oil Level Verification

Remove the RH lateral console panel and the fuel tank cover.

Check the gearbox oil level by removing the gearbox oil level plug.



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1. Engine oil dipstick
2. Gearbox oil level plug

The oil should be level with the bottom of the oil level hole.

NOTICE Operating the gearbox with an improper oil level may severely damage gearbox.

Gearbox Oil Replacement

Draining Procedure

Prior to change the oil, ensure vehicle is on a level surface.

Oil change should be done with a warm engine.

⚠ WARNING

The gearbox oil can be very hot.

Place a drain pan under the gearbox drain plug area.

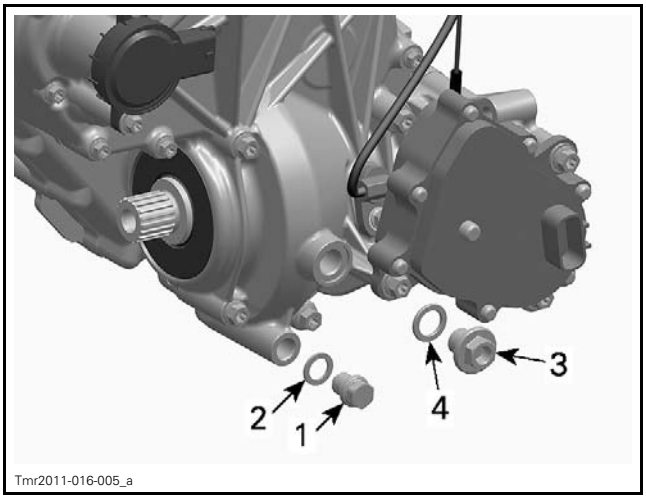
Clean drain plug area and remove magnetic drain plug with its sealing ring to drain gearbox oil.

Discard sealing ring. Always install a NEW one.

Remove oil filler screw including its O-ring.

NOTICE Pay attention not to loose O-ring on oil filler screw.

Wait a while to allow oil flow out of gearbox.



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1. Magnetic drain plug
2. Sealing ring
3. Oil filler screw
4. O-ring

Dispose gearbox oil as per your local environmental regulations.

Inspection

Oil condition gives information about the teeth condition inside the gearbox. See *TROUBLESHOOTING* in this subsection.

Clean the magnetic drain plug from metal shavings and dirt. Presence of debris gives an indication of failure inside the gearbox. Check gearbox to correct the problem.

Replace O-ring of oil filler screw if brittle, hard or otherwise damaged.

Filling Procedure

Make sure that magnetic drain plug is reinstalled and tight.

Always install a NEW sealing ring.

MAGNETIC DRAIN PLUG	
Tightening torque	20 N•m ± 2 N•m (15 lbf•ft ± 1 lbf•ft)

With the vehicle on a level surface, fill the gearbox through the oil filler hole with XPS SYNTHETIC GEAR OIL (75W 140) (P/N 293 600 140) until the oil reaches the lower threads of the oil filler hole (around 450 ml (15.22 U.S. oz)).

However, if the XPS synthetic gear oil is not available use a gearbox oil that meets the requirements of 75W 140 API GL-5 synthetic gear oil.

Install the oil filler screw with its O-ring. Tighten oil filler screw to recommended torque.

OIL FILLER SCREW	
Tightening torque	5 N•m ± 0.6 N•m (44 lbf•**in** ± 5 lbf•**in**)

Vehicle Speed Sensor (VSS) Cleaning

Remove the VSS. Refer to *VSS REMOVAL* in *GEARBOX AND 4X4 COUPLING UNIT* subsection.

Remove all metal particles and oil from the VSS magnet.

NOTE: A dirty VSS will cause erratic speedometer readings.

FUEL SYSTEM

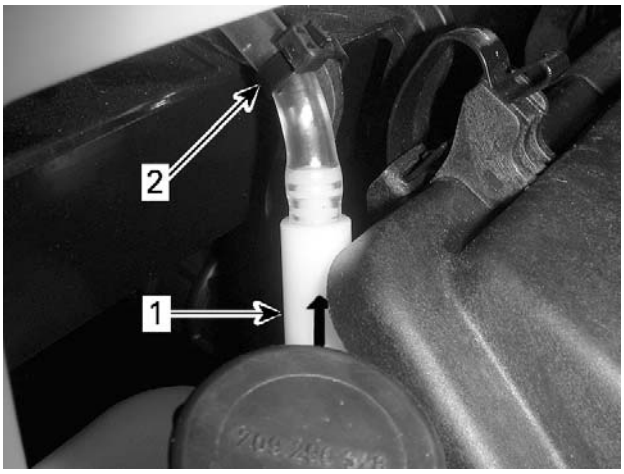
Throttle Body Inspection

1. Refer to *AIR INTAKE SYSTEM* subsection and remove the following:
   – Air filter housing
   – Adapter hose between air filter housing and throttle body.
2. Visually inspect throttle plate and throttle body venturi for cleanliness.
3. Clean inside throttle body using a common throttle body cleaner if necessary.

Fuel Tank Vent Breather Filter Replacement

Ensure breather filter is installed with the flow arrow pointing towards the vent hose.

Secure the vent hose using a locking tie as illustrated.



FUEL TANK VENT BREATHER FILTER
1. Direction arrow on breather filter pointing towards vent hose
2. Vent hose secured with a locking tie

Fuel System Inspection

1. Visually inspect fuel tank for cracks, wear marks, signs of leakage or any other damages.
2. Visually inspect fuel system hoses for proper rooting, cracking, wear marks, signs of leakage or any other damages.
3. Carry out a *FUEL TANK LEAK TEST*, refer to *FUEL TANK AND FUEL PUMP* subsection.

⚠ WARNING

All fuel system leaks must be repaired. Damaged, worn or leaking fuel system components should be replaced to ensure fuel system tightness.

Fuel Pump Pressure Test

Refer to *FUEL TANK AND FUEL PUMP* subsection for procedure.

Fuel Pump Prefilter Cleaning

1. Remove fuel pump from fuel tank, refer to *FUEL PUMP REMOVAL* in *FUEL TANK AND FUEL PUMP* subsection.
2. Clean the fuel pump prefilter (strainer) using XPS BRAKES AND PARTS CLEANER (P/N 219 701 705) and low pressure air.
3. If the fuel pump prefilter is heavily soiled, clogged or damaged:
   – Replace it with a new one. Refer to *FUEL PUMP STRAINER REPLACEMENT* in the *FUEL TANK AND FUEL PUMP* subsection.
   – Inspect inside of fuel tank for contaminants.

– Clean fuel tank as required.
– Inspect fuel tank vent breather filter. Replace as necessary. Refer to *FUEL TANK VENT BREATHER FILTER* in *FUEL TANK AND FUEL PUMP* subsection.

ELECTRICAL SYSTEM

Battery Inspection

Visually inspect battery casing for cracks or other damage. If casing is damaged, replace battery and thoroughly clean battery rack with water and baking soda.

Inspect battery posts condition, battery rack mounting, straps and strap attachment points.

For battery testing, refer to *CHARGING SYSTEM* subsection.

Spark Plug Replacement

Spark Plug Removal

Unplug the spark plug cable.

Clean the spark plug area with pressurized air.

Unscrew spark plug.

Spark Plug Installation

Prior to installation make sure that contact surfaces of the cylinder head and spark plug are free of grime.

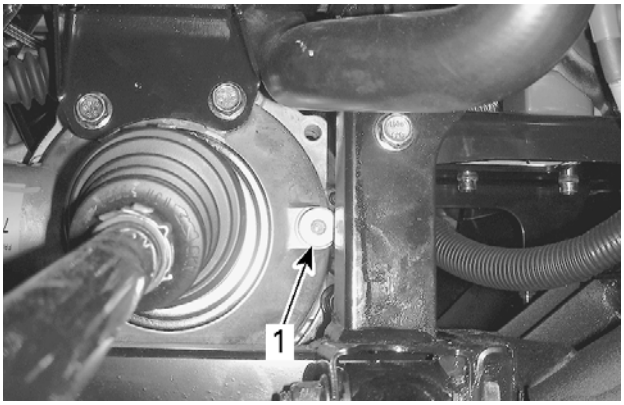
1. Using a wire feeler gauge, set electrode gap as specified in *TECHNICAL SPECIFICATIONS*.
2. Apply antiseize lubricant over the spark plug threads to prevent possible seizure.
3. Hand screw spark plug into cylinder head, then tighten with a torque wrench and an appropriate socket.

SPARK PLUG	
Service product	LOCTITE 767 (ANTISEIZE LUBRICANT) (P/N 293 800 070)
Tightening torque	20 N•m ± 2 N•m (15 lbf•ft ± 1 lbf•ft)

DRIVE SYSTEM

Front Differential Oil Level Verification

Clean filler plug prior to checking oil level.



FRONT RIGHT SIDE OF VEHICLE
1. Filler plug

With vehicle on a level surface, check oil level by removing filler plug. Oil level must reach the lower edge.

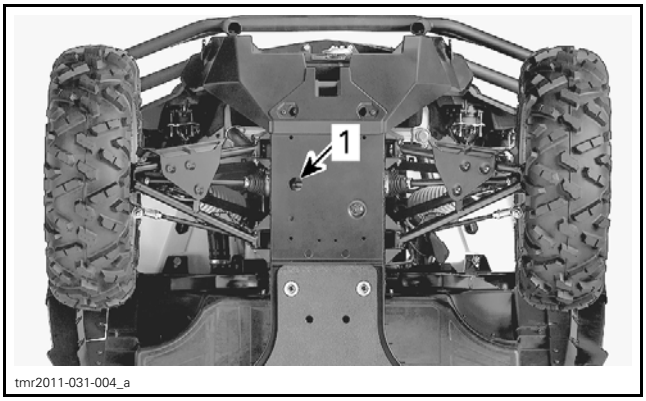
Reinstall filler plug with a NEW sealing ring.

FILLER PLUG	
Tightening torque	22.5 N•m ± 2.5 N•m (17 lbf•ft ± 2 lbf•ft)

Front Differential Oil Replacement

Place vehicle on a level surface. Set transmission in park position.

From underneath of vehicle, clean drain plug area.

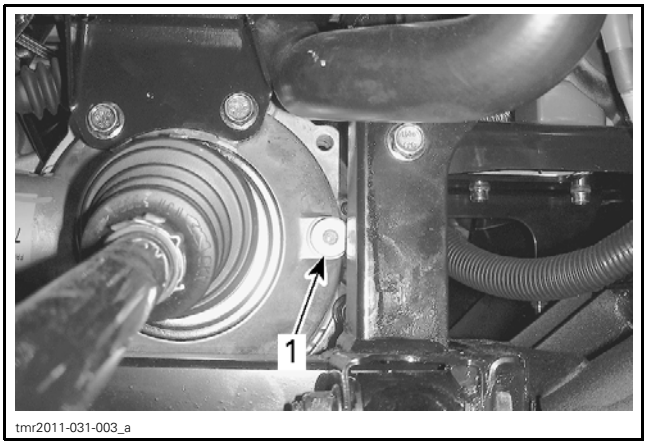


1. Drain plug access hole

Place a drain pan under the front differential.

Remove drain plug.

Unscrew filler plug.



FRONT RIGHT SIDE OF VEHICLE
1. Filler plug

Install drain plug.

DRAIN PLUG	
Tightening torque	7.5 N•m ± 0.5 N•m (66 lbf•**in** ± 4 lbf•**in**)

Refill front differential with recommended oil.

RECOMMENDED OIL	CAPACITY
XPS SYNTHETIC GEAR OIL (75W 90) (P/N 293 600 043) or a 75W 90 (API GL-5) gear oil	500 ml (17 U.S. oz)

Reinstall filler plug with a NEW sealing ring.

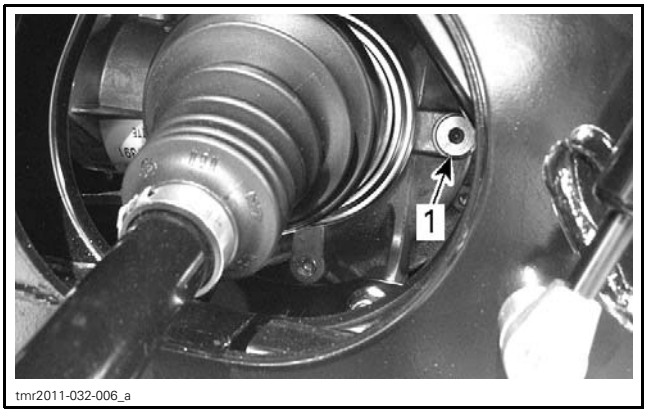
FILLER PLUG	
Tightening torque	22.5 N•m ± 2.5 N•m (17 lbf•ft ± 2 lbf•ft)

Rear Final Drive Oil Level Verification

Ensure vehicle is on a level surface.

Clean filler plug area.

Remove filler plug.



LH REAR SIDE OF VEHICLE
1. Filler plug

It is possible to verify the oil level by inserting a wire with a 90° bend through the oil filler hole.

Oil level is within the following distance from the bottom of oil filler plug threads when the vehicle is level on ground.

OIL LEVEL
20 mm ± 5 mm (9/16 in ± 3/16 in)

Reinstall filler plug with a NEW sealing ring.

FILLER PLUG	
Tightening torque	22.5 N•m ± 2.5 N•m (17 lbf•ft ± 2 lbf•ft)

Rear Final Drive Oil Replacement

Ensure vehicle is on a level surface.

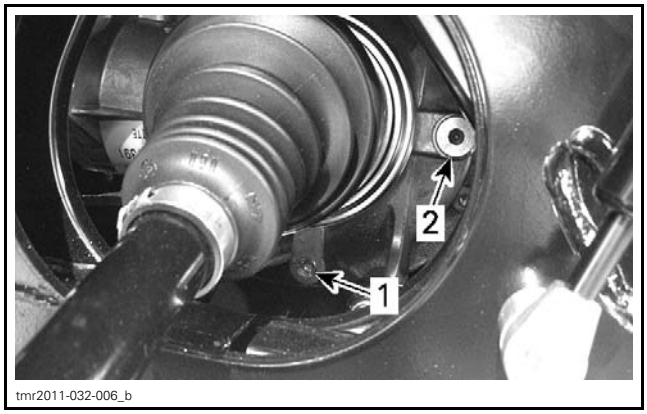
Remove the rear skid plate.

Clean filler and drain plug areas.

Place a drain pan under rear final drive.

Unscrew filler plug.

Remove drain plug.



LH REAR SIDE OF VEHICLE
1. Drain plug
2. Filler plug

Install drain plug.

DRAIN PLUG	
Tightening torque	7.5 N•m ± 0.5 N•m (66 lbf•**in** ± 4 lbf•**in**)

Refill the rear final drive.

RECOMMENDED OIL	QUANTITY
XPS SYNTHETIC GEAR OIL (75W 140) (P/N 293 600 140) or a 75W 140 (API GL-5) gear oil	350 ml (12 U.S. oz)

Reinstall filler plug with a NEW sealing ring.

FILLER PLUG	
Tightening torque	22.5 N•m ± 2.5 N•m (17 lbf•ft ± 2 lbf•ft)

Drive Shaft Boot and Protector Inspection

Visually inspect each drive shaft boot for grease leak, cracks or opening.

Check if the drive shaft boot protector are fixed firmly, not torn or otherwise damaged.

Replace if necessary.

Drive Shaft Joint Inspection

Turn and move drive shaft to detect excessive play.

Propeller Shaft U-Joint Condition

Check yoke U-joints for wear, backlash or axial play, replace if necessary.

Propeller Shaft U-Joint Lubrication

PROPELLER SHAFT U-JOINT LUBRICATION
Use Hi-temp bearing grease NLGI-2 or an equivalent

CHASSIS (WHEELS AND TIRES)

Wheel Lug Nut Torque Verification

Tighten wheel lug nuts to the specified torque using the illustrated sequence.

WHEEL LUG NUTS	
Tightening torque	100 N•m ± 10 N•m (74 lbf•ft ± 7 lbf•ft)

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TIGHTENING SEQUENCE

CHASSIS (STEERING SYSTEM)

Wheel Bearing Inspection

1. Safely lift and support the front of vehicle. Refer to *INTRODUCTION* subsection.
2. Hold wheel by the top and the bottom and move it. Check for any play.
3. If there is any loose, replace wheel bearing, refer to *STEERING SYSTEM* subsection.

NOTE: To properly locate play during this inspection, be sure to check other components for wear or loose (ball joints, suspension pivots, etc). If necessary repair or replace all defective parts before checking the wheel bearing condition. Be careful not to misjudge loose in the ball joint and loose in the wheel bearing.

Steering System Inspection

Steering Column

Turn and move steering column to detect any play.

Rack and Pinion

Check rack and pinion boots for:
– Damage
– Cracks.

Replace if necessary.

Tie-Rod End

Check tie-rod end ball joint for:
– Damage

– Pitting
– Play.

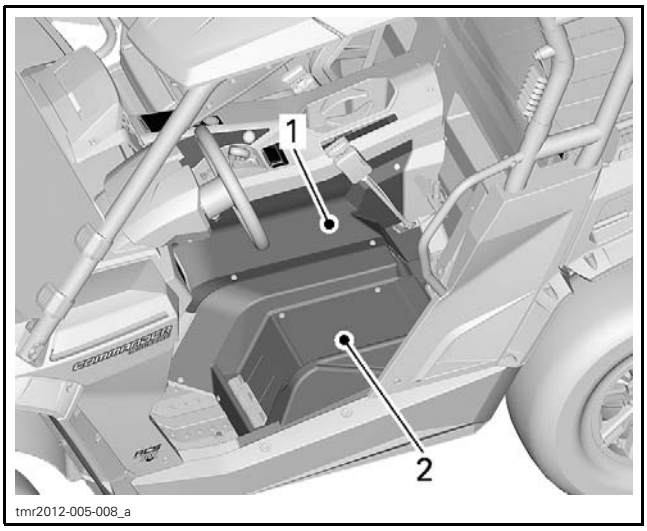
Replace if necessary.

CHASSIS (SUSPENSION)

ACS Air Filter

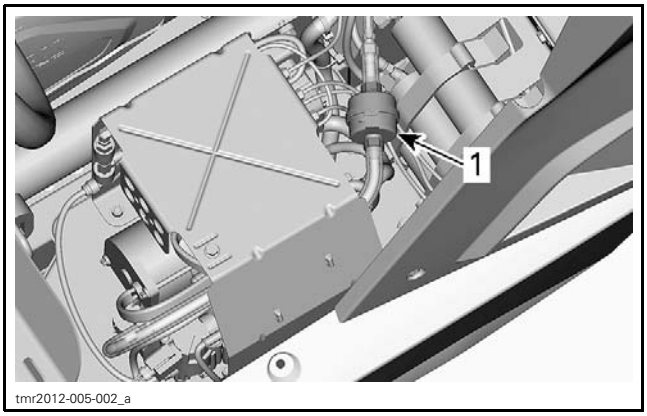
ACS Air Filter Access

To access to ACS air filter, remove the following:
– Driver's seat
– LH lateral console panel
– Floor panel.



SIDE NET REMOVED FOR CLARITY
1. *LH lateral console panel*
2. *Floor panel*

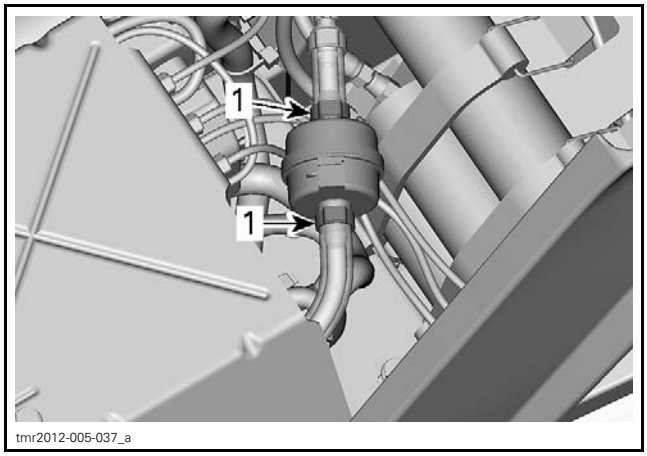
The ACS compressor is located in front of air reservoirs.



1. *ACS air filter*

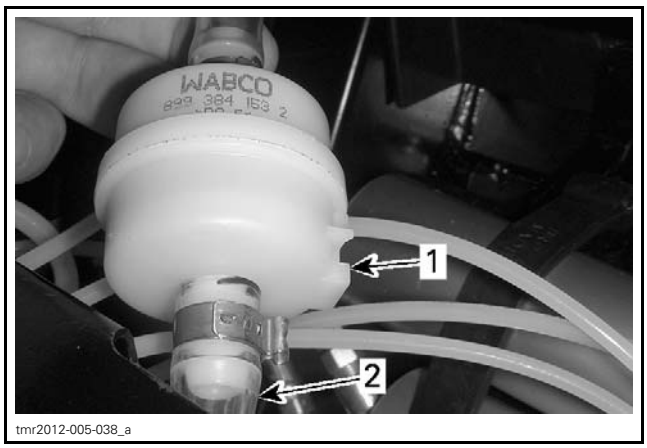
ACS Air Filter Replacement

1. Remove and discard clamps securing hoses to air filter.



1. *Clamps to be removed*

2. Remove the air filter.
3. Install the new air filter with its attachment towards the compressor.
4. Secure air filter using NEW clamps.



1. *Air filter attachment*
2. *Air hose from compressor*

ACS Hoses and Fittings

ACS Hoses and Fittings Inspection

Check shock hoses for damage.

Check shock fittings for damage.

Check hoses and fittings for air leaks.

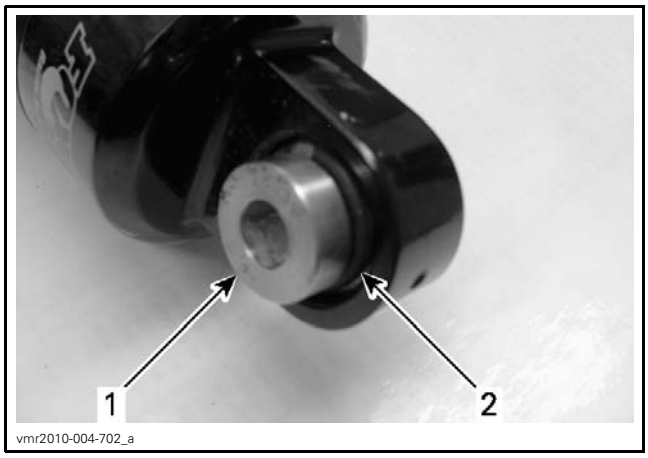
Shock Absorber Inspection

Check shock absorber for any leaks, replace if necessary.

Shock Absorber Spherical Bearing Lubrication

HPG Shock Absorber with Remote Reservoir

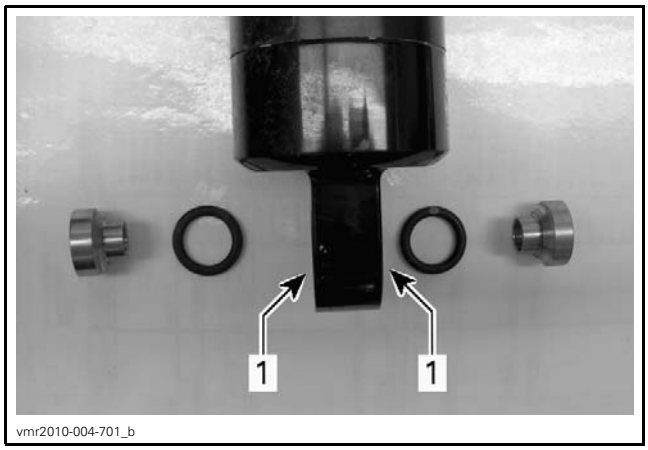
1. Remove shock absorber from vehicle.
2. Remove shock sleeves then O-rings from shock absorber.



1. Sleeve
2. O-ring

3. Clean spherical bearing using a shop rag to remove any dirt and debris.
4. Lubricate spherical bearing as illustrated.

SPHERICAL BEARING LUBRICATION
SUSPENSION GREASE (P/N 293 550 033)



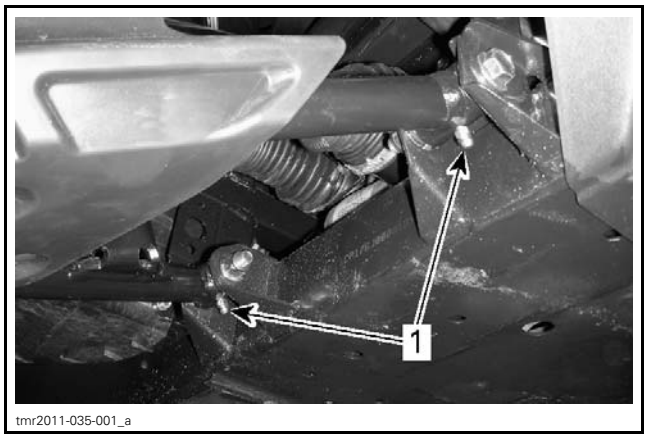
1. Apply grease here

5. Install O-rings then shock sleeves.
6. Install shock absorber.

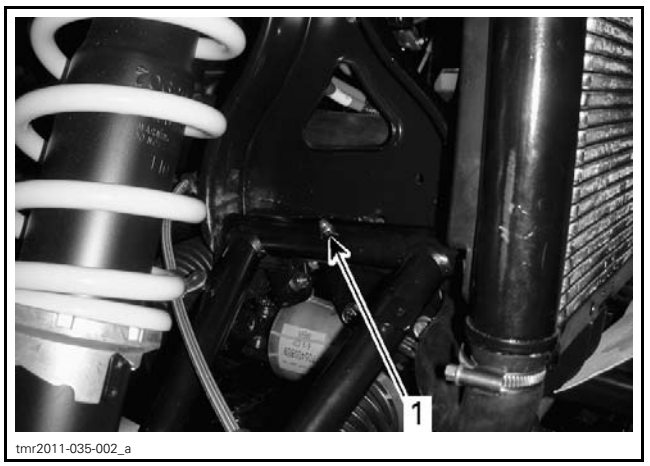
Front Suspension Arm Lubrication

Lubricate suspension arm at grease fittings.

SUSPENSION ARM LUBRICATION
SUSPENSION GREASE (P/N 293 550 033)



LOWER SUSPENSION ARM
1. Grease fittings



UPPER SUSPENSION ARM
1. Grease fitting

Front Suspension Arm Inspection

Check suspension arm for:
- Cracks
- Pitting
- Bending
- Distortion.

Check suspension arm for abnormal play:
- Side to side
- Up and down.

If any play is detected, inspect:
- Bushings
- Cushions
- Wear plates.

Check ball joint for:
- Damage
- Pitting
- Play.

Check ball joint bellows for:
- Damage
- Cracks.

CHASSIS (BRAKES)

Brake System Inspection and Cleaning

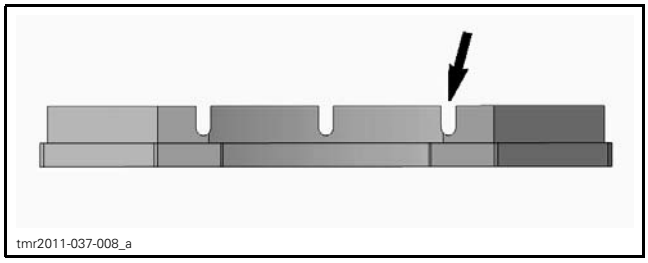
NOTICE **Do not clean brake components in petroleum based solvent. Use brake system cleaner only. Soiled brake pads must be replaced with new ones.**

Brake Pads

1. Measure brake pad lining thickness.

BRAKE PAD MINIMUM THICKNESS
1 mm (1/32 in)

NOTE: The brake pad grooves are wear indicators.



BRAKE PAD GROOVE

⚠ WARNING

Brake pads must always be replaced in pairs.

Brake Caliper

1. Remove calipers then check the following components:
   - Check brake pad pins
   - Check caliper boot for cracks
   - Check caliper movement on its support
   - Check pistons movement
   - Check pistons for scratches, rust or other damages.
2. Clean the following components using XPS BRAKES AND PARTS CLEANER (P/N 219 701 705):
   - Brake pads
   - Caliper support and slider
   - Caliper pistons, spring and pins.

NOTE: Do not remove pistons from caliper for cleaning them.

3. Lubricate caliper sliders and pins using an appropriate *BRAKE CALIPER SYNTHETIC GREASE*.

Brake Disc

1. Check brake disc as follows:
   - Check disc thickness
   - Check disc surfaces
   - Check disc warpage.

NOTE: Refer to *BRAKE DISC INSPECTION* in *BRAKES* subsection for details.

2. Clean brake disc using XPS BRAKES AND PARTS CLEANER (P/N 219 701 705).

Master Cylinder

1. Check master cylinder as follows:
   - Check cleanliness of master cylinder rod and boot.
   - Check master cylinder boot for cracks or damage.
2. If required, clean then lubricate master cylinder rod and boot using COSMO RUBBER GREASE (P/N 293 550 055).

Brake Pedal

1. Check brake pedal as follows:
   - Brake pedal pivot movement
   - Brake pedal pivot cleanliness.
2. If required, clean then lubricate brake pedal pivot using XPS SYNTHETIC GREASE (P/N 293 550 010).

Brake Hoses

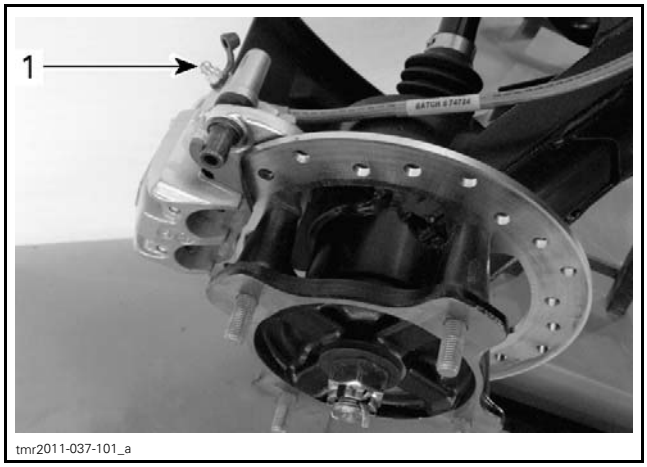
1. Check hoses for leaks, crushed, deformations, cracking or scrapes.

NOTE: Any deformation can restrict the proper flow of fluid and cause braking problems.

Brake Fluid Replacement

Brake Fluid Draining

1. Clean and remove reservoir cover with its diaphragm.
2. Connect a clear hose into caliper bleeder.

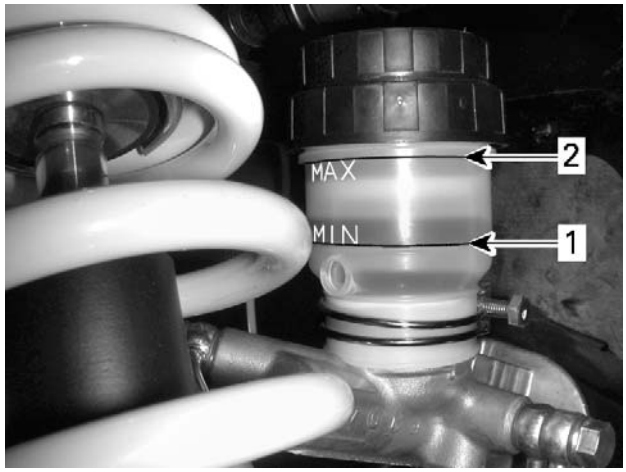


1. Caliper bleeder

3. Loosen caliper bleeder.
4. Pump brake pedal until no more fluid flows out.
5. Repeat draining procedure for the other caliper bleeders.

Brake Fluid Filling

1. Add recommended brake fluid to MAX. mark. Do not overfill.



TYPICAL
1. MIN.
2. MAX.

RECOMMENDED BRAKE FLUID
DOT 4 BRAKE FLUID (P/N 293 600 131)

⚠ WARNING

- Use only DOT 4 brake fluid from a sealed container.
- Do not use brake fluid from an old or already opened container.

Brake Fluid Bleeding (Procedure Using a Vacuum Pump)

NOTE: Brake fluid reservoir must be kept full to prevent air from being pumped into the system.

1. On each caliper, unscrew bleeder until brake fluid comes out then close it.
2. Install the vacuum pump onto caliper bleeder.

REQUIRED TOOL	
VACUUM/PRESSURE PUMP (P/N 529 021 800)	

3. Place pump to vacuum position.
4. Pump vacuum pump a few times.
5. Loosen bleeder.
6. Continue to pump until no more air bubbles appear in clear hose.
7. Close then tighten bleeder.

BLEEDER	
Tightening torque	5.5 N•m ± 1.5 N•m (49 lbf•**in** ± 13 lbf•**in**)

8. Add recommended brake fluid to MAX. mark. Do not overfill.
9. Perform bleeding procedure for the other caliper bleeders.
10. Check brake pedal operation:
    - If brake pedal feels spongy, bleed system again then carry out the *BRAKE SYSTEM PRESSURE VALIDATION* as detailed in *BRAKES* subsection.

Brake Fluid Bleeding (Manual Bleeding Procedure)

NOTE: Brake fluid reservoir must be kept full to prevent air from being pumped into the system.

1. Connect a clear hose onto caliper bleeder.
2. Pump up system pressure with brake pedal until pedal resistance is felt.
3. Depress and hold brake pedal.
4. Open bleeder and then close it.
5. Release brake pedal slowly.

NOTE: Do not release brake pedal until bleeder has been closed.

6. Repeat procedure until fluid flows out without any air bubbles.
7. Tighten bleeder.

BLEEDER	
Tightening torque	5.5 N•m ± 1.5 N•m (49 lbf•**in** ± 13 lbf•**in**)

8. Perform bleeding procedure for the other caliper bleeders.
9. Check brake pedal operation:
    - If brake pedal feels spongy, bleed system again then carry out the *BRAKE SYSTEM PRESSURE VALIDATION* as detailed in *BRAKES* subsection.

CHASSIS (PASSENGER HANDHOLDS)

Passenger Handhold Condition

Check if the passenger handholds are fixed firmly, not bent or otherwise damaged.

Replace if necessary.

CHASSIS (TOW HITCH)

Tow Hitch Inspection

Ensure tow hitch receptacle module is solidly mounted.

Inspect hitch for cracks and other damages.

Repair or replace as necessary.

STORAGE PROCEDURE

SERVICE PRODUCTS

Description	Part Number	Page
BRP HEAVY DUTY CLEANER	293 110 001	34
XPS FUEL STABILIZER	413 408 601	33
XPS LUBE	293 600 016	34
XPS MULTI-PURPOSE CLEANER	219 701 709	34
XPS STORAGE OIL (EXCEPT U.S. COUNTRY)	413 711 600	33
XPS STORAGE OIL (U.S. COUNTRY ONLY)	413 711 900	33

GENERAL

If the SSV is not used or is to be stored for an extended period of time, more than 4 months, be sure to perform the storage procedures described below.

Where applicable, refer to the appropriate subsections in this manual for the required tasks outlined in these procedures.

PROCEDURES

NOTE: To facilitate the inspection and ensure adequate lubrication of components, it is recommended to clean the entire vehicle. Refer to *VEHICLE CLEANING* in this subsection.

FUEL SYSTEM

Fuel System Protection

With the new fuel additives, it is critical to use the XPS FUEL STABILIZER (P/N 413 408 601) or an equivalent to prevent fuel deterioration and fuel system gumming. Follow the manufacturer's instructions for proper use.

NOTICE **Fuel stabilizer should be added prior to engine lubrication to ensure fuel system components protection against varnish deposits.**

Pour fuel stabilizer in fuel tank. Fill up fuel tank.

ENGINE

Engine Internal Lubrication

Engine internal parts must be lubricated to protect them from rust formation during the storage period.

Proceed as follows:

1. Remove lateral console panels.
2. Remove spark plugs.
3. Spray storage oil into each cylinder.

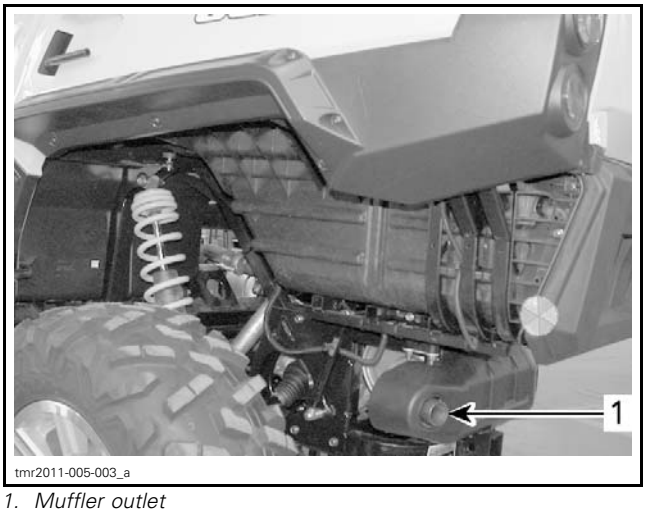
NOTE: Use the storage oil as per country availability.

STORAGE OIL
XPS STORAGE OIL (EXCEPT U.S. COUNTRY) (P/N 413 711 600)
XPS STORAGE OIL (U.S. COUNTRY ONLY) (P/N 413 711 900)

4. Press start button, 1 or 2 seconds maximum, to lubricate cylinders.
5. Reinstall the spark plugs.

NOTE: Do not run engine during storage period.

6. Block muffler outlet with a rag.



1. Muffler outlet

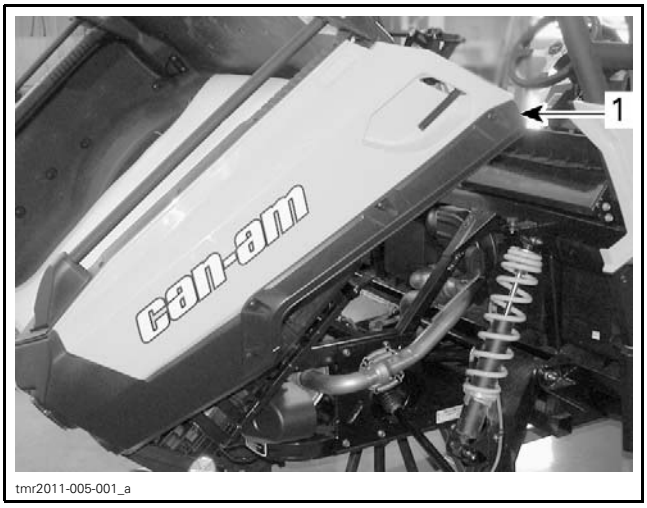
CVT Protection

Remove drive belt. Refer to *ENGINE, CVT AND GEARBOX*.

Close CVT cover.

Block CVT outlet with a rag.

NOTE: To reach the CVT outlet, tilt the cargo box.



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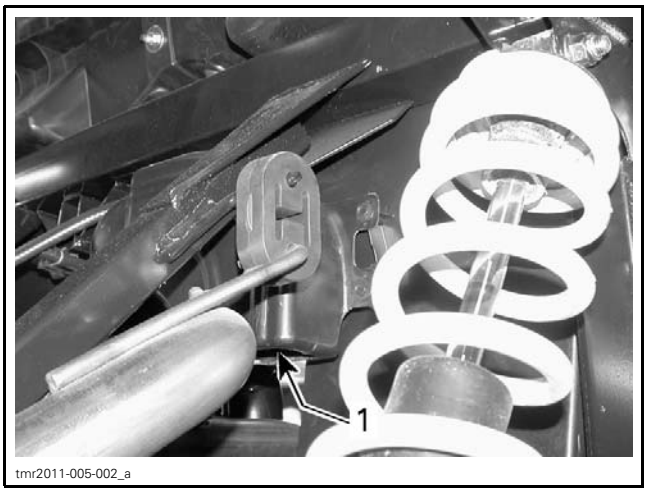
1. Tilted cargo box



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1. CVT outlet

ELECTRICAL SYSTEM

Battery Removal

Remove the battery.

Charge and store battery.

DRIVE SYSTEM

Lubricate front and rear propeller joints.

Lubricate the engine output shaft with XPS LUBE (P/N 293 600 016).

CHASSIS

Lubrication

Lubricate front suspension (no lube on rear).

Tire Pressure

Inflate tires to the recommended pressure.

Vehicle Cleaning

Wash and dry the vehicle.

NOTICE Never use a high pressure washer to clean the vehicle. USE LOW PRESSURE ONLY (like a garden hose). The high pressure can cause electrical or mechanical damages.

Remove any dirt or rust.

To clean the vinyl or plastic parts, use only flannel clothes with XPS MULTI-PURPOSE CLEANER (P/N 219 701 709).

NOTICE It is necessary to use flannel cloths on plastic parts to avoid damaging surfaces. Never clean plastic parts with strong detergent, degreasing agent, paint thinner, acetone, products containing chlorine, etc.

To clean the entire vehicle, including metallic parts use BRP HEAVY DUTY CLEANER (P/N 293 110 001).

Inspect the vehicle and repair any damage. Touch up all metal spots where paint has been scratched off. Spray all metal parts with XPS LUBE (P/N 293 600 016).

Vehicle Protection

Protect the vehicle with a cover to prevent dust accumulation during storage.

NOTICE The vehicle has to be stored in a cool and dry place and covered with an opaque tarpaulin. This will prevent sun rays and grime from affecting plastic components and vehicle finish.

PRESEASON PREPARATION

Prior to using vehicle, proper vehicle preparation is required after a storage period.

If any worn, broken or damaged parts are found, replace them.

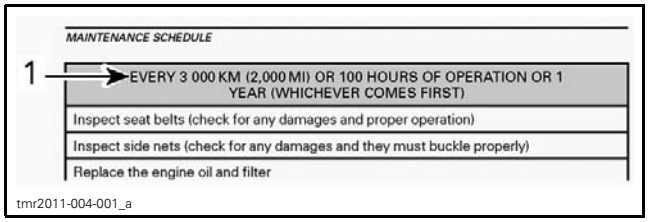
Remove rags that were installed for storage: CVT outlet hose and muffler.

Disconnect air inlet hose from the air filter housing and inspect for animal nests etc. Reinstall hose.

Drain fuel tank and fill with fresh fuel if a fuel stabilizer was not used for the storage.

Reinstall battery. Refer to *CHARGING SYSTEM*.

Using the maintenance chart, perform the items titled EVERY 3 000 km (2,000 mi) OR 100 HOURS OF OPERATION OR 1 YEAR.



1. Use this chart

NOTE: If the "every 6 000 km (4,000 mi) or 200 hours of operation or 2 years" maintenance service is due, also perform the related items as per the maintenance chart.

Test drive vehicle to confirm proper operation.

SPECIAL PROCEDURES

SERVICE PRODUCTS

Description	Part Number	Page
XPS LUBE	293 600 016	38

GENERAL

NOTE: Component failures resulting from these events are not warrantable.

Refer to the appropriate subsections in this manual for the required tasks outlined in these procedures.

ROLLED OVER VEHICLE

In the event the vehicle was rolled over, check the following.

Inspect suspension components and steering system components.

Inspect body and chassis for damage (welded joints, bent or cracked parts).

Pay particular attention to the cage, shoulder protector, side nets, seat belts and their mechanisms.

⚠ WARNING

Do not use vehicle if any of the safety devices are damaged or inoperative.

Check all fluids level before restarting engine.

NOTICE **Check for oil accumulation in the air intake system. Check air filter.**

After restarting engine, check multifunction gauge if any malfunction is detected.

Troubleshoot and repair as required before using vehicle.

SUBMERGED VEHICLE

In the event the vehicle was submerged, proceed with the following.

NOTICE **A submerged vehicle may cause several damages (short and long term) if not serviced adequately or soon enough. Do not crank or start engine.**

Drain the entire air intake system. Inspect the throttle body. Remove parts as required.

Replace the air filter.

Drain, inspect and clean the CVT.

Empty muffler (removal required).

Unplug ECM, multifunction gauge and DPS connectors, and open fuse boxes. Check for presence of water. Dry as necessary.

Inspect all lights for water intrusion. Dry as required.

Replace the engine oil (without starting the engine).

Remove spark plugs. Crank engine in drowned mode to expel any water.

⚠ CAUTION Keep away from spark plug holes to avoid to be splashed when cranking engine.

Add a small quantity of engine oil in cylinders (approximately 2 teaspoonfuls).

Install spark plugs (replace if required).

Look for water in fuel tank, in doubt, flush fuel tank and refill with new gas.

Look for water in brake system. Replace brake fluid as required.

⚠ WARNING

Before starting engine, use B.U.D.S. and check vehicle for fault codes.

Start the engine and allow it to run at idle speed until the engine reaches its operating temperature.

Stop the engine.

Change engine oil and filter.

NOTE: Change oil as many times as necessary, until there is no whitish appearance in engine oil.

Check gearbox oil. Replace oil if contaminated with water.

Replace oil of front differential.

Replace oil of rear final drive.

Replace the ACS air filter.

Lubricate front and rear suspensions and propeller shaft joints. Refer to *FRONT AND REAR SUSPENSIONS*.

Spray all metal parts with XPS LUBE (P/N 293 600 016).

Test drive to confirm proper operation.

ENGINE REMOVAL AND INSTALLATION

All Commander

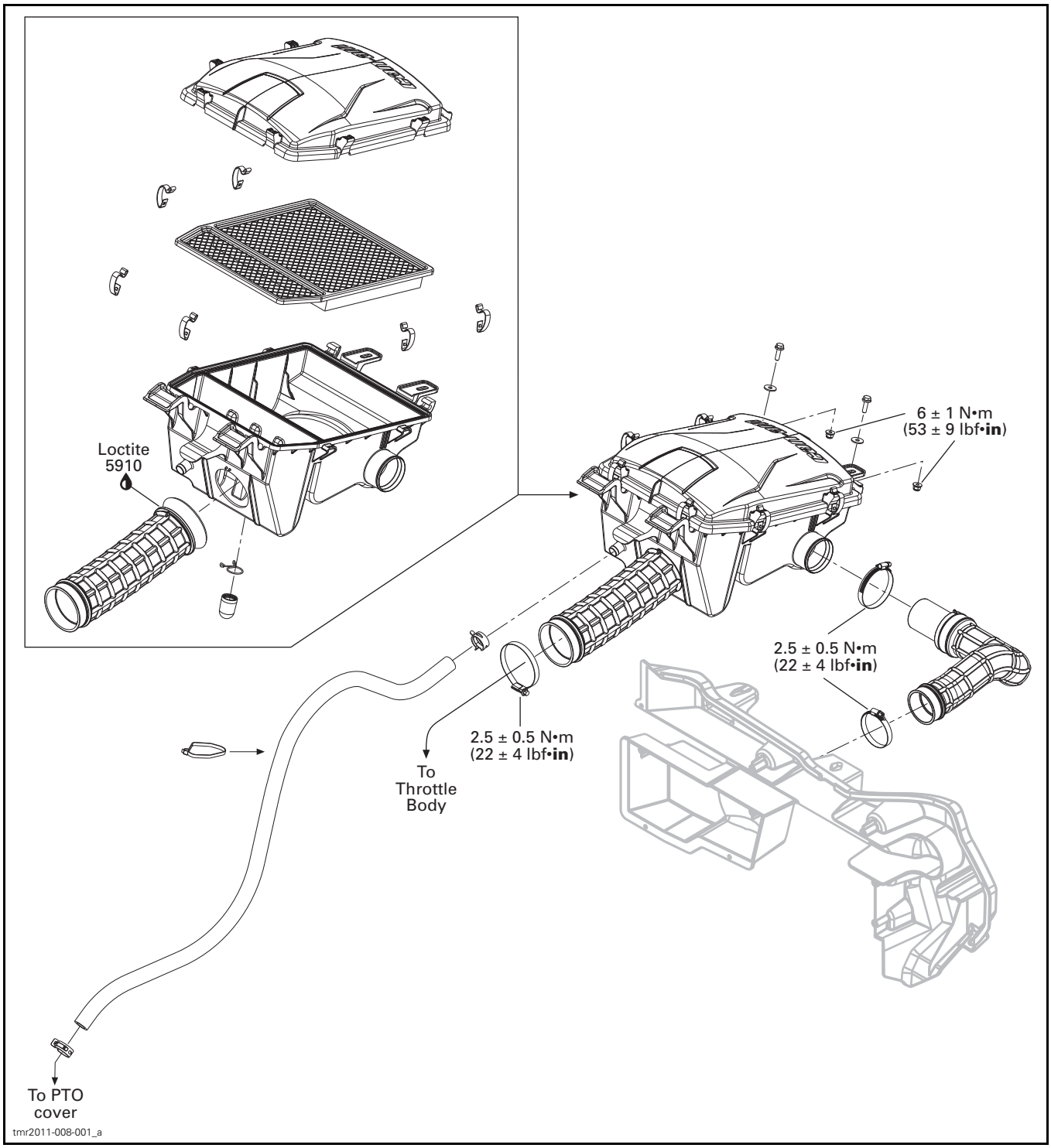
Front and rear propeller shafts are no longer screwed on engine output shafts.

AIR INTAKE SYSTEM

SERVICE PRODUCTS

Description	Part Number	Page
LOCTITE 5910	293 800 081	46

AIR FILTER HOUSING



GENERAL

NOTICE Never modify the air intake system. Otherwise, engine performance degradation or damage can occur. The engine is calibrated to operate specifically with these components.

PROCEDURES

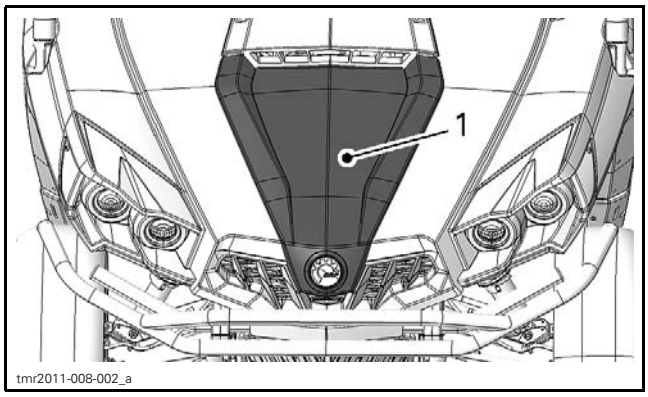
AIR FILTER

For air filter servicing, refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.

AIR FILTER HOUSING

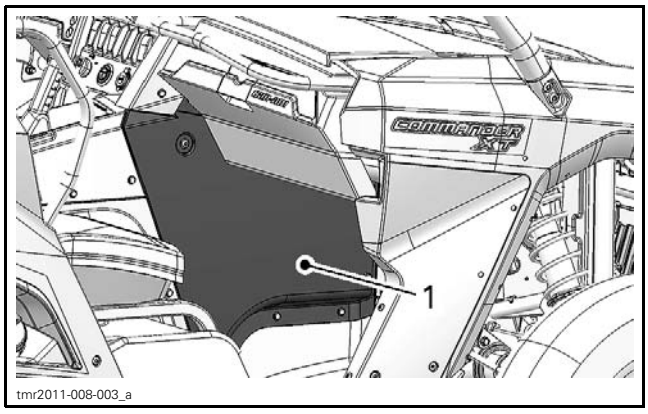
Air Filter Housing Removal

1. Remove the following parts:
   1.1 Service cover



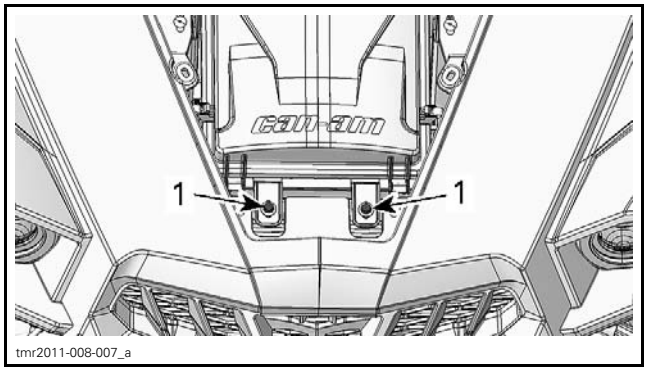
1. Service cover

   1.2 RH inner panel.



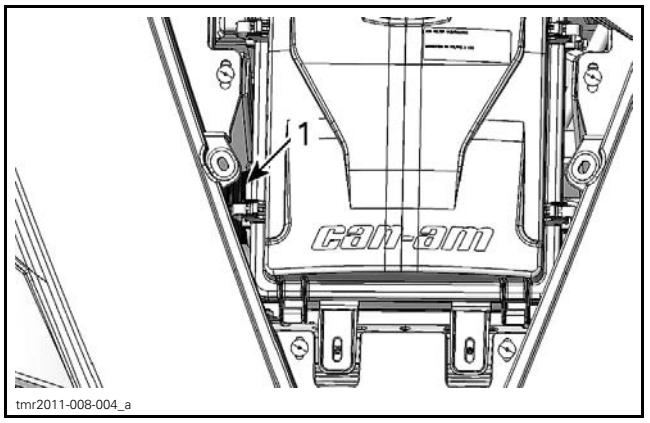
FROM INSIDE OF COCKPIT – PASSENGER SIDE
1. RH inner panel

2. Remove retaining bolts of air filter housing.



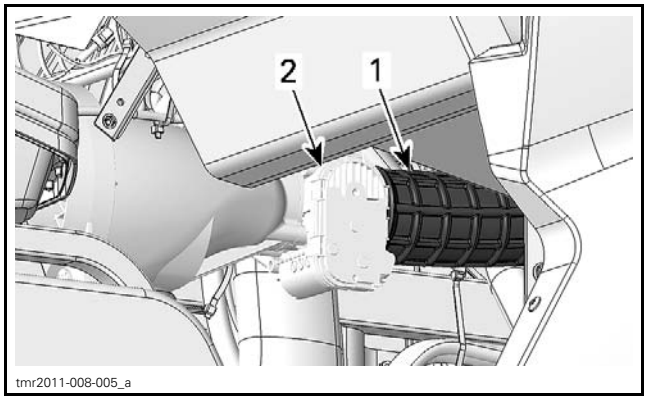
1. Air filter housing retaining bolts

3. Disconnect air inlet hose from the LH side of air filter housing.



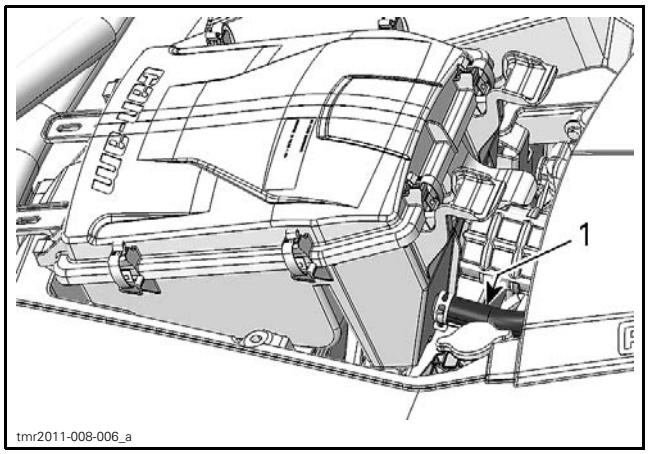
1. Air inlet hose

4. Disconnect intake adapter from throttle body.



FROM INSIDE OF COCKPIT – PASSENGER SIDE
1. Intake adapter
2. Throttle body

5. Disconnect vent hose from the rear of air filter housing.

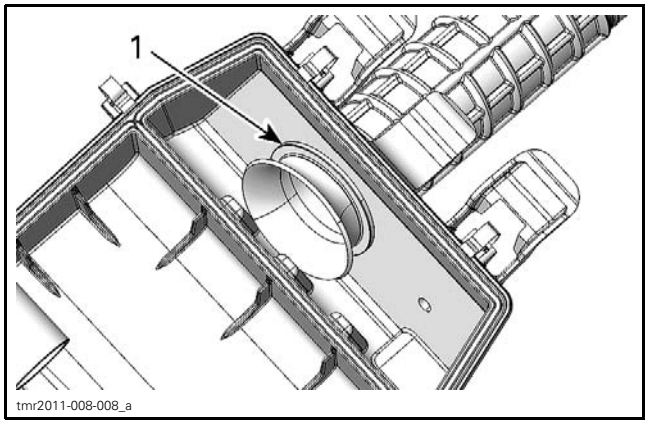


1. Vent hose

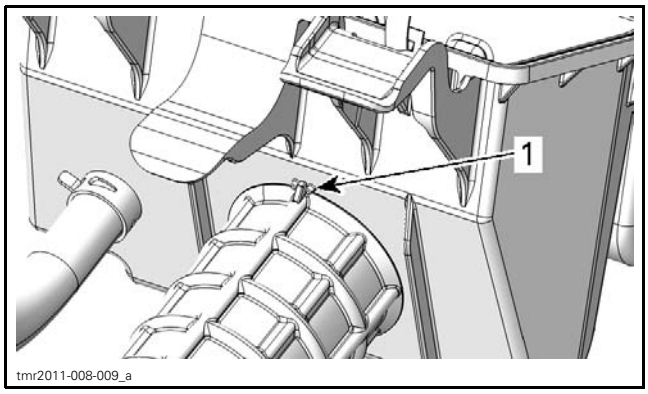
Air Filter Housing Installation

For installation, reverse the removal procedure but pay attention to the following.

If the intake adapter is removed, reseal it with LOCTITE 5910 (P/N 293 800 081) and align its recess with the notch on air filter housing.



1. Apply Loctite 5910 between intake adapter lips and housing wall



1. Intake adapter recess into air filter housing notch

TORQUE	
Gear clamps	2.5 N•m ± 0.5 N•m (22 lbf•**in** ± 4 lbf•**in**)
Air filter housing nuts	6 N•m ± 1 N•m (53 lbf•**in** ± 9 lbf•**in**)

EXHAUST SYSTEM

CAN, USA and Int'l Models

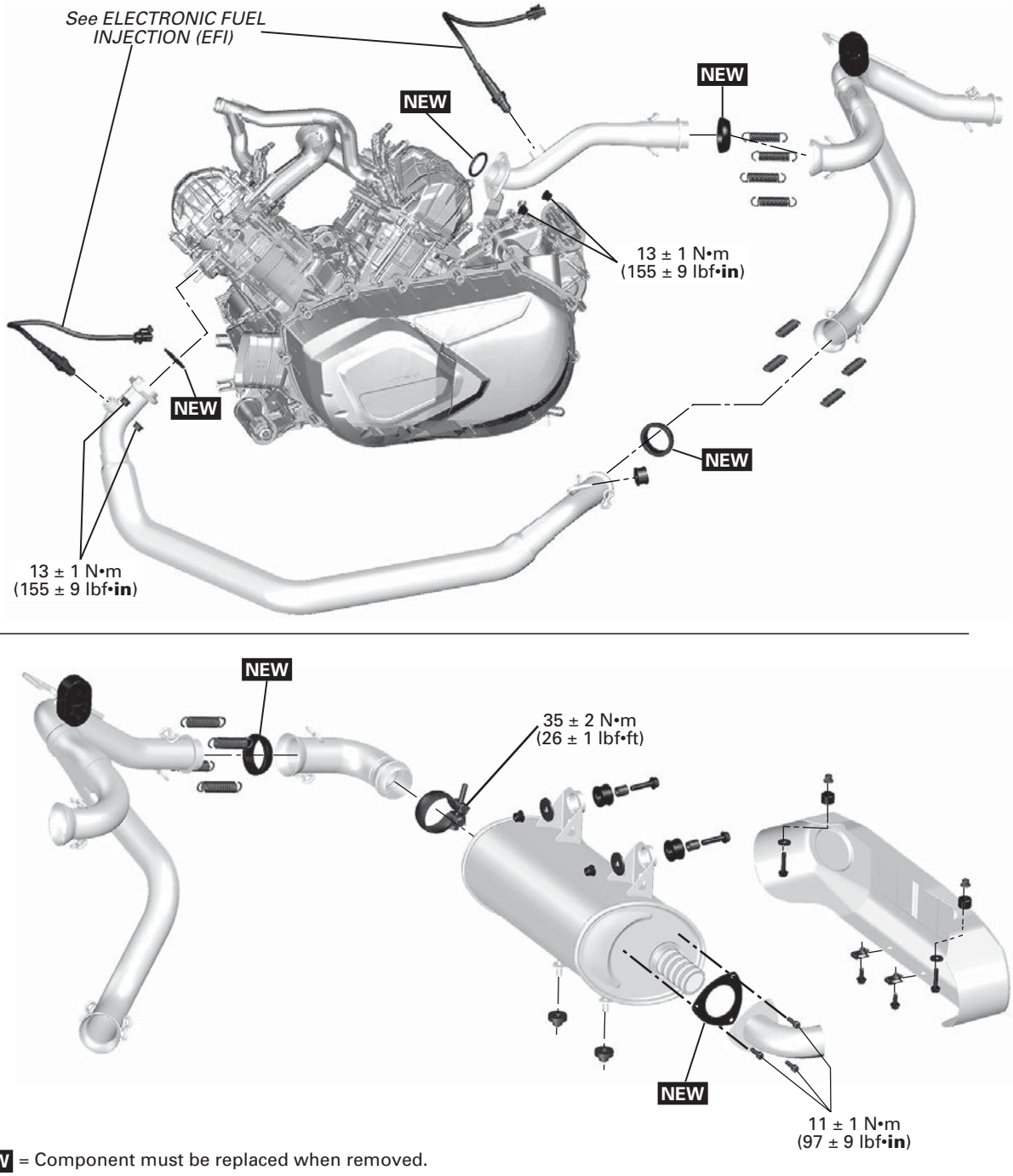
Heat pipes are now equipped with heated oxygen sensors (HO_2S).

New muffler with integrated catalyst.

All Models

New installation sequence to reinstall parts of the exhaust system.

CAN, USA and Int'l Models



NEW = Component must be replaced when removed.

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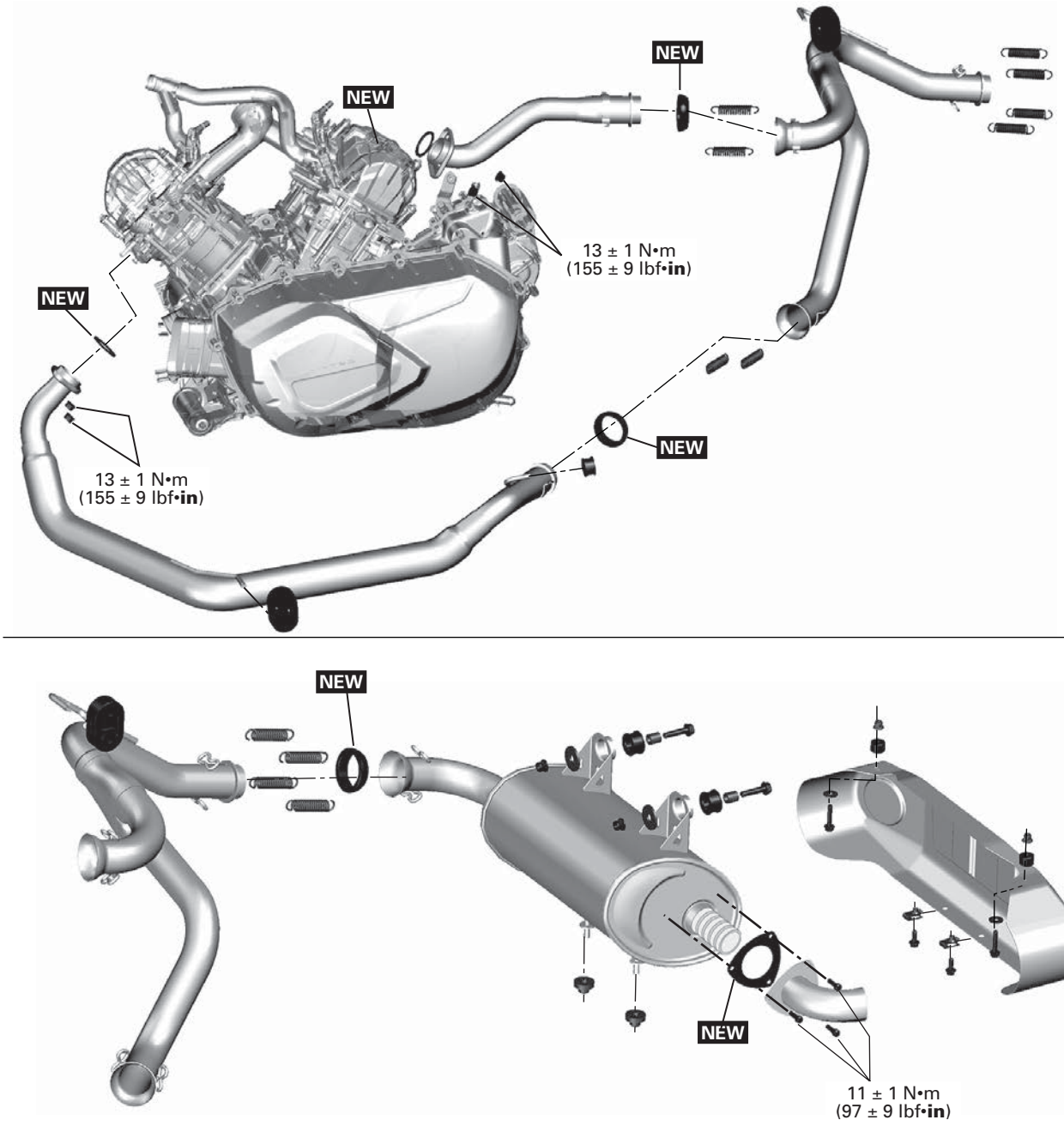
CE Models



NEW = Component must be replaced when removed.

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PROCEDURES

EXHAUST SYSTEM INSTALLATION SEQUENCE

When a part of the exhaust system needs to be removed, a specific sequence must be met during the installation to avoid leaks or damaging parts.

CAN, USA and Int'l Models

1. Tighten muffler retaining bolts.

MUFFLER RETAINING BOLTS	
Tightening torque	24.5 N•m ± 3.5 N•m (18 lbf•ft ± 3 lbf•ft)

2. Install front and rear head pipes to cylinder heads. Finger tight retaining nuts.

NOTICE During front head pipe installation, a minimum gap of 10 mm (3/8 in) between head pipe and frame must be kept. Use any M10 or M12 screw as a gauge.

3. Insert the front head pipe hook into the rubber bushing.
4. Install the muffler inlet elbow to the muffler using the clamp. Tighten clamp just enough to be able to rotate the elbow.
5. Position the "Y" exhaust pipe by installing gaskets (3x), springs (12x) and inserting the hanger rod into rubber support.
6. Align front and rear head pipes, "Y" exhaust pipe and inlet elbow.

NOTE: During the alignment of pipes, make sure to keep joints all with springs straight as possible, however a slight angle is allowed.

7. Tighten head pipe nuts.

HEAD PIPE NUTS	
Tightening torque	13 N•m ± 1 N•m (115 lbf•**in** ± 9 lbf•**in**)

8. Tighten the muffler extension pipe clamp.

MUFFLER EXTENSION PIPE CLAMP	
Tightening torque	35 N•m ± 2 N•m (26 lbf•ft ± 1 lbf•ft)

CE Models

1. Tighten muffler retaining bolts.

MUFFLER RETAINING BOLTS	
Tightening torque	24.5 N•m ± 3.5 N•m (18 lbf•ft ± 3 lbf•ft)

2. Install front and rear head pipes to cylinder heads. Finger tight retaining nuts.

NOTICE During front head pipe installation, a minimum gap of 10 mm (3/8 in) between head pipe and frame must be kept. Use any M10 or M12 screw as a gauge.

3. Insert the front head pipe hook into the rubber bushing.
4. Position the "Y" exhaust pipe by installing gaskets (3x), springs (8x) and inserting the hanger rod into rubber support.
5. Align front and rear head pipes, "Y" exhaust pipe and inlet elbow.

NOTE: During the alignment of pipes, make sure to keep joints all with springs straight as possible, however a slight angle is allowed.

6. Tighten head pipe nuts.

HEAD PIPE NUTS	
Tightening torque	13 N•m ± 1 N•m (115 lbf•**in** ± 9 lbf•**in**)

LUBRICATION SYSTEM

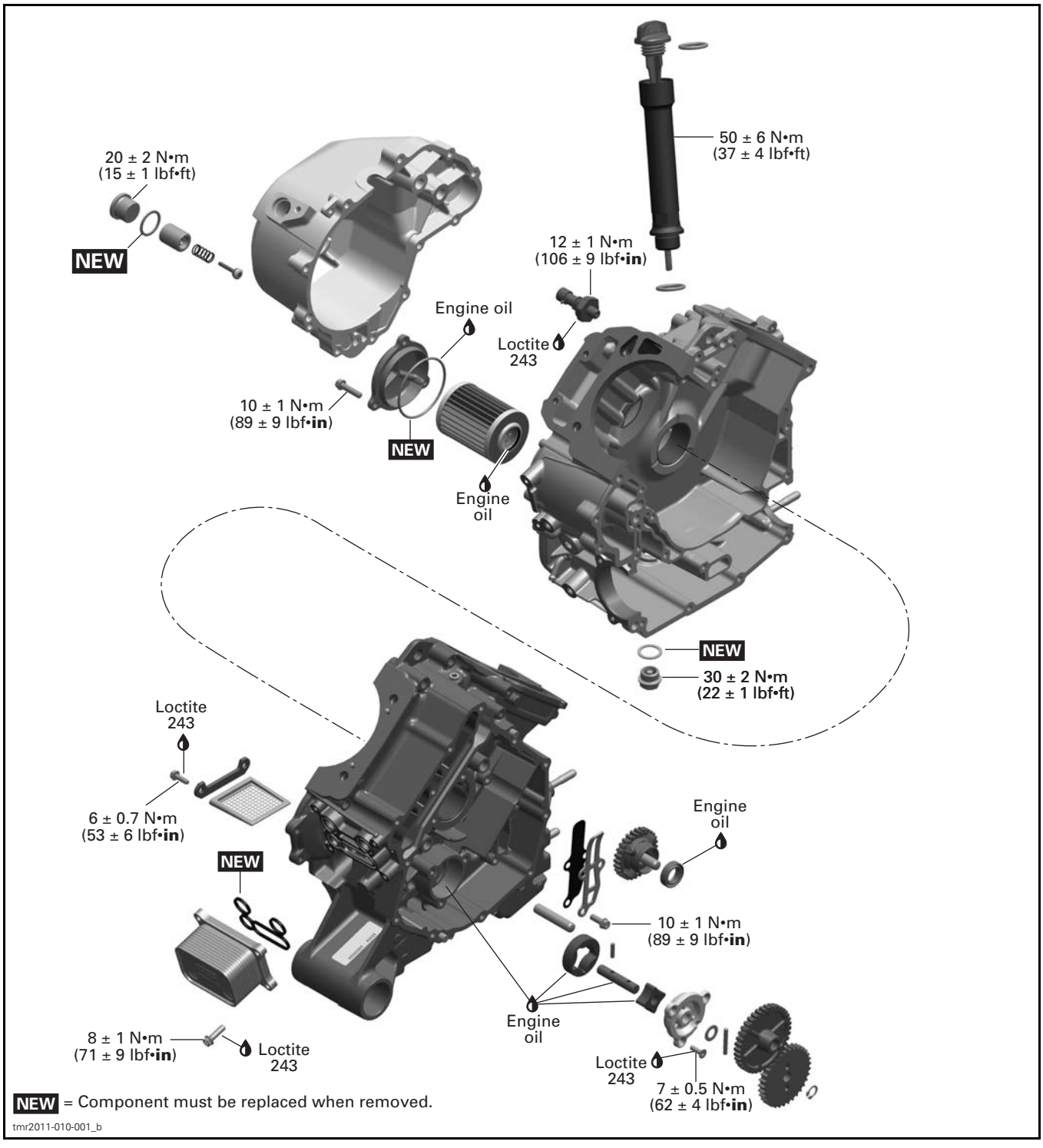
SERVICE TOOLS

Description	Part Number	Page
ADAPTER HOSE	529 035 652	54
DISCONNECT TOOL	529 035 714	54
PRESSURE GAUGE	529 035 709	54

SERVICE PRODUCTS

Description	Part Number	Page
LOCTITE 243 (BLUE)	293 800 060	56, 60

COMPONENTS



NEW = Component must be replaced when removed.

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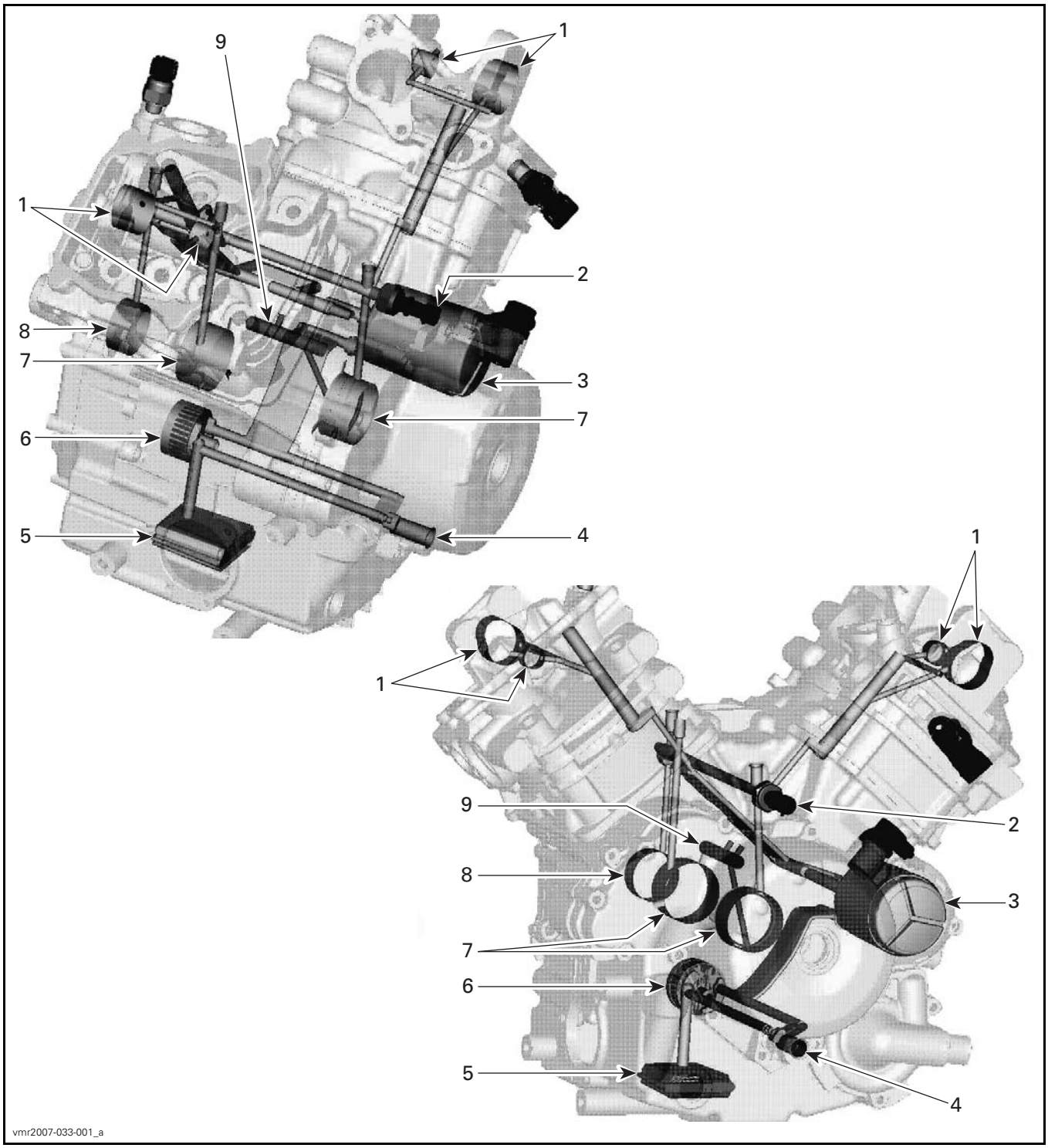
ENGINE LUBRICATION CIRCUIT



1. *Camshaft bearings*
2. *Oil pressure switch*
3. *Oil filter*
4. *Oil pressure regulator valve*
5. *Oil strainer*
6. *Oil pump*
7. *Crankshaft main bearings*
8. *Crankshaft support bearing*
9. *Connecting rod bearings*

INSPECTION

ENGINE OIL PRESSURE

NOTE: The engine oil pressure test should be done with a warm engine 100°C (212°F) and the recommended oil.

Remove the oil pressure switch. Refer to *OIL PRESSURE SWITCH* in this subsection.

Use the pressure gauge with the proper adapter hose.

REQUIRED TOOL	
PRESSURE GAUGE (P/N 529 035 709)	
ADAPTER HOSE (P/N 529 035 652)	

The engine oil pressure should be within the following values.

OIL PRESSURE	1250 RPM	6000 RPM
MINIMAL	70 kPa (10 PSI)	300 kPa (44 PSI)
NOMINAL	150 kPa (22 PSI)	350 kPa (51 PSI)
MAXIMAL	250 kPa (36 PSI)	450 kPa (65 PSI)

If the engine oil pressure is out of specifications, check the points described in *TROUBLESHOOTING* in this subsection.

Remove oil pressure gauge and adapter hose.

NOTE: To remove adapter hose from oil pressure gauge, use the disconnect tool.

REQUIRED TOOL	
DISCONNECT TOOL (P/N 529 035 714)	

Reinstall the oil pressure switch.

TROUBLESHOOTING

LOW OR NO OIL PRESSURE

1. Oil level is too low.
   - *Refill engine with recommended engine oil. Refer to OIL LEVEL VERIFICATION in the PERIODIC MAINTENANCE PROCEDURES subsection.*
   - *Check for high oil consumption, refer to HIGH OIL CONSUMPTION in the TROUBLESHOOTING subsection.*
   - *Check for engine oil leaks. For leak indicator hole, refer to COOLING SYSTEM INSPECTION in the PERIODIC MAINTENANCE PROCEDURES subsection. Repair if necessary.*
2. Use of unsuitable engine oil type.
   - *Replace engine oil by the recommended engine oil.*
3. Clogged oil filter.
   - *Replace oil and oil filter at the same time.*
4. Defective oil pressure switch.
   - *Test oil pressure switch, see procedure in this subsection.*
5. Defective or worn oil pump.
   - *Check oil pump, see procedure in this subsection.*
6. Defective engine oil pressure regulator.
   - *Check engine oil pressure regulator, see procedure in this subsection.*
7. Worn plain bearings in crankcase.
   - *Check plain bearings clearance, refer to BOTTOM END subsection.*
8. Clogged engine oil strainer.
   - *Clean engine oil strainer, see procedure in this subsection.*

OIL CONTAMINATION

1. Defective water pump seal ring or rotary seal.
   - *Check for oil or coolant leak from indicator hole near water pump, refer to COOLING SYSTEM INSPECTION in the PERIODIC MAINTENANCE PROCEDURES subsection. Replace seal if necessary.*
2. Cylinder head or cylinder base gasket leak.
   - *Retighten cylinder head to specified torque, refer to TOP END subsection. Replace gasket if tightening does not solve the problem.*
3. Engine internal damage.
   - *Repair engine.*
4. Oil cooler gasket leak.
   - *Replace oil cooler gasket and change engine oil.*

HIGH OIL CONSUMPTION

1. Leaking breather oil seal.
   - *Check if the oil seal of the breather is brittle, hard or damaged. Refer to BOTTOM END subsection.*
2. Valve stem seals worn or damaged.
   - *Replace valve stem seals.*
3. Worn piston rings (blue exhaust smoke).
   - *Replace piston rings.*

PROCEDURES

OIL COOLER

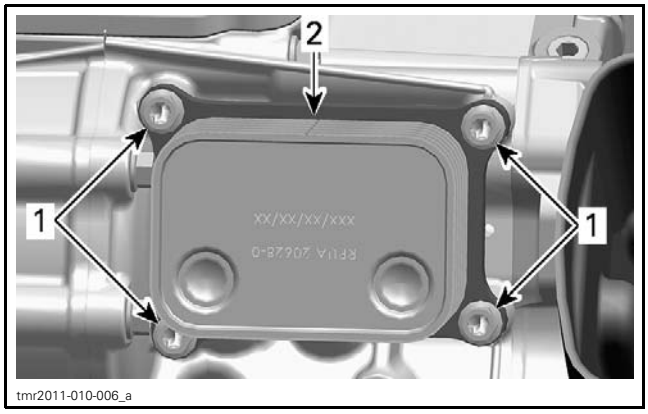
Oil Cooler Access

Refer to *BODY* and remove:
– Upper console
– Lower console
– RH lateral console panel
– RH inner panel
– Fuel tank cowl.

Oil Cooler Removal

Refer to the *PERIODIC MAINTENANCE PROCEDURES* subsection to:
– Drain engine oil.
– Drain engine coolant.

Remove oil cooler retaining screws.



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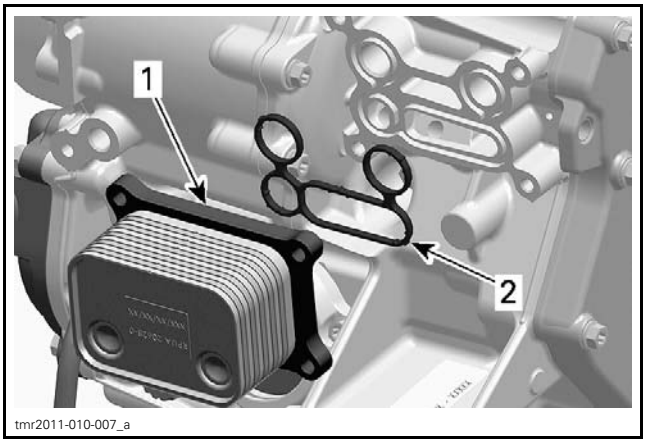
1. Retaining screws
2. Oil cooler

Place rags or towels under oil cooler to catch remaining oil and coolant.

Remove oil cooler and discard gasket.



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1. Oil cooler
2. Gasket

Oil Cooler Inspection

Check oil cooler for cracks or other damage.

Replace if necessary.

Oil Cooler Installation

For installation, reverse the removal procedure. Pay attention to the following details.

Wipe off any oil and coolant spillage.

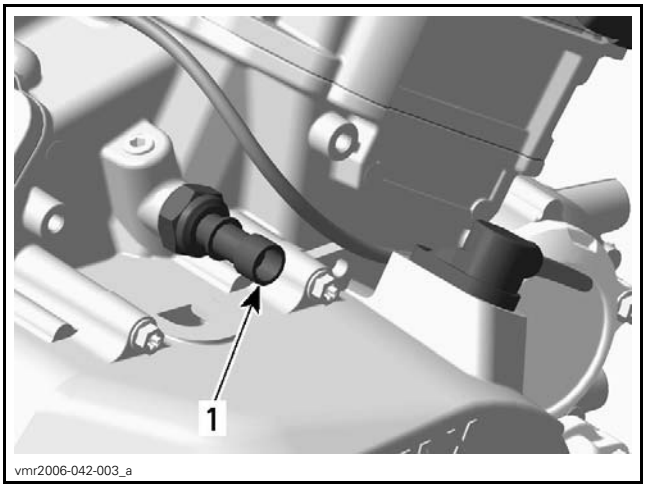
Install a NEW gasket.

Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection and carry out the following:
– Refill engine oil with recommended oil and at the proper oil lever.
– Refill and bleed cooling system.

OIL PRESSURE SWITCH (OPS)

Oil Pressure Switch Location

The oil pressure switch is located at engine MAG side above the magneto cover.



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1. Oil pressure switch

Oil Pressure Switch Access

Refer to *BODY* and remove:
- Upper console
- Lower console
- RH lateral console panel
- RH inner panel
- Fuel tank cowl.

Oil Pressure Switch Activation

The oil pressure switch activates when the engine oil pressure is lower than the operating pressure.

OIL PRESSURE SWITCH OPERATING PRESSURE
30 kPa ± 10 kPa (4.35 PSI ± 1.45 PSI)

To check the function of the oil pressure switch, an oil pressure test has to be performed. Refer to *ENGINE OIL PRESSURE* in this subsection.

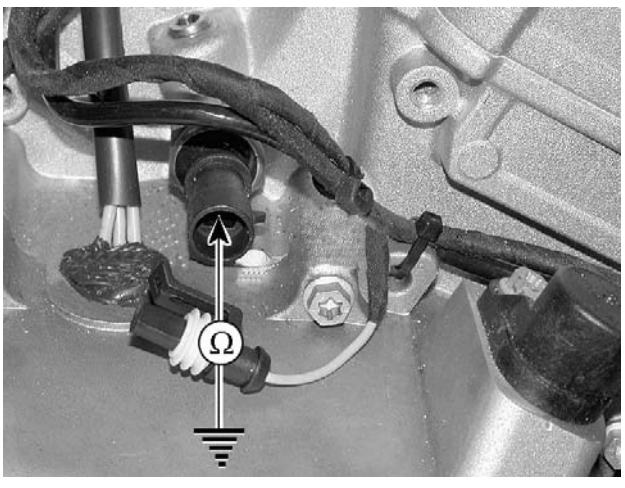
If the engine oil pressure is good perform the oil pressure switch resistance test.

Oil Pressure Switch Resistance Test

Disconnect the connector from the oil pressure switch.

Use a multimeter to check the resistance between as shown.

OPS CONNECTOR		ENGINE NOT RUNNING	ENGINE RUNNING
PIN		RESISTANCE (Ω)	
4	Engine ground	Close to 0 Ω (normally closed switch)	Infinite (open) when pressure reaches 30 kPa ± 10 kPa (4.35 PSI ± 1.45 PSI)



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If resistance values are incorrect, replace the oil pressure switch.

If the values are correct, check wiring.

Oil Pressure Switch Removal

Unplug the oil pressure switch connector.

Unscrew and remove oil pressure switch.

Oil Pressure Switch Installation

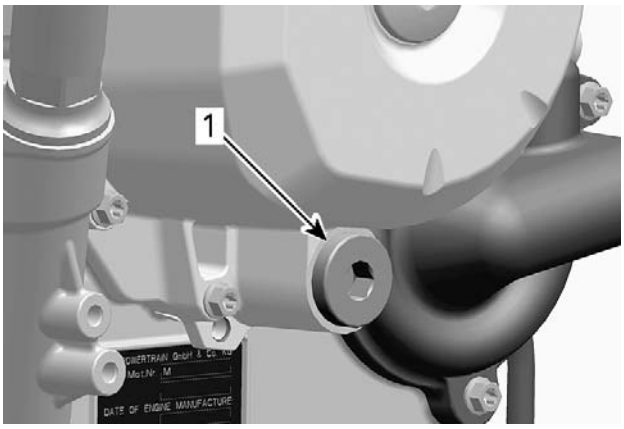
Tighten oil pressure switch to specified torque.

OIL PRESSURE SWITCH	
Service product	LOCTITE 243 (BLUE) (P/N 293 800 060)
Tightening torque	12 N•m ± 1 N•m (106 lbf•**in** ± 9 lbf•**in**)

ENGINE OIL PRESSURE REGULATOR

Oil Pressure Regulator Location

The oil pressure regulator is located on the engine magneto side (inside magneto cover).



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1. Engine oil pressure regulator

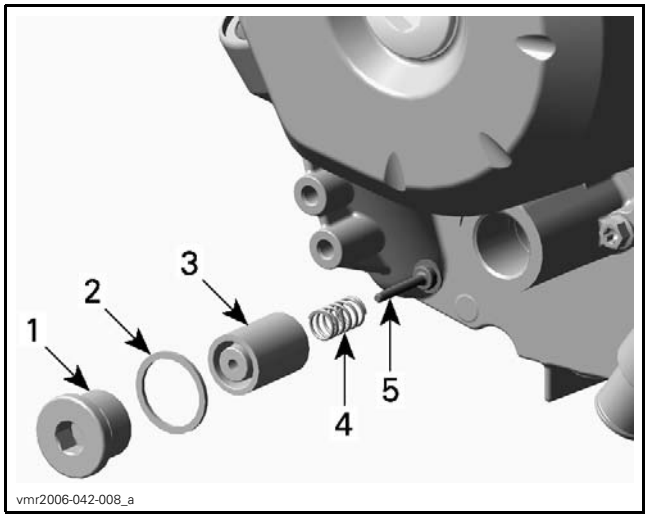
NOTE: The oil pressure regulator system works when the oil pressure exceeds 400 kPa (58 PSI).

Oil Pressure Regulator Access

Refer to *BODY* and remove:
- Upper console
- Lower console
- RH lateral console panel
- RH inner panel
- Fuel tank cowl.

Oil Pressure Regulator Removal

Remove plug screw and pull oil pressure regulator out.



1. *Plug screw*
2. *Gasket ring*
3. *Pressure regulator housing*
4. *Spring*
5. *Pressure regulator valve*

Oil Pressure Regulator Inspection

Inspect pressure regulator housing and valve for scoring or other damages.

Check spring for free length.

SPRING FREE LENGTH	
NEW NOMINAL	39 mm (1.535 in)
SERVICE LIMIT	37 mm (1.457 in)

NOTE: Replace worn or damaged components.

Clean bore and thread in the magneto housing from metal shavings and other contaminations.

Oil Pressure Regulator Installation

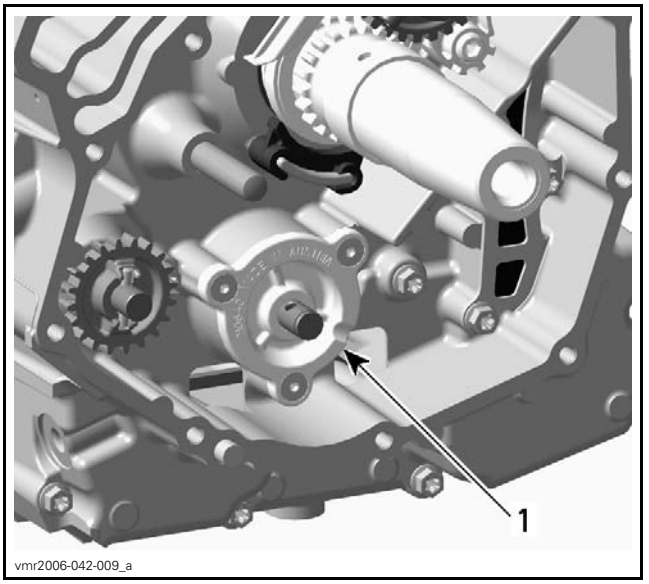
For installation, reverse the removal procedure. Pay attention to the following details.

NOTE: At installation always replace the gasket ring of the plug screw by a new one.

OIL PUMP

Oil Pump Location

The oil pump is located on the engine PTO side (behind PTO cover).

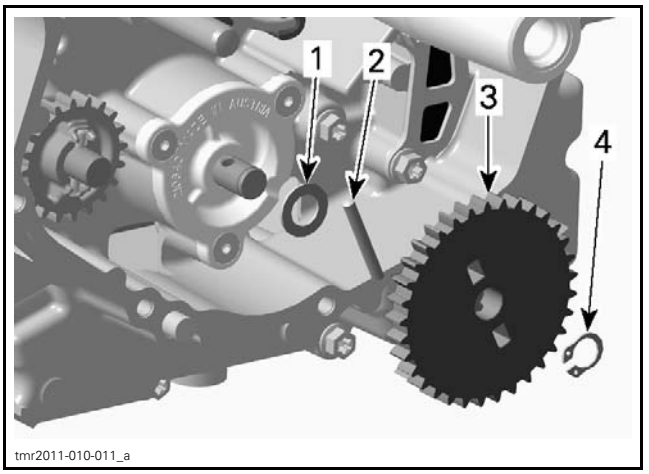


1. *Oil pump*

Oil Pump Removal

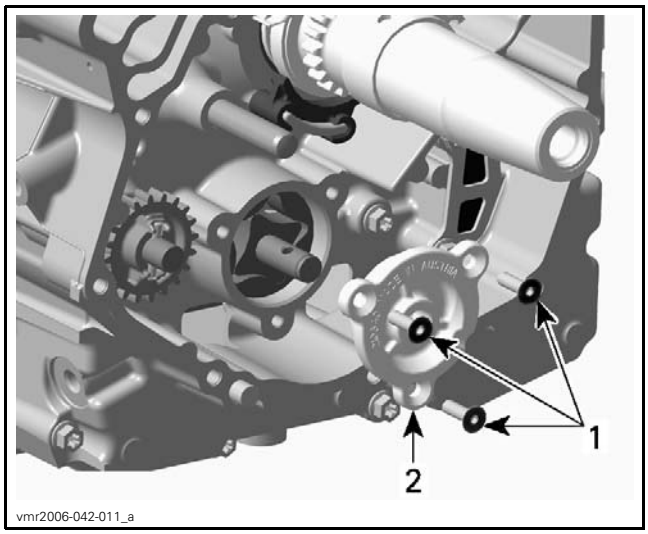
Remove the PTO cover. Refer to *PTO COVER* in the *BOTTOM END* subsection.

1. Remove:
   - Retaining ring
   - Oil pump gear
   - Needle pin
   - Thrust washer.



1. *Thrust washer*
2. *Needle pin*
3. *Oil pump gear*
4. *Retaining ring*

2. Remove oil pump cover screws and pull oil pump cover out.



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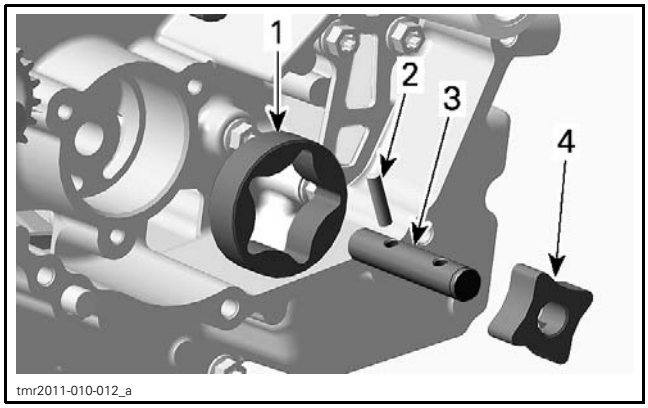
1. Retaining screws
2. Oil pump cover

3. Remove oil pump shaft with needle pin and inner rotor.
4. Remove outer rotor.



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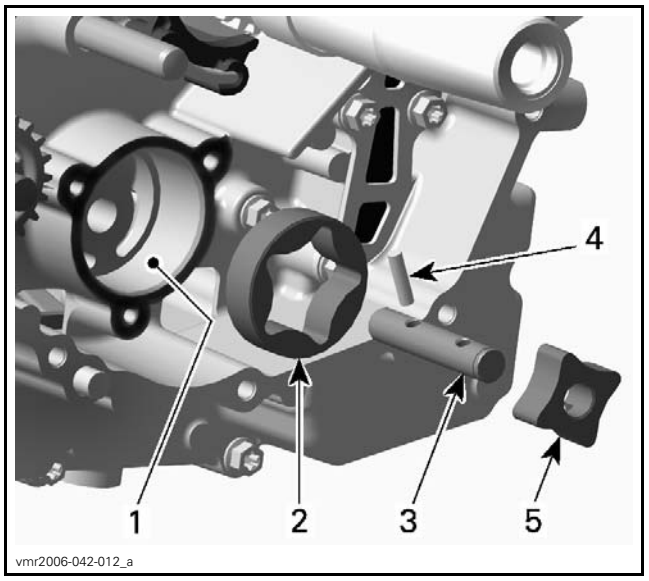
1. Outer rotor
2. Needle pin
3. Oil pump shaft
4. Inner rotor

Oil Pump Inspection

Inspect oil pump and oil pump cover bore for marks, scratches or other damages. Check for scratches in crankcase between outer rotor and oil pump bore. If so, replace damaged parts.

Check oil pump cover for damages and for surface straightness with a straightedge.



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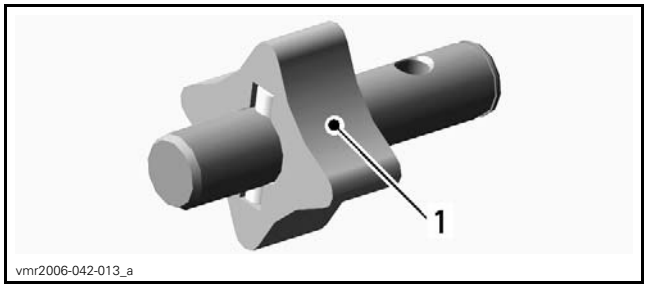
1. Oil pump bore
2. Outer rotor
3. Oil pump shaft
4. Needle pin
5. Inner rotor

Check inner rotor for corrosion pin holes or other damages. If so, replace oil pump shaft assembly.



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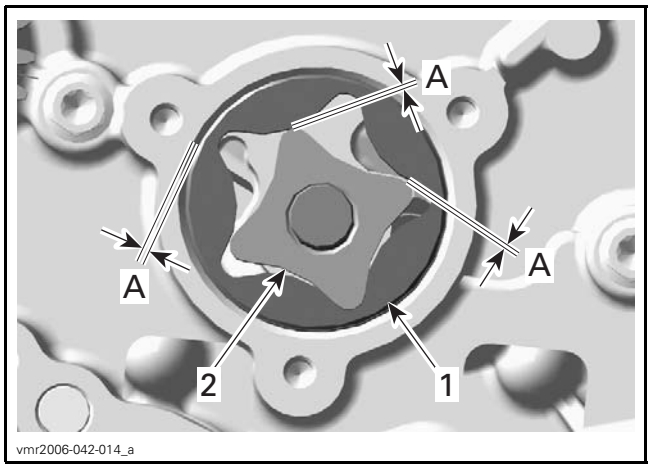
1. Pittings on the teeth

Using a feeler gauge, measure the clearance of inner and outer rotors as shown.

CLEARANCE OF INNER AND OUTER ROTOR	
SERVICE LIMIT	0.25 mm (.0098 in)

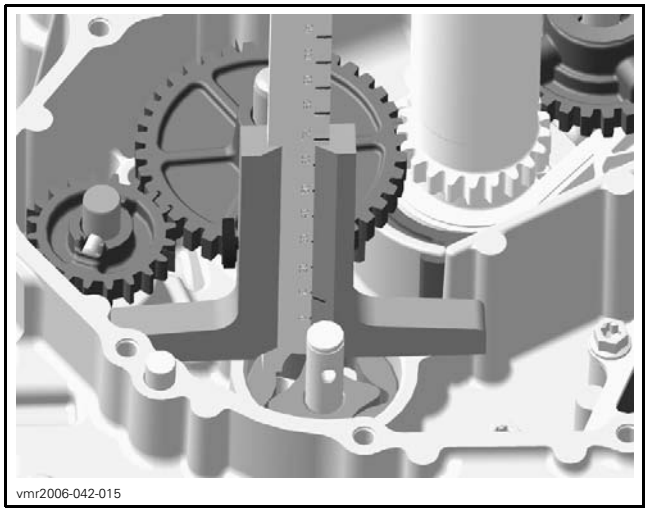


1. Outer rotor
2. Inner rotor
A. 0.25 mm (.0098 in)

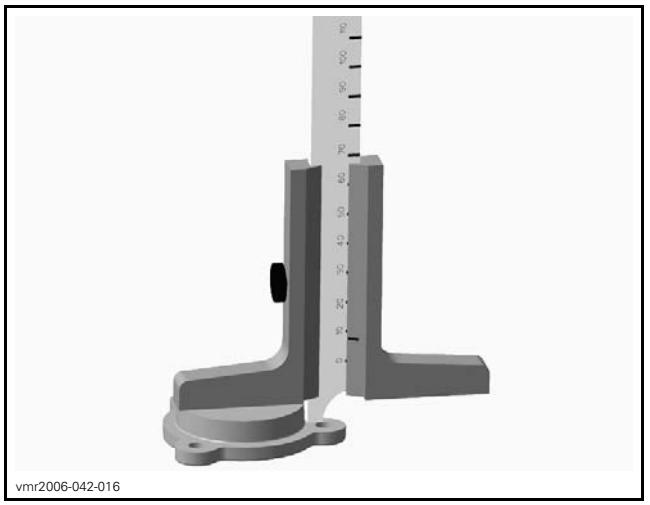
If clearance of inner and outer rotors exceeds the tolerance, replace oil pump rotors. Ensure to also check oil pump cover. If damaged, replace the complete oil pump assembly.

If clearance between outer rotor and its bore in crankcase exceeds the tolerance, replace the complete oil pump rotors and/or the crankcase.

Using a depth gauge, measure the axial clearance of the oil pump as shown.



OIL PUMP — MEASUREMENT "A"



OIL PUMP COVER — MEASUREMENT "B"

Substract measurement "B" from measurement "A" to obtain axial clearance.

OIL PUMP AXIAL CLEARANCE	
SERVICE LIMIT	0.2 mm (.0079 in)

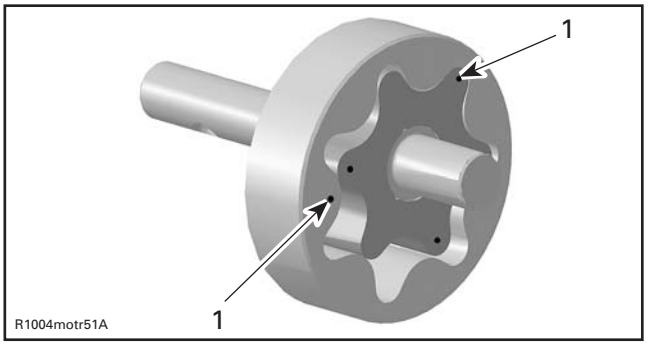
NOTE: When the axial clearance of the oil pump shaft assembly increases, the oil pressure decreases.

Oil Pump Installation

For installation, reverse the removal procedure.

Pay attention to the following details.

NOTE: When installing the oil pump rotors, make sure both markings are on the outer side.



TYPICAL
1. Markings

After reinstallation of the remaining parts, check for smooth operation of the oil pump assembly.

Oil Pump Final Test

After engine is completely reassembled, start engine and make sure oil pressure is within specifications (refer to *ENGINE OIL PRESSURE* in this subsection).

ENGINE OIL STRAINER

Oil Strainer Location

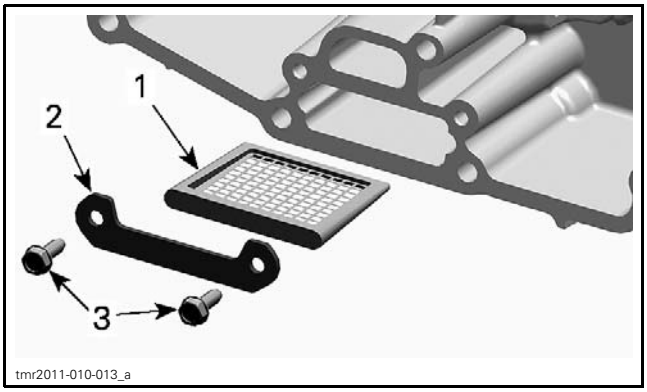
The engine oil strainer is located between both crankcase halves.

Oil Strainer Removal

Separate crankcase halves. Refer to *BOTTOM END* subsection.

Remove screws and retaining plate.

Pull out engine oil strainer.



1. Engine oil strainer
2. Retaining plate
3. Screws

Oil Strainer Cleaning and Inspection

Clean engine oil strainer with a part cleaner then use an air gun to dry it.

⚠ WARNING

Always wear eye protector. Chemicals can cause a rash break out and injure your eyes.

Check engine oil strainer for cracks or other damage. Replace if damaged.

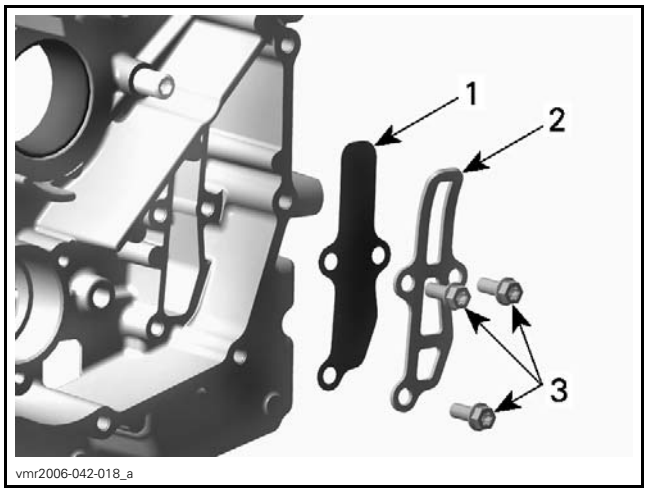
Oil Strainer Installation

The installation is the reverse of the removal procedure.

OIL STRAINER RETAINING SCREWS	
Service product	LOCTITE 243 (BLUE) (P/N 293 800 060)
Tightening torque	6 N•m ± 0.7 N•m (53 lbf•**in** ± 6 lbf•**in**)

REED VALVE

The engine is equipped with a reed valve which prevents accumulation of larger oil quantities in the crankcase. The reed valve is fitted into the crankcase.



1. Reed valve
2. Stopper
3. Screws

Reed Valve Removal

Remove:

– PTO cover (refer to *PTO COVER* in the *BOTTOM END* subsection)
– Reed valve retaining screws
– Stopper plate
– Reed valve.

Reed Valve Inspection

Check reed valve for cracks or other damage.

Replace reed valve if damaged.

Reed Valve Installation

The installation is the reverse of the removal procedure.

REED VALVE RETAINING SCREWS	
Tightening torque	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

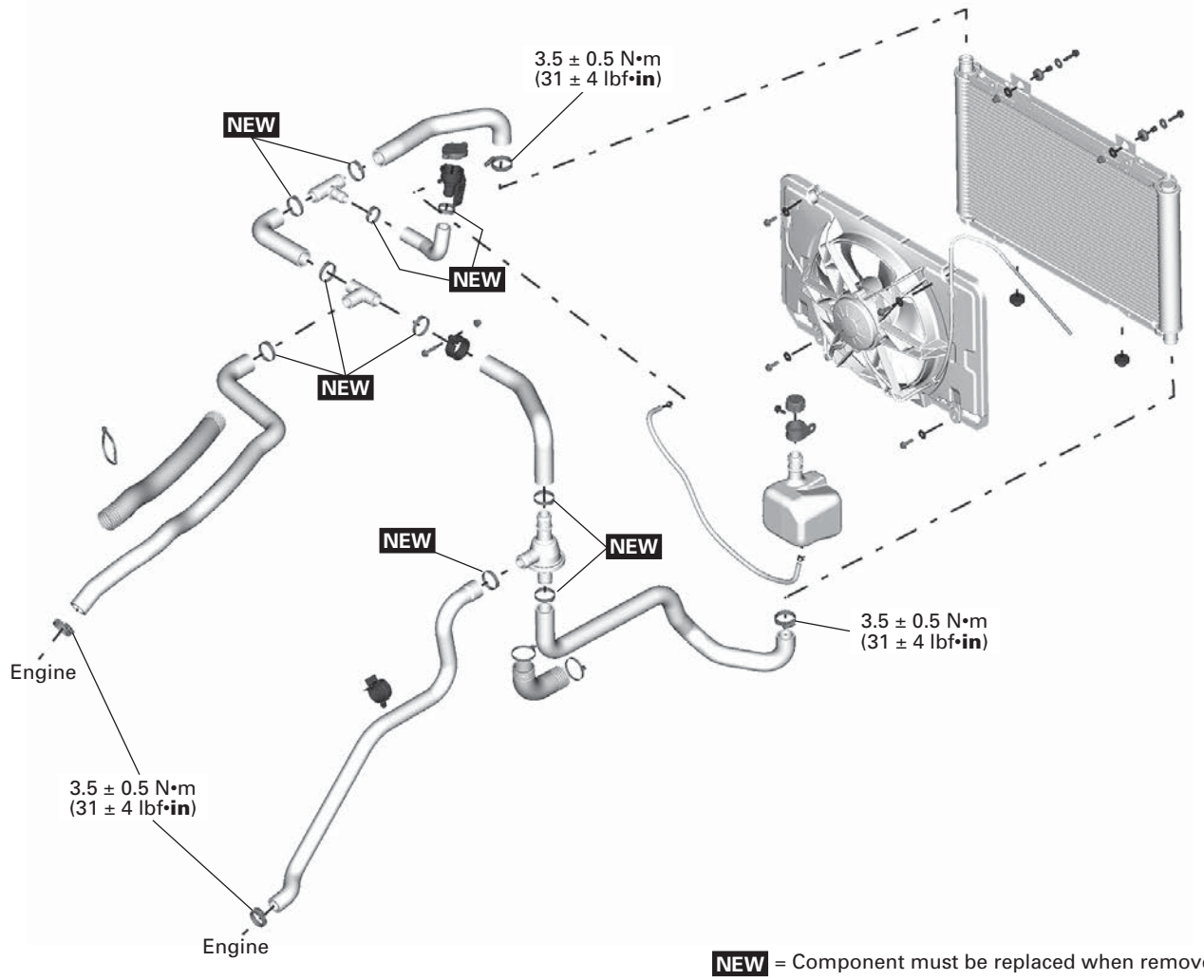
COOLING SYSTEM

All Commander 1000

Thermostat housing moved up to avoid contact with new DPS.

New coolant hoses.

RADIATOR



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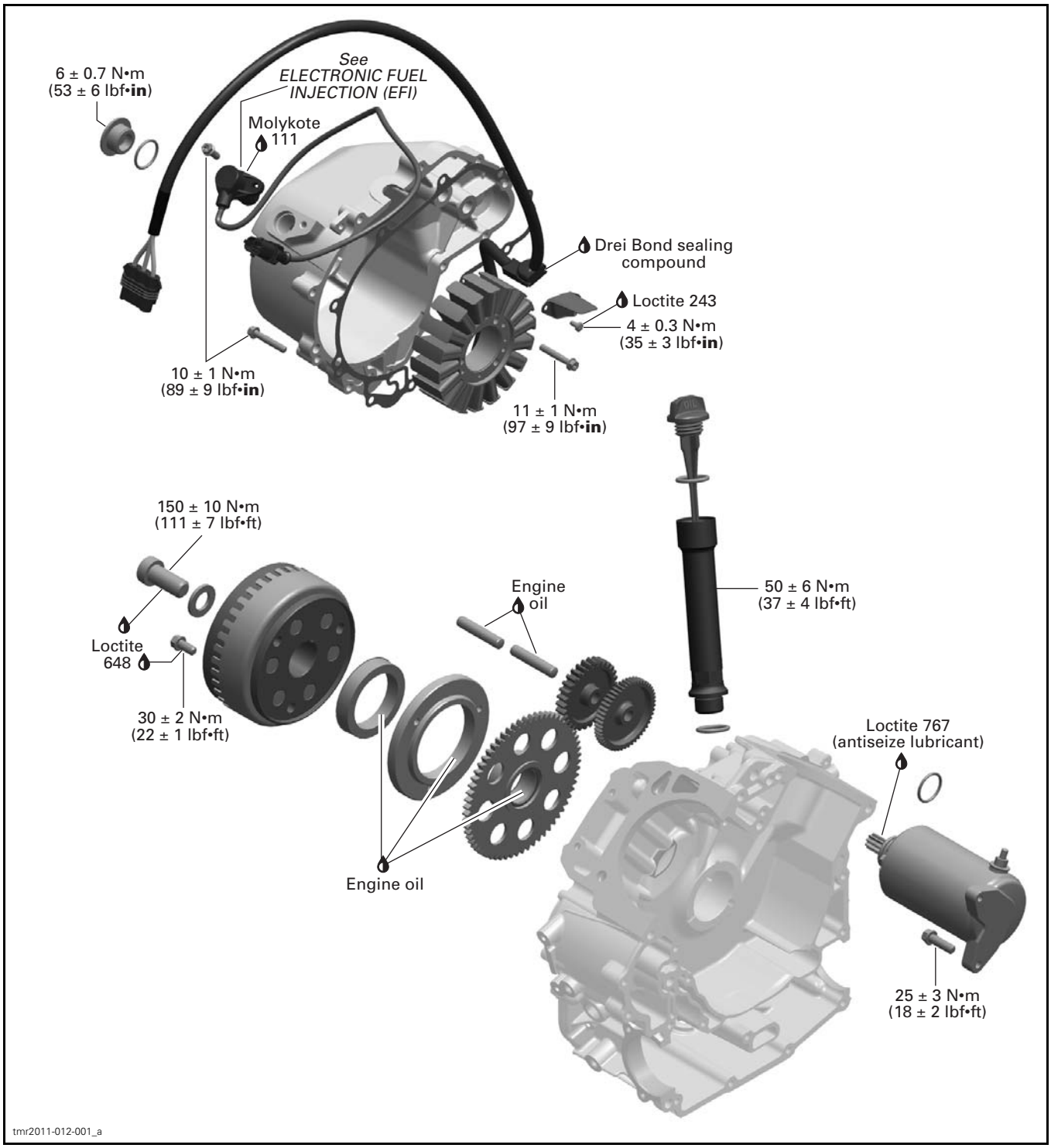
MAGNETO SYSTEM

SERVICE TOOLS

Description	Part Number	Page
BACK PROBE TEST WIRES	529 036 063	87
CRANKSHAFT LOCKING BOLT	529 035 617	88
CRANKSHAFT PROTECTOR	529 036 034	88
FLUKE 115 MULTIMETER	529 035 868	86–87
MAGNETO PULLER	529 035 748	88

SERVICE PRODUCTS

Description	Part Number	Page
DREI BOND SEALING COMPOUND	420 297 906	85
LOCTITE 243 (BLUE)	293 800 060	88
LOCTITE 648 (GREEN)	413 711 400	89–90
LOCTITE 767 (ANTISEIZE LUBRICANT)	293 800 070	91
LOCTITE CHISEL (GASKET REMOVER)	413 708 500	85
PULLEY FLANGE CLEANER	413 711 809	89


6 ± 0.7 N•m
(53 ± 6 lbf•in)
See
ELECTRONIC FUEL
INJECTION (EFI)
Molykote
111
Drei Bond sealing
compound
Loctite 243
4 ± 0.3 N•m
(35 ± 3 lbf•in)
10 ± 1 N•m
(89 ± 9 lbf•in)
11 ± 1 N•m
(97 ± 9 lbf•in)
150 ± 10 N•m
(111 ± 7 lbf•ft)
Loctite
648
30 ± 2 N•m
(22 ± 1 lbf•ft)
Engine
oil
50 ± 6 N•m
(37 ± 4 lbf•ft)
Loctite 767
(antiseize lubricant)
Engine oil
25 ± 3 N•m
(18 ± 2 lbf•ft)
tmr2011-012-001_a

PROCEDURES

MAGNETO COVER

Magneto Cover Access

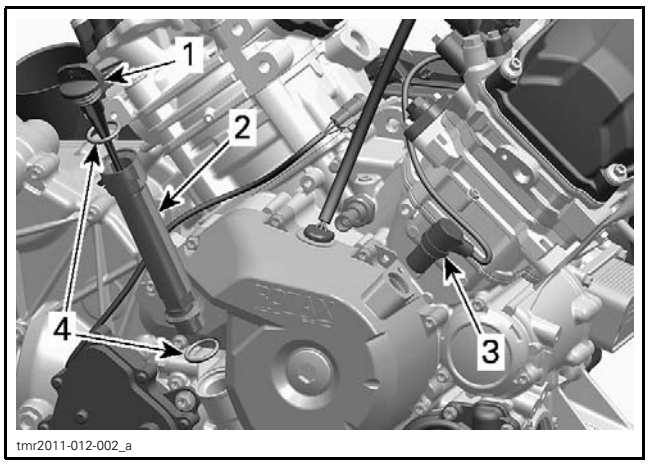
Remove fuel tank, refer to *FUEL TANK AND FUEL PUMP*.

Magneto Cover Removal

Drain engine oil (refer to *PERIODIC MAINTENANCE PROCEDURES* subsection).

Remove crankshaft position sensor (CPS) and cut tie raps.

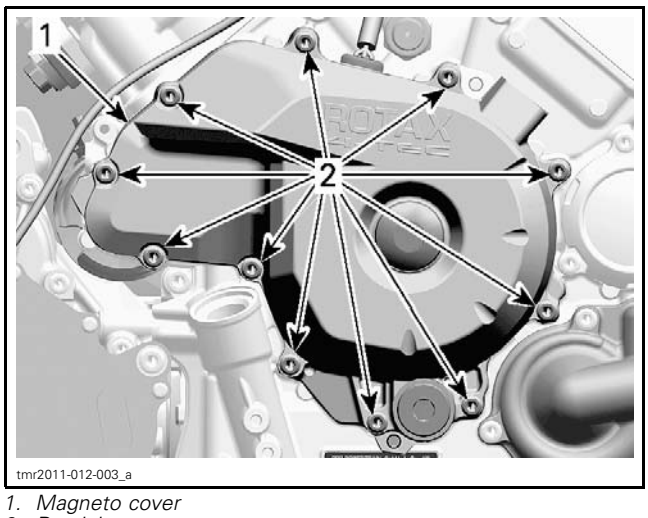
Remove dipstick and oil level tube with O-rings.



tmr2011-012-002_a

1. Dipstick
2. Oil level tube
3. Crank position sensor (CPS)
4. O-rings

Remove magneto cover retaining screws.



tmr2011-012-003_a

1. Magneto cover
2. Retaining screws

Pull out magneto cover.

NOTE: If required, remove stator and harness from magneto cover.

Magneto Cover Inspection and Cleaning

Check magneto cover for cracks or other damage. Replace if necessary.

NOTE: Clean all metal components in a non-ferrous metal cleaner. Use LOCTITE CHISEL (GASKET REMOVER) (P/N 413 708 500), or suitable equivalent.

⚠ WARNING

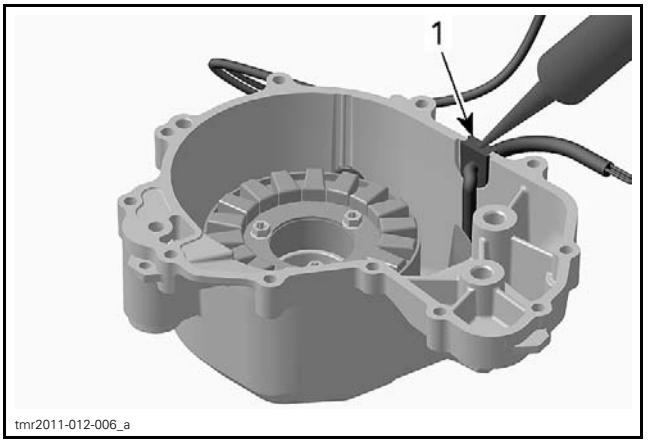
Wear safety glasses and work in a well ventilated area when working with strong chemical products. Also wear suitable non-absorbent gloves to protect your hands.

Magneto Cover Installation

For installation, reverse the removal procedure. However, pay attention to the following.

NOTE: Install a NEW magneto cover gasket.

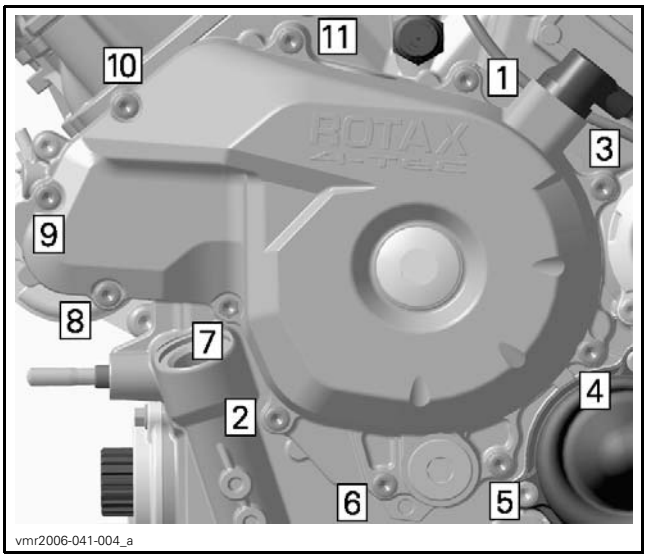
Apply DREI BOND SEALING COMPOUND (P/N 420 297 906) on stator cable grommet as shown in next illustration.



tmr2011-012-006_a

1. Stator cable grommet (apply Drei Bond sealing compound)

Tighten screws using the following sequence.



TIGHTENING SEQUENCE

MAGNETO COVER SCREWS	
Tightening torque	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

Refill engine with recommended oil.

STATOR

Stator Connector Access

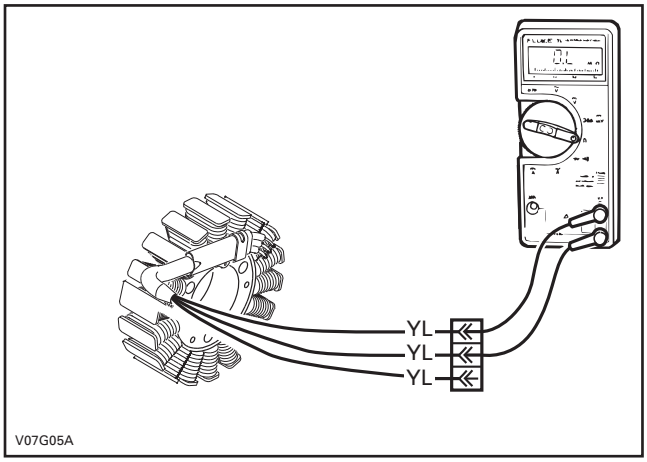
NOTE: The stator is directly connected to the voltage regulator/rectifier.

Stator Static Test: Continuity

1. Disconnect the stator connector from the voltage regulator/rectifier.
2. Check resistance between YELLOW wires.

REQUIRED TOOL	
FLUKE 115 MULTIMETER (P/N 529 035 868)	

TERMINAL	RESISTANCE @ 20°C (68°F)
1 and 2	0.15 - 0.30 Ω
1 and 3	
2 and 3	



TYPICAL

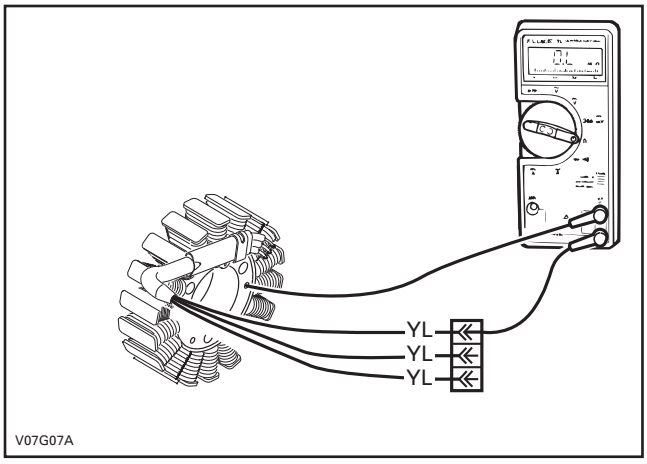
3. If any reading is out of specification, replace stator.
4. Re-plug connectors properly.

Stator Static Test: Insulation

1. Disconnect the stator connector from the voltage regulator/rectifier.
2. Connect multimeter between any YELLOW wire (on stator connector) and engine ground.

REQUIRED TOOL	
FLUKE 115 MULTIMETER (P/N 529 035 868)	

TEST PROBES	RESISTANCE @ 20°C (68°F)
Any YELLOW wire and engine ground	Infinite (open circuit)



TYPICAL

3. If there is a resistance or continuity, the stator coils and/or the wiring is shorted to ground and needs to be repaired or replaced.
4. Re-plug connectors properly.

Stator Dynamic Test: AC Voltage Output

1. Disconnect stator connector at voltage regulator/rectifier.
2. Start engine.
3. Check AC voltage output as follow:

REQUIRED TOOL	
BACK PROBE TEST WIRES (P/N 529 036 063)	
FLUKE 115 MULTIMETER (P/N 529 035 868)	

4. Read voltage as per following table.

TEST ENGINE SPEED	TERMINAL	VOLTAGE
4000 RPM	1 and 2	15 Vac MINIMUM
	1 and 3	
	2 and 3	

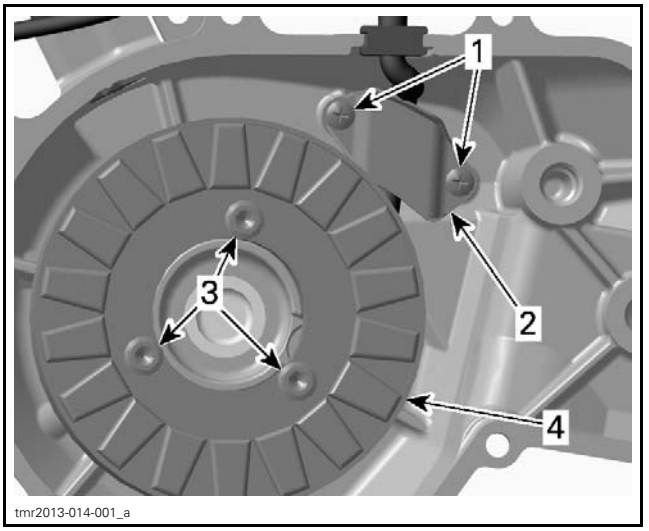
5. If voltage is lower than specification, replace stator.
6. Re-plug connectors properly.

Stator Removal

Remove *MAGNETO COVER*. See procedure in this subsection.

Remove screws securing the wire holding strip.

Remove stator retaining screws then the stator.



tmr2013-014-001_a

1. Holding strip screws
2. Wire holding strip
3. Stator retaining screws
4. Stator

Stator Inspection

Check stator windings and insulation for cracks or other damages. If damaged replace it.

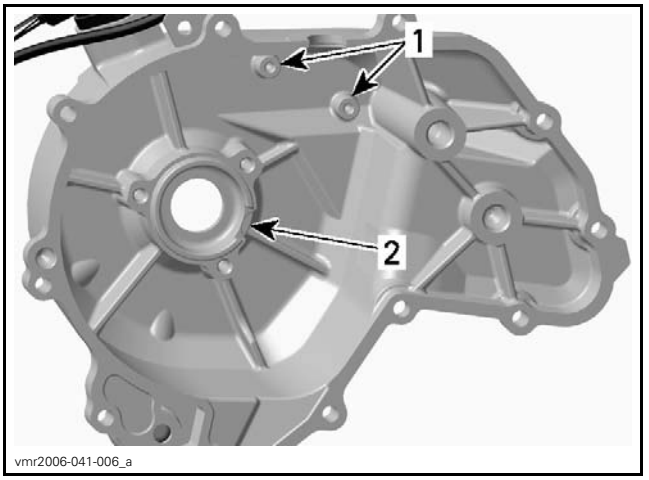
Check if stator wires are brittle, hard or otherwise damaged.

Stator Installation

For installation, reverse the removal procedure. However, pay attention to the following.

NOTICE **When installing the stator take care to route wires properly and install retaining strip.**

NOTE: There is only one position for the stator (notch in the magneto housing cover).



vmr2006-041-006_a

1. Threads for cable holding strip
2. Notch for stator

HOLDING STRIP SCREWS	
Service product	LOCTITE 243 (BLUE) (P/N 293 800 060)
Tightening torque	4 N•m ± 0.5 N•m (35 lbf•**in** ± 4 lbf•**in**)

STATOR RETAINING SCREWS	
Tightening torque	11 N•m ± 1 N•m (97 lbf•**in** ± 9 lbf•**in**)

ROTOR

Rotor Removal

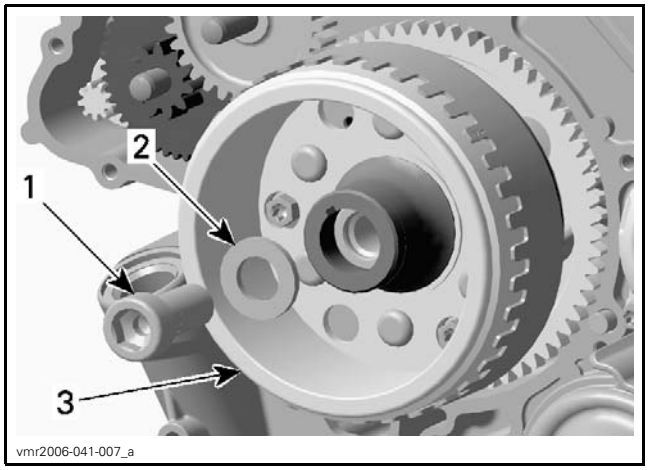
Remove *MAGNETO COVER*. See procedure in this subsection.

Lock crankshaft (refer to *CRANKSHAFT LOCKING PROCEDURE* in the *BOTTOM END* subsection).

REQUIRED TOOL	
CRANKSHAFT LOCKING BOLT (P/N 529 035 617)	

Heat screw in order to break the Loctite.

Remove screw and washer securing rotor to crankshaft.

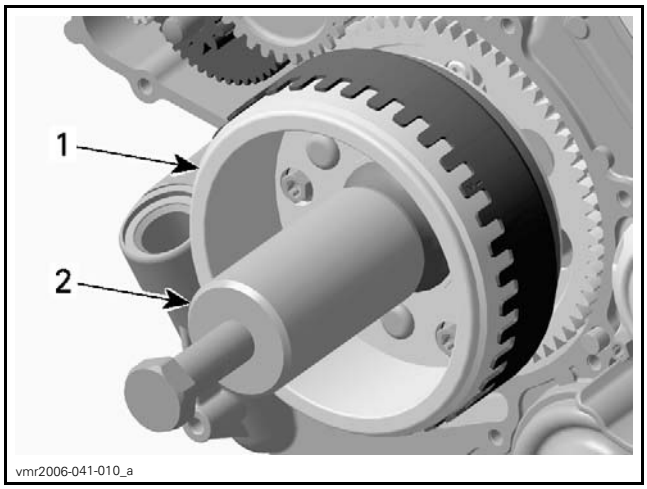


1. Screw M16
2. Washer
3. Rotor

Remove rotor.

REQUIRED TOOL	
MAGNETO PULLER (P/N 529 035 748)	
CRANKSHAFT PROTECTOR (P/N 529 036 034)	

NOTE: Use grease to place protector on crankshaft end prior to screw on the magneto puller.



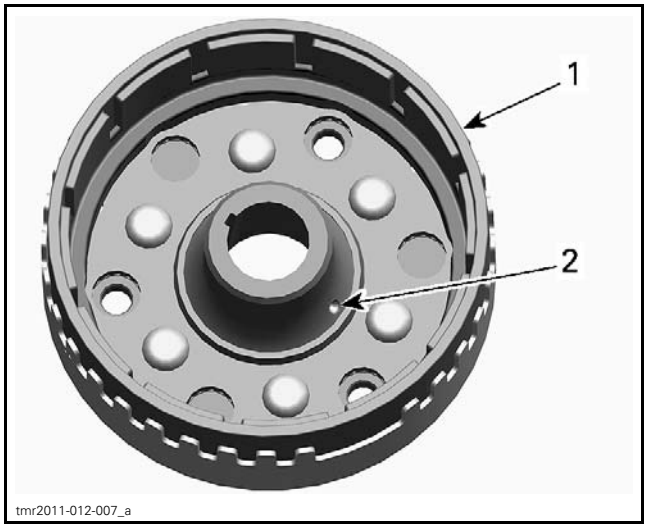
1. Rotor
2. Magneto puller

Screw magneto puller bolt to remove rotor.

Rotor Inspection

Check inner side of rotor for scratches or other damage.

Blow pressurized air in the rotor oil bore and make sure it is not clogged.



1. Rotor
2. Oil bore

Check keyway of the rotor for wear or damages.

Check if trigger wheel teeth are bent or otherwise damaged.

Check woodruff key and keyway on the crankshaft for wear or damages.

Replace parts as necessary.

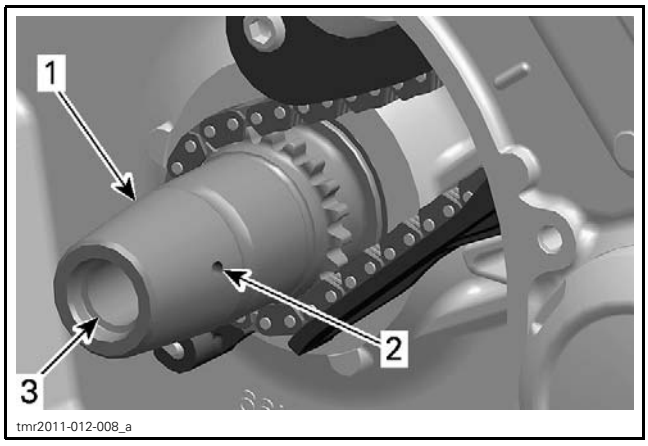
Rotor Installation

For installation, reverse the removal procedure. However, pay attention to the following.

Use PULLEY FLANGE CLEANER (P/N 413 711 809) to clean following:

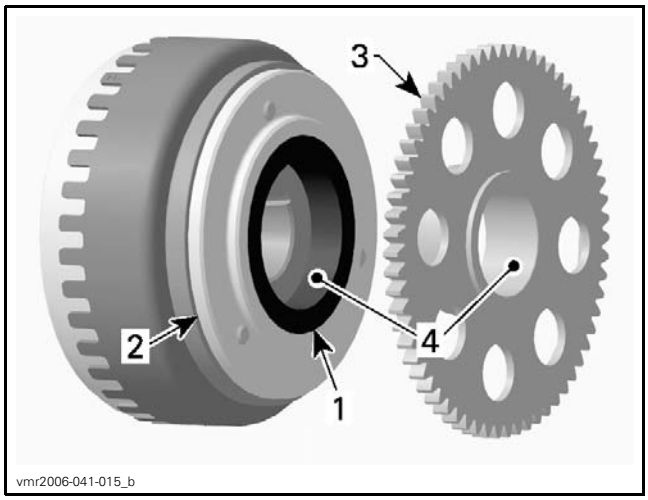
– Crankshaft taper
– Oil passage in crankshaft taper
– Thread in crankshaft
– Rotor taper
– Oil bore in rotor.

NOTICE Taper on crankshaft and rotor must be free of grease.



1. Crankshaft (MAG side)
2. Oil passage
3. Threads

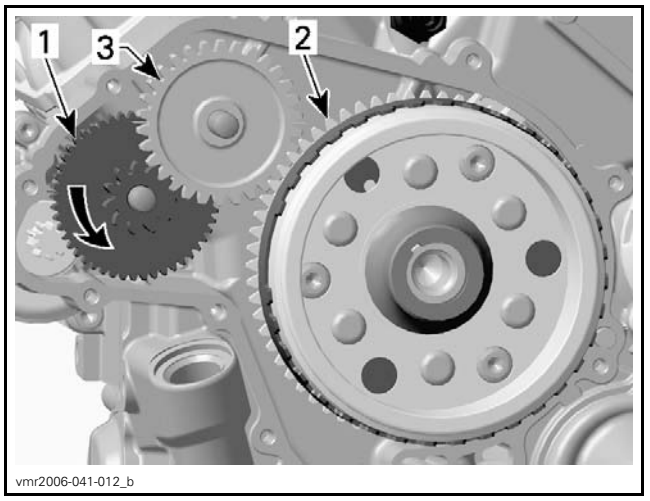
Oil sprag clutch and install sprag clutch gear.



1. Sprag clutch
2. Sprag clutch housing
3. Sprag clutch gear
4. Apply engine oil here

Slide rotor onto crankshaft. The woodruff key and the keyway must be aligned.

Rotate starter double gear counterclockwise to align intermediate gear teeth with sprag clutch gear.



1. Starter double gear
2. Sprag clutch gear
3. Intermediate gear

ROTOR RETAINING SCREW	
Service product	LOCTITE 648 (GREEN) (P/N 413 711 400)
Tightening torque	150 N•m ± 10 N•m (111 lbf•ft ± 7 lbf•ft)

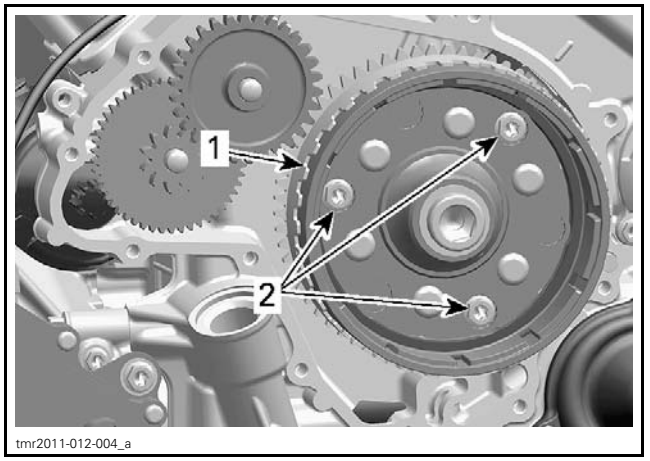
SPRAG CLUTCH

Sprag Clutch Removal

Remove *MAGNETO COVER*. See procedure in this subsection.

Heat screws in order to break the Loctite.

Loosen sprag clutch housing screws located inside rotor.

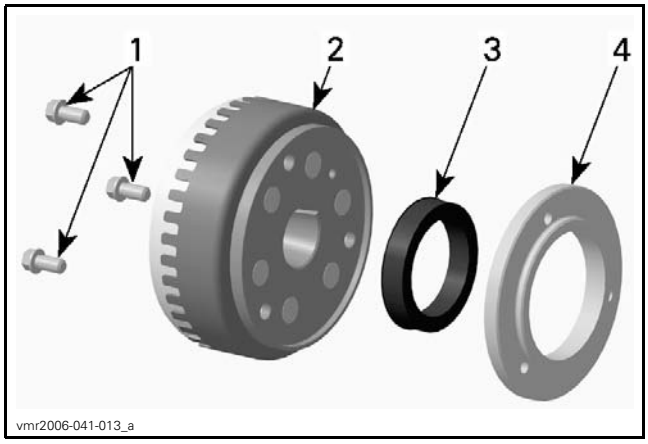


1. Rotor
2. Sprag clutch housing screws

Remove rotor (refer to *ROTOR* in this subsection).

Remove sprag clutch gear.

Remove sprag clutch housing screws and sprag clutch housing.



1. *Sprag clutch housing screws*
2. *Rotor*
3. *Sprag clutch*
4. *Sprag clutch housing*

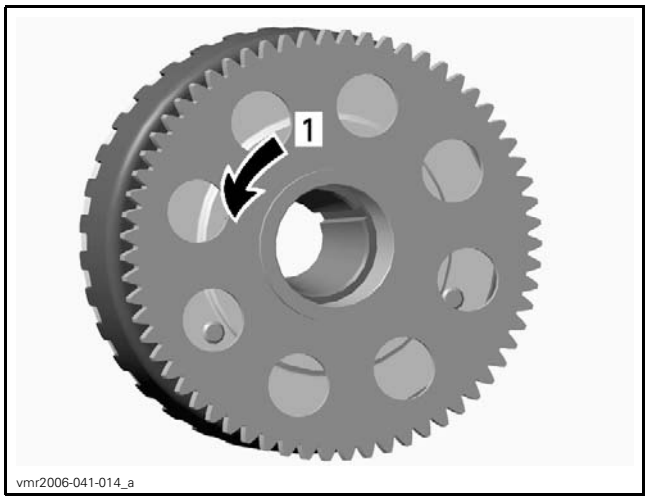
Sprag Clutch Inspection

Inspect sprag clutch and sprag clutch housing for wear and damage.

Also check the collar of the sprag clutch gear.

Rotate sprag clutch gear in sprag clutch.

NOTE: Sprag clutch must lock in counterclockwise direction.



SPRAG CLUTCH FUNCTIONAL TEST
1. *Lock*

NOTE: Sprag clutch, housing and gear must be replaced at the same time, if damaged.

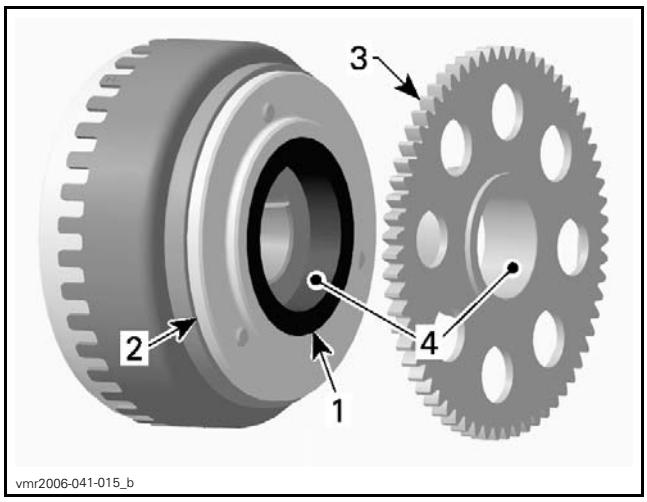
Sprag Clutch Installation

For installation, reverse the removal procedure. Pay attention to the following details.

Apply LOCTITE 648 (GREEN) (P/N 413 711 400) on threads of sprag clutch housing screws.

Install screws but do not torque yet.

Apply engine oil on sprag clutch and sprag clutch gear needle bearing.



1. *Sprag clutch*
2. *Sprag clutch housing*
3. *Sprag clutch gear*
4. *Apply engine oil here*

Install rotor, refer to *ROTOR* in this subsection.

Tighten sprag clutch housing screws to specification.

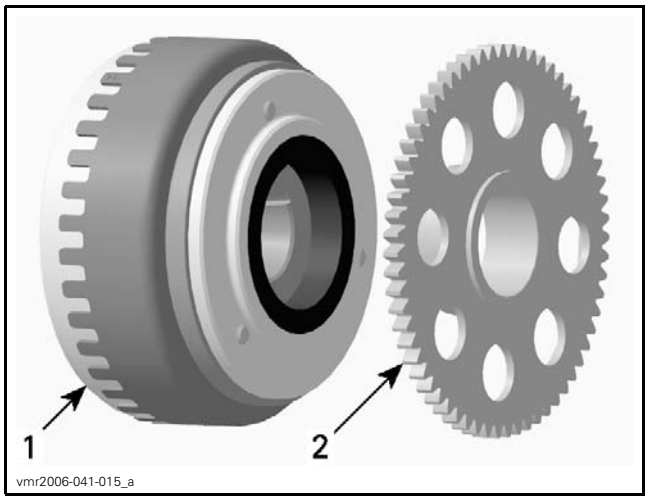
SPRAG CLUTCH HOUSING SCREWS	
Tightening torque	30 N•m ± 2 N•m (22 lbf•ft ± 1 lbf•ft)

SPRAG CLUTCH GEAR

Sprag Clutch Gear Removal

Remove *ROTOR*. See procedure in this subsection.

Pull sprag clutch gear out of the rotor.

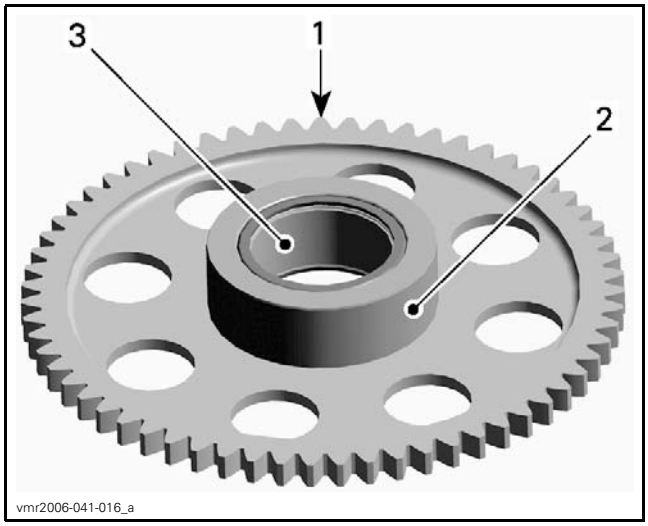


1. Rotor
2. Sprag clutch gear

Sprag Clutch Gear Inspection

Inspect gear, especially teeth and sprag clutch collar, for wear and other damage.

Check needle bearing condition. Replace sprag clutch gear if necessary.



INSPECT
1. Teeth
2. Collar
3. Needle bearing

Sprag Clutch Gear Installation

The installation is the reverse of the removal procedure.

NOTE: Apply engine oil on needle bearing and collar of sprag clutch gear.

STARTER DRIVE GEARS

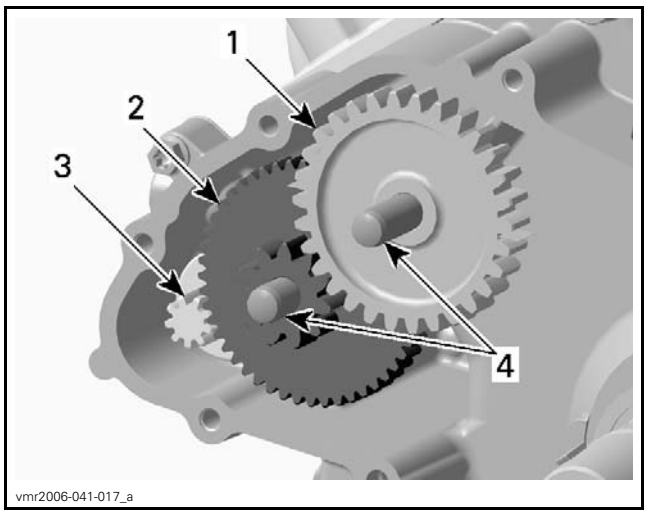
Starter Drive Gear Location

The starter drive gears are located on the engine MAG side behind the magneto cover.

Starter Drive Gear Removal

Remove *MAGNETO COVER*. See procedure in this subsection.

Remove location pins, starter double gear and intermediate gear.



1. Intermediate gear
2. Starter double gear
3. Starter gear
4. Location pins

Starter Drive Gear Inspection

Inspect gears and location pins for wear and damage.

Replace parts as necessary.

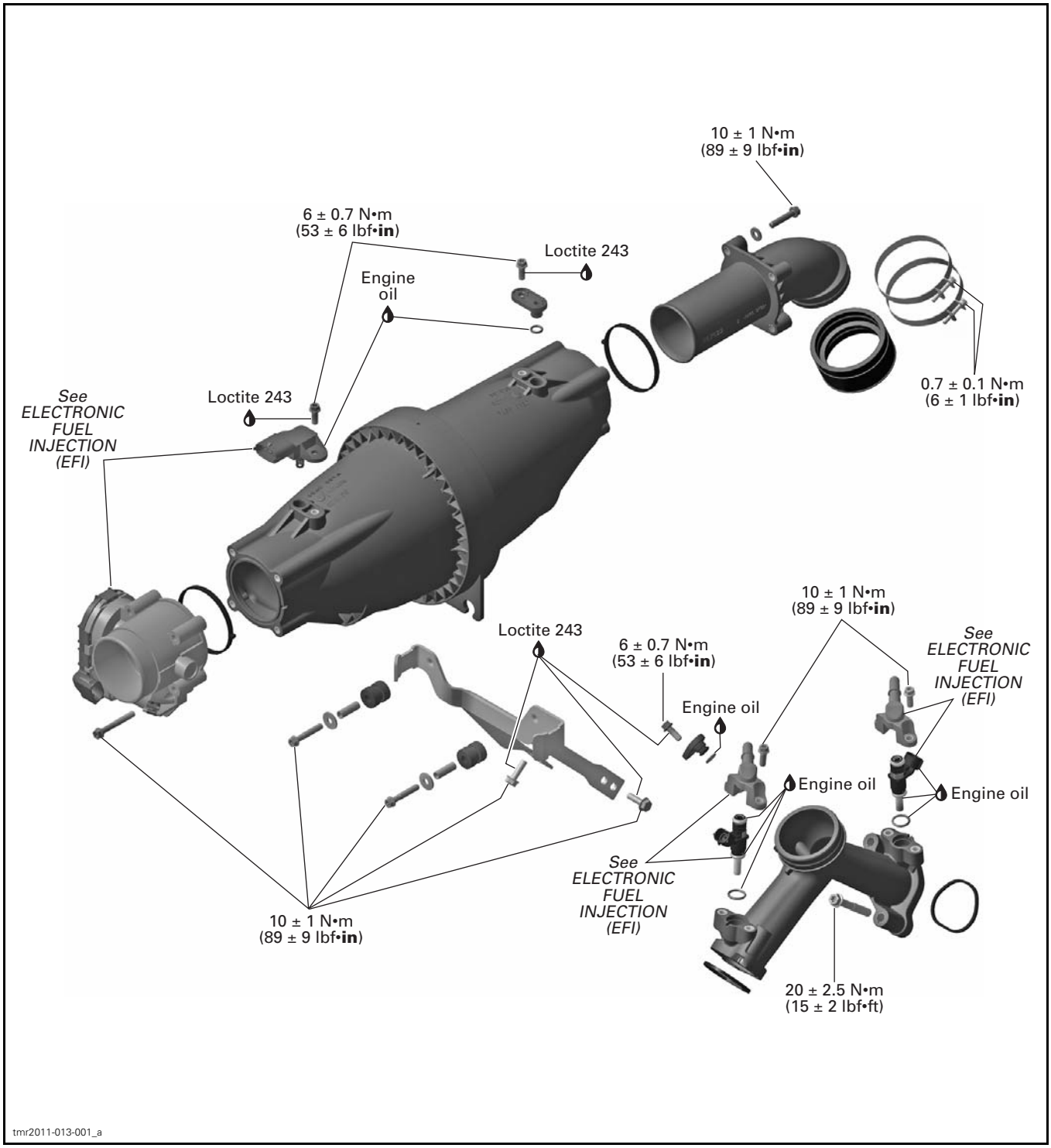
Starter Drive Gear Installation

The installation is the reverse of the removal procedure. Pay attention to the following details.

Apply LOCTITE 767 (ANTISEIZE LUBRICANT) (P/N 293 800 070) on starter gear before installing the starter double gear.

Apply engine oil on location pins.

INTAKE MANIFOLD

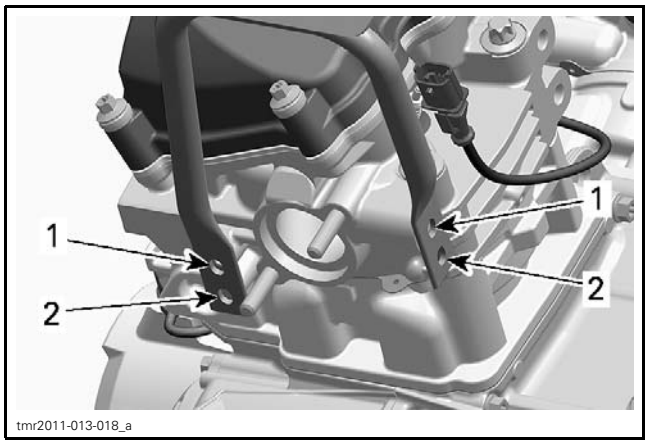


PROCEDURES

PLENUM BRACKET

Plenum Bracket Installation

On cylinder 1, install the plenum bracket using the appropriate mounting holes.



tmr2011-013-018_a

1. Mounting holes for the 1000 engine
2. Mounting holes for the 800R engine

Tighten plenum bracket retaining screws to specification.

PLENUM BRACKET RETAINING SCREWS	
Tightening torque	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

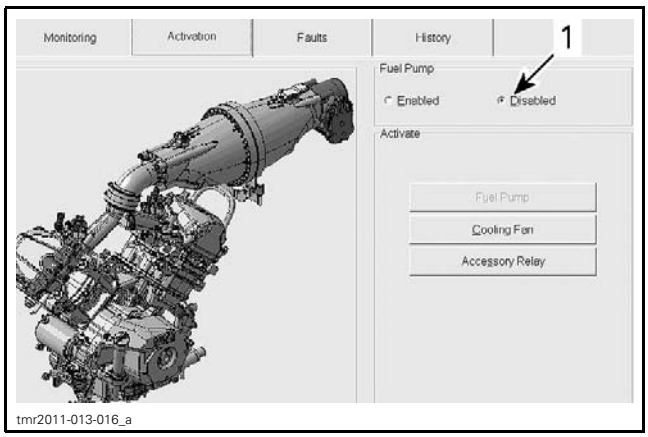
INTAKE MANIFOLD

Intake Manifold Access

Refer to *BODY* and remove the lower console.

Intake Manifold Removal

1. Disable fuel pump using B.U.D.S. Select the **ECM** and **Activation** tabs, then click on **Disabled** in the fuel pump area.



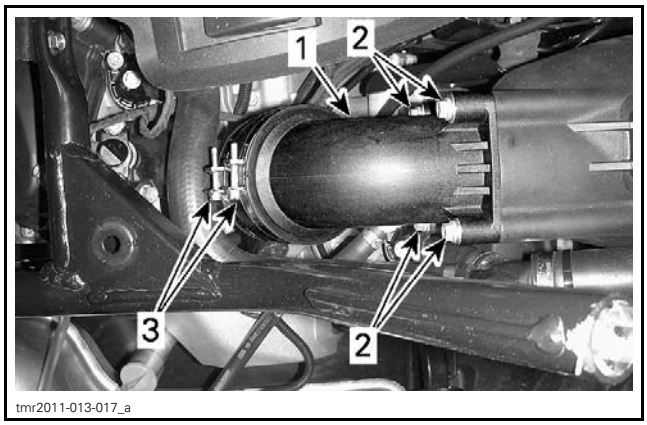
tmr2011-013-016_a

1. Click "Disabled"

2. Release fuel pressure by running engine until it runs out of gas.
3. Disconnect the fuel hoses at the fuel injectors, refer to *ELECTRONIC FUEL INJECTION (EFI).*

⚠ CAUTION The fuel hose may still be under pressure.

4. Disconnect fuel injectors electrical connectors.
5. Remove plenum adapter elbow.



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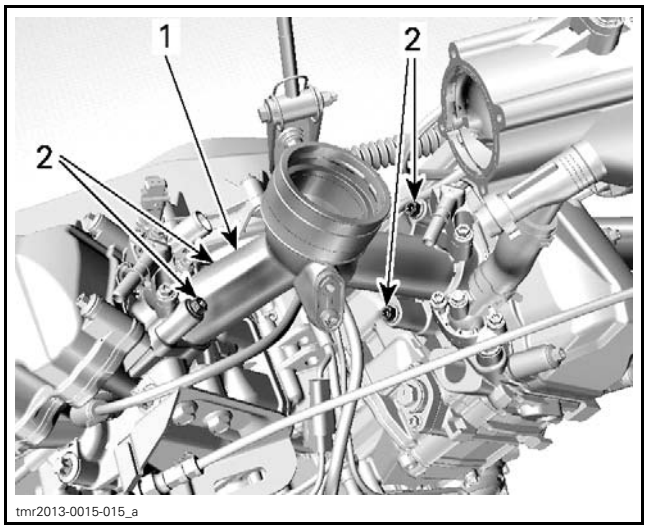
1. Plenum adapter elbow
2. Remove retaining screws
3. Remove clamps

6. Remove intake manifold from engine.



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SOME PARTS REMOVED FOR CLARITY
1. Intake manifold
2. Remove retaining screws (x4)

Intake Manifold Inspection

Check intake manifold for cracks, warping at flanges or any other damage. Replace if necessary.

Intake Manifold Installation

The installation is the reverse of the removal procedure. However, pay attention to the following.

Tighten intake manifold retaining screws to specified torque one cylinder at a time.

INTAKE MANIFOLD RETAINING SCREWS	
Tightening torque	20 N•m ± 2.5 N•m (15 lbf•ft ± 2 lbf•ft)

Tighten elbow retaining screws to specification.

ELBOW RETAINING SCREWS	
Tightening torque	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

Tighten intake manifold clamps to specification.

INTAKE MANIFOLD CLAMPS	
Tightening torque	0.7 N•m ± 0.1 N•m (6 lbf•**in** ± 1 lbf•**in**)

Enable fuel pump using B.U.D.S.

TOP END

SERVICE TOOLS

Description	Part Number	Page
CRANKSHAFT LOCKING BOLT	529 035 617	117
ENGINE LEAK DOWN TEST KIT	529 035 661	103
PISTON CIRCLIP INSTALLER	529 035 921	121
PISTON CIRCLIP INSTALLER	529 036 153	121
PISTON RING COMPRESSOR	529 035 919	117
TDC DIAL INDICATOR	414 104 700	103
VALVE GUIDE INSTALLER	529 036 140	116
VALVE GUIDE REMOVER 5 MM	529 035 924	115
VALVE SPRING COMPRESSOR CUP	529 035 764	112
VALVE SPRING COMPRESSOR	529 035 724	112

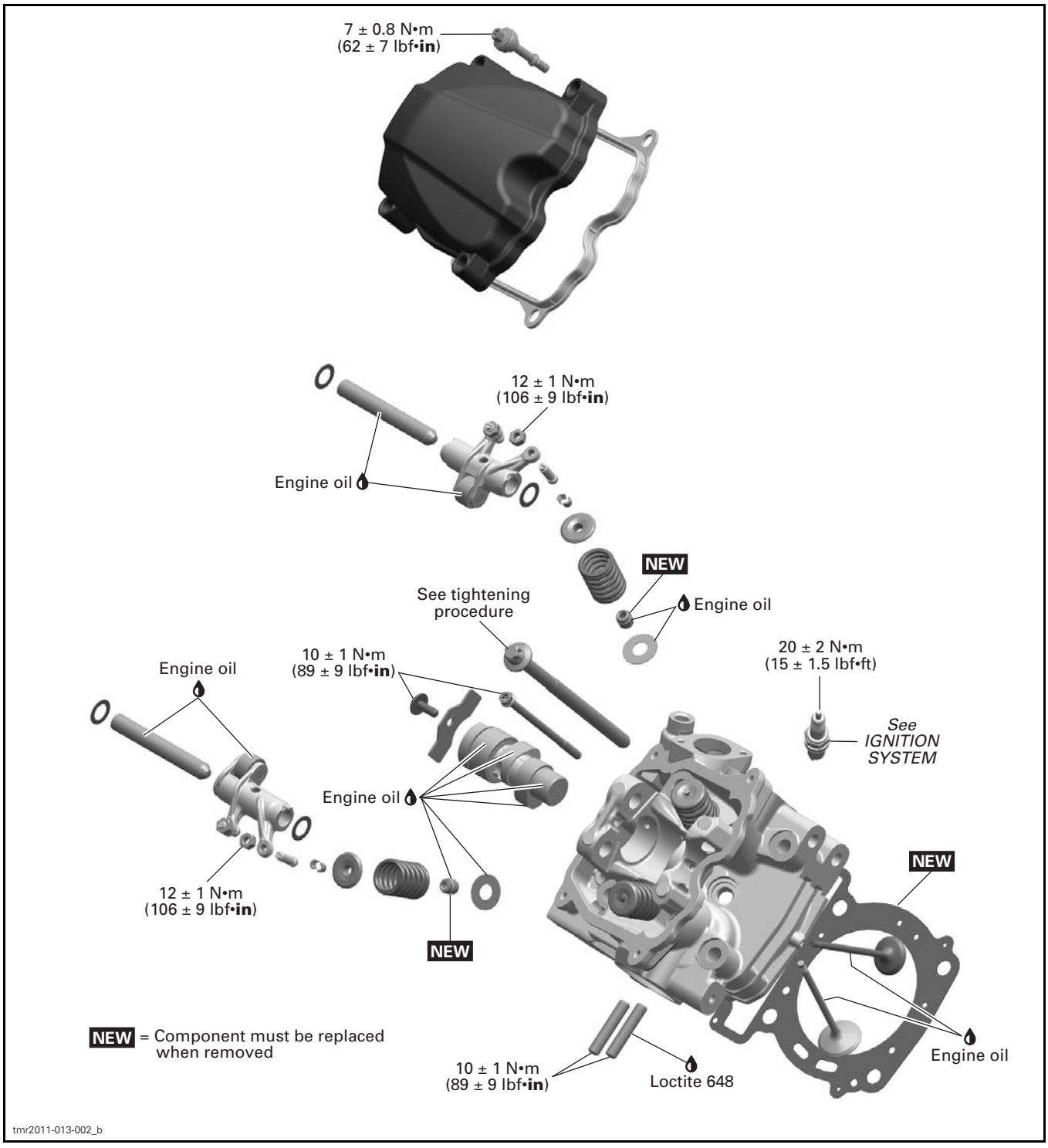
SERVICE TOOLS – OTHER SUPPLIER

Description	Part Number	Page
SNAP-ON PLIERS	YA 8230	113

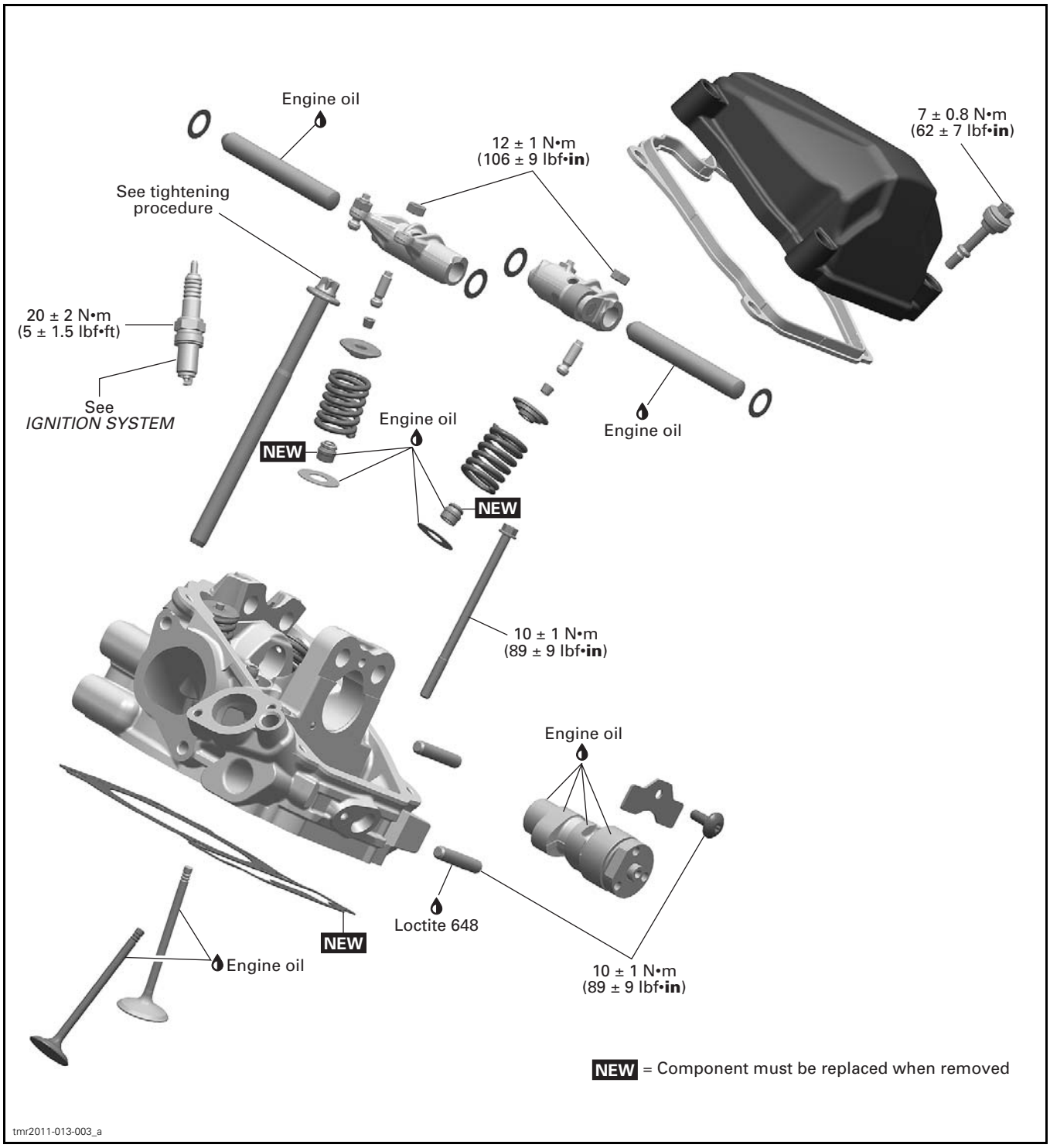
SERVICE PRODUCTS

Description	Part Number	Page
LOCTITE 767 (ANTISEIZE LUBRICANT)	293 800 070	116

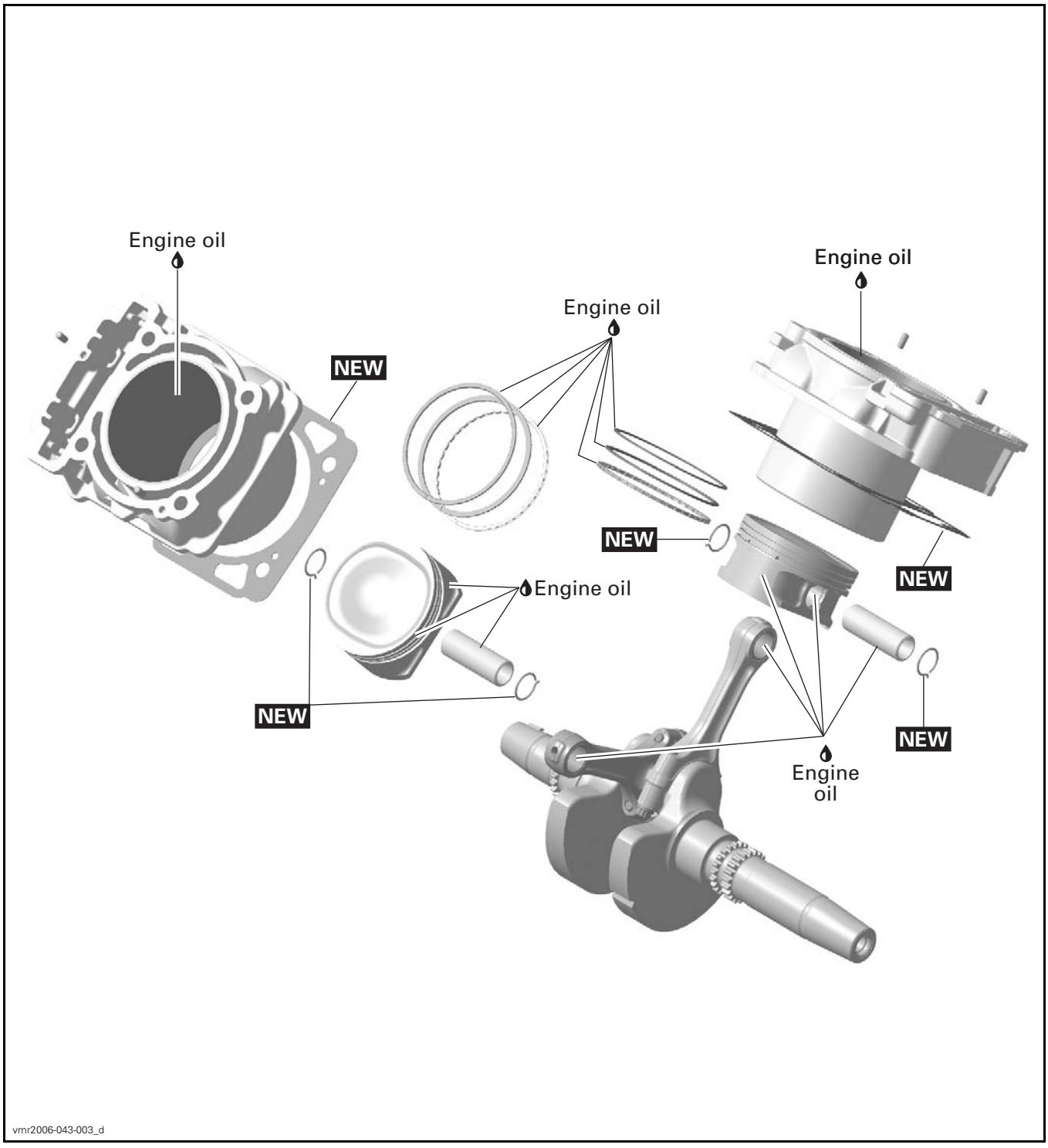
CYLINDER HEAD NO. 1



CYLINDER HEAD NO. 2

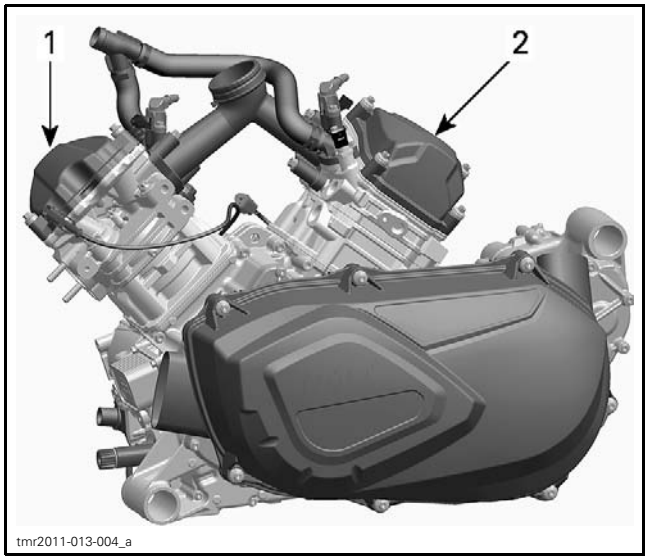


CYLINDERS AND PISTONS



GENERAL

Special reference are made in the text for procedures which are different for cylinder no. 1 and cylinder no. 2.



1. Cylinder 1 (front)
2. Cylinder 2 (rear)

When diagnosing an engine problem, always perform a cylinder leak test.

NOTE: Even though the following procedures do not require the engine removal, many illustrations show the engine out of the vehicle for more clarity.

IMPORTANT: Note position of parts on disassembly. This may help to find the root cause of a problem. A component that is not replaced should be reinstalled in the same position as originally mounted.

INSPECTION

LEAK TEST

Before performing the cylinder leak test, verify the following:

– Clamp(s) tightness
– Radiator and hoses.

NOTE: For best accuracy, the leak test should be done with the engine at normal operating temperature.

⚠ WARNING

Prevent burning yourself on hot engine parts.

Preparation

Disconnect battery.

⚠ WARNING

Always respect this order for disassembly; disconnect BLACK (-) cable first.

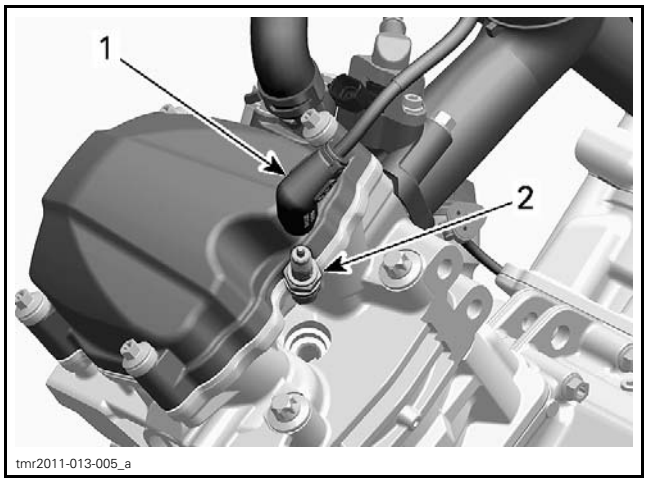
Remove radiator cap.

⚠ WARNING

To prevent burning yourself only remove the radiator cap by wearing the appropriate safety equipment.

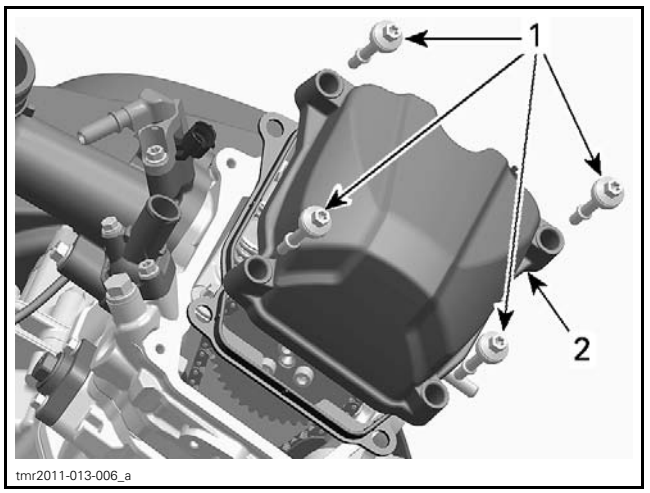
Unplug spark plug cable.

Clean spark plug area and remove spark plug from cylinder head.



1. Spark plug cable
2. Spark plug

Remove valve cover.



1. Valve cover screws
2. Valve cover

Rotate crankshaft until piston is at ignition TDC.

To turn crankshaft, there are two possible procedures.

First Procedure

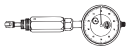
Turn the drive pulley.

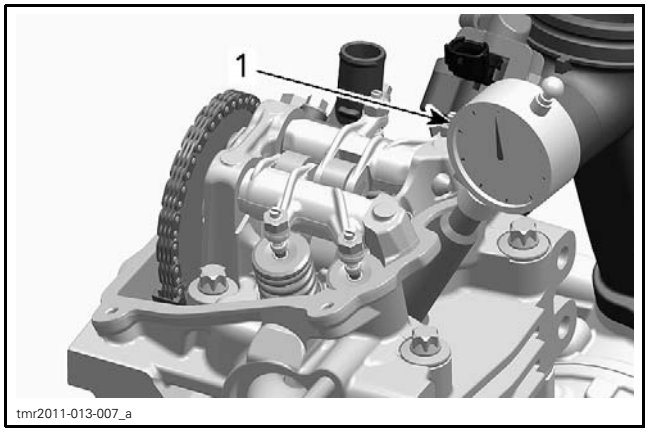
Second Procedure

1. Remove plug screw with O-ring from magneto cover.
2. Use a 14 mm Allen key and turn crankshaft.

NOTICE Turn only clockwise to avoid loosening of magneto flywheel Allen screw.

Set the piston to precisely ignition TDC.

REQUIRED TOOL	
TDC DIAL INDICATOR (P/N 414 104 700)	

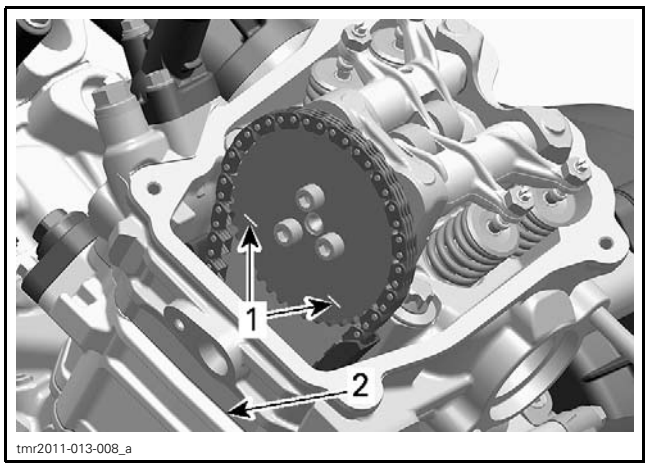


1. Dial gauge

NOTE: If a dial gauge is not available, use a screwdriver or another similarly suitable tool.

NOTICE **Do not scratch or damage piston/cylinder surface.**

NOTE: At ignition TDC the marks on the camshaft timing gear have to be parallel to cylinder head base as per following illustration.



1. Marks on camshaft timing gear
2. Cylinder head base

Leak Test

REQUIRED TOOL	
ENGINE LEAK DOWN TEST KIT (P/N 529 035 661)	

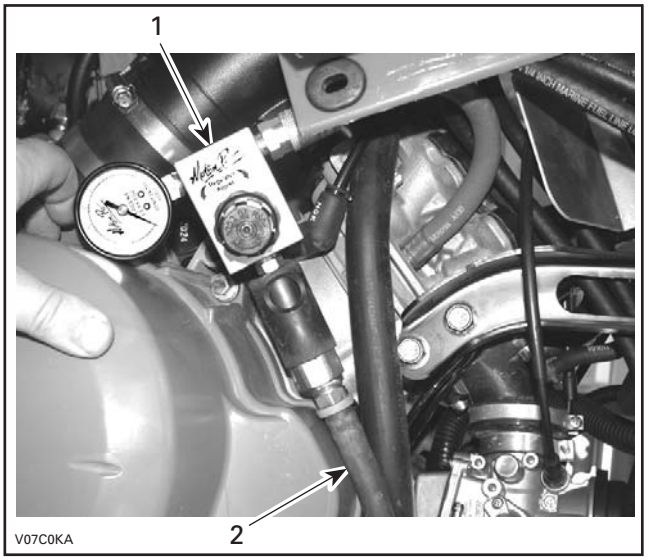
Connect leak tester to adequate air supply.

Set needle of measuring gauge to zero.

NOTE: All testers have specific instructions on gauge operation and required pressure.

Install gauge adapter into previously cleaned spark plug hole.

Supply combustion chamber with air pressure.



TYPICAL
1. Leak tester
2. Air supply hose

Note the amount or percentage of leakage (depending on tester).

LEAKAGE PERCENTAGE	ENGINE CONDITION
0% to 15%	Excellent condition
16% to 25%	Good condition
26% to 40%	Fair condition; reduced engine performance
41% and higher	Poor condition, diagnose and repair engine

NOTE: To make sure there is no false reading due to a valves not perfectly seated, tap each valve adjustment screw (on the rocker) using a soft hammer.

Diagnosis

Listen for air leaks.

- Air escaping in intake port/throttle body means leaking intake valve(s).
- Air escaping in exhaust port means leaking exhaust valve(s).
- Air bubbles in the coolant (radiator) means leaking cylinder head gasket.
- Air/coolant escaping from cylinder/head means damaged gasket(s) and/or loosened screws.

– Air escaping into crankcase area means excessively worn cylinder and/or broken piston rings.
– Air/oil escaping from crankcase means damaged gasket and/or loosened screws (refer to *BOTTOM END* subsection).

NOTE: For all the checkpoints mentioned above, see the appropriate engine section to diagnose and repair the engine.

Reassembly

Reverse the preparation procedure. Ensure to respect torque values and use of appropriate products/lubricants. Refer to exploded views in other subsections of this manual as required.

PROCEDURES

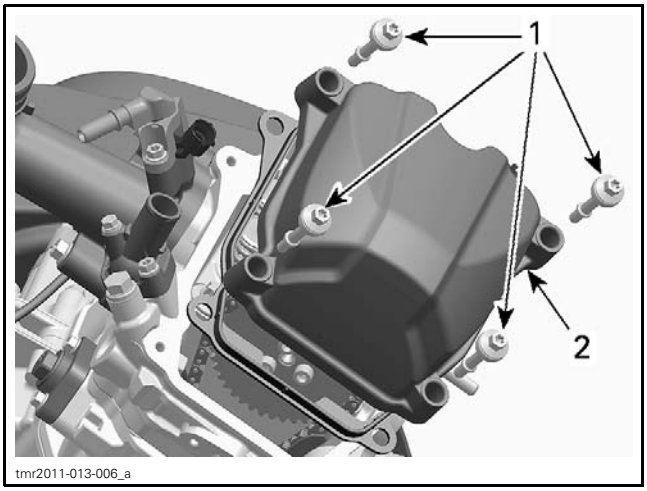
VALVE COVER

Valve Cover Access

Refer to *BODY* and remove:
– Upper console
– Lower console
– LH and RH lateral console panels.

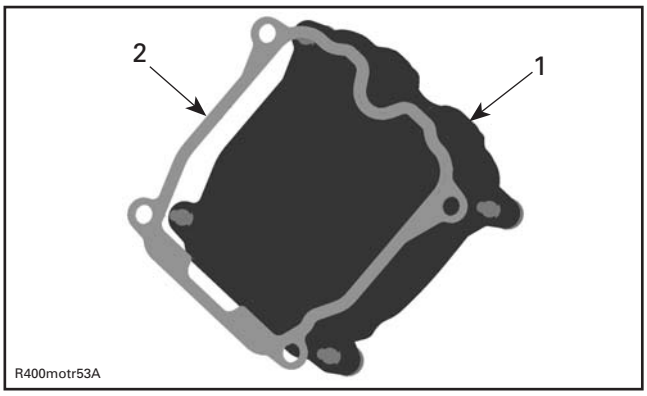
Valve Cover Removal

Remove valve cover screws of valve cover.



1. Valve cover screws
2. Valve cover

Remove valve cover and gasket.



1. Valve cover
2. Gasket

Repeat the procedure for the other valve cover if required.

Valve Cover Inspection

Check the gasket on the valve cover if it is brittle, cracked or hard. If so, replace the gasket.

Valve Cover Installation

For installation, reverse the removal procedure.

Tighten valve cover retaining screws to specified torque in a criss-cross sequence.

VALVE COVER RETAINING SCREWS	
Tightening torque	7 N•m ± 0.8 N•m (62 lbf•**in** ± 7 lbf•**in**)

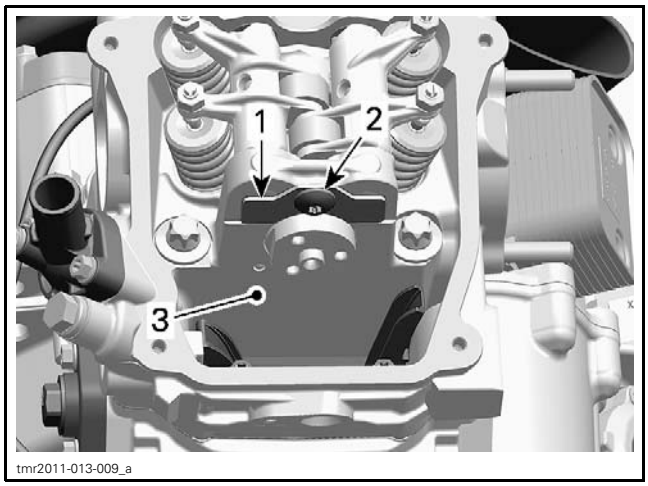
ROCKER ARM

Rocker Arm Removal

Remove valve cover.

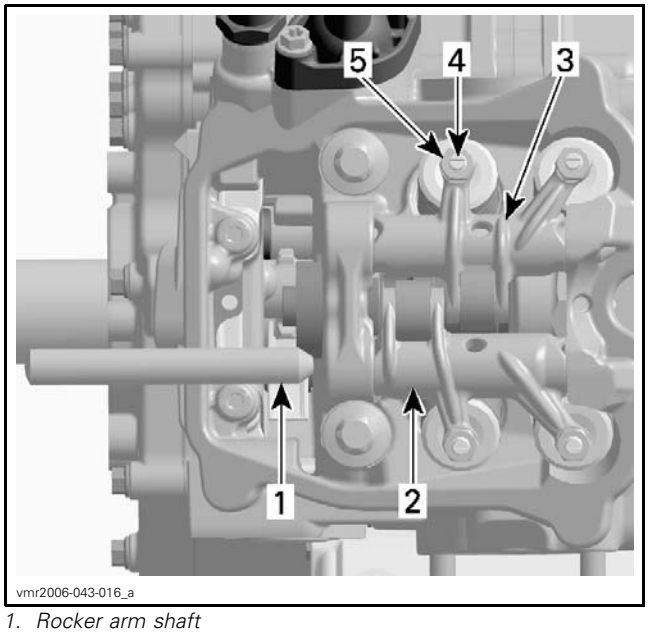
Refer to *TIMING CHAIN* subsection and remove the following parts:
– Timing chain tensioner
– Camshaft timing gear.

Remove pan head screw and camshaft retaining plate.



1. *Camshaft retaining plate*
2. *Pan head screw*
3. *Cylinder head*

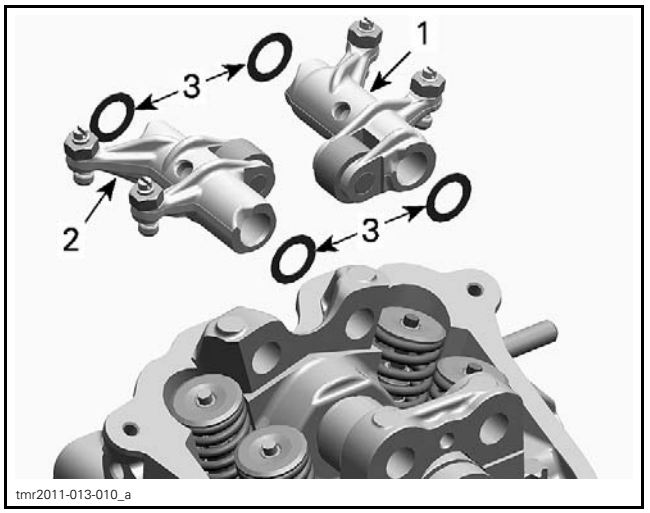
Remove rocker arm shafts.



1. *Rocker arm shaft*
2. *Rocker arm (exhaust side)*
3. *Rocker arm (intake side)*
4. *Adjustment screw*
5. *Lock nut*

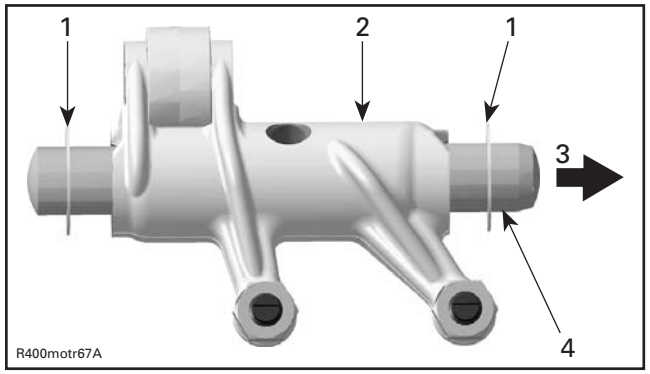
Remove rocker arm assembly (exhaust side and intake side) with adjustment screws and lock nuts.

Remove thrust washers.



1. *Rocker arm (exhaust side)*
2. *Rocker arm (intake side)*
3. *Thrust washers*

NOTICE Pay attention not to lose thrust washers or drop them into the timing chain compartment.

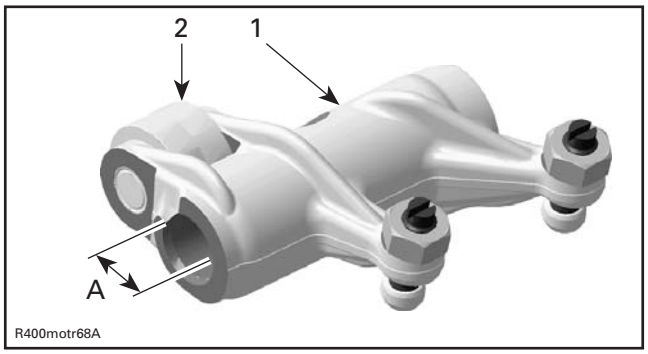


1. *2 thrust washers*
2. *Rocker arm (exhaust side)*
3. *Cylinder head (spark plug side)*
4. *Big taper to spark plug side*

Rocker Arm Inspection

Inspect each rocker arm for cracks and scored friction surfaces. If so, replace rocker arm assembly.

Check the rocker arm rollers for free movement, wear and excessive radial play. Replace rocker arm assembly if necessary.

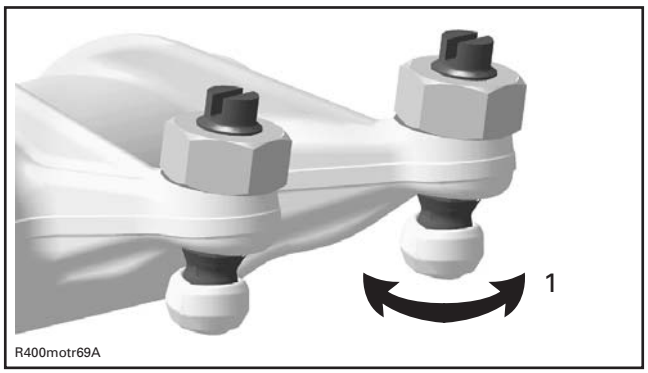


1. Rocker arm (exhaust side)
2. Roller
A. Bore for rocker arm shaft

Measure rocker arm bore diameter. If diameter is out of specification, change the rocker arm assembly.

ROCKER ARM BORE DIAMETER	
NEW	12.036 mm to 12.050 mm (.4739 in to .4744 in)
SERVICE LIMIT	12.060 mm (.4748 in)

Check adjustment screws for free movement, cracks and/or excessive play.

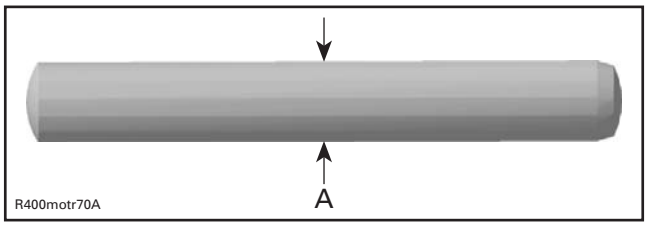


1. Free movement of adjustment screw top

Rocker Arm Shaft Inspection

Check for scored friction surfaces; if so, replace parts.

Measure rocker arm shaft diameter.



A. Measure rocker arm shaft diameter here

ROCKER ARM SHAFT DIAMETER	
NEW	12.00 mm to 12.018 mm (.4724 in to .4731 in)
SERVICE LIMIT	11.990 mm (.472 in)

Any area worn excessively will require parts replacement.

Rocker Arm Installation

NOTE: Use the same procedure for exhaust and intake rocker arm.

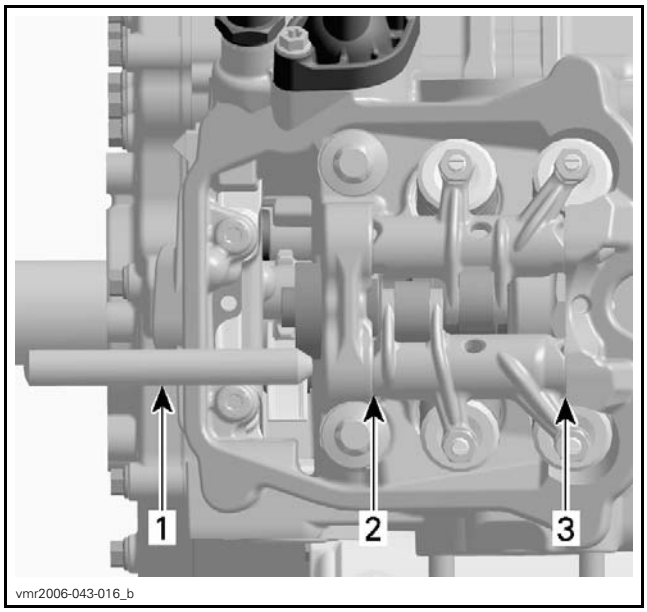
Apply engine oil on rocker arm shaft.

Install the rocker arm shafts with the chamfered edge first and use following procedure.

Insert a rocker arm pin through rocker arm pin bore.

Install a thrust washer at timing chain side, then the proper rocker arm (exhaust side or intake side).

Push in rocker arm shaft until its chamfer reaches the end of rocker arm bore.



1. Rocker arm shaft
2. Thrust washer (timing chain side)
3. Thrust washer (spark plug side)

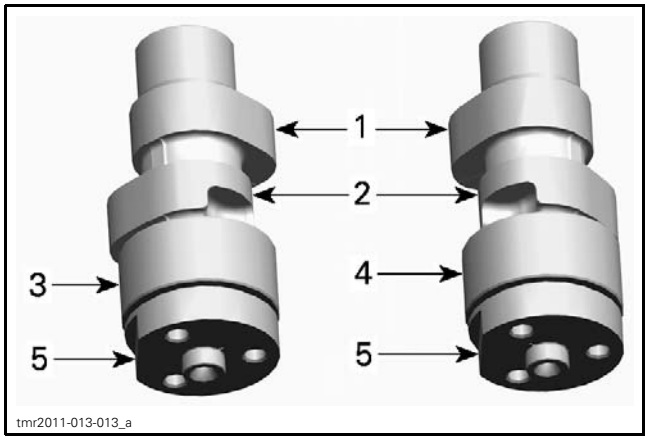
Place the other thrust washer and push rocker arm shaft to end position.

Install the camshaft retaining plate.

Adjust valve clearance, refer to *PERIODIC MAINTENANCE PROCEDURE*.

CAMSHAFT

NOTE: The engine is equipped with two different camshafts.



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1. *Intake cam*
2. *Exhaust cam*
3. *Camshaft of cylinder 1*
4. *Camshaft of cylinder 2*
5. *Flat spot*

Camshaft Removal

The removal procedure is the same for both camshafts.

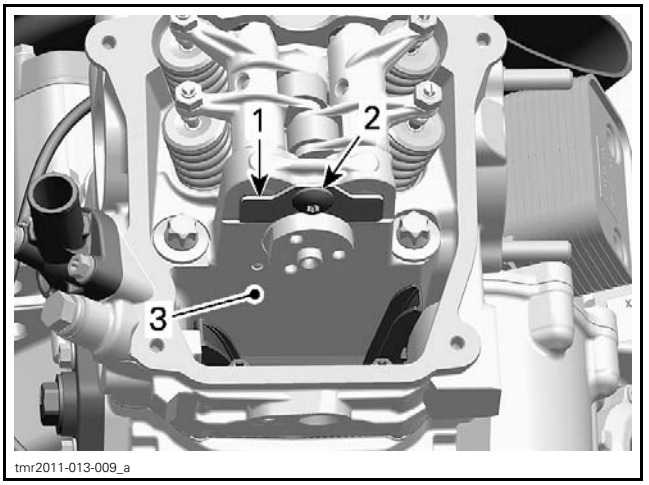
NOTICE **Each camshaft is different in design. Thus, it is important not to mix up any parts of the camshaft assembly with that of the other cylinder. Keep parts as a group.**

Remove valve cover (see *VALVE COVER* in this subsection).

Refer to *TIMING CHAIN* subsection and remove the following parts:

– Timing chain tensioner
– Camshaft timing gear.

Remove the camshaft retaining plate.



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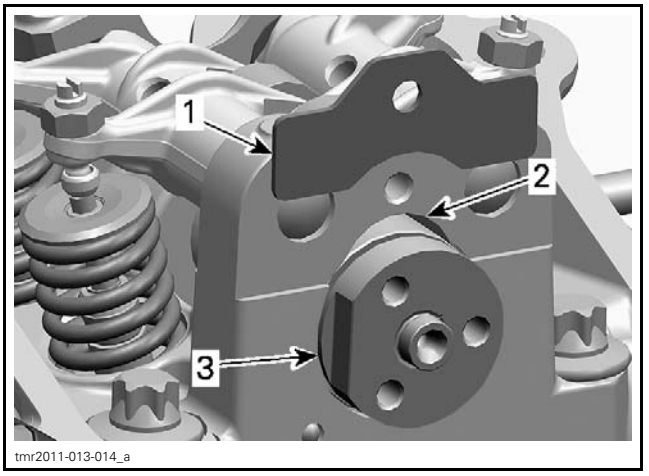
1. *Camshaft retaining plate*
2. *Pan head screw*
3. *Cylinder head*

Remove rocker arms (see *ROCKER ARM* in this subsection).

Remove the camshaft.

NOTE: For removal rotate camshaft so that intake/exhaust lobe shows to upper side of cylinder head.



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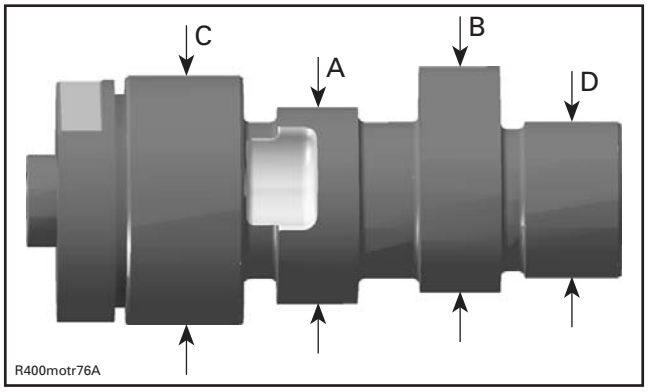
1. *Camshaft retaining plate*
2. *Area for camshaft lobes*
3. *Camshaft*

Camshaft Inspection

Camshaft Lobe Inspection

Check each lobe for scoring, scuffing, cracks or other signs of wear.

Measure camshaft lobe height using a micrometer.



A. Camshaft lobe (exhaust valves)
B. Camshaft lobe (intake valves)
C. Camshaft journal (timing chain side)
D. Camshaft journal (spark plug side)

CAMSHAFT LOBE (EXHAUST)		
800R ENGINE	NEW	32.950 mm to 33.150 mm (1.2972 in to 1.3051 in)
	SERVICE LIMIT	32.930 mm (1.2965 in)
1000 ENGINE	NEW	32.860 mm to 33.060 mm (1.294 in to 1.302 in)
	SERVICE LIMIT	32.840 mm (1.293 in)

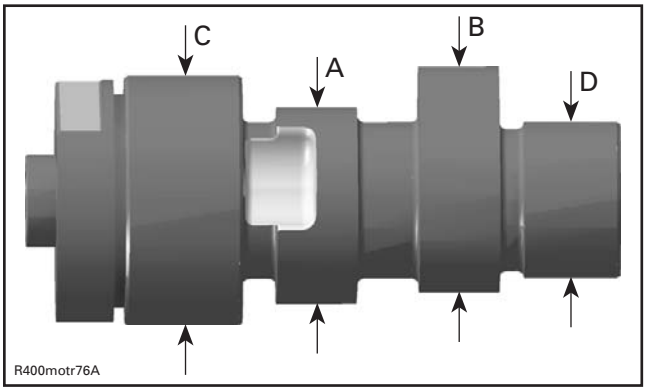
CAMSHAFT LOBE (INTAKE)		
800R ENGINE	NEW	32.890 mm to 33.090 mm (1.2949 in to 1.3028 in)
	SERVICE LIMIT	32.870 mm (1.2941 in)
1000 ENGINE	NEW	32.960 mm to 33.160 mm (1.298 in to 1.306 in)
	SERVICE LIMIT	32.940 mm (1.297 in)

Measure camshaft bearing in cylinder head. Refer to *CYLINDER HEAD INSPECTION* in this subsection.

Camshaft Journal Inspection

Check each journal for scoring, scuffing, cracks or other signs of wear.

Measure camshaft journal using a micrometer.



A. Camshaft lobe (exhaust valves)
B. Camshaft lobe (intake valves)
C. Camshaft journal (timing chain side)
D. Camshaft journal (spark plug side)

CAMSHAFT JOURNAL (TIMING CHAIN SIDE)	
NEW	34.959 mm to 34.975 mm (1.3763 in to 1.377 in)
SERVICE LIMIT	34.950 mm (1.376 in)

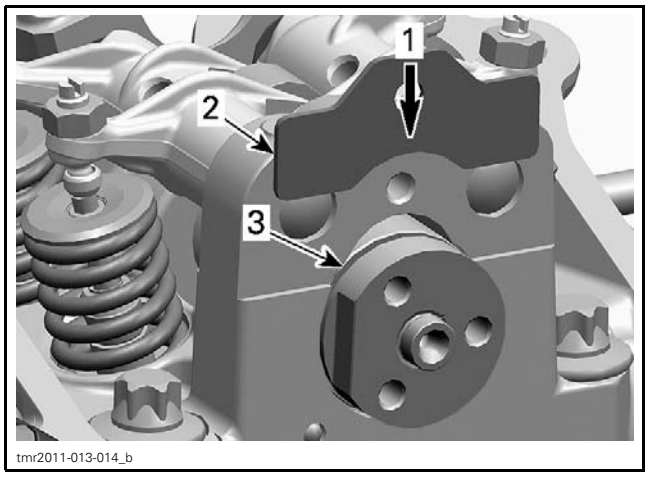
CAMSHAFT JOURNAL (SPARK PLUG SIDE)	
NEW	21.959 mm to 21.980 mm (.8645 in to .8654 in)
SERVICE LIMIT	21.950 mm (.8642 in)

Camshaft Installation

For installation, reverse the removal procedure. Pay attention to the following details.

NOTICE **The camshafts are not identical in design. Do not invert the camshafts during assembly. Any mix-up of the components will lead to engine damage.**

Place the camshaft retaining plate in the slot of the camshaft.



1. Direction of movement
2. Camshaft retaining plate
3. Slot retaining camshaft

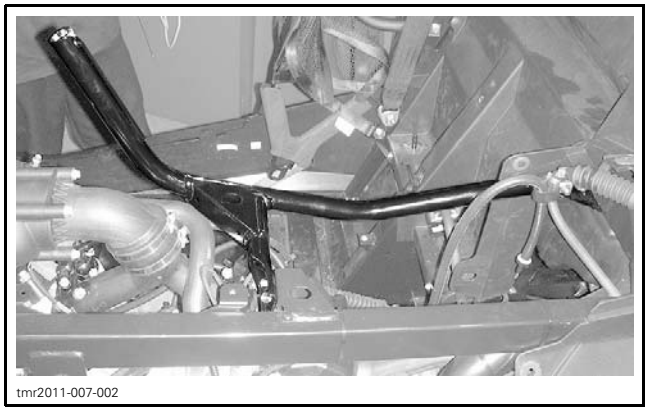
For other parts, refer to proper installation procedure.

CYLINDER HEAD

Cylinder Head Access

Refer to *BODY* and remove:
– Lower console
– LH and RH lateral console panels.

Remove LH passenger handhold bar.



LH PASSENGER HANDHOLD BAR

On cylinder 2, remove the shift cable bracket.

Refer to *INTAKE MANIFOLD* subsection to remove following parts:
– Plenum, for cylinder 1
– Intake manifold.

Cylinder Head Removal

The removal procedure is the same for both cylinder heads.

Drain coolant. Refer to *ENGINE COOLANT REPLACEMENT* in the *PERIODIC MAINTENANCE PROCEDURES* subsection.

NOTE: Before removing cylinder head, blow out remaining coolant by air pressure. During cylinder head removal, the remaining coolant in cylinder head could overflow into the engine and a little quantity of coolant could drop into the engine. In this case, the engine oil will be contaminated.

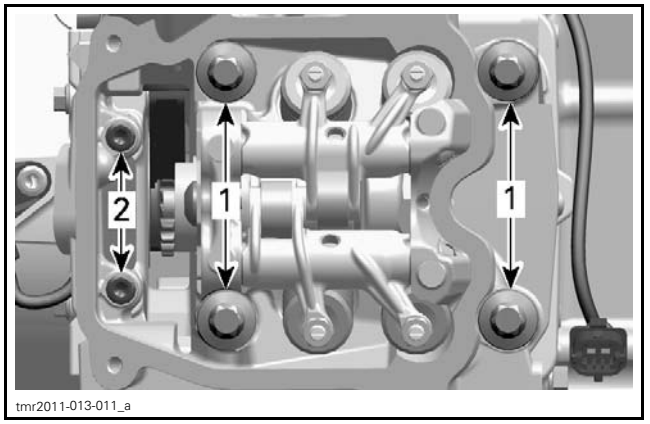
Disconnect spark plug wire.

Disconnect temperature sensor connector, located at rear cylinder head.

Remove the valve cover and its gasket (see *VALVE COVER* in this subsection).

Refer to *TIMING CHAIN* subsection and remove the following parts:
– Timing chain tensioner
– Camshaft timing gear.

First remove the M6 cylinder head screws, then the M10 cylinder head screws.

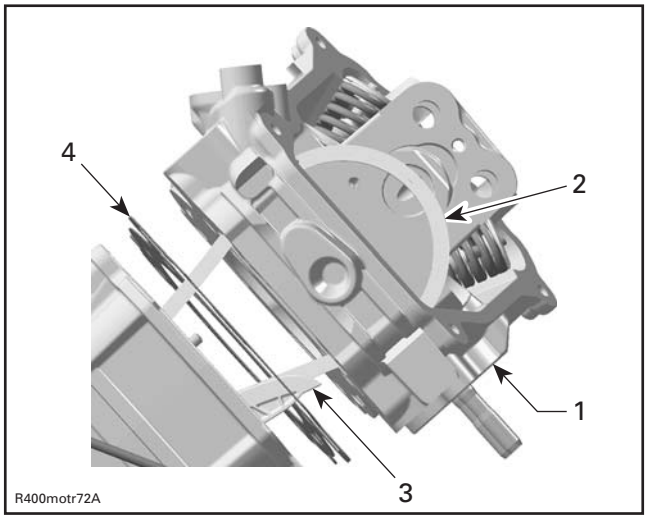


1. Cylinder head screws M10
2. Cylinder head screws M6

Pull up cylinder head.

Remove timing chain guide (fixed).

Remove and discard the cylinder head gasket.



1. Cylinder head
2. Timing chain
3. Chain guide (fixed)
4. Cylinder head gasket

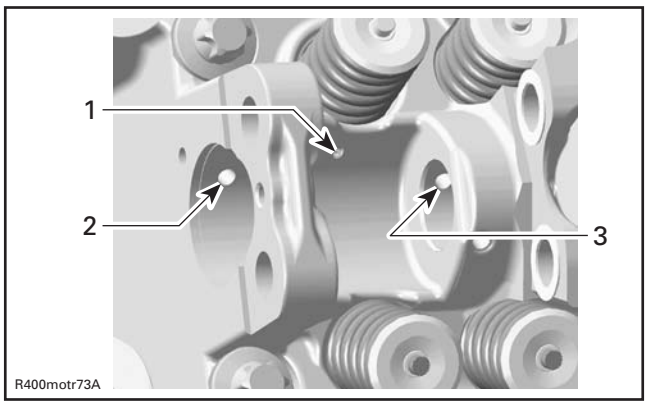
Cylinder Head Inspection

Inspect timing chain guide (fixed) for wear, cracks or other damages. Replace if necessary.

Check for cracks between valve seats, if so, replace cylinder head.

Check mating surface between cylinder and cylinder head for contamination. If so, clean both surfaces.

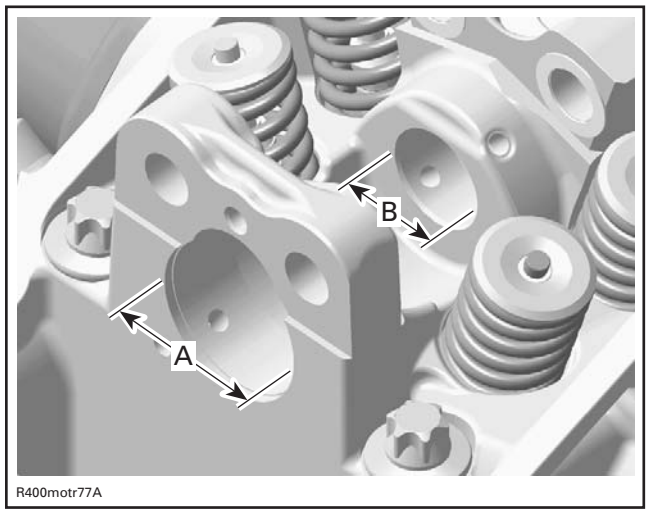
Clean oil support through the cylinder head from contamination.



1. Oil port to lubricate camshaft lobes intake/exhaust
2. Oil supply to camshaft bearing journal (timing chain side)
3. Oil supply to camshaft bearing journal (spark plug side)

Cylinder Head Camshaft Bearing Inspection

Measure camshaft bearing in cylinder head.



A. Camshaft bearing (timing chain side)
B. Camshaft bearing (spark plug side)

CAMSHAFT BEARING (TIMING CHAIN SIDE)	
NEW	35.000 mm to 35.025 mm (1.378 in to 1.3789 in)
SERVICE LIMIT	35.040 mm (1.3795 in)
CAMSHAFT BEARING (SPARK PLUG SIDE)	
NEW	22.000 mm to 22.021 mm (.8661 in to .867 in)
SERVICE LIMIT	22.040 mm (.8677 in)

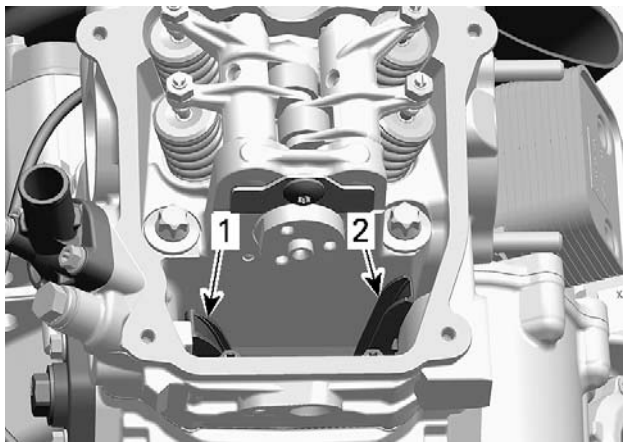
Cylinder Head Installation

NOTE: Never invert front and rear cylinder heads. On the 800R, cylinder heads are not identical.

For installation, reverse the removal procedure. Pay attention to the following details.

Ensure dowel pins are in place.

NOTICE **Timing chain guide (fixed) has to be fixed between cylinder and cylinder head.**



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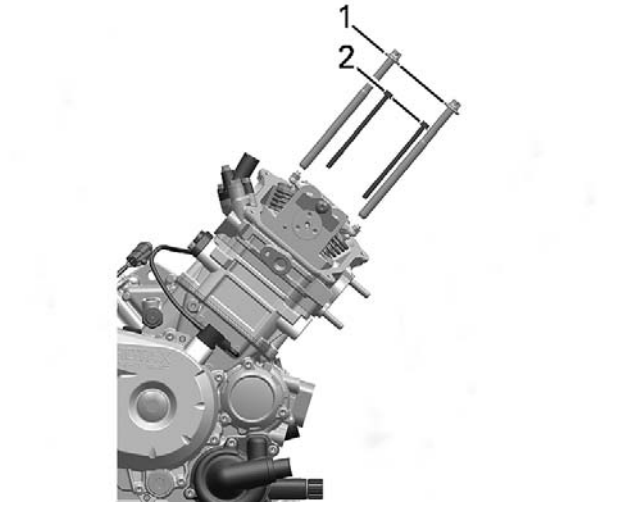
TYPICAL
1. *Timing chain guide (tensioner side) mounted in crankcase*
2. *Timing chain guide (fixed) between cylinder and cylinder head*

Install a NEW cylinder head gasket.

Install cylinder head screws in correct position.

NOTICE **Cylinder head screws have different sizes and lengths.**



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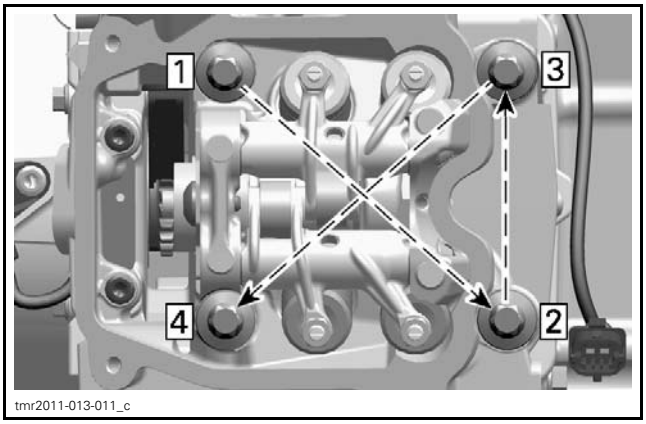
1. *Location no. 1*
2. *Location no. 2*

CYLINDER HEAD SCREW IDENTIFICATION		
800R engine	Location no. 1	M10 x 140
	Location no. 2	M6 x 85
1000 engine	Location no. 1	M10 x 159
	Location no. 2	M6 x 105

Tighten M10 cylinder head screws FIRST as per following specifications.



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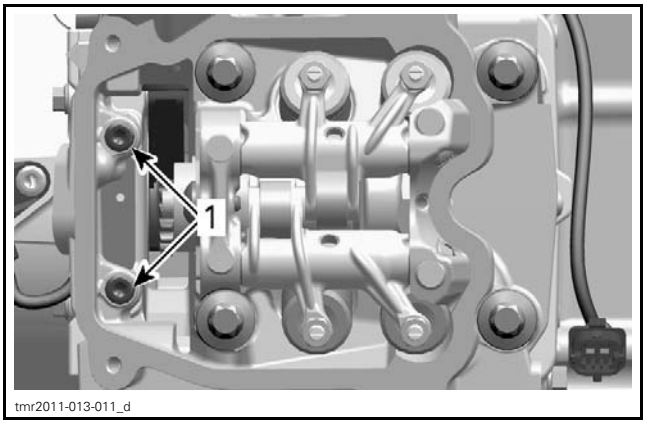
TIGHTENING SEQUENCE - M10 CYLINDER HEAD SCREWS

M10 CYLINDER HEAD SCREWS	
Tightening torque (step 1)	20 N•m ± 1 N•m (15 lbf•ft ± 1 lbf•ft)

M10 CYLINDER HEAD SCREWS	
Tightening torque (step 2)	180° +/- 5°

Tighten M6 cylinder head screws as per following specification.



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1. *M6 Screws*

M6 CYLINDER HEAD SCREWS	
Tightening torque	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

Check timing chain guide (tensioner side) for movement.

On cylinder 1, install the plenum bracket, refer to *INTAKE MANIFOLD* subsection.

VALVE SPRINGS

Valve Spring Removal

Refer to following procedures in this subsection to remove:

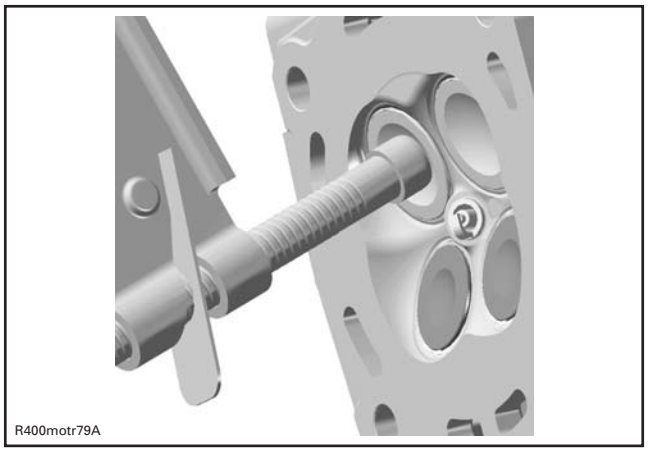
– *CAMSHAFT*
– *CYLINDER HEAD*.

Compress valve spring.

REQUIRED TOOL	
VALVE SPRING COMPRESSOR (P/N 529 035 724)	
VALVE SPRING COMPRESSOR CUP (P/N 529 035 764)	

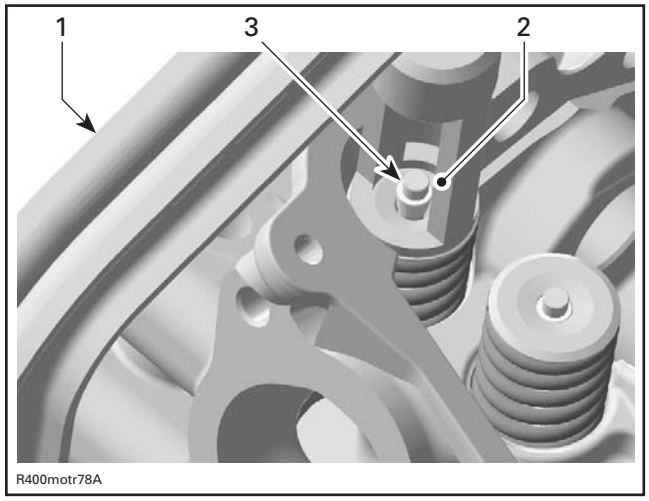
⚠ WARNING

Always wear safety glasses when disassembling valve springs. Be careful when unlocking valves. Components could fly away because of the strong spring preload.



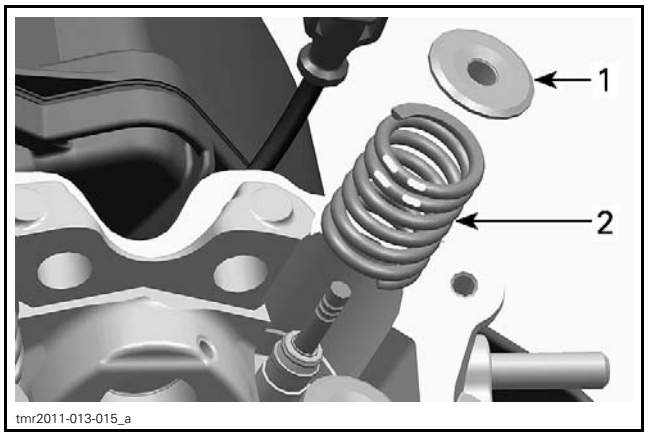
LOCATE VALVE SPRING COMPRESSOR CLAMP IN CENTER OF THE VALVE

Remove valve cotters.



1. Valve spring compressor clamp
2. Valve spring compressor cup
3. Valve cotter

Remove tools and withdraw valve spring retainer and valve spring.

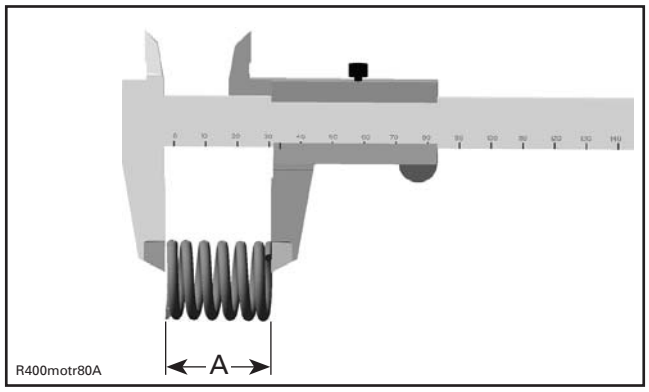


1. Valve spring retainer
2. Valve spring

Valve Spring Inspection

Check valve spring for visible damage. If so, replace valve spring.

Check valve spring for free length and straightness.



A. Valve spring length

VALVE SPRING FREE LENGTH	
NEW	40.81 mm (1.607 in)
SERVICE LIMIT	39.00 mm (1.535 in)

Replace valve springs if not within specifications.

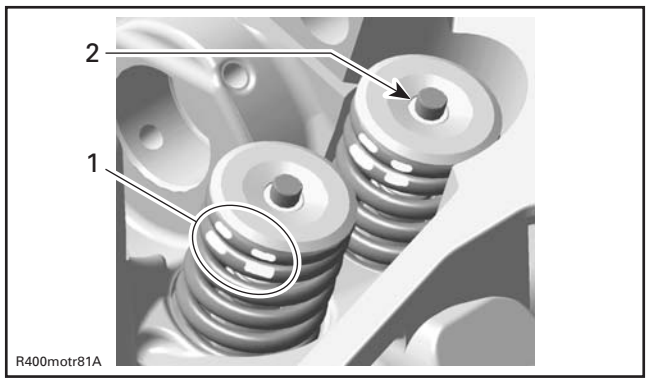
Valve Spring Installation

For installation, reverse the removal procedure. Pay attention to the following details.

Colored area of the valve spring must be placed on top.

To ease installation of cotters, apply oil or grease on them so that they remain in place while releasing the spring.

NOTE: Valve cotter must be properly engaged in valve stem grooves.



1. Position of the valve spring
2. Valve cotter

After spring is installed, ensure it is properly locked by tapping on valve stem end with a soft hammer so that valve opens and closes a few times.

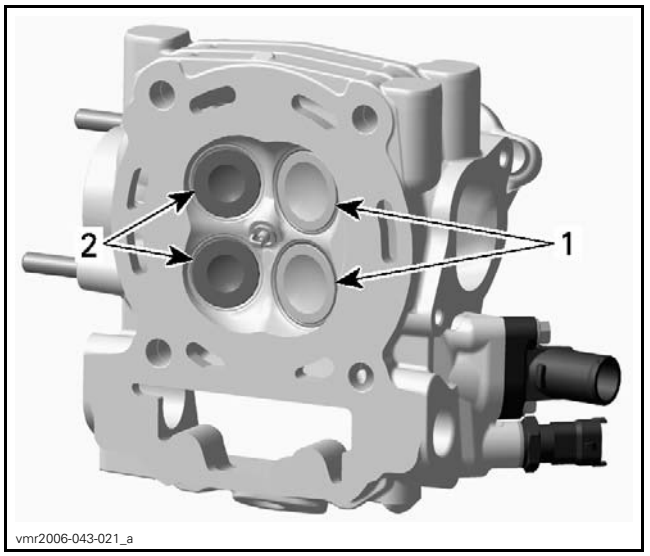
NOTICE An improperly locked valve spring will cause engine damage.

VALVES

Valve Removal

Remove valve spring, see *VALVE SPRING* in this subsection.

Push valve stem, then pull valves (intake and exhaust) out of valve guide.



1. Intake valves 31 mm
2. Exhaust valves 27 mm

Remove valve stem seal and discard it.

REQUIRED TOOL	
SNAP-ON PLIERS (P/N YA 8230)	

Valve Inspection

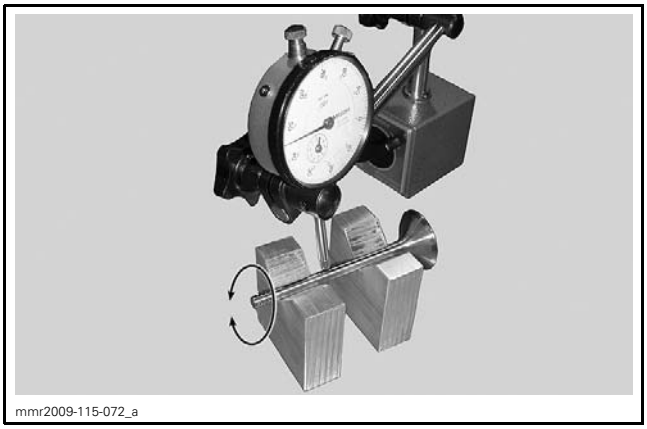
Whenever valves are removed always inspect valve guides. Refer to *VALVE GUIDES* in this subsection.

Valve Stem Seal

Always install NEW seals whenever valves are removed.

Valve

Inspect valve surface, check for abnormal stem wear and bending. If out of specification, replace by a new one.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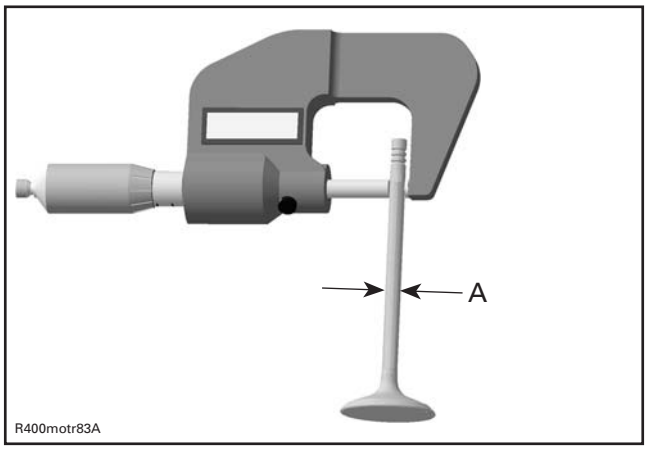
VALVE OUT OF ROUND (INTAKE AND EXHAUST VALVES)	
NEW	0.005 mm (.0002 in)
SERVICE LIMIT	0.06 mm (.0024 in)

Valve Stem

Measure valve stem in three places using a micrometer.

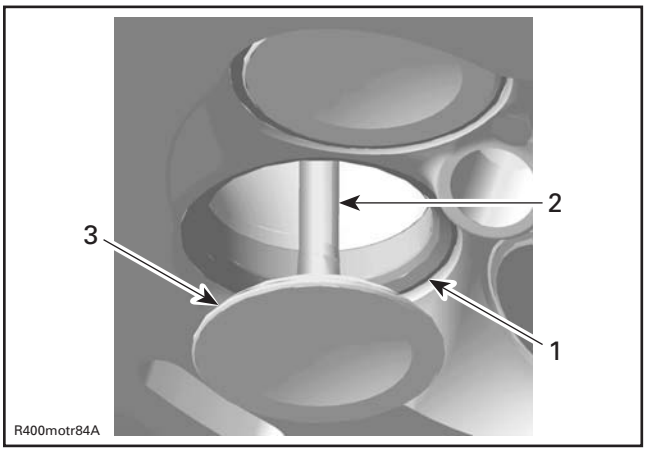
Replace valve if valve stem is out of specification or has other damages such as wear or friction surface.



A. Valve stem diameter

VALVE STEM DIAMETER	
EXHAUST VALVE	
NEW	4.956 mm to 4.970 mm (.1951 in to .1957 in)
SERVICE LIMIT	4.930 mm (.1941 in)
INTAKE VALVE	
NEW	4.966 mm to 4.980 mm (.1955 in to .1961 in)
SERVICE LIMIT	4.930 mm (.1941 in)

Valve Face and Seat



1. Valve seat
2. Exhaust valve contaminated area
3. Valve face (contact surface to valve seat)

Check valve face and seat for burning or pittings and replace valve or cylinder head if there are signs of damage.

Ensure to seat valves properly. Apply some lapping compound to valve face and work valve on its seat with a lapping tool (see *VALVE GUIDES* in this subsection).

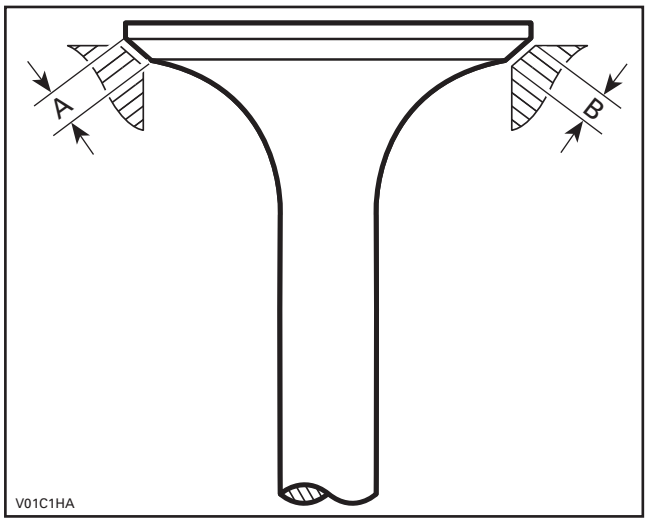
Measure valve face contact width.

NOTE: The location of contact area should be in center of valve seat.

Measure valve seat width using a caliper.

VALVE SEAT CONTACT WIDTH	
EXHAUST VALVE	
NEW	1.25 mm to 1.55 mm (.049 in to .061 in)
SERVICE LIMIT	2.00 mm (.079 in)
INTAKE VALVE	
NEW	1.05 mm to 1.35 mm (.041 in to .053 in)
SERVICE LIMIT	1.80 mm (.071 in)

If valve seat contact width is too wide or has dark spots, replace the cylinder head.



A. Valve face contact width
B. Valve seat contact width

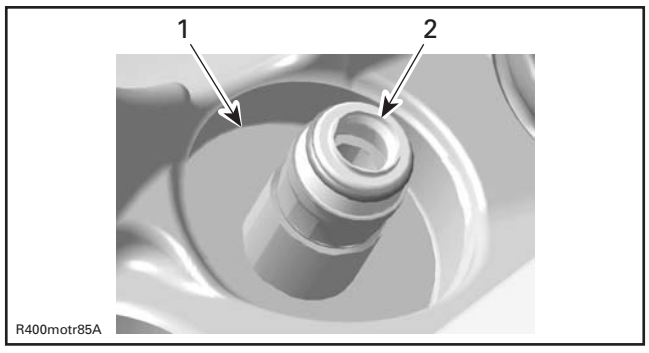
Valve Installation

For installation, reverse the removal procedure. Pay attention to the following details.

Install a NEW valve stem seal. Make sure thrust washer is installed before installing seal.

Apply engine oil on valve stem and install it.

NOTICE **Be careful when valve stem is passed through sealing lips of valve stem seal.**



1. Thrust washer
2. Sealing lips of valve stem seal

To ease installation of cotters, apply oil or grease on them so that they remain in place while releasing the spring.

After spring is installed, ensure it is properly locked by tapping on valve stem end with a soft hammer so that valve opens and closes a few times.

NOTICE **An improperly locked valve spring will cause engine damage.**

VALVE GUIDES

Valve Guide Inspection

Always replace valve stem seals whenever valve guides are removed.

Measure valve guide in three places using a small bore gauge.

NOTE: Clean valve guide to remove carbon deposits before measuring.

Replace valve guide if it is out of specification or has other damages such as wear or friction surface.

VALVE GUIDE DIAMETER (INTAKE AND EXHAUST VALVES)	
NEW	4.998 mm to 5.018 mm (.1968 in to .1976 in)
SERVICE LIMIT	5.050 mm (.1988 in)

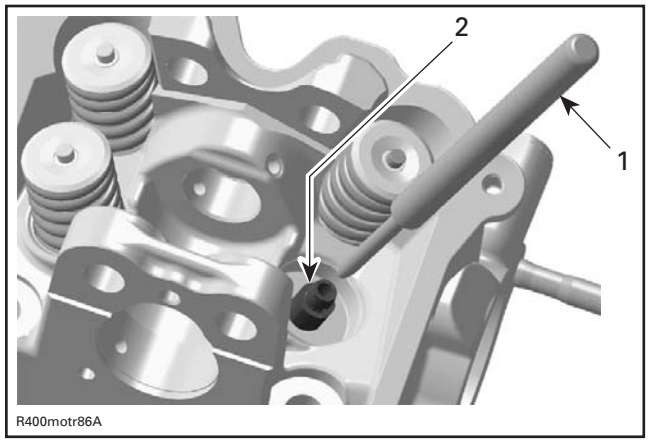
Valve Guide Removal

Refer to following procedures in this subsection to remove:
– Cylinder head
– Valves.

NOTE: Clean valve guide area from contamination before removal.

Drive the valve guide out of cylinder head.

REQUIRED TOOL	
Hammer	
VALVE GUIDE REMOVER 5 MM (P/N 529 035 924)	



1. Valve guide remover
2. Valve guide

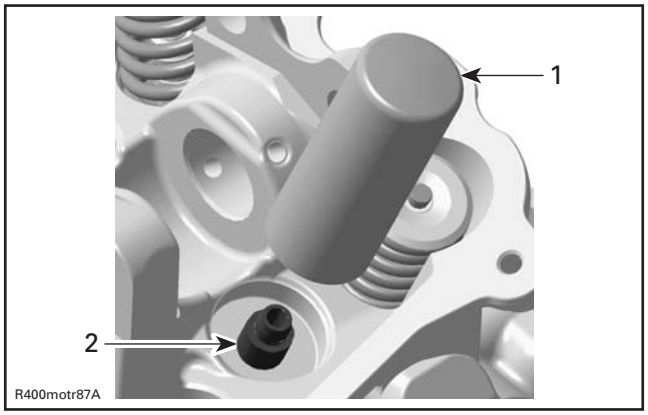
Valve Guide Installation

For installation, reverse the removal procedure. Pay attention to the following details.

Clean the valve guide bore before reinstalling the valve guide into cylinder head.

Install valve guide.

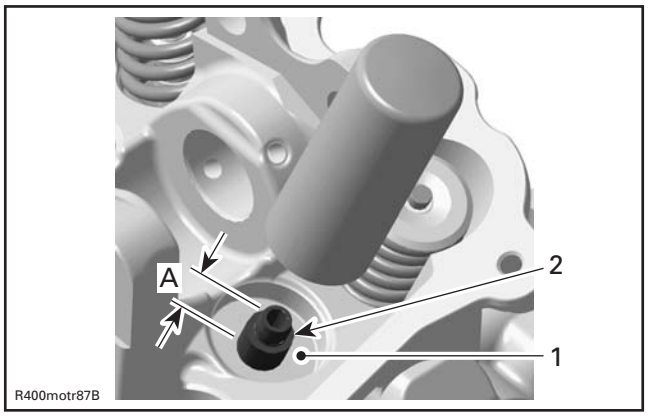
REQUIRED TOOL	
VALVE GUIDE INSTALLER (P/N 529 036 140)	



1. Valve guide installer
2. Valve guide

NOTE: Apply LOCTITE 767 (ANTISEIZE LUBRICANT) (P/N 293 800 070) on valve guide prior to install it into the cylinder head.

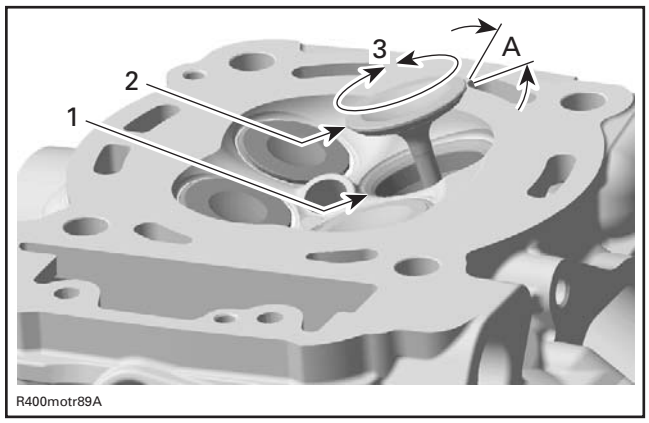
NOTICE **Push valve guide in the cold cylinder head as per following illustration.**



1. Thrust surface of cylinder head
2. Valve guide
A. Measurement from thrust surface to valve guide top

VALVE GUIDE (MEASUREMENT "A")	
NEW	14.00 mm to 14.40 mm (.5512 in to .5669 in)

Apply some lapping compound to valve face and work valve on its seat with a lapping tool.



1. Valve seat
2. Valve face (contact surface to valve seat)
3. Turn valve while pushing against cylinder head
A. Valve seat angle 45°

NOTE: Ensure to seat valves properly. Apply marking paste to ease checking contact pattern.

Repeat procedure until valve seat/valve face fits together.

CYLINDER

Cylinder Removal

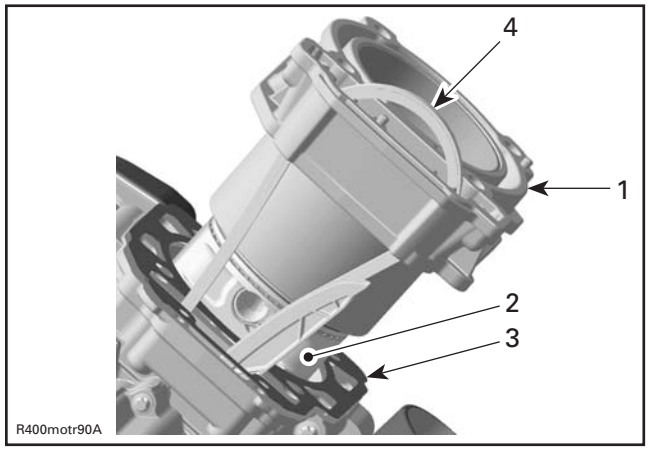
Refer to *TIMING CHAIN* subsection and remove the following parts:

– Timing chain tensioner
– Camshaft timing gear.

Remove the cylinder head (see *CYLINDER HEAD* in this subsection).

Pull cylinder.

Discard cylinder base gaskets.



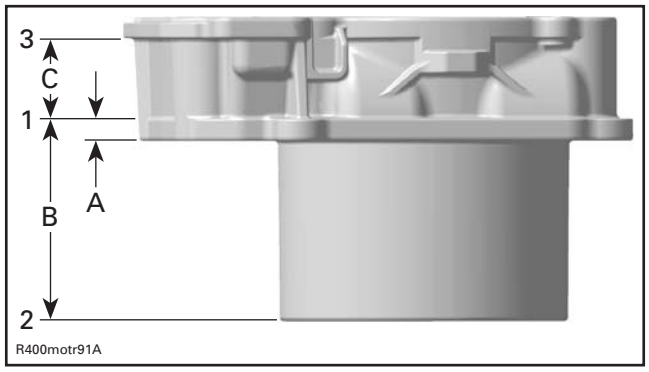
1. Cylinder
2. Piston assembly
3. Cylinder base gasket
4. Camshaft timing chain

Cylinder Inspection

Check cylinder for cracks, scoring and wear ridges on the top and bottom of the cylinder. If so, replace cylinder.

Cylinder Taper

Measure cylinder bore at 3 recommended positions.



A. First measurement (from cylinder bottom)
B. Second measurement
C. Third measurement

CYLINDER TAPER MEASUREMENTS		
ENGINE	MEASUREMENT	SPECIFICATION
800R engine	A	5 mm (.197 in)
	B	63 mm (2.48 in)
	C	32 mm (1.26 in)
1000 engine	A	5 mm (.197 in)
	B	58 mm (2.283 in)
	C	52 mm (2.047 in)

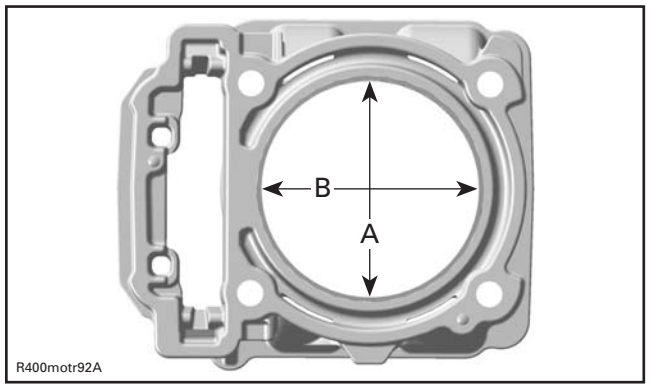
CYLINDER TAPER SPECIFICATION	
NEW (MAXIMUM)	0.038 mm (.0015 in)
SERVICE LIMIT	0.090 mm (.0035 in)

Distance between measurements should not exceed the service limit mentioned above. Otherwise, replace cylinder and piston rings.

Cylinder Out of Round

Measure cylinder diameter in piston axis direction from top of cylinder. Take another measurement 90° from first one and compare.

NOTE: Take the same measuring points like described in *CYLINDER TAPER* above.



A. Perpendicular to crankshaft axis
B. Parallel to crankshaft axis

CYLINDER OUT OF ROUND	
NEW (MAXIMUM)	0.015 mm (.0006 in)
SERVICE LIMIT	0.020 mm (.0008 in)

Cylinder Installation

For installation, reverse the removal procedure. Pay attention to the following details.

NOTICE Always replace cylinder base gasket before installing the cylinder.

NOTE: Make sure piston rings are properly spaced, refer to *PISTON RINGS* in this subsection.

Apply engine oil:
- In the bottom area of the cylinder bore
- On the piston rings
- On the compressor tool.

Compress piston rings.

REQUIRED TOOL	
PISTON RING COMPRESSOR (P/N 529 035 919)	

First mount cylinder 2.

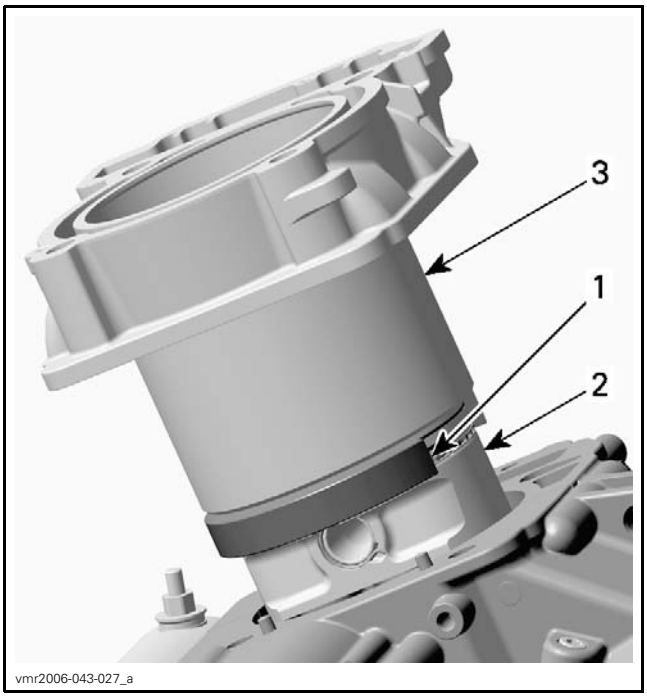
NOTE: The cylinder can not be pushed fully over the piston unless the piston is located at TDC.

Then remove the CRANKSHAFT LOCKING BOLT (P/N 529 035 617).

Crank the engine further and position piston 1 at TDC.

Mount cylinder 1.

Put timing chain through the chain pit then put the cylinder in place.



1. Piston ring compressor tool
2. Piston
3. Cylinder

NOTICE **Chain guide has to be fixed between cylinder and cylinder head.**

NOTE: After both cylinders are installed, turn crankshaft until piston of cylinder 2 is at TDC and lock crankshaft. Refer to *CRANKSHAFT* in the *BOTTOM END* subsection.

Install cylinder head and the other parts in accordance with the proper installation procedures.

PISTON

Piston Removal

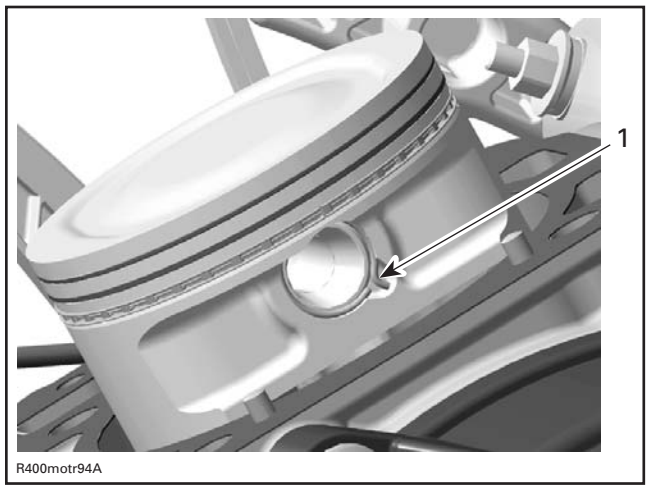
Refer to following procedures in this subsection to remove:
– Cylinder head
– Cylinder.

Place a rag under piston and in the area of timing chain compartment.

⚠ WARNING

Piston circlips are spring loaded.

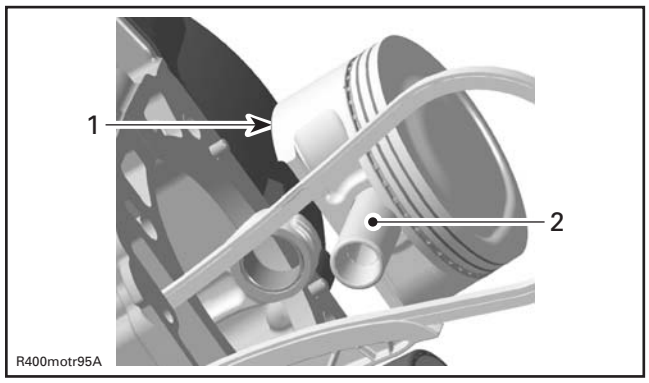
Remove one piston circlip and discard it.



1. Piston circlip

NOTE: The removal of both piston circlips is not necessary to remove piston pin.

Push piston pin out of piston.



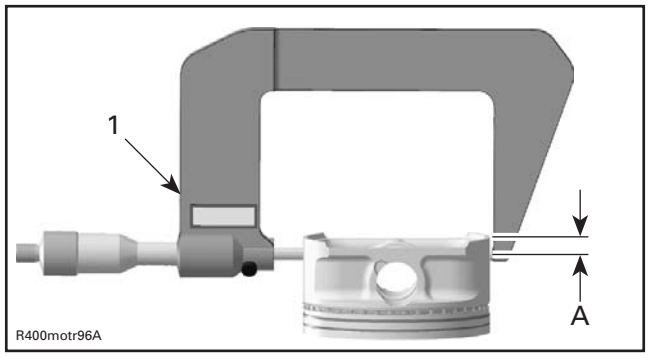
1. Piston
2. Piston pin

Detach piston from connecting rod.

Piston Inspection

Inspect piston for scoring, cracking or other damages. Replace piston and piston rings if necessary.

Using a micrometer, measure piston at 8 mm (.315 in) perpendicularly (90°) to piston pin.



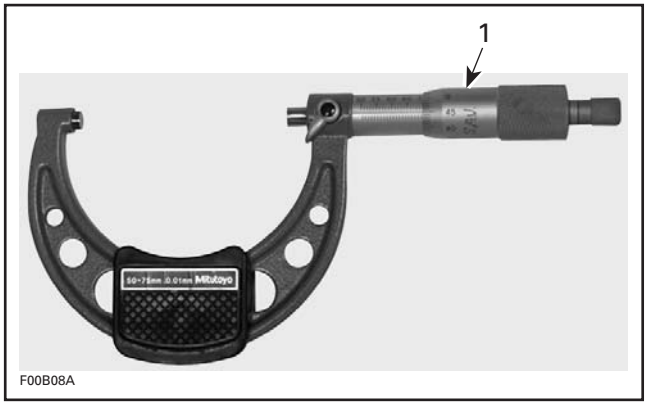
1. Measuring perpendicularly (90°) to piston pin
A. 8 mm (.315 in)

The measured dimension should be as described in the following tables. If not, replace piston.

PISTON MEASUREMENT	
NEW	90.950 mm to 90.966 mm (3.5807 in to 3.5813 in)
SERVICE LIMIT	90.850 mm (3.577 in)

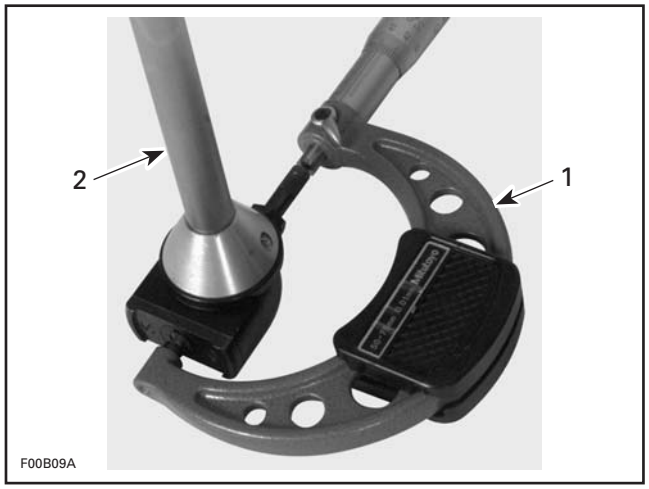
Piston/Cylinder Clearance

Adjust and lock a micrometer to the piston dimension.

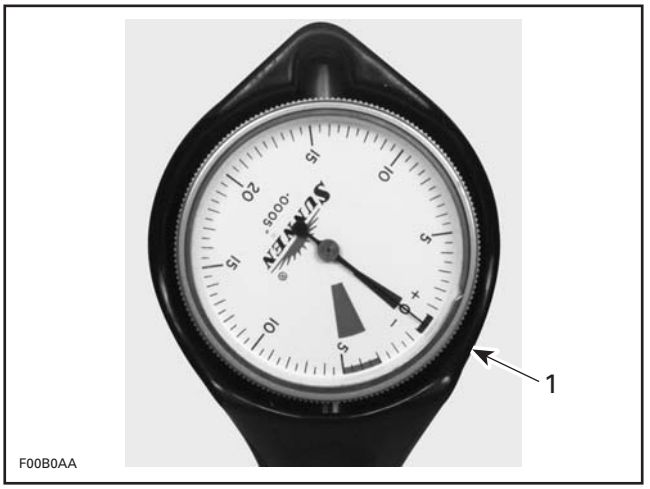


1. Micrometer set to the piston dimension

With the micrometer set to the dimension, adjust a cylinder bore gauge to the micrometer dimension and set the indicator to 0 (zero).



1. Use the micrometer to set the cylinder bore gauge
2. Dial bore gauge



TYPICAL
1. Indicator set to 0 (zero)

Position the dial bore gauge 20 mm (.787 in) above cylinder base, measuring perpendicularly (90°) to piston pin axis.

Read the measurement on the cylinder bore gauge. The result is the exact piston/cylinder wall clearance.

PISTON/CYLINDER CLEARANCE	
NEW	0.027 mm to 0.057 mm (.0011 in to .0022 in)
SERVICE LIMIT	0.100 mm (.0039 in)

NOTE: Make sure used piston is not worn.

If clearance exceeds specified tolerance, replace piston by a new one and measure piston/cylinder clearance again.

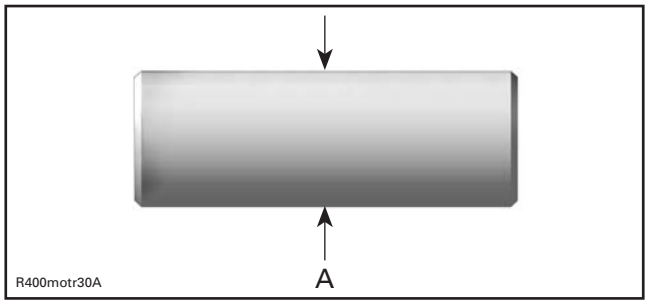
NOTE: Make sure the cylinder bore gauge indicator is set exactly at the same position as with the micrometer, otherwise the reading will be false.

Connecting Rod/Piston Pin Clearance

Using synthetic abrasive woven, clean piston pin from deposits.

Inspect piston pin for scoring, cracking or other damages.

Measure piston pin. See the following illustration for the proper measurement positions.

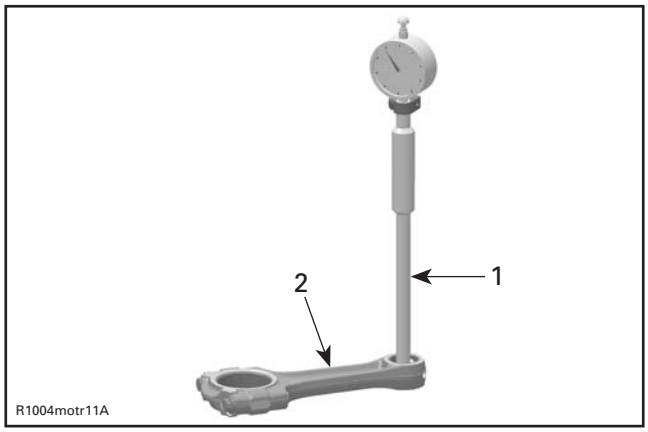


A. Piston pin diameter

PISTON PIN DIAMETER	
800R	
NEW	19.996 mm to 20.000 mm (.7872 in to .7874 in)
SERVICE LIMIT	19.980 mm (.7866 in)
1000	
NEW	21.996 mm to 22.000 mm (.866 in to .8661 in)
SERVICE LIMIT	21.980 mm (.8654 in)

Replace piston pin if diameter is out of specifications.

Measure inside diameter of connecting rod small end bushing.



1. Bore gauge
2. Connecting rod

CONNECTING ROD SMALL END DIAMETER	
800R	
NEW	20.010 mm to 20.020 mm (.7878 in to .7882 in)
SERVICE LIMIT	20.060 mm (.7898 in)
1000	
NEW	20.010 mm to 20.020 mm (.7878 in to .7882 in)
SERVICE LIMIT	20.050 mm (.7894 in)

Replace connecting rod if diameter of connecting rod small end is out of specifications. Refer to *BOTTOM END* subsection for removal procedure.

Compare measurements to obtain the connecting rod/piston pin clearance.

CONNECTING ROD/ PISTON PIN CLEARANCE	
SERVICE LIMIT	0.080 mm (.0031 in)

Piston Installation

For installation, reverse the removal procedure. Pay attention to the following details.

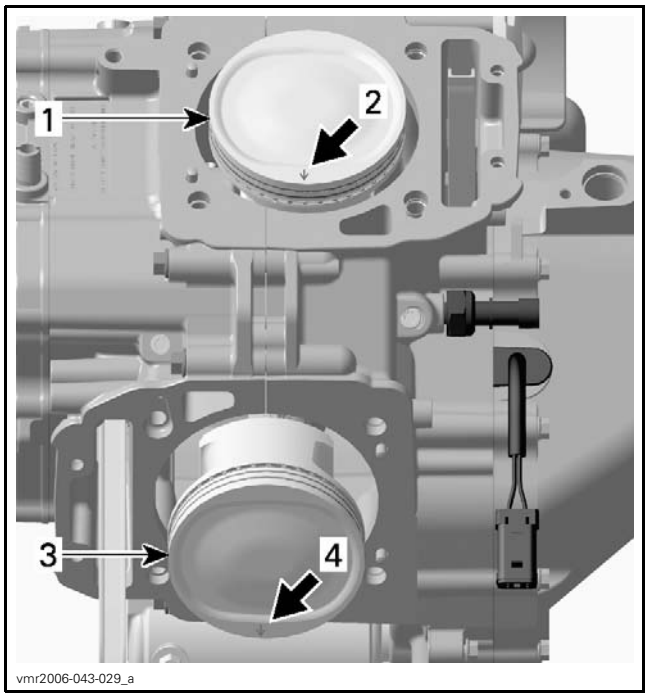
Apply engine oil on the piston pin.

Insert piston pin into piston and connecting rod.

For each cylinder, install piston with the punched arrow on piston dome is pointing toward the rear side of the engine.

Front cylinder: Mark on top of piston must show to intake side.

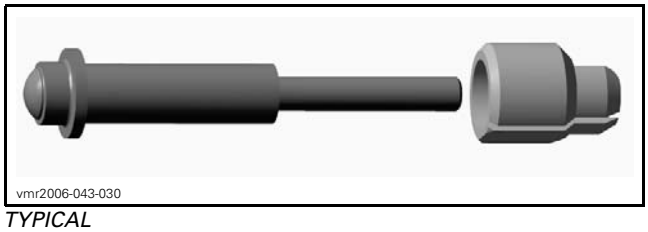
Rear cylinder: Mark on top of piston must show to exhaust side.



1. *Piston of cylinder 1*
2. *Mark on piston must show to intake side of cylinder 1*
3. *Piston of cylinder 2*
4. *Mark on piston must show to exhaust side of cylinder 2*

Use the piston appropriate circlip installer to assemble the NEW piston circlip as per following procedure:

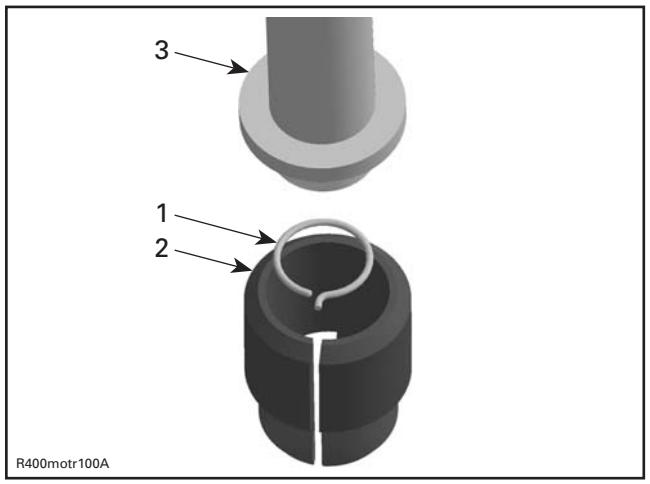
ENGINE TYPE	TOOL
800R	PISTON CIRCLIP INSTALLER (P/N 529 035 921)
1000	PISTON CIRCLIP INSTALLER (P/N 529 036 153)



TYPICAL

NOTICE Always replace disassembled piston circlip(s) by NEW ones. Place a rag on cylinder base to avoid dropping the circlip inside the engine.

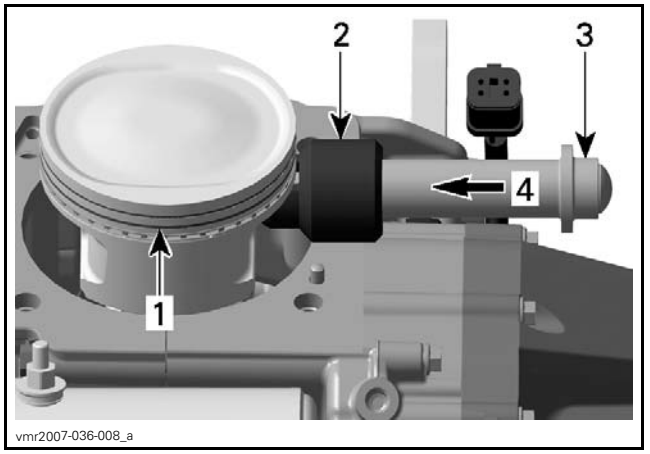
Place circlip in sleeve as per following illustration.



1. *Circlip*
2. *Sleeve*
3. *Assembly jig from piston clip installer*

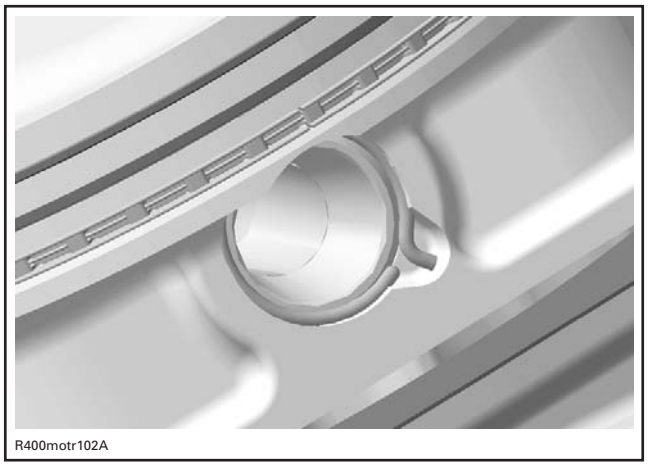
Push taper side of assembly jig until circlip reaches middle of sleeve.

Align sleeve with piston pin axis and push assembly jig until circlip engages in piston.



1. *Hold piston while pushing circlip in place*
2. *Sleeve*
3. *Assembly jig*
4. *Direction to push circlip*

NOTE: Take care that the hook of the piston circlip is positioned properly.


R400motr102A

CORRECT POSITION OF THE PISTON CIRCLIP

PISTON RINGS

Ring Removal

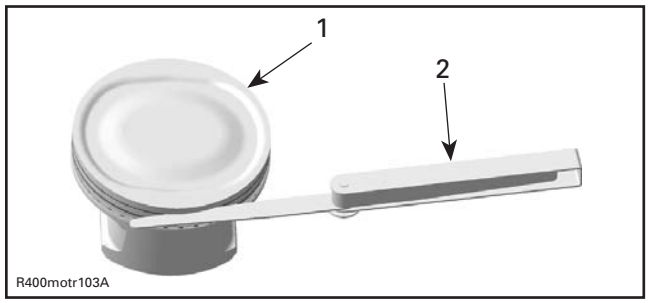
Remove the piston (see *PISTON* in this subsection).

Ring Inspection

Ring/Piston Groove Clearance

Using a feeler gauge measure each ring/piston groove clearance. If the clearance is too large, the piston and the piston rings should be replaced.

RING/PISTON GROOVE CLEARANCE	
UPPER COMPRESSION RING	
NEW	0.03 mm to 0.07 mm (.0012 in to .0028 in)
SERVICE LIMIT	0.150 mm (.0059 in)
LOWER COMPRESSION RING	
NEW	0.02 mm to 0.06 mm (.0008 in to .0024 in)
SERVICE LIMIT	0.150 mm (.0059 in)
OIL SCRAPER RING	
NEW	0.01 mm to 0.18 mm (.0004 in to .0071 in)
SERVICE LIMIT	0.250 mm (.0098 in)



R400motr103A

1. Piston
2. Feeler gauge

Ring End Gap

RING END GAP	
UPPER COMPRESSION RING	
NEW	0.20 mm to 0.40 mm (.008 in to .016 in)
SERVICE LIMIT	0.60 mm (.024 in)
LOWER COMPRESSION RING	
NEW	0.20 mm to 0.40 mm (.008 in to .016 in)
SERVICE LIMIT	0.70 mm (.028 in)
OIL SCRAPER RING	
NEW	0.20 mm to 0.70 mm (.008 in to .028 in)
SERVICE LIMIT	1.00 mm (.039 in)

To measure the ring end gap place the ring in the cylinder in the area of 8 mm to 16 mm (5/16 in to 5/8 in) from top of cylinder.

NOTE: In order to correctly position the ring in the cylinder, use piston as a pusher.

Using a feeler gauge, check ring end gap. Replace ring if gap exceeds above described specified tolerance.

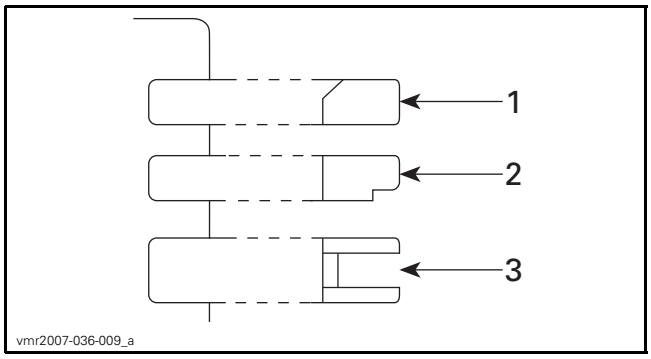
Ring Installation

For installation, reverse the removal procedure. Pay attention to the following details.

NOTE: Use a ring expander to prevent breakage during installation. The oil ring must be installed by hand.

NOTE: First install spring and then rings of oil scraper ring.

Install the oil scraper ring first, then the lower compression ring with the word "N and TOP " facing up, then the upper compression ring with the word "N and TOP" facing up.

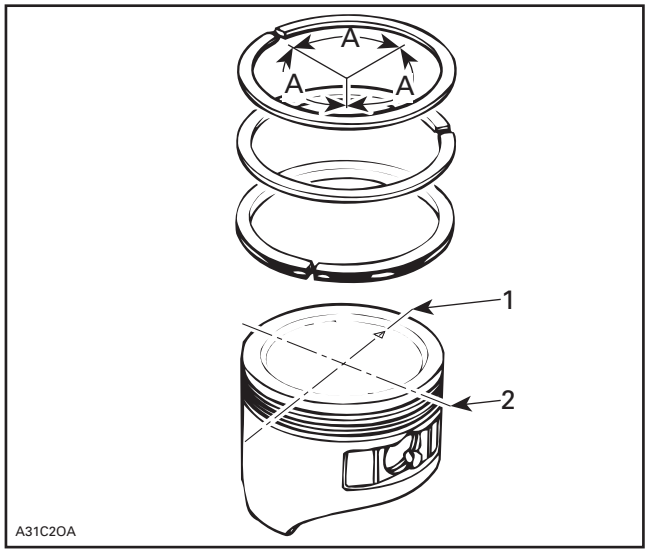


1. Upper compression ring
2. Lower compression ring
3. Oil scraper ring

NOTICE Ensure that top and second rings are not interchanged.

Check that rings rotate smoothly after installation.

Space the piston ring end gaps 120° apart and do not align the gaps with the piston pin bore or the thrust side axis.



1. DO NOT align ring gap with piston thrust side axis
2. DO NOT align ring gap with piston pin bore axis
A. 120°

TIMING CHAIN

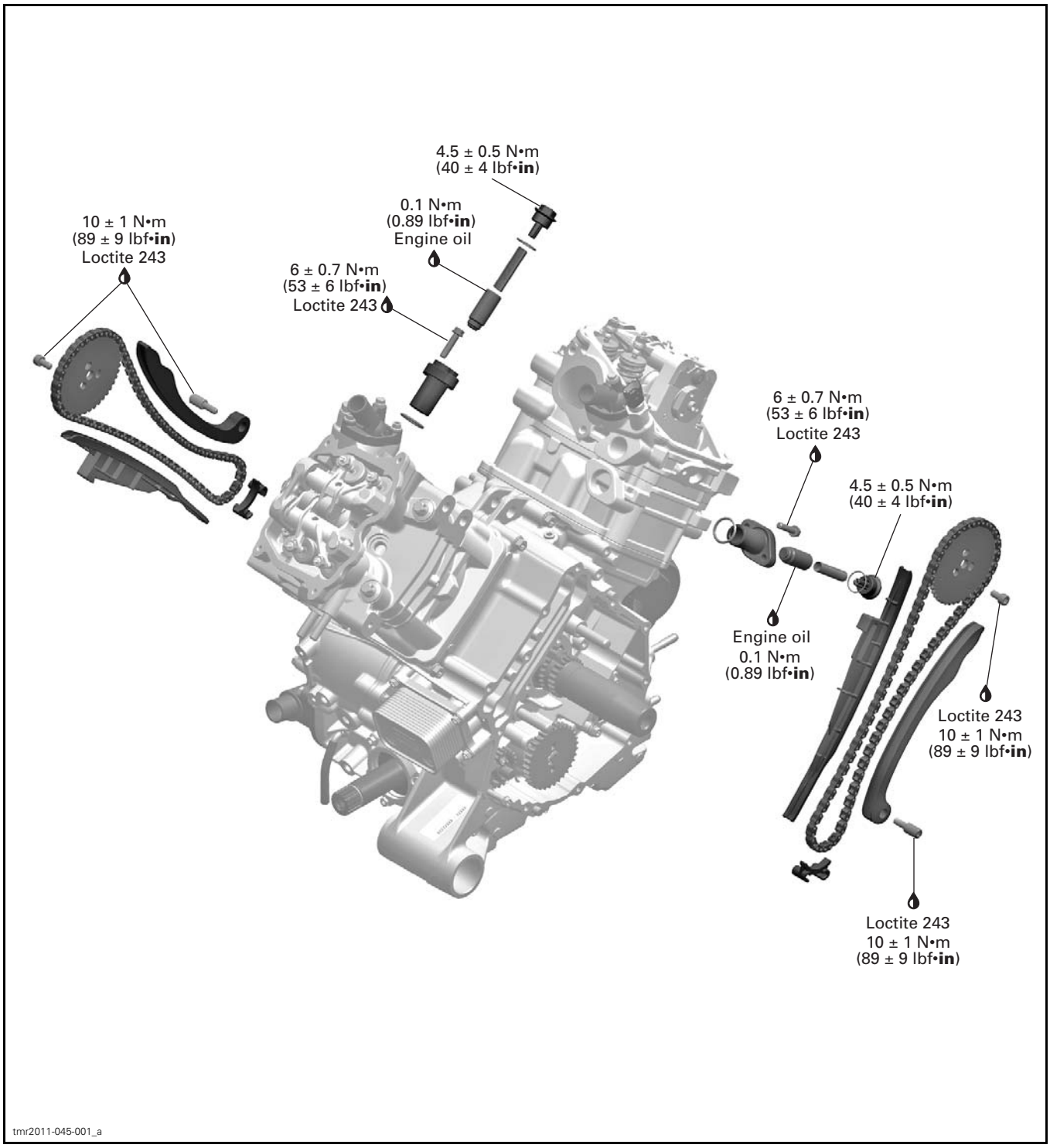
SERVICE TOOLS

Description	Part Number	Page
CAMSHAFT TIMING TOOL	529 036 231	129–130
CRANKSHAFT TDC POSITION TOOL	529 036 201	133

SERVICE PRODUCTS

Description	Part Number	Page
LOCTITE 243 (BLUE)	293 800 060	130, 135

TIMING CHAIN



GENERAL

IMPORTANT: Note position of parts on disassembly. This may help to find the root cause of a problem. A component that is not replaced should be reinstalled in the same position as originally mounted.

TROUBLESHOOTING

UNUSUAL ENGINE NOISE OR VIBRATION

1. IMPROPER VALVE CLEARANCE ADJUSTMENT AND/OR WORN OUT ROCKER ARM(S)
   - *Readjust valve clearance and/or replace defective part(s), refer to TOP END subsection.*
2. DEFECTIVE CHAIN TENSIONER
   - *Replace chain tensioner.*
3. WORN OUT TIMING CHAIN GUIDE(S)
   - *Replace timing chain guide(s).*
4. STRETCHED TIMING CHAIN OR WORN OUT TIMING GEARS
   - *Replace timing chain and timing gears.*
5. LOOSE TIMING GEAR RETAINING SCREWS
   - *Retighten screws to recommended torque.*
6. INCORRECT CAMSHAFT TIMING
   - *Replace damaged components and readjust camshaft timing.*

ENGINE LACKS ACCELERATION OR POWER

1. INCORRECT CAMSHAFT TIMING
   - *Replace damaged components and readjust camshaft timing.*

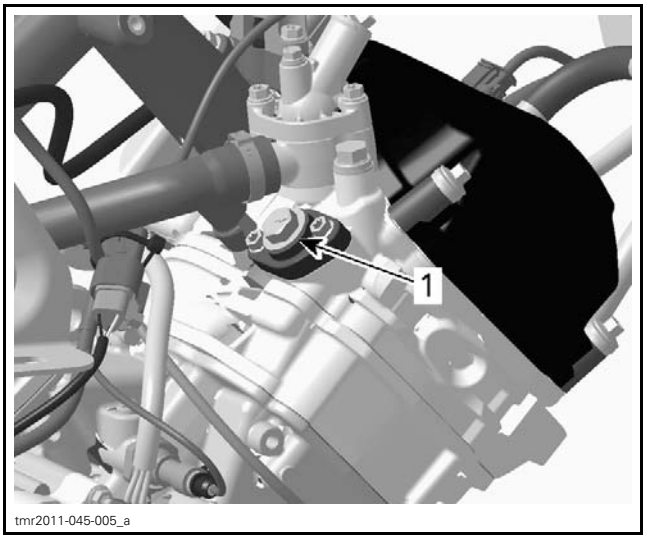
PROCEDURES

TIMING CHAIN TENSIONERS

Timing Chain Tensioner Location

800R Engine

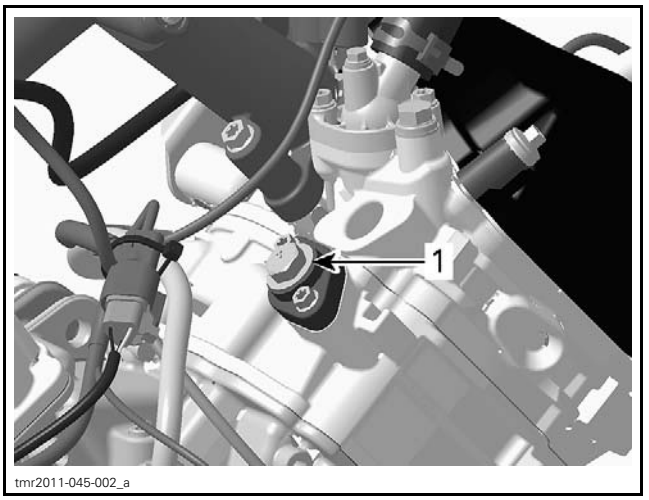
The timing chain tensioner is located in the cylinder head.



800R ENGINE - (FRONT CYLINDER SHOWN)
1. Timing chain tensioner

1000 Engine

The timing chain tensioner is located in the cylinder.



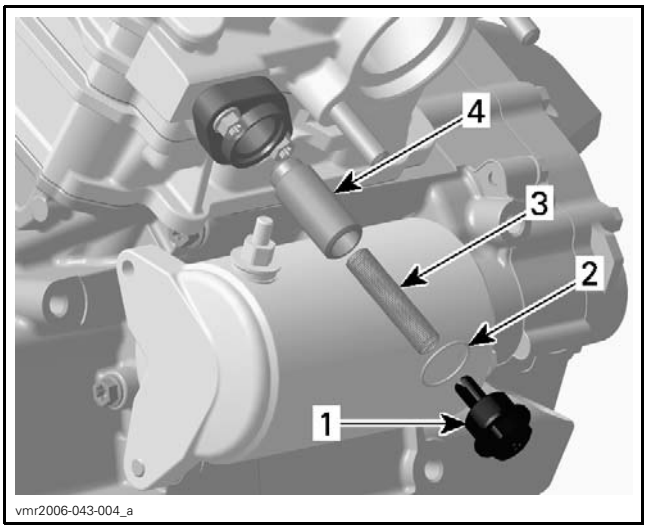
1000 ENGINE - (FRONT CYLINDER SHOWN)
1. Timing chain tensioner

Timing Chain Tensioner Removal

1. Make sure the respective cylinder is set to TDC ignition. Refer to *CAMSHAFT TIMING GEARS* in this subsection.
2. Carefully unscrew chain tensioner plug and release spring tension.

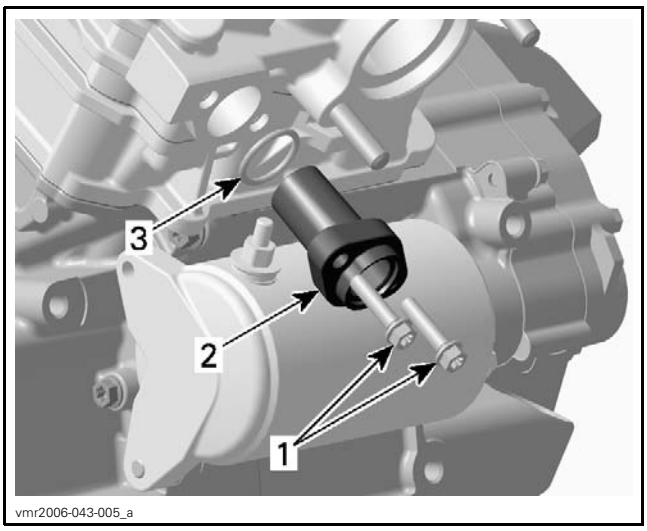
⚠ CAUTION **Tensioner is spring loaded.**

3. Remove:
   – O-ring
   – Spring
   – Chain tensioner plunger.



1. Chain tensioner plug
2. O-ring
3. Spring
4. Chain tensioner plunger

4. Remove:
   – Chain tensioner housing retaining screws
   – Chain tensioner housing
   – O-ring.



1. Screws
2. Chain tensioner housing
3. O-ring

Timing Chain Tensioner Inspection

Check the chain tensioner housing and plug for cracks or other damages. Replace if necessary.

Check chain tensioner plunger for free movement and/or scoring.

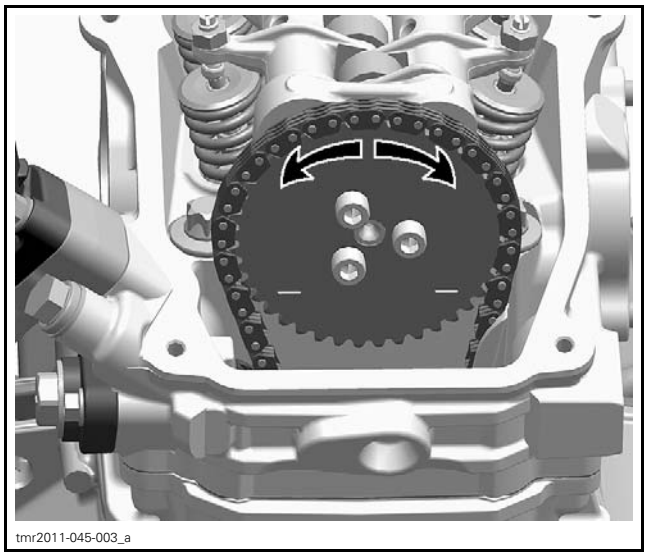
Check if O-rings are brittle, cracked or hard. Replace if necessary.

Check spring condition. Replace if bent, broken or worn.

Timing Chain Tensioner Installation

1. For installation, reverse the removal procedure. However, pay attention to the following.

NOTE: Before installing the chain tensioner make sure, that the camshaft timing gear can be moved back and forth.



MOVE GEAR BACK AND FORTH

2. Apply engine oil on the plunger before installation.
3. Slightly turn the camshaft timing gear in order to get the timing chain play on the tensioner side.
4. Slightly screw the plunger in until the timing chain allows no more back and forth movement of the camshaft timing gear.
5. Screw the plunger in an additional 1/8 turn to reach the required specified torque.

TIMING CHAIN TENSIONER ADJUSTMENT (TORQUE)
0.1 N•m (.9 lbf•**in**)

NOTICE **Improper adjustment of the timing chain will lead to severe engine damage.**

6. Fit the spring on one side into the slot of the plug and on the other side into the plunger.

NOTE: Turn spring only clockwise in order to fit the spring end into the notch of the plunger to avoid loosening the plunger during spring installation. Do not preload the spring.

NOTE: Do not forget to place the O-ring on chain tensioner plug.

7. Then compress the spring and screw the plug in.

NOTE: To avoid overstressed timing chain, the plug must engage into threads within the first full turn.

8. Remove locking tool and install all other removed parts.
9. Finally, tighten the plug.

CAMSHAFT TIMING GEARS

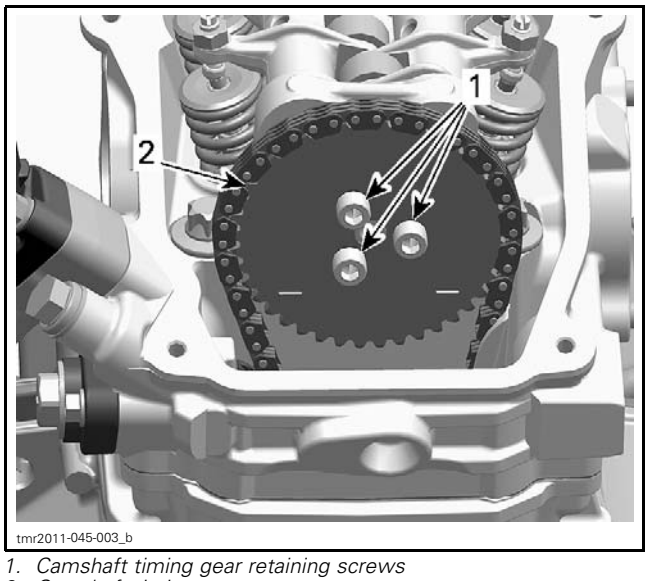
Camshaft Timing Gear Removal

Remove the valve cover, refer to *TOP END* subsection.

Turn crankshaft to TDC ignition of the respective cylinder and lock magneto flywheel, see *CAMSHAFT TIMING* in this subsection.

Unscrew timing chain tensioner. Refer to *TIMING CHAIN TENSIONERS* in this subsection.

Remove camshaft timing gear retaining screws.



1. Camshaft timing gear retaining screws
2. Camshaft timing gear

Remove the camshaft timing gear.

NOTE: Secure timing chain with a piece of wire.

Camshaft Timing Gear Inspection

Check camshaft timing gear for wear or deterioration.

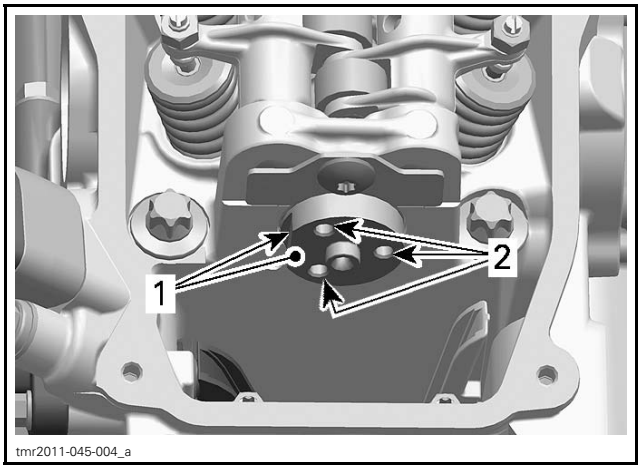
If gear is worn or damaged, replace it as a set with the timing chain.

For crankshaft gear, refer to *BOTTOM END* subsection, see *CRANKSHAFT*.

Camshaft Timing Gear Installation

For installation, reverse the removal procedure. Pay attention to the following details.

1. Clean mating surface and threads of camshaft prior installing camshaft timing gear.

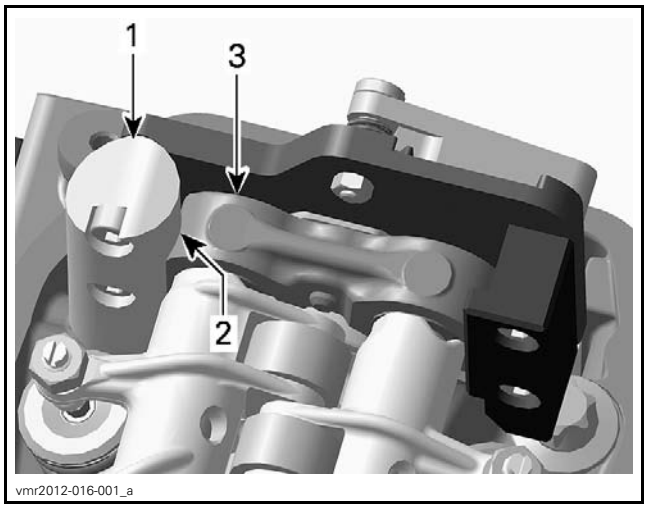


1. Mating surface on camshaft
2. Threads for camshaft screws

2. Crankshaft must be set to TDC ignition position before installing the timing chain, refer to *CAMSHAFT TIMING* in this subsection.
3. Install the camshaft timing tool on the cylinder head.

REQUIRED TOOL	
CAMSHAFT TIMING TOOL (P/N 529 036 231)	

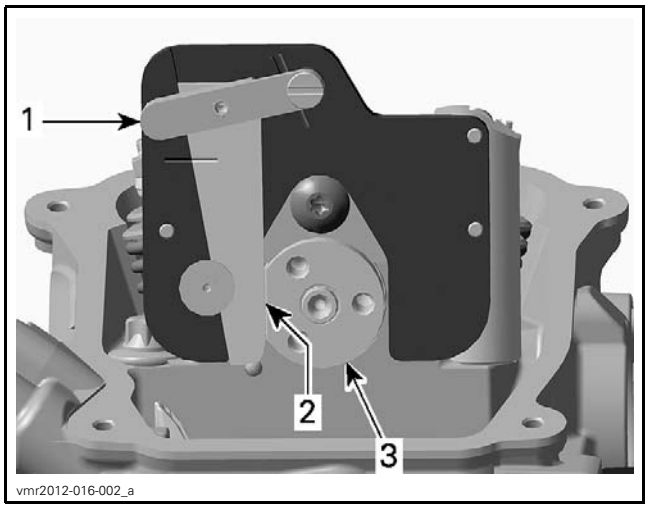
NOTE: Align tube of camshaft adjustment tool properly with machined radius on cylinder head.



CAMSHAFT TIMING TOOL INSTALLED
1. Tube (camshaft adjustment tool)
2. Machined radius (camshaft adjustment tool)
3. Cylinder head

4. Set camshaft to TDC ignition position by aligning the camshaft flange flat spot with the tool lever.

NOTE: In addition, to ensure proper camshaft timing, press camshaft adjustment tool lever downwards.

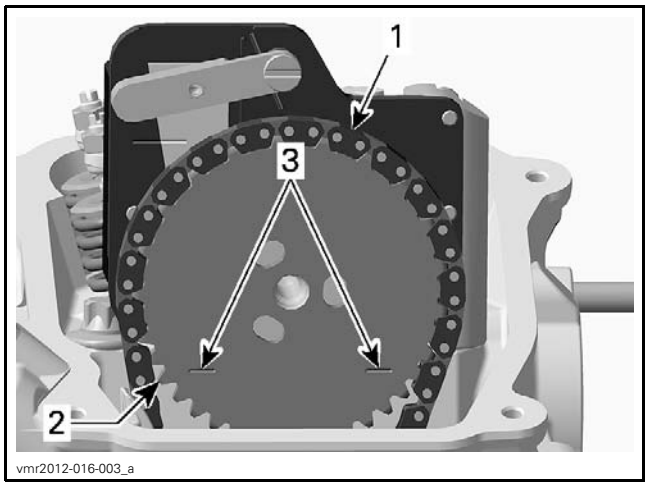


PRESS TOOL LEVER DOWN
1. *Lever*
2. *Flat spot*
3. *Camshaft*

NOTICE **Crankshaft and camshaft must be locked at TDC ignition position to place camshaft timing gear and timing chain in the proper position.**

5. Place camshaft timing gear along with the timing chain on the camshaft.

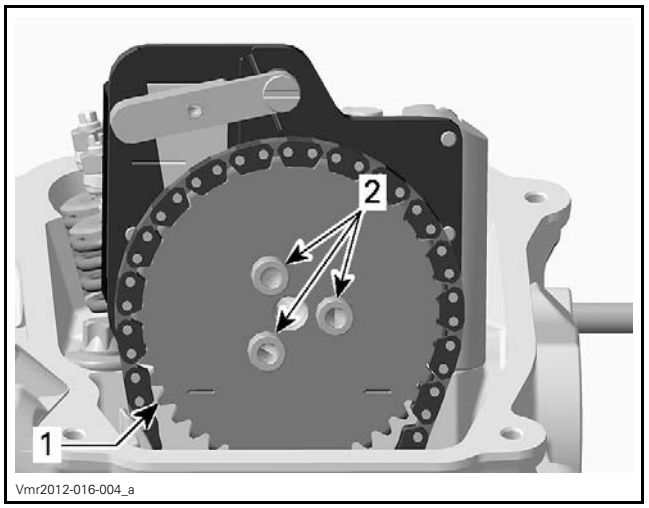
NOTE: The printed marks on the camshaft timing gear must be parallel to the cylinder head base.



1. *Timing chain*
2. *Camshaft timing gear*
3. *Printed marks on camshaft timing gear*

6. Install and adjust timing chain tensioner, refer to *TIMING CHAIN TENSIONER* in this subsection.

7. Install and tighten camshaft timing gear retaining screws to specified torque.



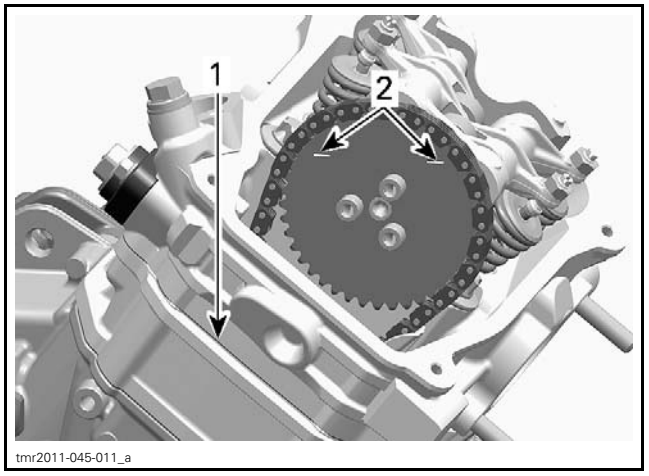
1. *Camshaft timing gear*
2. *Timing gear retaining screws*

CAMSHAFT TIMING GEAR RETAINING SCREWS	
Service product	LOCTITE 243 (BLUE) (P/N 293 800 060)
Tightening torque	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

8. Remove the CAMSHAFT TIMING TOOL (P/N 529 036 231).

Camshaft Timing

NOTE: If a piston (of cylinder 1 or 2) is set to TDC ignition, the camshaft timing gear of the opposite cylinder must be in the following position.

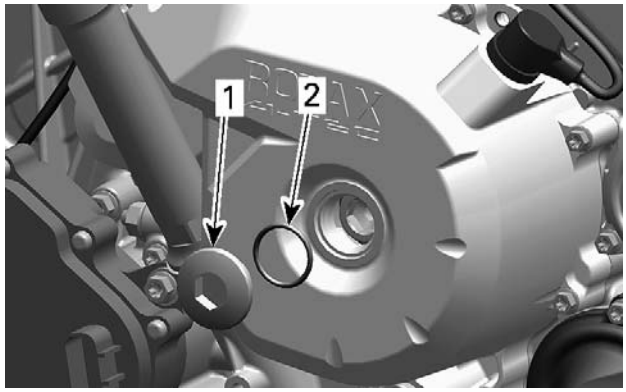


TYPICAL
1. *Cylinder head base*
2. *Marks on timing gear of the opposite cylinder*

Camshaft Timing Piston No. 2 (rear)

1. Remove spark plugs of both cylinders.

2. Remove valve covers of both cylinders.
3. Remove the plug and O-ring of magneto cover.



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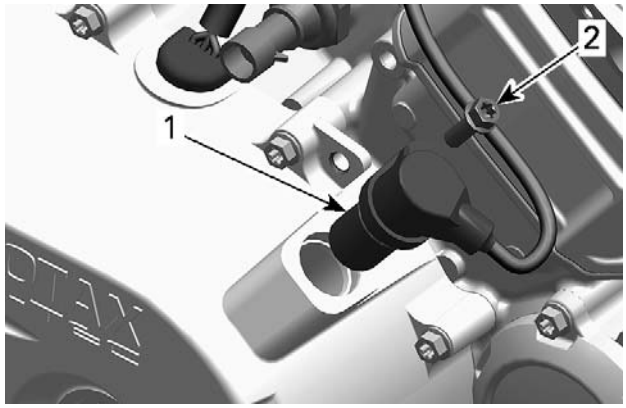
1. Plug
2. O-ring

4. Remove the crankshaft position sensor (CPS).



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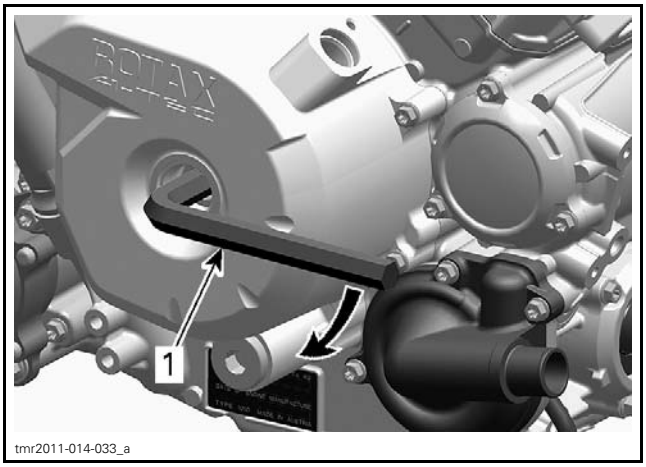
1. CPS
2. Screw

5. Set piston no. 2 to TDC ignition by turning the crankshaft.

REQUIRED TOOL
Allen key 14 mm



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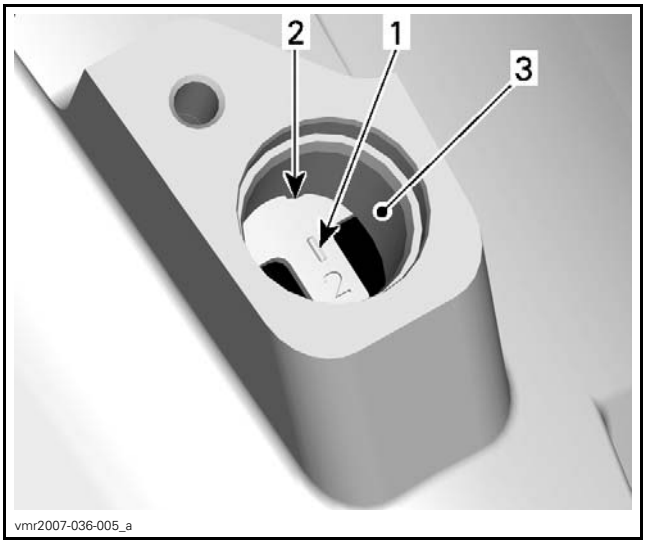
1. Allen key 14 mm

5.1 The rear piston is at TDC when it's index mark on the magneto flywheel is aligned with notch in the magneto cover.



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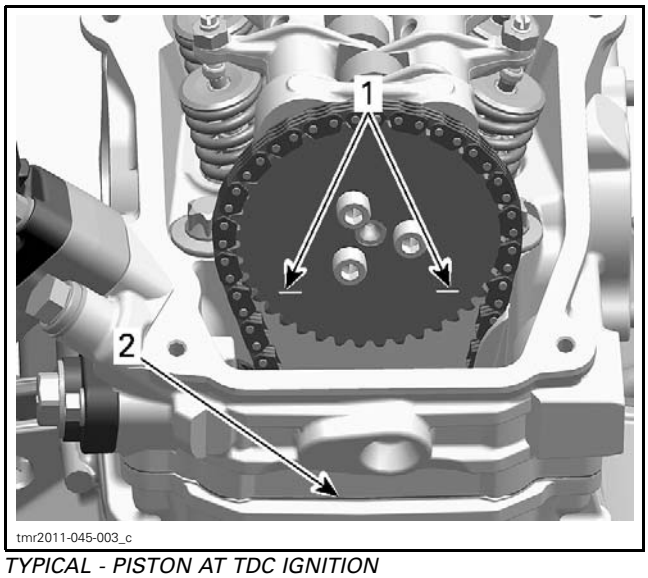
PISTON NO. 2 AT TDC
1. Mark "2" on magneto flywheel
2. Notch on magneto cover
3. Crankshaft position sensor location

5.2 Confirm printed marks on the camshaft timing gear are parallel to cylinder head base, in the lower position.

NOTE: If printed marks on camshaft timing gear are not as specified, turn crankshaft 360°.

NOTE: In this position the piston is set to TDC ignition.



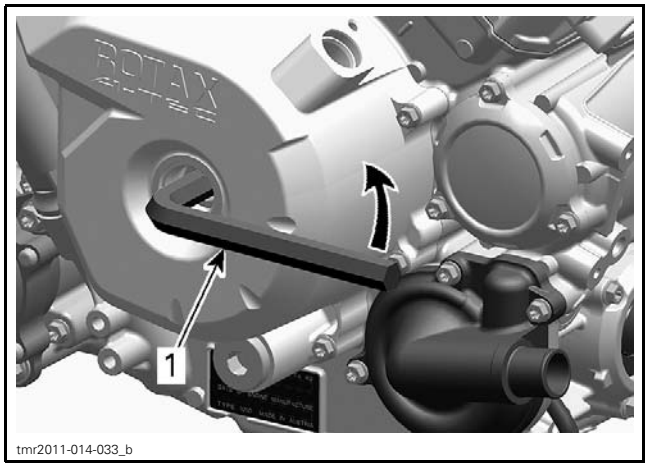
TYPICAL - PISTON AT TDC IGNITION
1. *Printed marks on camshaft timing gear*
2. *Cylinder head base*

6. Install the crankshaft TDC position tool to lock crankshaft in position. Refer to *CRANKSHAFT TDC POSITION TOOL* in this subsection.

Camshaft Timing Piston No. 1 (front)

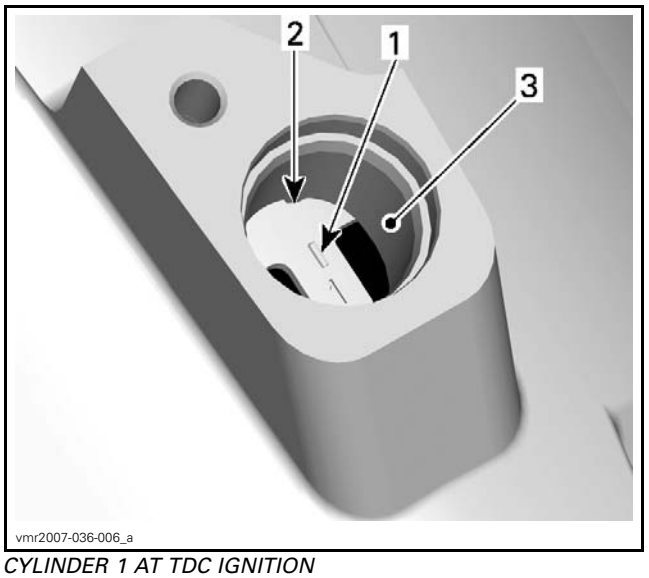
1. Set piston no. 2 (rear) to TDC ignition, see *CAMSHAFT TIMING PISTON NO. 2 (REAR)* in this subsection.
2. Remove crankshaft TDC position tool.
3. To set front piston no. 1 to **TDC ignition** turn crankshaft 280° counterclockwise.

REQUIRED TOOL
Allen key 14 mm



TURN CRANKSHAFT 280° COUNTERCLOCKWISE
1. *Allen key 14 mm*

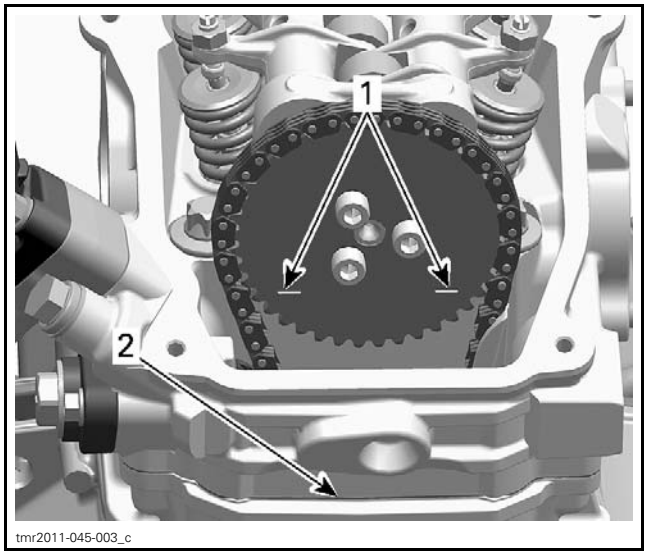
3.1 The front piston is at TDC when it's index mark on the magneto flywheel is aligned with the notch in the magneto cover.



CYLINDER 1 AT TDC IGNITION
1. *Mark "1" on magneto flywheel*
2. *Notch on magneto cover*
3. *Location of crankshaft position sensor*

3.2 Confirm printed marks on the camshaft timing gear are parallel with cylinder head base, in the lowest position.

NOTE: In this position the piston is set to TDC ignition.



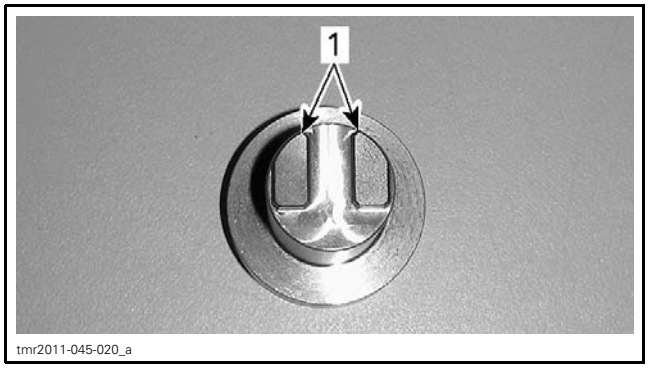
TYPICAL - PISTON AT TDC IGNITION
1. *Printed marks on camshaft timing gear*
2. *Cylinder head base*

Crankshaft TDC Position Tool Installation

Install tool in magneto cover CPS bore.

REQUIRED TOOL	
CRANKSHAFT TDC POSITION TOOL (P/N 529 036 201)	

NOTE: Make sure to match the teeth on the crankshaft TDC position tool with the magneto rotor.



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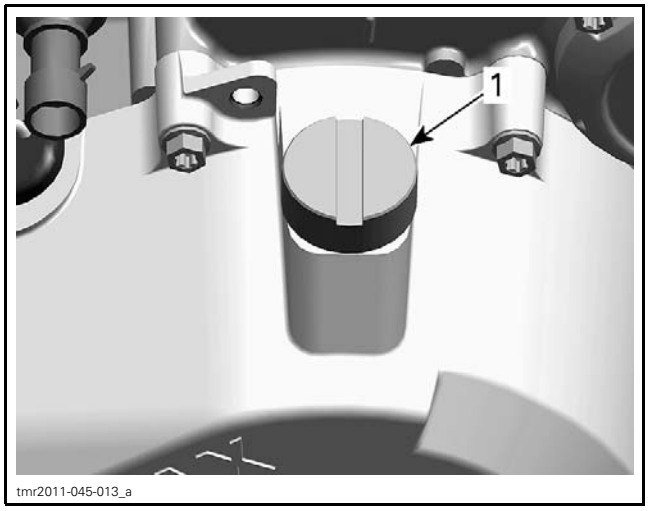
1. Crankshaft TDC position tool teeth (end view)



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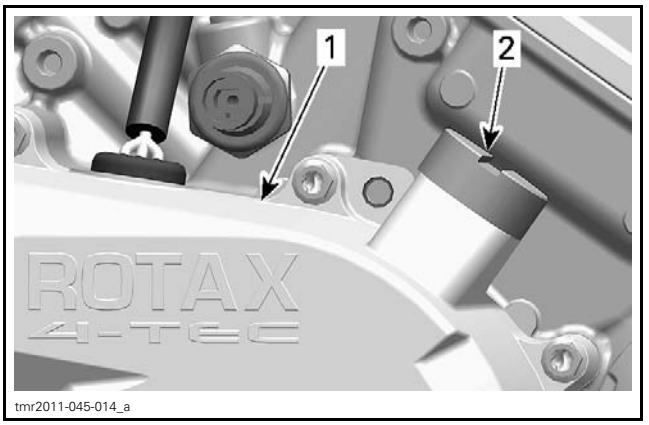
MAGNETO COVER
1. Crankshaft TDC position tool installed in CPS bore

NOTICE Tool must be fully inserted.



tmr2011-045-014_a

1. Magneto cover
2. TDC position tool

TIMING CHAIN

The engine is equipped with two timing chains.
– MAG side timing chain is located behind the magneto cover.
– PTO side timing chain is located behind the PTO cover.

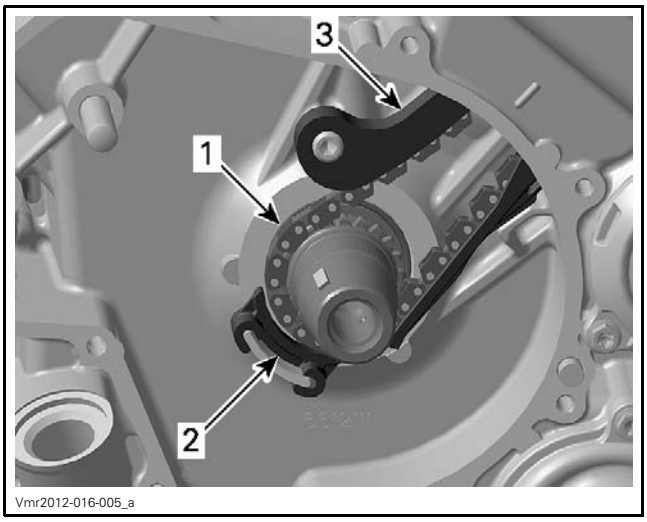
Timing Chain Removal (MAG Side)

Refer to *MAGNETO SYSTEM* subsection and remove following parts:
– Magneto cover
– Rotor
– Sprag clutch gear.

Refer to *TOP END* subsection and remove following parts:
– Valve cover.

Refer to following procedures in this subsection and remove following parts:
– Chain tensioner
– Camshaft timing gear.

Remove timing chain guide (tensioner side) and lower timing chain guide.



1. Timing chain
2. Lower timing chain guide
3. Timing chain guide (tensioner side)

NOTE: Mark the operating direction of the timing chain and check for excessive radial play before removal. Refer to *TIMING CHAIN INSPECTION*.

Carefully pull the timing chain downwards and sideways, then out of the crankcase.

Timing Chain Removal (PTO Side)

Refer to *BOTTOM END* subsection and remove following parts:

– PTO cover
– Breather gear
– Intermediate gear.

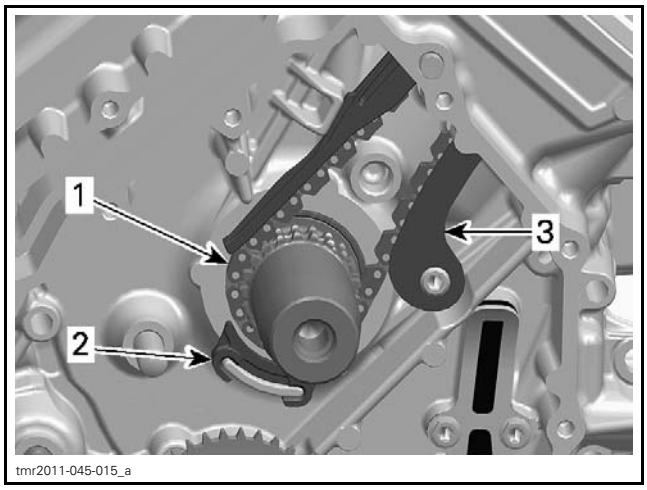
Refer to *TOP END* subsection and remove following parts:

– Valve cover.

Refer to following procedures in this subsection and remove following parts:

– Chain tensioner
– Camshaft timing gear.

Remove timing chain guide (tensioner side) and lower timing chain guide.



1. Timing chain
2. Lower timing chain guide
3. Timing chain guide (tensioner side)

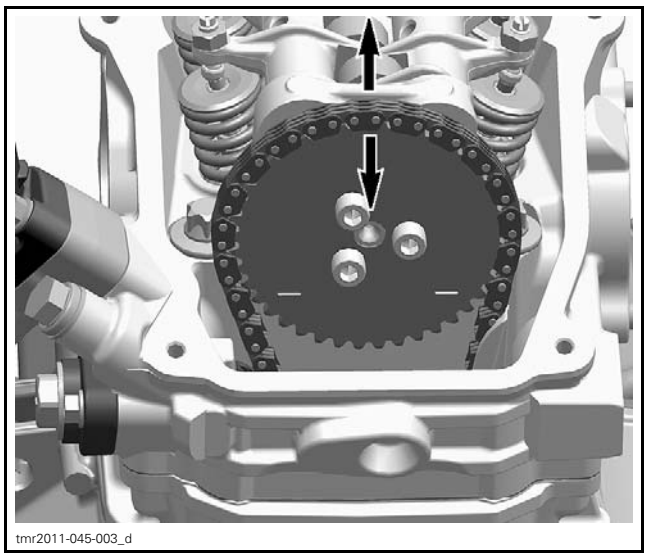
Carefully pull the timing chain sideward and down from the crankcase.

NOTE: Mark the operating direction of the timing chain and check for excessive radial play before removal. Refer to *TIMING CHAIN INSPECTION*.

Timing Chain Inspection

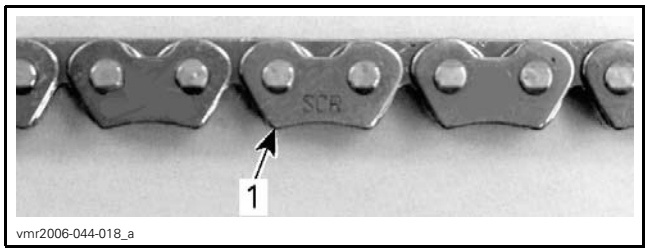
Inspection is the same for both timing chains.

Check timing chain on camshaft timing gear for excessive radial play.



CHECKING TIMING CHAIN RADIAL PLAY

Check chain condition for wear and teeth condition.



1. Timing chain

If chain is excessively worn or damaged, replace it as a set (camshaft timing gear and timing chain).

Check timing chain guides for wear, cracks or deforming. Replace as required.

NOTE: Check also the timing chain guide (tensioner side).

Timing Chain Installation

The installation is essentially the reverse of the removal procedure, but pay attention to the following details.

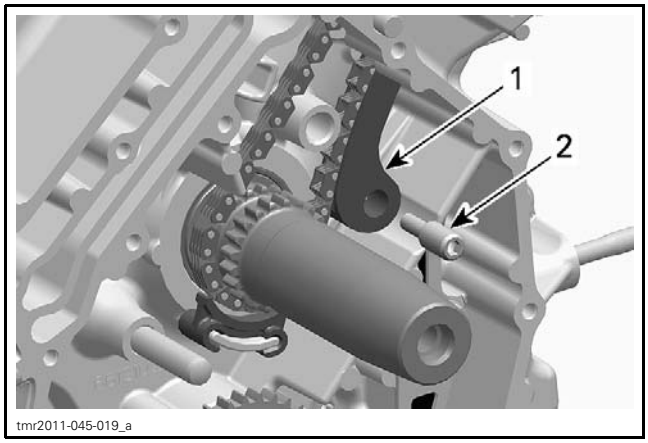
NOTE: Installation is the same for both timing chains.

Install timing chain with camshaft timing gear.

NOTE: Ensure to carry out proper valve timing, refer to *CAMSHAFT TIMING GEARS* in this subsection.

NOTICE **Improper valve timing will damage engine components.**

TIMING CHAIN GUIDE (TENSIONER SIDE)



1. Timing chain guide (tensioner side)
2. Bearing screw

Timing Chain Guide Removal (Tensioner Side)

Refer to *TIMING CHAIN* in this subsection.

Timing Chain Guide Inspection (Tensioner Side)

Check timing chain guide for wear, cracks or deforming. Replace if necessary.

Timing Chain Guide Installation (Tensioner Side)

The installation is the reverse of the removal procedure.

TIMING CHAIN GUIDE BEARING SCREW	
Service product	LOCTITE 243 (BLUE) (P/N 293 800 060)
Tightening torque	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

BOTTOM END

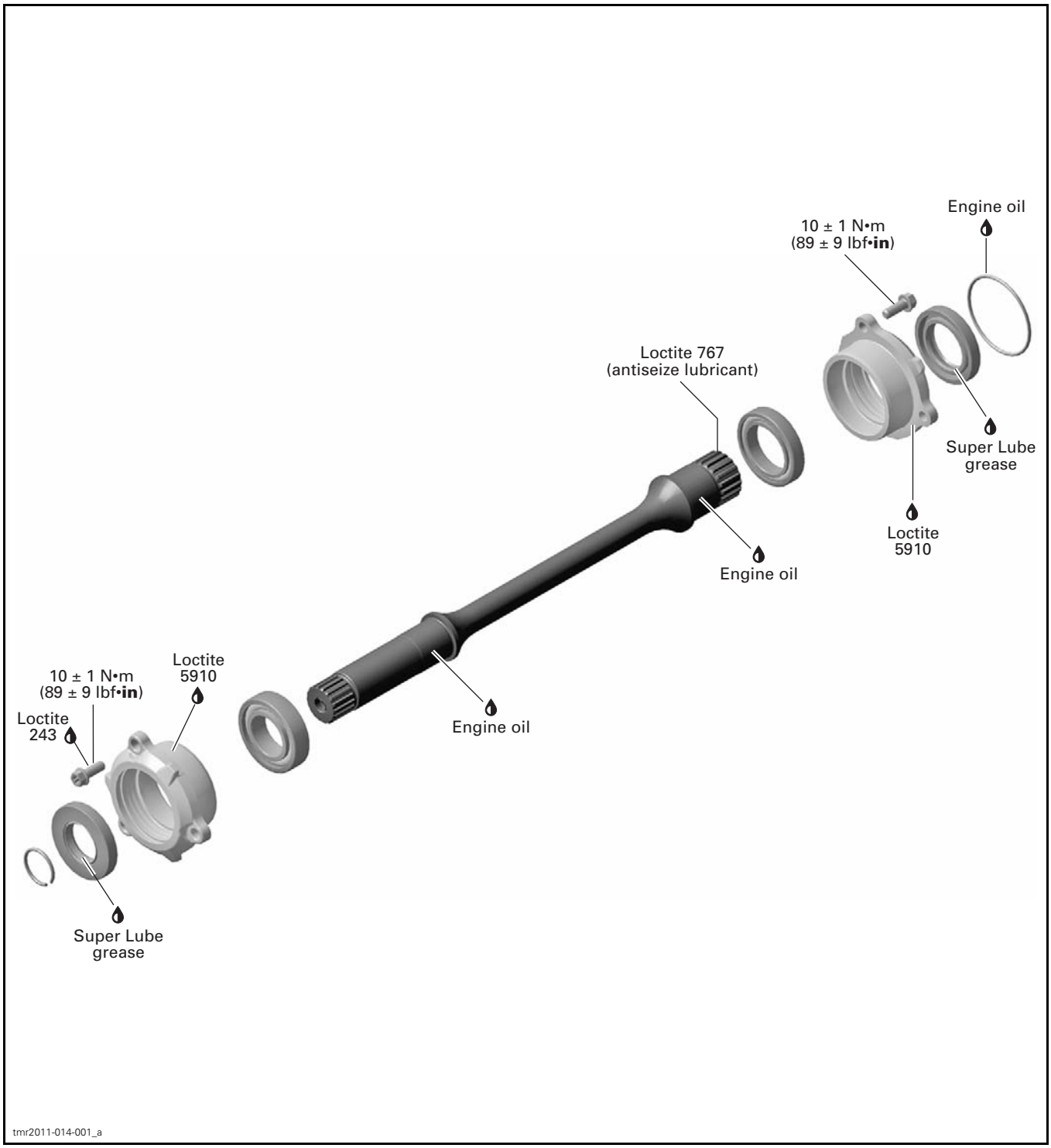
SERVICE TOOLS

Description	Part Number	Page
CRANKCASE SUPPORT MAG/PTO	529 036 031	151
CRANKSHAFT LOCKING BOLT	529 035 617	154
DRIVE SHAFT OIL SEAL INSTALLER	529 036 028	143–144
DRIVE SHAFT OIL SEAL PROTECTOR	529 036 029	142
PLAIN BEARING REMOVER/INSTALLER	529 035 917	151
PLAIN BEARING REMOVER/INSTALLER	529 036 032	146
PTO COVER OIL SEAL INSTALLER	529 036 033	145

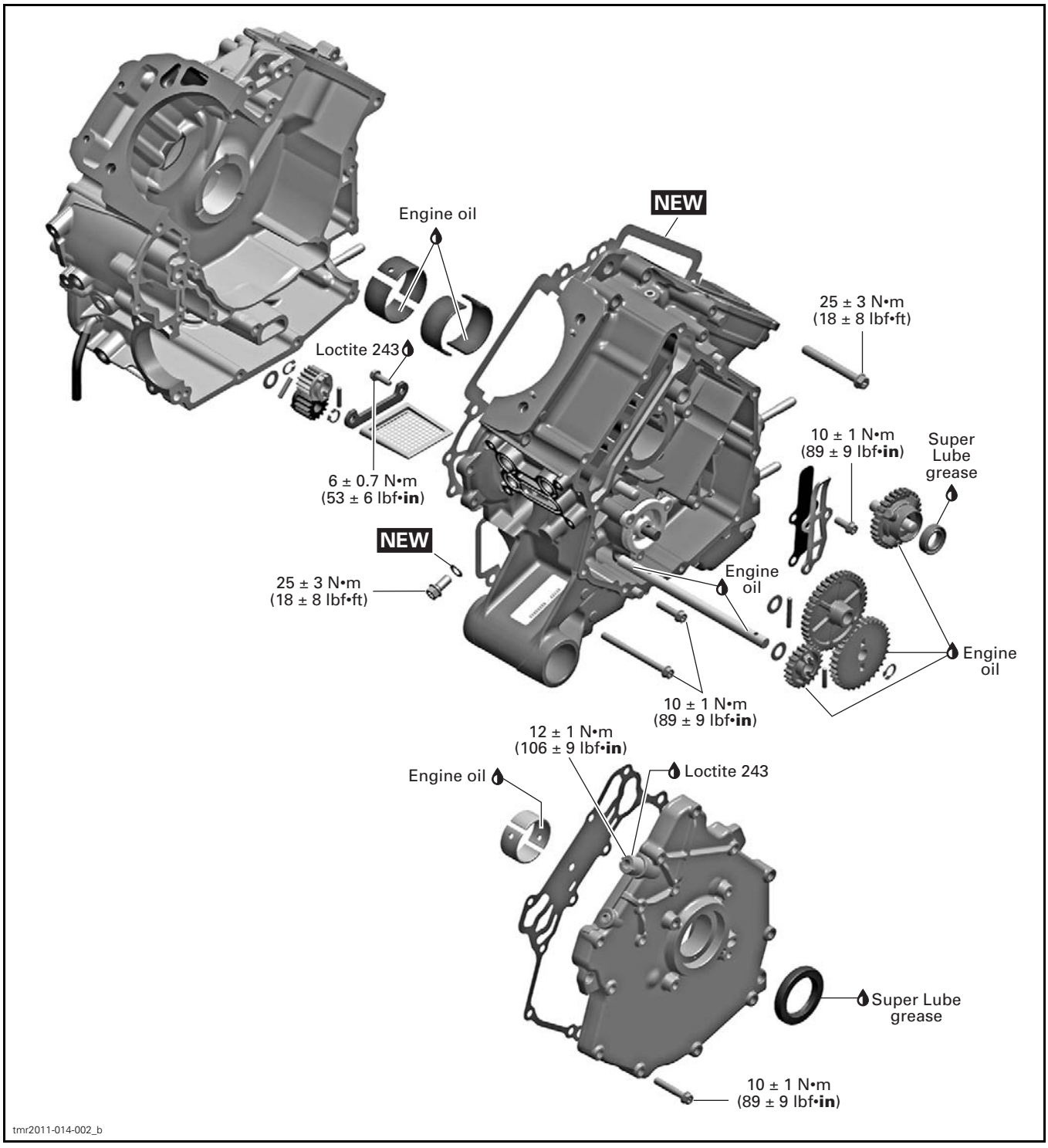
SERVICE PRODUCTS

Description	Part Number	Page
LOCTITE 243 (BLUE)	293 800 060	143
LOCTITE 5910	293 800 081	142
LOCTITE CHISEL (GASKET REMOVER)	413 708 500	142

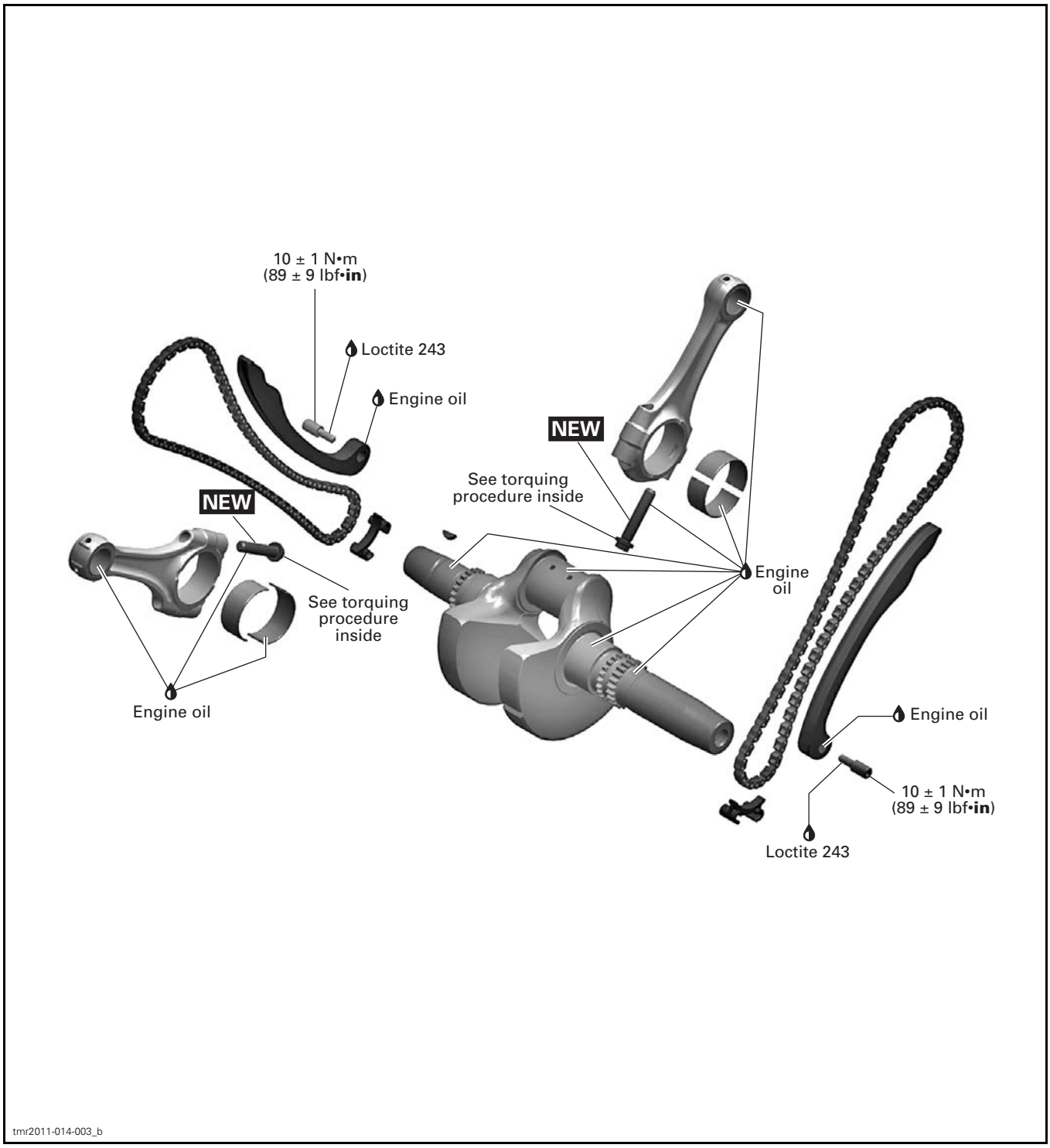
ENGINE DRIVE SHAFT



CRANKCASE AND PTO COVER



CRANKSHAFT


10 ± 1 N•m
(89 ± 9 lbf•in)
Loctite 243
Engine oil
NEW
See torquing
procedure inside
NEW
See torquing
procedure inside
Engine oil
Engine
oil
Engine oil
10 ± 1 N•m
(89 ± 9 lbf•in)
Loctite 243
tmr2011-014-003_b

GENERAL

IMPORTANT: Note position of parts on disassembly. This may help to find the root cause of a problem. A component that is not replaced should be reinstalled in the same position as originally mounted.

PROCEDURES

ENGINE DRIVE SHAFT

NOTE: The engine drive shaft transmits the power from the gearbox to the front differential and is located inside the crankcase.

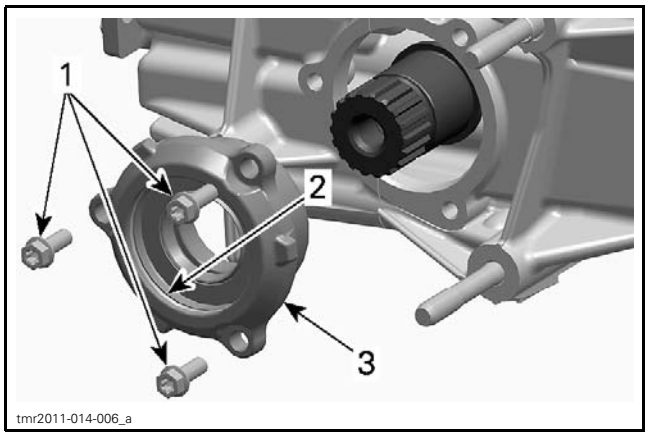
Engine Drive Shaft Removal

Remove the engine. Refer to *ENGINE REMOVAL AND INSTALLATION* subsection.

Rear Bearing Cover Removal

Detach gearbox from engine, refer to *GEARBOX AND 4X4 COUPLING UNIT* subsection.

At rear of engine, remove the bearing cover and its O-ring.

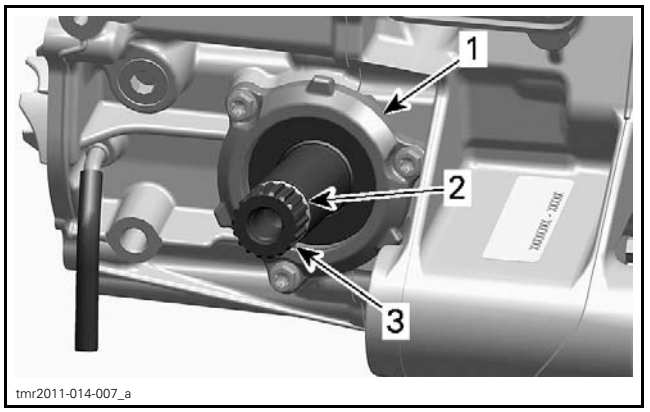


1. Bearing cover screws
2. O-ring
3. Bearing cover gearbox side

Front Bearing Cover Removal

Remove the bearing cover at the front of the engine.

NOTICE Check ends of the circlip for sharp edges or burr before removing the drive shaft, to avoid damaging the oil seal.

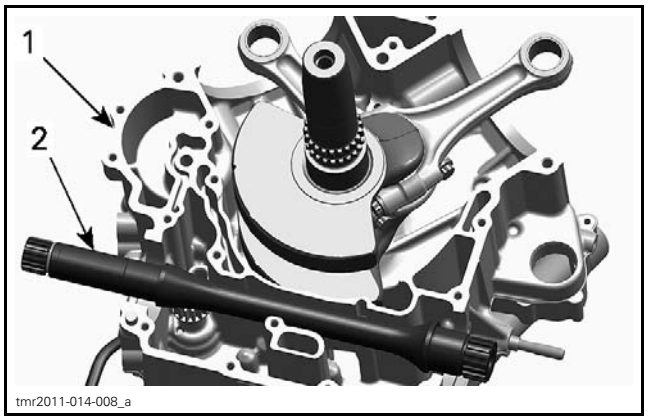


1. Bearing cover front drive side
2. Circlip
3. Drive shaft

Engine Drive Shaft Removal

Split crankcase, refer to *CRANKCASE* in this subsection.

Remove engine drive shaft from the crankcase.

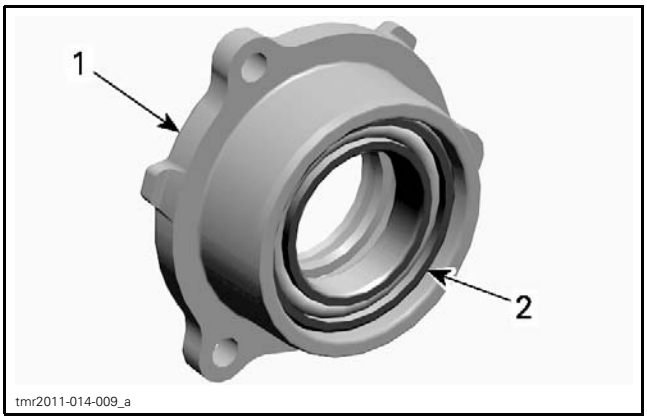


1. Crankcase MAG side
2. Engine drive shaft

Engine Drive Shaft Inspection

Replace oil seals and/or O-ring (bearing cover gearbox side) if they are brittle, hard or damaged.

Check drive shaft bearings for contamination and/or metal shavings. Check if bearings turn freely and smoothly. Replace if necessary.



1. Bearing cover
2. Drive shaft bearing

Check drive shaft for cracks, bend, pitting or other visible damages.

Check drive shaft splines for wear or damages.

Check oil seal running surface of the drive shaft for scratches. Replace if necessary.

Engine Drive Shaft Installation

The installation is the reverse of removal procedure. Pay attention to the following details.

Clean all metal components in solvent.

Crankcase surfaces and bearing covers are best cleaned using a combination of LOCTITE CHISEL (GASKET REMOVER) (P/N 413 708 500) and a brass brush. Brush a first pass in one direction then make the final brushing perpendicularly (90°) to the first pass.

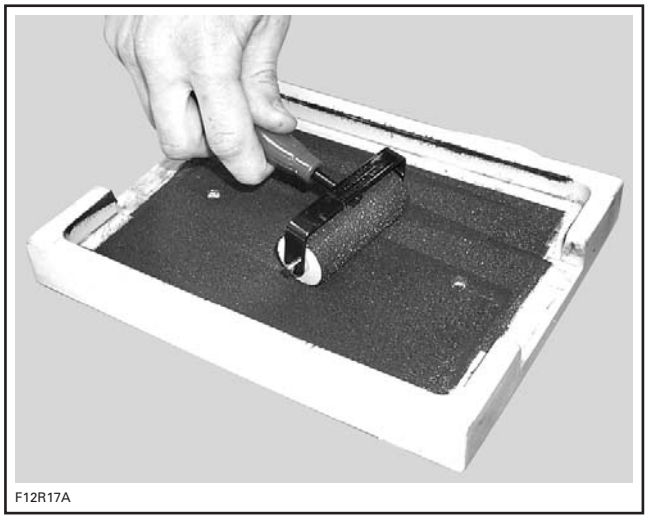
NOTICE **Do not wipe with rags. Use a new clean hand towel only.**

Use a suitable installer for installing bearings.

Use LOCTITE 5910 (P/N 293 800 081) on mating surfaces.

IMPORTANT: When beginning the application of the bearing cover sealant, the assembly and the first torquing should be done within 10 minutes. It is suggested to have all you need on hand to save time.

Use a plexiglass plate and apply some sealant on it. Use a soft rubber roller 50 mm - 75 mm (2 in - 3 in), available in arts products suppliers for printing, and roll the sealant to get a thin uniform coat on the plate (spread as necessary). When ready, apply the sealant on bearing cover surfaces.



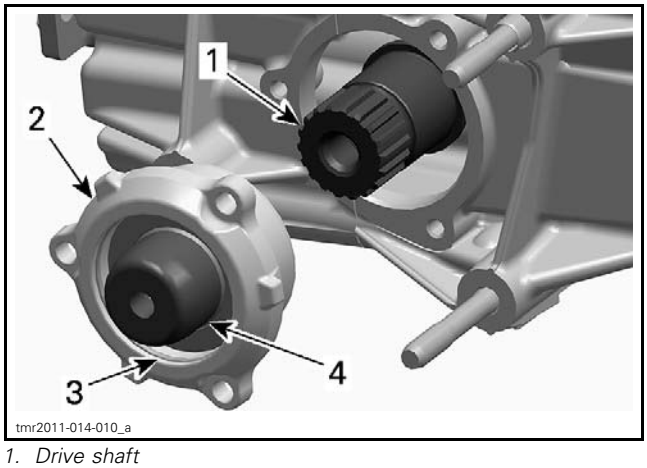
Do not apply in excess as it will spread out inside crankcase.

NOTE: It is recommended to apply this specific sealant as described here to get a uniform application without lumps. If you do not use the roller method, you may use your finger to uniformly distribute the sealant (using a finger will not affect the adhesion).

Rear Bearing Cover Installation

For bearing cover installation on gearbox side, protect the oil seal to avoid damaging the sealing lip.

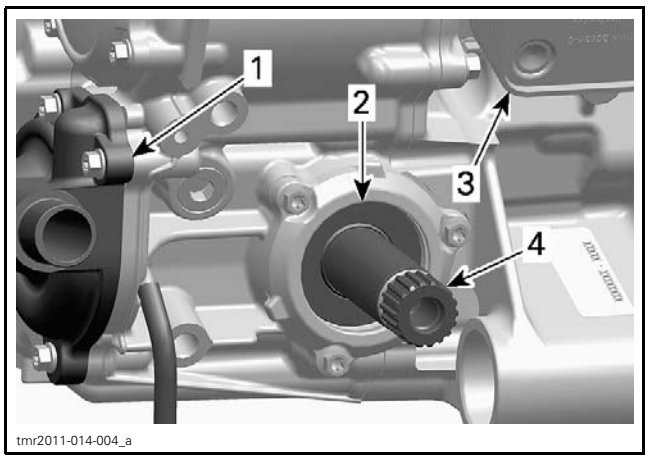
REQUIRED TOOL	
DRIVE SHAFT OIL SEAL PROTECTOR (P/N 529 036 029)	



1. Drive shaft
2. Bearing cover gearbox side
3. O-ring
4. Protection sleeve

REAR BEARING COVER SCREWS	
Tightening torque	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

Front Bearing Cover Installation



FRONT OF ENGINE
1. *Water pump cover*
2. *Oil seal front side*
3. *Oil cooler*
4. *Drive shaft*

FRONT BEARING COVER SCREWS	
Service product	LOCTITE 243 (BLUE) (P/N 293 800 060)
Tightening torque	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

Engine Drive Shaft Installation

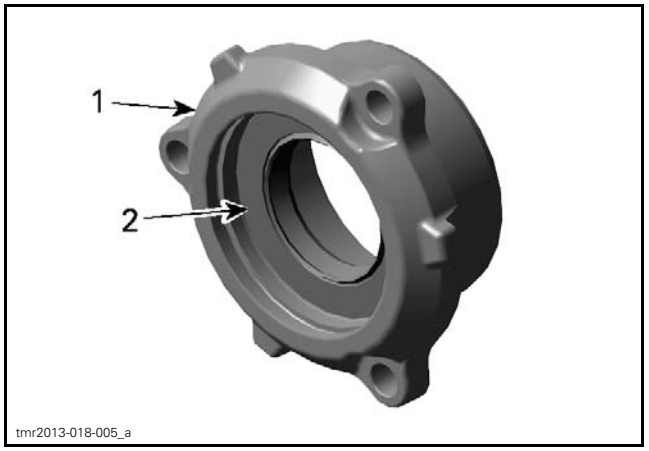
Finally check for axial play of the drive shaft.

FRONT OIL SEAL (ENGINE DRIVE SHAFT)

Front Oil Seal Replacement (Engine Drive Shaft)

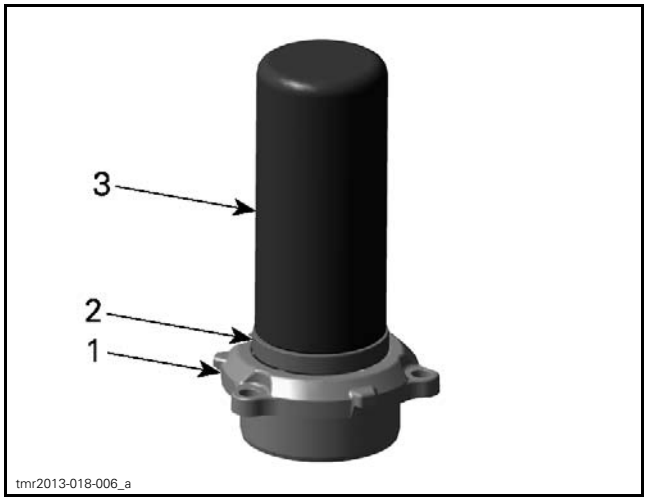
NOTE: The front oil seal can be replaced with the engine installed.

1. Remove front propeller shaft.
2. Remove adapter sleeve between propeller shaft and front engine drive shaft.
3. Remove the front bearing cover, refer to *ENGINE DRIVE SHAFT REMOVAL/INSTALLATION* in this subsection.
4. Remove drive shaft seal from bearing cover.



1. *Bearing cover*
2. *Oil seal*

5. Install drive shaft oil seal using the following tool.



1. *Bearing cover*
2. *Oil seal*
3. *Oil seal installer*

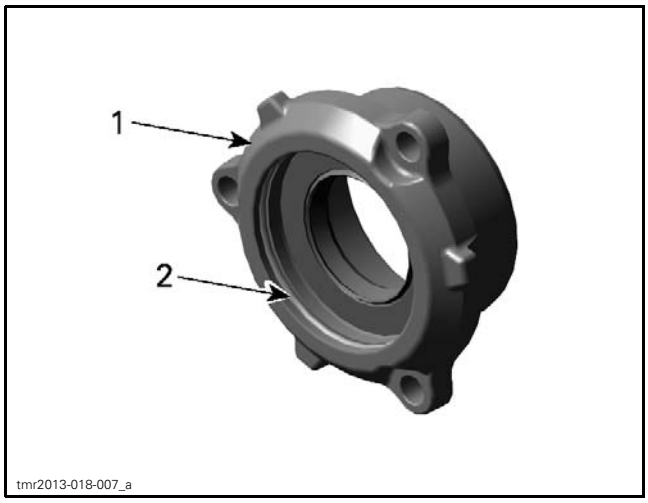
REQUIRED TOOL	
DRIVE SHAFT OIL SEAL INSTALLER (P/N 529 036 028)	

6. Reinstall remaining parts in the reverse order of removal.

REAR OIL SEAL (ENGINE DRIVE SHAFT)

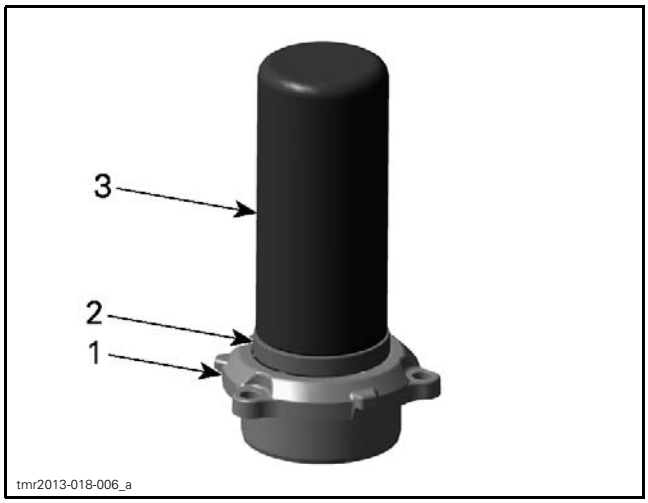
Rear Oil Seal Replacement (Engine Drive Shaft)

1. Remove rear bearing cover, refer to *ENGINE DRIVE SHAFT REMOVAL/INSTALLATION* in this subsection.
2. Remove drive shaft seal from bearing cover.
3. Remove O-ring from bearing cover.



1. Bearing cover
2. O-ring

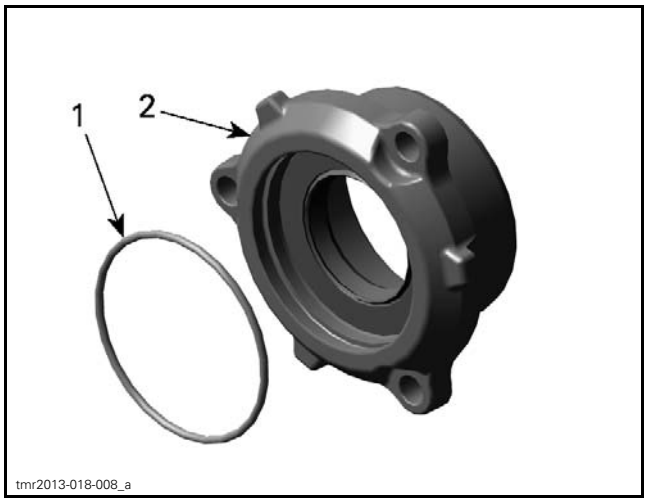
4. Install drive shaft oil seal using the following tool.



1. Bearing cover
2. Oil seal
3. Oil seal installer

REQUIRED TOOL	
DRIVE SHAFT OIL SEAL INSTALLER (P/N 529 036 028)	

5. Install O-ring in rear bearing cover.



1. O-ring
2. Bearing cover

6. Reinstall remaining parts in the reverse order of removal.

PTO COVER OIL SEAL

To replace oil seal it is not necessary to remove engine from vehicle.

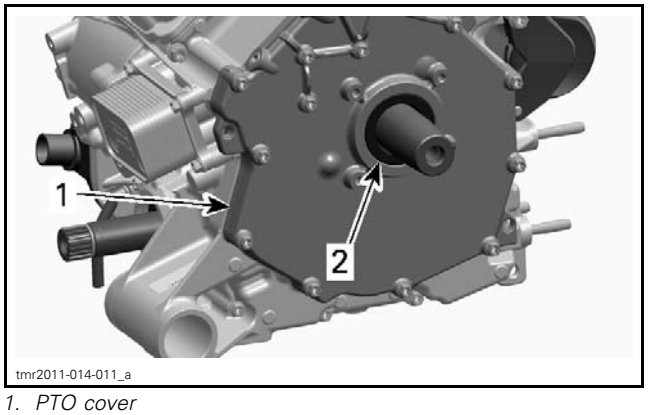
PTO Oil Seal Removal

Refer to *CONTINUOUSLY VARIABLE TRANSMISSION (CVT)* subsection to remove the following parts:

– CVT cover
– Drive pulley
– Driven pulley
– CVT air guide.

Remove oil seal with a small flat screwdriver.

NOTICE Avoid scoring surfaces with tool.



1. PTO cover
2. Oil seal

PTO Oil Seal Inspection

Check oil seal running surface of crankshaft PTO side for grooves. Replace if necessary.

PTO Oil Seal Installation

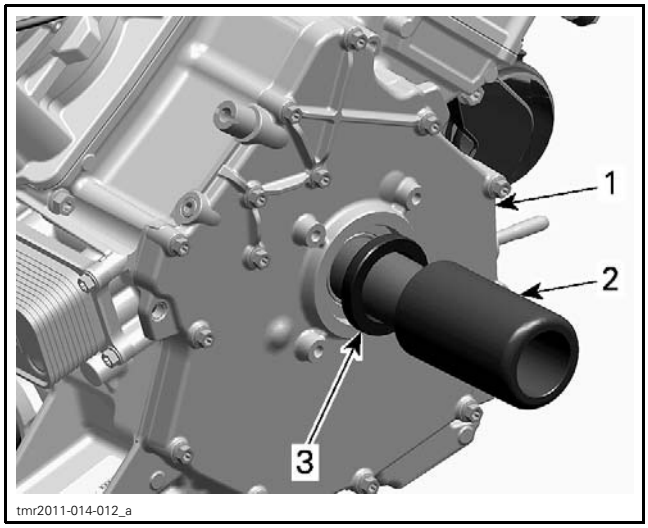
The installation is the reverse of the removal procedure.

Pay attention to the following details.

NOTICE **Oil seal must be installed with sealing lip toward the engine.**

Push oil seal in place.

REQUIRED TOOL	
PTO COVER OIL SEAL INSTALLER (P/N 529 036 033)	



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1. *PTO cover*
2. *Oil seal installer*
3. *Oil seal*

PTO COVER

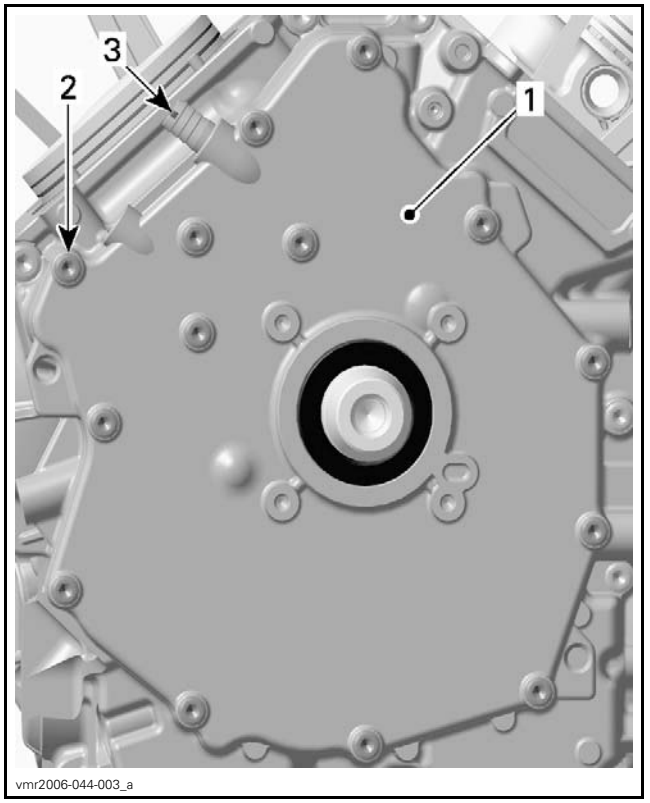
PTO Cover Removal

Refer to *CONTINUOUSLY VARIABLE TRANSMISSION (CVT)* subsection to remove the following parts:

– CVT cover
– Drive pulley
– Driven pulley
– CVT air guide.

Disconnect vent hose.

Remove PTO cover screws and pull PTO cover.



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1. *PTO cover*
2. *PTO cover screws*
3. *Vent hose nipple*

PTO Cover Inspection

Check the PTO cover for cracks or other damage.

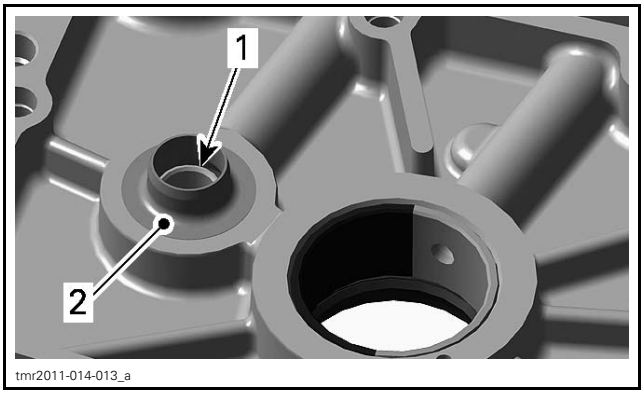
Replace PTO cover if damaged.

Clean oil breather bore in PTO cover from contaminations with part cleaner then use pressurized air to dry it.

⚠ WARNING

Always wear skin and eye protection. Chemicals can cause skin rash, skin burns and severe eye injury.

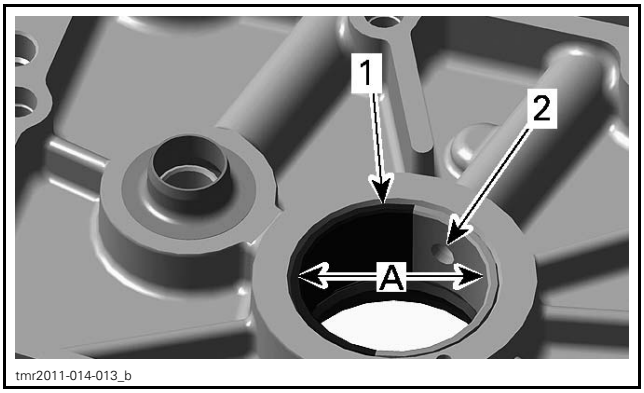
Check surface of sealing sleeve for wear or other damages. Replace PTO cover if damaged.



1. Oil breather bore
2. Surface of sealing sleeve

Check plain bearings for scorings or other damages.

NOTE: Measure plain bearing inside diameter (PTO cover) and compare to crankshaft journal diameter (PTO cover bearing). Refer to *CRANKSHAFT* in this section. Replace if the measurement is out of specification.



1. Plain bearing
2. Oil bore
A. Measure plain bearing inside diameter

PLAIN BEARING INSIDE DIAMETER (PTO COVER)	
SERVICE LIMIT	34.120 mm (1.3433 in)

Plain Bearing Replacement (PTO Cover)

Plain Bearing Removal

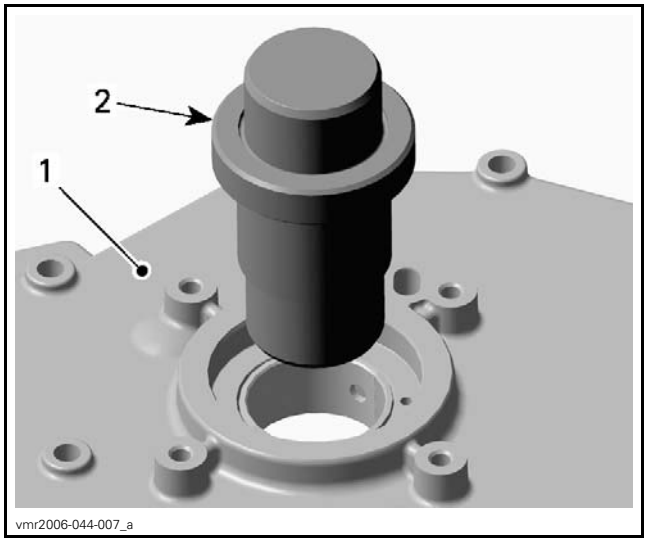
NOTICE Unless otherwise instructed, never use a hammer to install plain bearings. Use a press only.

Carefully remove the PTO oil seal with a screwdriver, without damaging the PTO cover.

Press out the plain bearings from the outside towards the inside.

REQUIRED TOOL	
PLAIN BEARING REMOVER/INSTALLER (P/N 529 036 032)	

The PTO cover has to be supported from below with suitable support with straight surface, in order to prevent damage of the sealing surface.



1. PTO cover
2. Plain bearing remover/installer

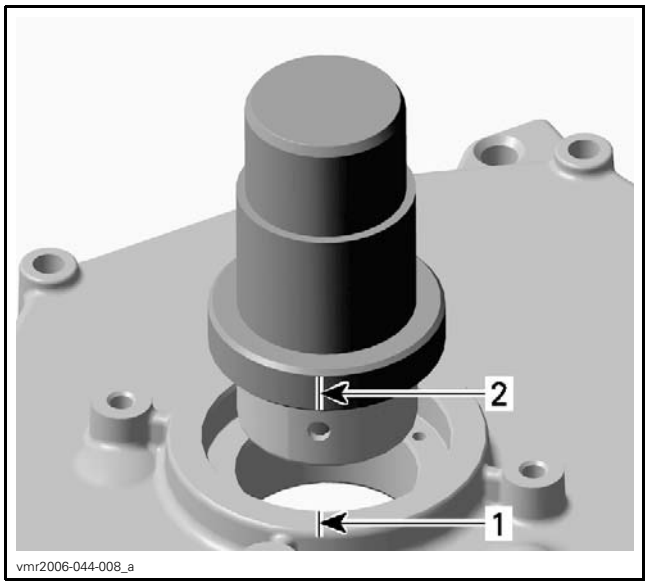
Plain Bearing Installation

NOTE: Do not lubricate plain bearings and/or PTO cover for installation.

Install plain bearings in a cool PTO cover.

REQUIRED TOOL	
PLAIN BEARING REMOVER/INSTALLER (P/N 529 036 032)	

NOTICE Mark position of oil bore on PTO cover and on plain bearing remover/installer. Align mark on plain bearing remover/installer with mark on PTO cover.

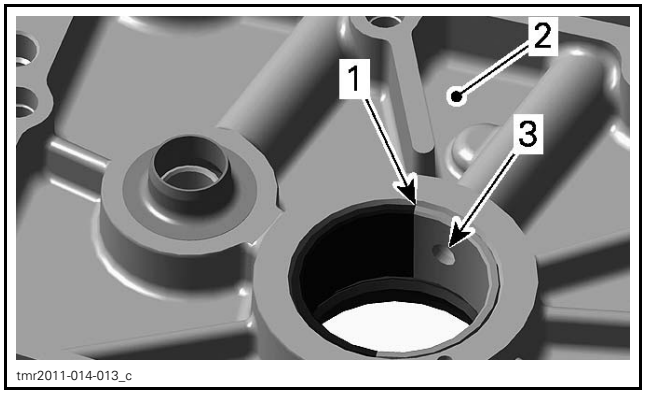


1. *Mark position of oil bore on PTO cover*
2. *Mark position of oil bore on plain bearing remover/installer*

Carefully press-in the plain bearings in the same direction as during disassembly, from the outside towards the inside. Support PTO cover with suitable support with straight surface, in order to prevent damage of the sealing surface.

NOTE: Wrong oil bore position will stop oil supply to plain bearings and will damage the engine.

NOTICE **The partition of the plain bearings must be positioned near to oil bore in counterclockwise direction.**



1. *Partition*
2. *PTO cover (inside)*
3. *Oil bore*

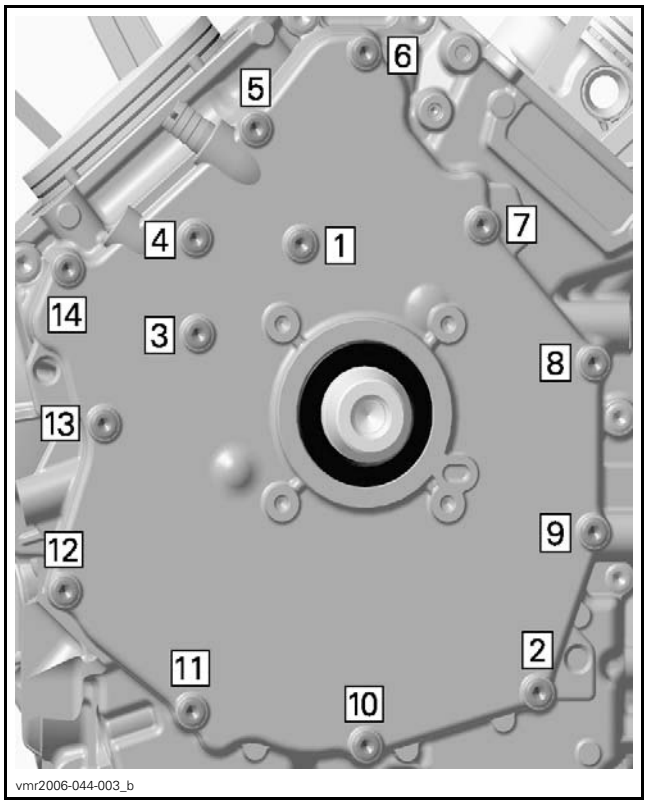
PTO Cover Installation

For installation, reverse the removal procedure.

Pay attention to the following details.

NOTE: At installation, replace PTO cover gasket and oil seal.

Tighten PTO cover screws following the illustrated sequence.



TIGHTENING SEQUENCE

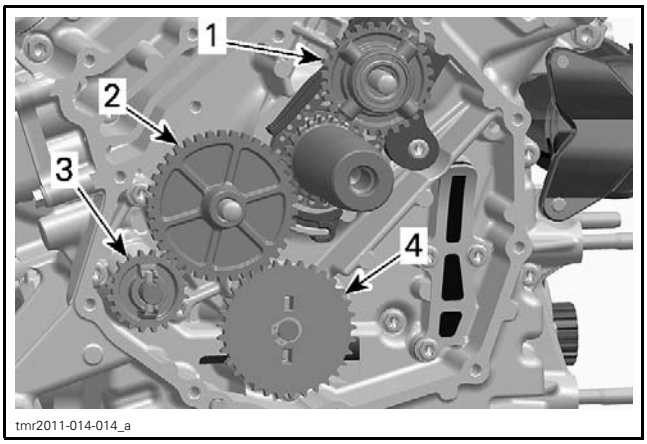
PTO COVER SCREWS	
Tightening torque	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

DRIVE GEARS

Drive Gears Location

The engine is equipped with a breather gear which prevents engine oil coming out through the breathing system into the air intake system.

The drive gears are located on the engine PTO side behind the PTO cover.



1. Breather gear
2. Intermediate gear
3. Water pump drive gear
4. Oil pump drive gear

Drive Gears Removal

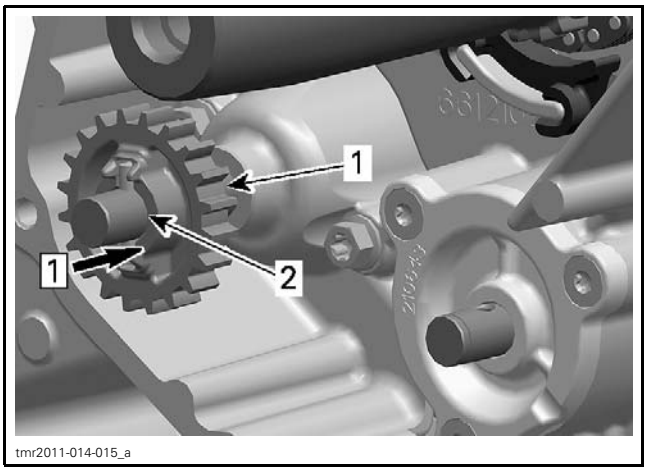
Remove PTO cover (refer to *PTO COVER*).

Withdraw intermediate gear and breather gear.

For oil pump drive gear removal, refer to *OIL PUMP* in the *LUBRICATION SYSTEM* subsection.

To remove water pump drive gear, pull the shaft assembly a bit out and turn it about one teeth until it stays out.

Then push water pump drive gear in.

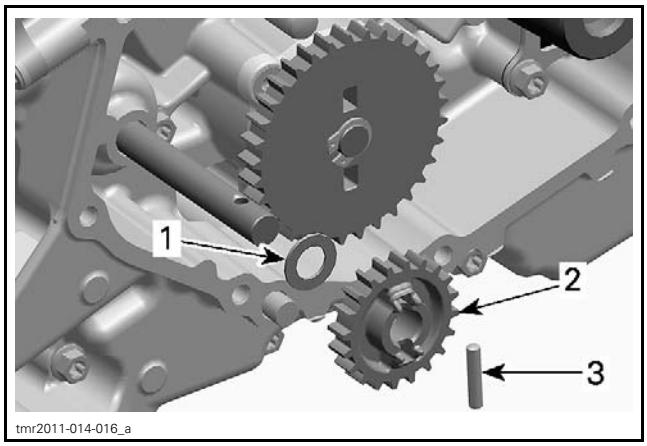


Step 1: Push gear in

1. Water pump drive gear
2. Intermediate shaft

Remove needle pin and pull water pump drive gear out.

Remove thrust washer from intermediate shaft.



1. Thrust washer
2. Water pump drive gear
3. Needle pin

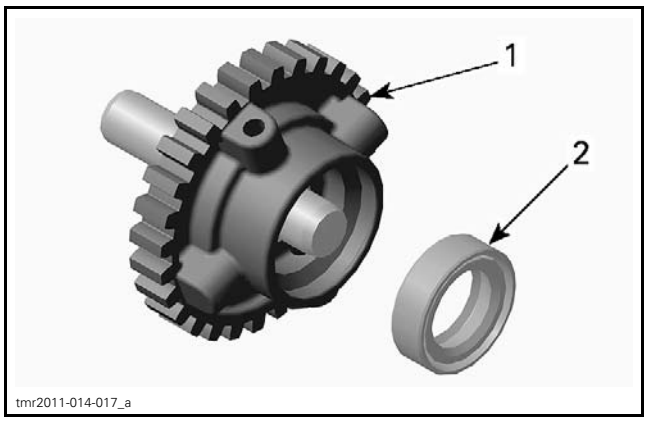
Drive Gears Inspection

Intermediate Gear/Oil Pump Drive Gear/Water Pump Drive Gear

Inspect gears for wear or other damage. Replace if damaged.

Breather Gear

Check if oil seal is brittle, hard or damaged. Replace if necessary.



1. Breather gear
2. Oil seal

Inspect gear for wear or other damage.

Check ball bearing for excessive play and smooth operation. Replace breather gear assembly if necessary.

Drive Gears Installation

The installation is essentially the reverse of the removal procedure.

Adequately oil the ball bearing of the breather gear.

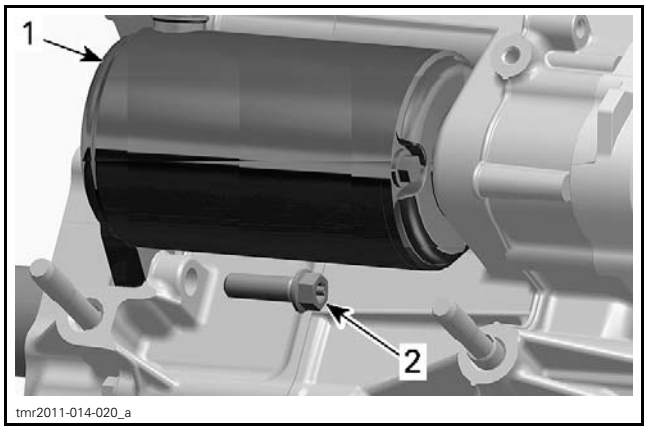
CRANKCASE

Crankcase Disassembly

1. Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection and:
   1.1 Drain cooling system.
   1.2 Drain engine oil.
   1.3 Drain gearbox oil.
2. Lock crankshaft. Refer to *CRANKSHAFT LOCKING PROCEDURE* in the this subsection.
3. Refer to *CONTINUOUSLY VARIABLE TRANSMISSION (CVT)* subsection to remove following parts:
   – CVT cover
   – Drive pulley
   – Driven pulley
   – CVT air guide.
4. Remove engine from vehicle. Refer to *ENGINE REMOVAL AND INSTALLATION* subsection.
5. Detach gearbox from engine. Refer to *GEARBOX AND 4X4 COUPLING UNIT*.
6. Refer to *MAGNETO SYSTEM* subsection to remove the following parts:
   – Magneto cover
   – Rotor with sprag clutch gear
   – Starter drive gears.
7. Refer to following procedures in this subsection to remove the following parts:
   – PTO cover
   – Drive gears
   – Bearing covers of engine drive shaft.
8. Refer to *TIMING CHAIN* subsection to remove following parts:
   – Chain tensioners
   – Camshaft timing gears
   – Timing chains
   – Timing chain guides.
9. Refer to *TOP END* subsection to remove following parts:
   – Front cylinder head
   – Rear cylinder head
   – Cylinders.
10. Refer to *COOLING SYSTEM* subsection to remove following parts:
    – Water pump housing.
11. Refer to *LUBRICATION SYSTEM* subsection to remove following parts:
    – Oil filter
    – Oil cooler
    – Oil pump drive gear.

NOTE: Oil pump removal from crankcase is not necessary, but recommended to see condition of oil pump (refer to *LUBRICATION SYSTEM* subsection).

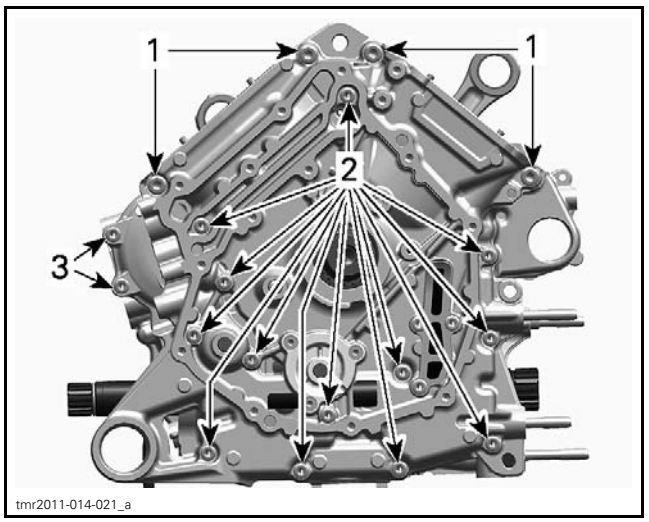
12. Remove electric starter.



1. Electric starter
2. Screw

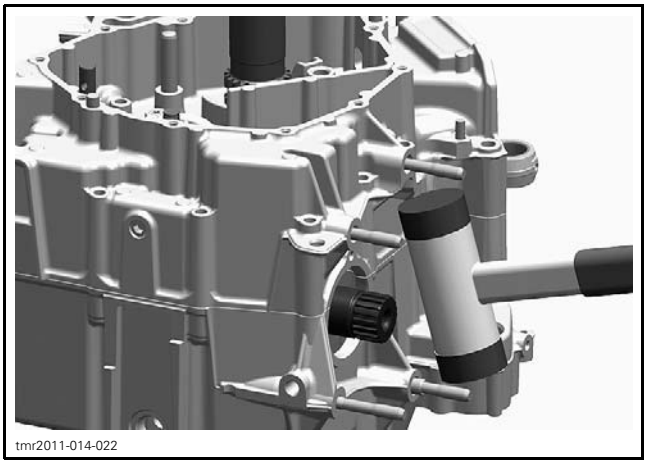
NOTE: Before splitting the crankcase, measure crankshaft axial play. Refer to *CRANKSHAFT*.

Remove retaining screws of crankcase.



1. Four screws M8 x 65
2. 13 screws M6 x 75
3. Two screws M6 x 25

Carefully split crankcase halves by using a screwdriver and a soft hammer.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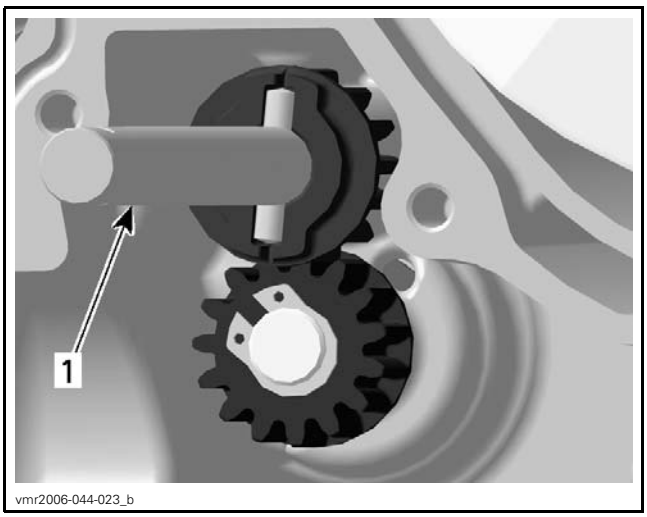
NOTE: During disassembly, do not damage the sealing surfaces of the crankcase halves.

Pull crankshaft out of crankcase.

Remove the water pump intermediate shaft.



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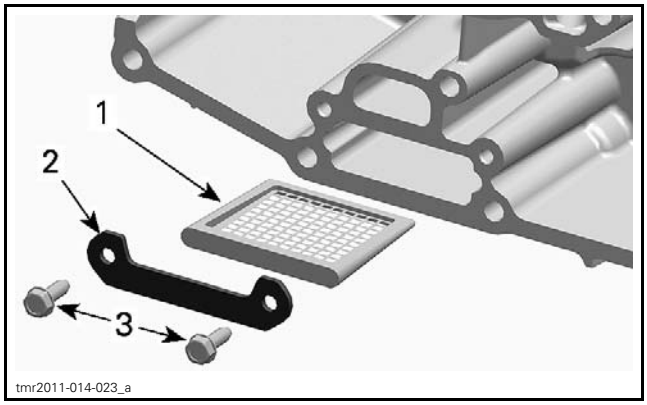
1. Water pump intermediate shaft

Remove engine oil strainer.

NOTE: Oil strainer removal for inspection and cleaning is recommended. Refer to *LUBRICATION SYSTEM* subsection.



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1. Engine oil strainer
2. Retaining plate
3. Screws

Crankcase Cleaning

⚠ WARNING

Use safety goggles to avoid eye injuries.

Clean crankcase using a part cleaner.

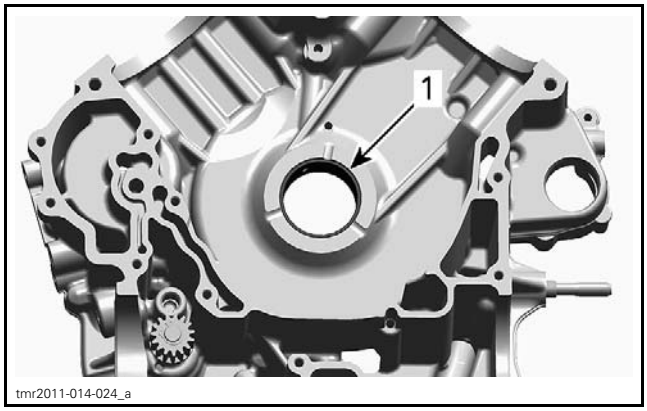
Dry crankcase using compressed air.

Blow the oil supply lines.

Crankcase Inspection

Check crankcase halves for cracks or other damage. Replace if damaged.

Check MAG and PTO plain bearings in for scoring or other damages.



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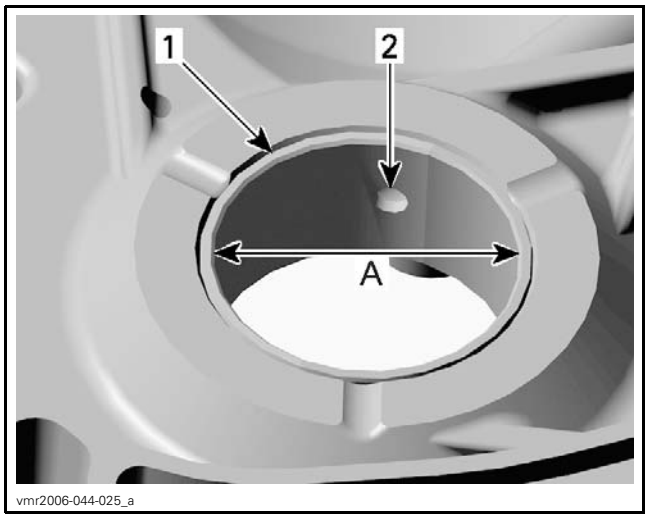
1. Plain bearing

NOTE: Measure plain bearing inside diameter and compare to PTO/MAG main journal diameters of crankshaft (refer to *CRANKSHAFT*). Replace if the measurements are out of specification.



1. Plain bearing
2. Oil bore
A. Measure plain bearing inside diameter

MAIN BEARING INSIDE DIAMETER (PTO/MAG)	
SERVICE LIMIT	42.100 mm (1.6575 in)

Plain Bearing Replacement (Main)

Plain Bearing Removal

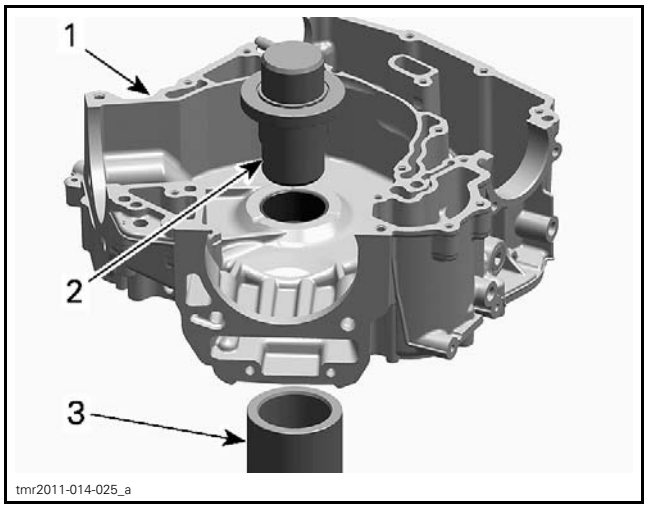
NOTICE Always support crankcase halves properly when plain bearings are removed. Damages to crankcase halves may occur if this procedure is not performed correctly.

NOTE: Always use a press for removal of plain bearings.

Carefully press the plain bearings out, from the crankcase half inside towards the outside.

REQUIRED TOOLS	
CRANKCASE SUPPORT MAG/PTO (P/N 529 036 031)	
PLAIN BEARING REMOVER/INSTALLER (P/N 529 035 917)	

NOTE: During disassembly, make sure not to damage the sealing surfaces of the crankcase halves.



PUSH PLAIN BEARINGS OUTSIDE
1. Crankcase half
2. Plain bearing remover/installer
3. Crankcase support sleeve (P/N 529 036 031)

Plain Bearing Installation (Main)

NOTICE Unless otherwise instructed, never use hammer to install plain bearings. Use press only.

NOTE: Place the proper crankcase support sleeve under crankcase halves before installing the plain bearings (refer to *BEARING REMOVAL PROCEDURE*).

Carefully press in the plain bearings in the same direction as during disassembly, from the crankcase inside towards the outside.

During reassembly, make sure not to damage the sealing surfaces of the crankcase halves.

Install plain bearings in a cold crankcase.

NOTE: Do not lubricate plain bearings and/or crankcase for installation.

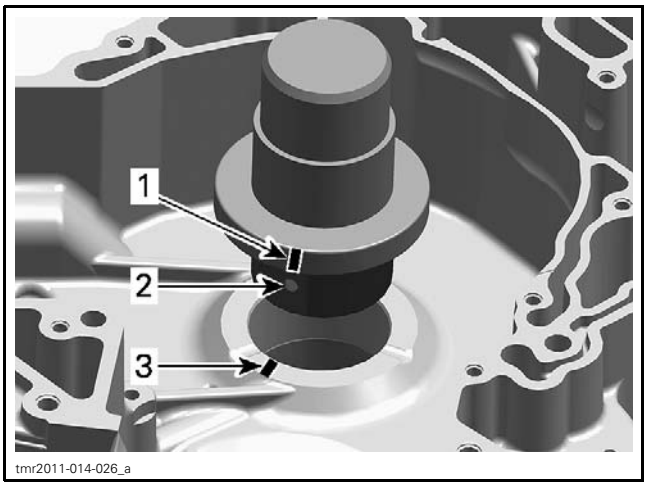
REQUIRED TOOL	
PLAIN BEARING REMOVER/INSTALLER (P/N 529 035 917)	

Use an O-ring (Ø 42 x 1 mm to 1.5 mm (.04 in to .06 in) thickness) to hold plain bearings in place during installation. The O-ring will disappear in the groove of the plain bearing remover/installer.

Mark position of plain bearing oil bore on plain bearing remover/installer.

Mark position of oil bore on crankcase half.

Align mark on plain bearing remover/installer with mark on crankcase half.

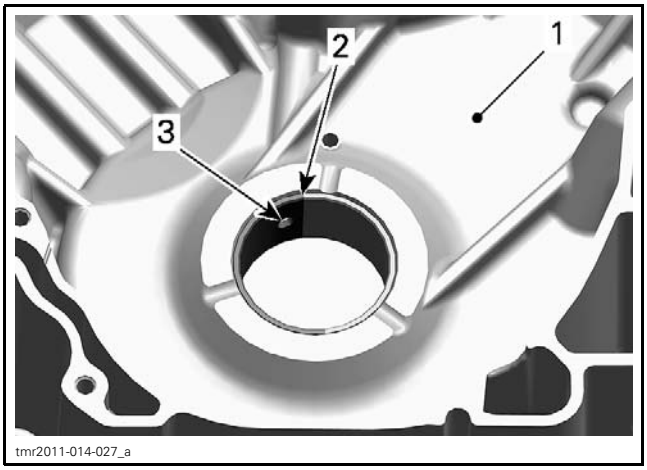


1. Oil bore position marked on plain bearing remover/installer
2. Plain bearing oil bore
3. Oil bore position marked on crankcase

NOTICE Misalignment of the plain bearing and crankcase oil bores will prevent proper oil supply to plain bearings.

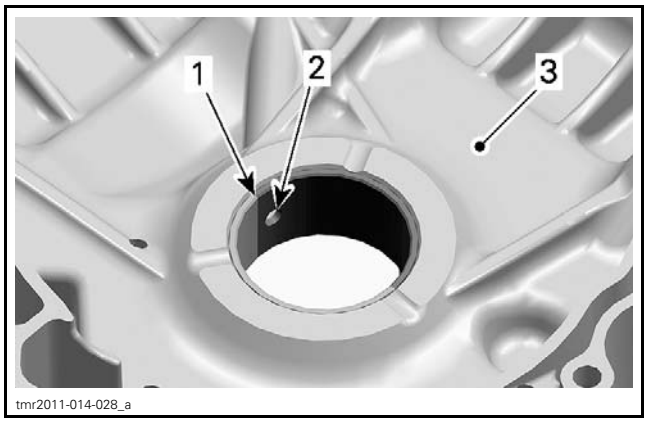
Carefully press in the plain bearings from inside the crankcase towards the outside.

NOTICE The partition of the plain bearings in crankcase half MAG side must be positioned near to oil bore in clockwise direction.



1. Crankcase half MAG (inside surface)
2. Partition
3. Oil bore

NOTICE The partition of the plain bearings in crankcase half PTO side must be positioned near to oil bore in counterclockwise direction.



1. Partition
2. Oil bore
3. Crankcase half PTO (inside)

Crankcase Assembly

The assembly of crankcase is essentially the reverse of removal procedure. However, pay attention to the following details.

Install a NEW crankcase gasket.

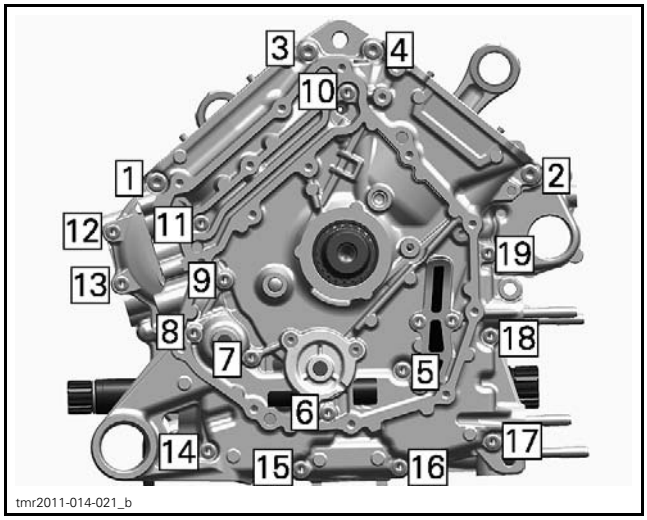
Oil the plain bearings before mounting the crankshaft.

NOTICE Correctly reinstall crankshaft (refer to *CRANKSHAFT*).

Properly reinstall engine oil strainer and screws. Refer to *LUBRICATION SYSTEM* subsection.

Reinstall water pump intermediate shaft and gears. Refer to *WATER PUMP GEARS* in the *COOLING SYSTEM* subsection.

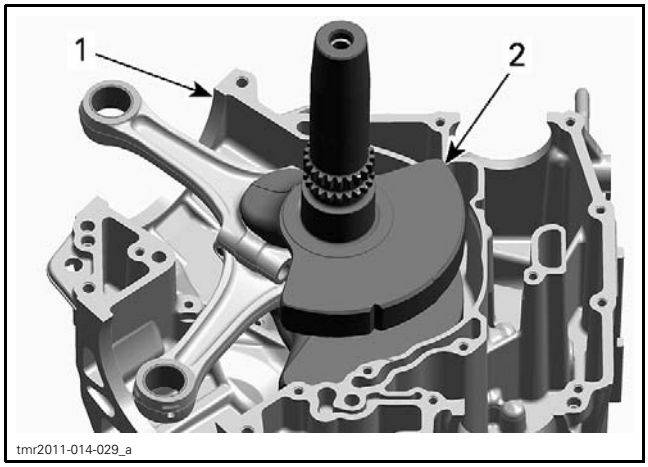
Tightening sequence for screws on crankcase is as per following illustration.



TIGHTENING SEQUENCE

CRANKCASE SCREWS	
Tightening torque - M6	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)
Tightening torque - M8	25 N•m ± 3 N•m (18 lbf•ft ± 2 lbf•ft)

CRANKSHAFT



1. *Crankcase MAG*
2. *Crankshaft*

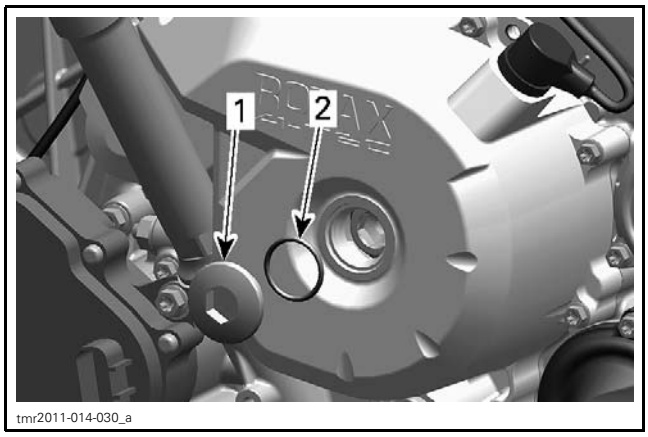
Crankshaft Locking Procedure

NOTE: When crankshaft is locked, the rear piston no. 2 is at TDC. Crankshaft can not be locked at piston no.1 TDC.

NOTICE To see if the rear piston no. 2 is at TDC ignition refer to *CAMSHAFT TIMING GEAR* in the *TIMING CHAIN* subsection.

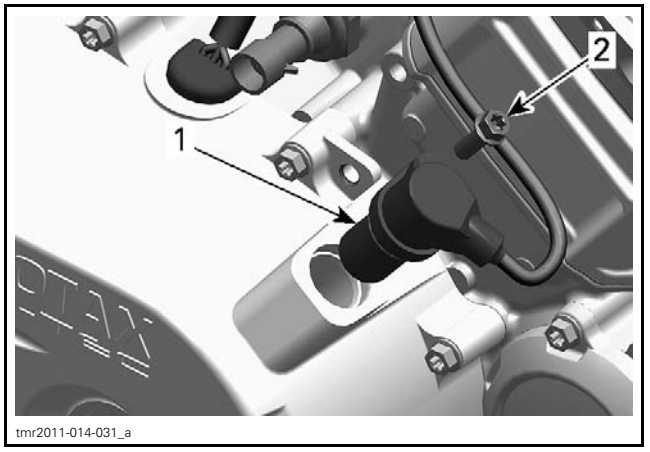
Remove:

1. Spark plug cables and spark plugs of both cylinders.
2. Plug screw and O-ring of magneto cover.



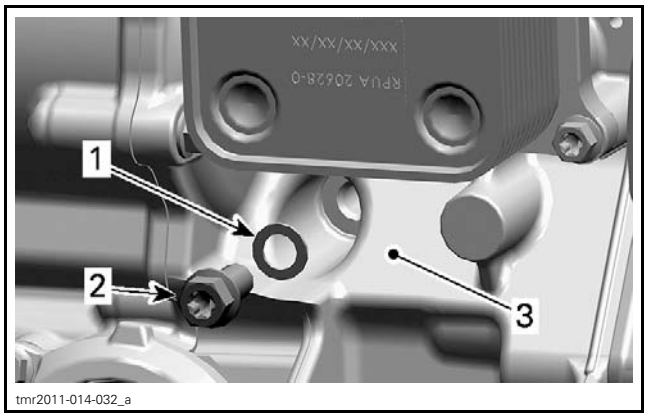
1. *Plug screw*
2. *O-ring*

3. Crankshaft position sensor.



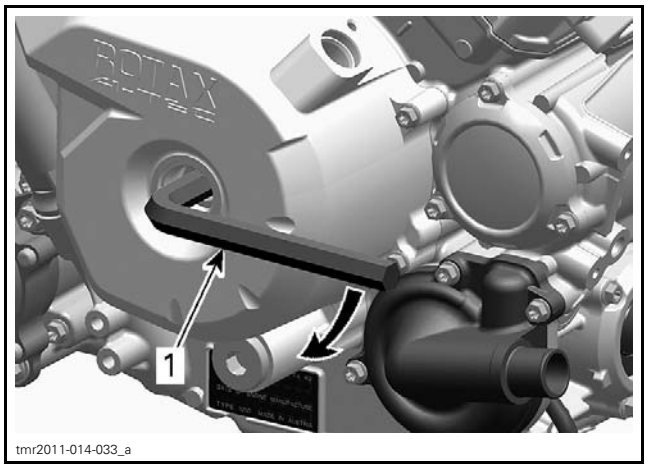
1. *Crankshaft position sensor*
2. *Screw*

4. Plug screw and discard sealing ring.



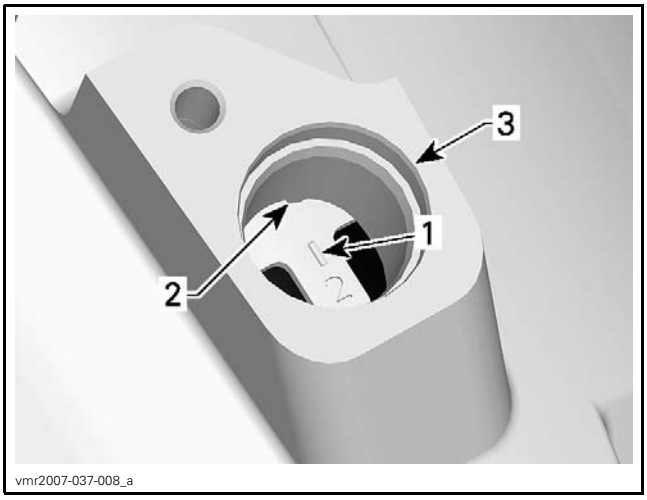
1. *Sealing ring*
2. *Plug screw*
3. *Crankcase PTO side, front side*

Use a 14 mm Allen key to turn crankshaft until piston no. 2 is at TDC.



1. *Allen key 14 mm*

When rear piston is at TDC marks on magneto flywheel "2" and on the magneto cover are aligned.



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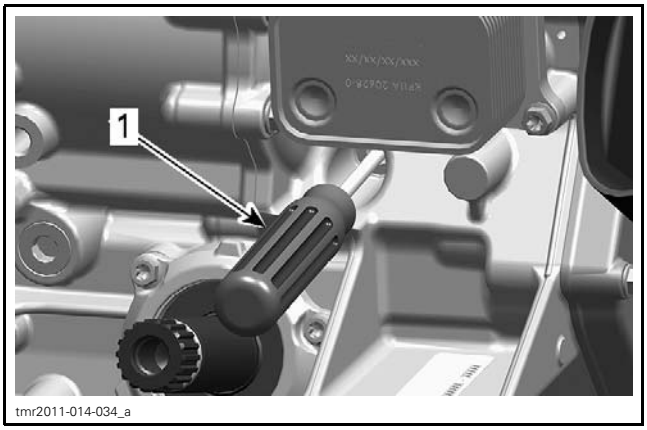
1. *Mark "2" on magneto flywheel*
2. *Notch on magneto cover*
3. *Crankshaft position sensor location*

Use a screwdriver to check if the groove in the crankshaft is aligned with the hole.



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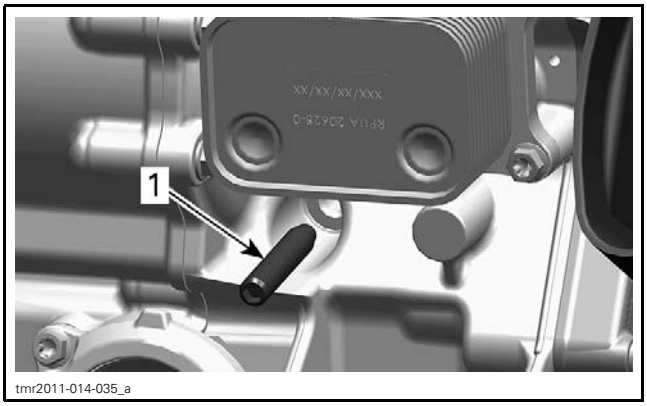
1. *Screwdriver*

Lock crankshaft.

REQUIRED TOOL	
CRANKSHAFT LOCKING BOLT (P/N 529 035 617)	



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1. *Crankshaft locking bolt*

Gradually insert the tool in the crankshaft groove. Make sure that the tool tip enters the groove and does not jam on the crankshaft balancer surface.

Crankshaft Removal

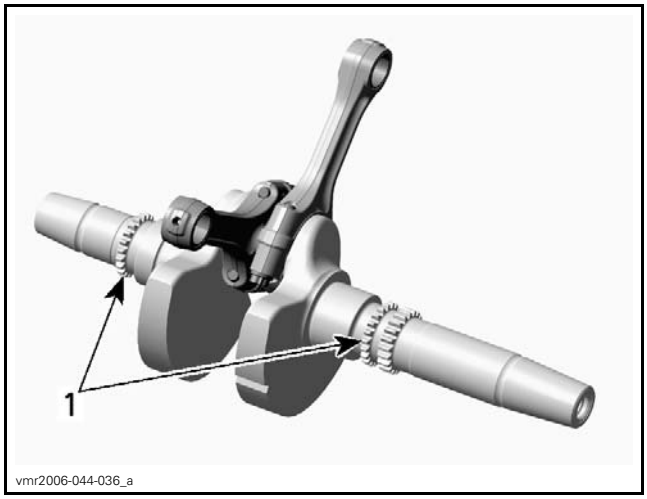
Refer to *CRANKCASE*.

Crankshaft Inspection

NOTE: Check each bearing journal of crankshaft for scoring, scuffing, cracks or other signs of wear.

NOTE: Replace crankshaft if the gears are worn or otherwise damaged.

NOTICE Components out of specifications always have to be replaced. If this is not observed, severe damage may be caused to the engine.



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1. *Crankshaft timing gears*

Crankshaft Axial Play

NOTE: Axial play needs to be measured before splitting the crankcase.

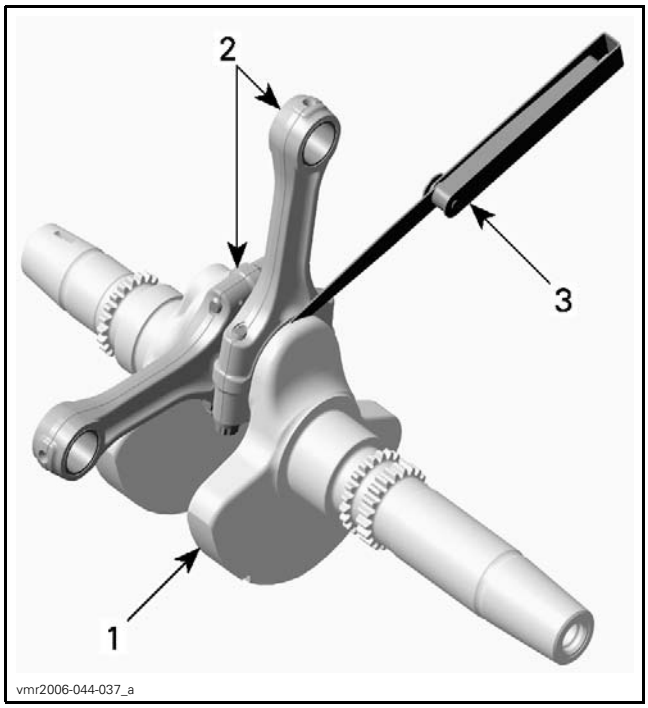
Measure play on PTO end, using a dial indicator.

CRANKSHAFT AXIAL PLAY	
NEW	0.200 mm to 0.500 mm (.008 in to .02 in)
SERVICE LIMIT	0.600 mm (.024 in)

If play is out of specification, replace crankcase and/or crankshaft.

Connecting Rod Big End Axial Play

Using a feeler gauge, measure distance between butting face of connecting rods and crankshaft counterweight. If the distance exceeds specified tolerance, replace the crankshaft.



1. *Crankshaft*
2. *Connecting rods*
3. *Feeler gauge*

CONNECTING ROD BIG END AXIAL PLAY		
800R ENGINE	NEW	0.200 mm to 0.500 mm (.008 in to .02 in)
	SERVICE LIMIT	0.600 mm (.024 in)
1000 ENGINE	NEW	0.250 mm to 0.550 mm (.01 in to .022 in)
	SERVICE LIMIT	0.600 mm (.024 in)

Connecting Rod/Piston Pin Clearance

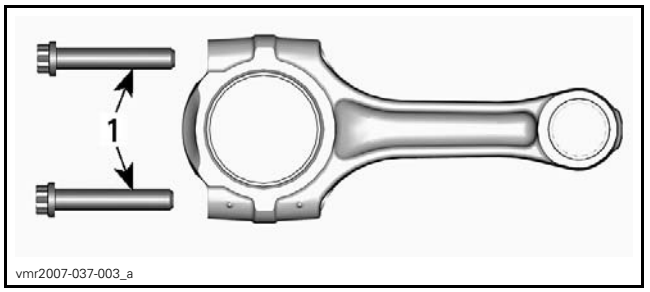
Refer to *TOP END* section.

Connecting Rod Big End Radial Play

NOTE: Prior to remove connecting rod from the crankshaft, mark big end halves together to ensure a correct reinstallation (cracked surface fits in only one position).

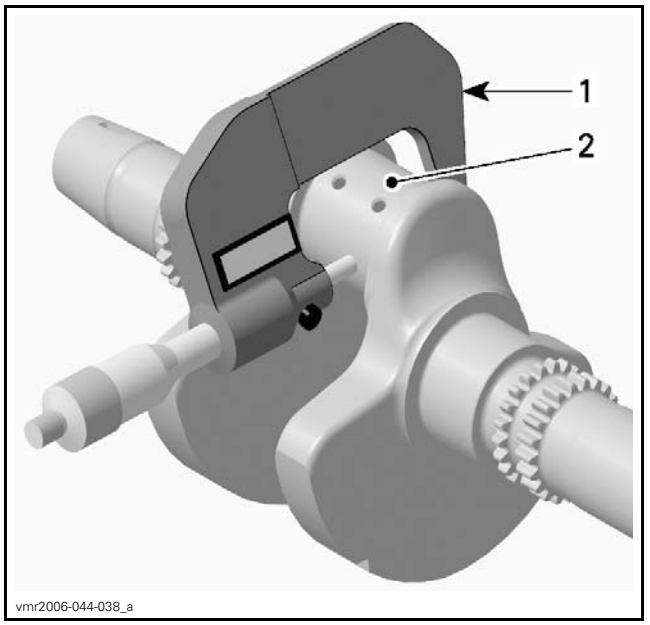
Remove connecting rods from crankshaft.

NOTICE **Connecting rod screws are not reusable. Always discard screws and replace by NEW ones. It is recommended to install new plain bearings when reinstalling connecting rods.**



1. *Connecting rod screws*

Measure crankpin. Compare to inside diameter of connecting rod big end.



1. *Micrometer*
2. *Crankpin area for plain bearing*

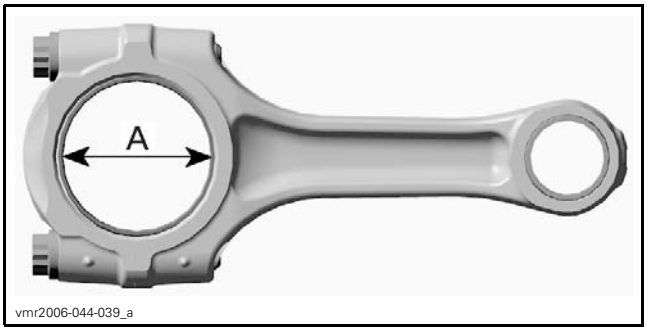
CRANK PIN DIAMETER		
800R ENGINE	NEW	40.009 mm to 40.025 mm (1.5752 in to 1.5758 in)
	SERVICE LIMIT	39.990 mm (1.5744 in)
1000 ENGINE	NEW	41.986 mm to 42.010 mm (1.653 in to 1.6539 in)
	SERVICE LIMIT	41.967 mm (1.6522 in)

If the crank pin diameter is out of specification, replace crankshaft.

To measure the connecting rod big end diameter, use the OLD connecting rod screws.

Install the OLD plain bearings as they were mounted initially.

Carry out the tightening procedure described in *CRANKSHAFT ASSEMBLY* in this subsection.



A. Connecting rod big end plain bearing

CONNECTING ROD BIG END DIAMETER		
800R ENGINE	SERVICE LIMIT	40.100 mm (1.5787 in)
1000 ENGINE		42.100 mm (1.6575 in)

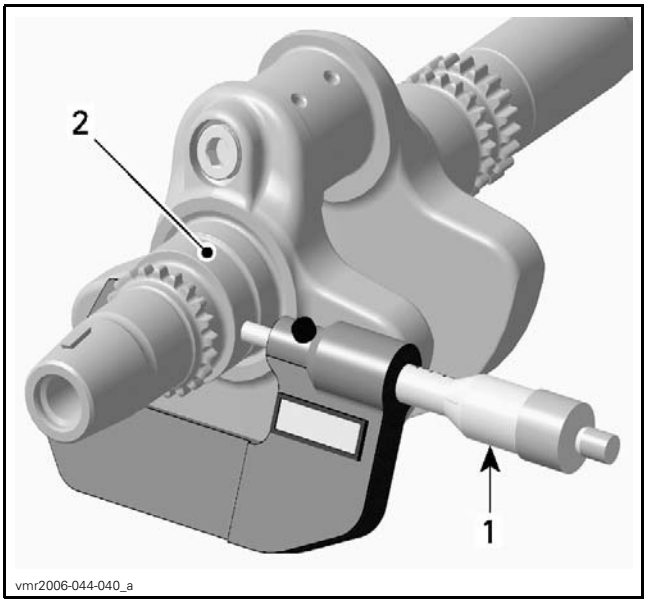
If connecting rod big end diameter is out of specification, replace plain bearings and recheck.

CONNECTING ROD BIG END RADIAL CLEARANCE		
800R/1000 ENGINES	SERVICE LIMIT	0.09 mm (.0035 in)

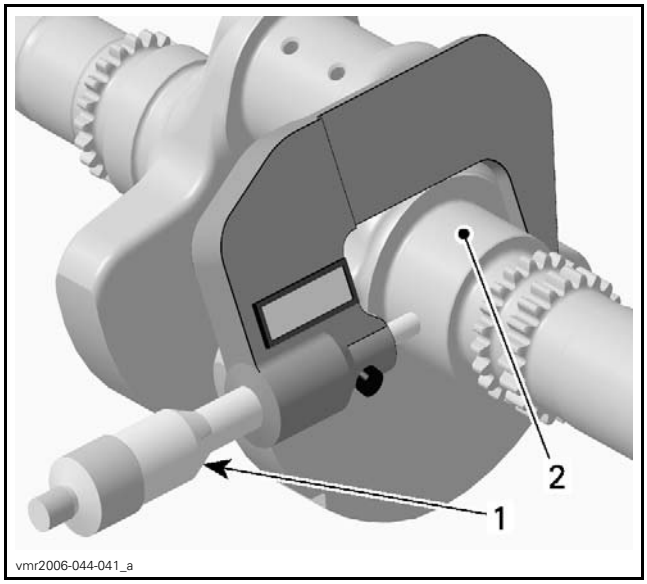
If connecting rod big end radial clearance is out of specification, replace plain bearings and recheck.

Crankshaft Radial Play MAG/PTO Side

Measure crankshaft on MAG/PTO side. Compare to inside diameter of MAG/PTO plain bearing (refer to *CRANKCASE*).



1. Micrometer
2. Crankshaft area for MAG plain bearing



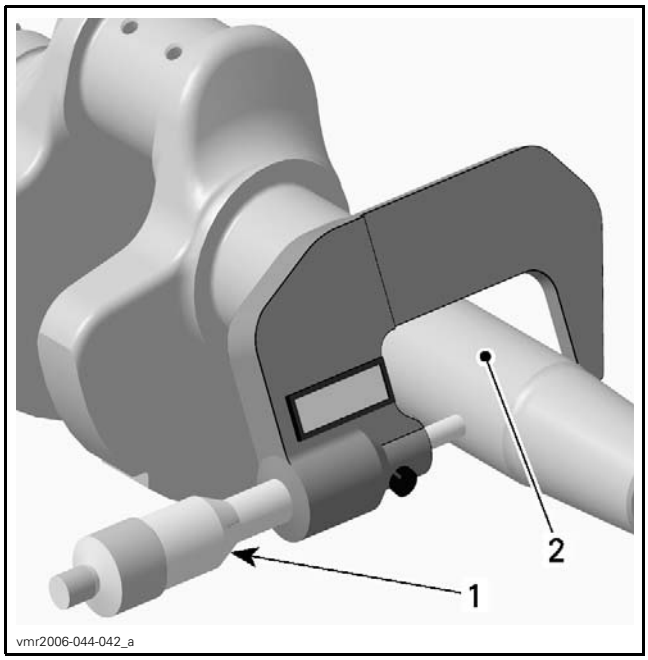
1. Micrometer
2. Crankshaft area for PTO plain bearing

CRANKSHAFT MAIN BEARING JOURNAL DIAMETER (MAG/PTO SIDE)	
NEW	42.016 mm to 42.040 mm (1.6542 in to 1.6551 in)
SERVICE LIMIT	42.000 mm (1.6535 in)

CRANKSHAFT RADIAL PLAY (MAG/PTO SIDE)	
SERVICE LIMIT	0.07 mm (.0028 in)

Crankshaft Radial Play (PTO Cover Bearing)

Measure crankshaft journal diameter (PTO cover bearing). Compare to plain bearing inside diameter (PTO cover). Refer to *PTO COVER* in this subsection.



1. Micrometer
2. Crankshaft journal (PTO support bearing)

CRANKSHAFT JOURNAL DIAMETER (PTO COVER BEARING)	
NEW	34.004 mm to 34.020 mm (1.3387 in to 1.3394 in)
SERVICE LIMIT	33.998 mm (1.3385 in)

CRANKSHAFT RADIAL PLAY (PTO COVER BEARING)	
SERVICE LIMIT	0.10 mm (.0039 in)

If crankshaft journal diameter is out of specification, replace crankshaft.

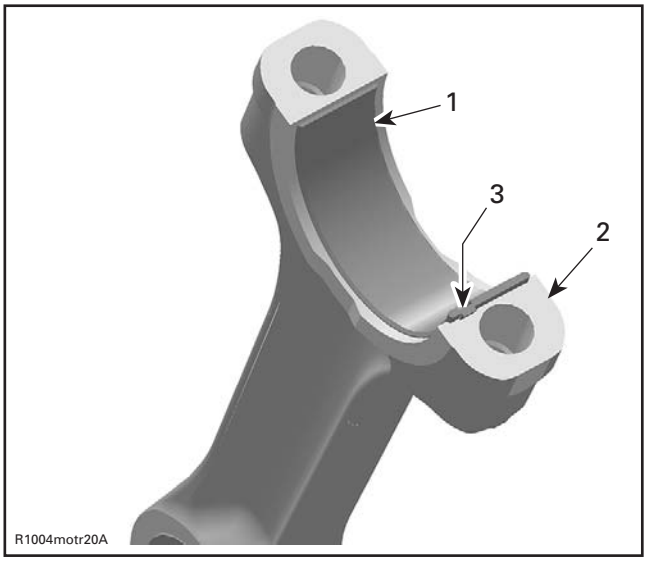
If crankshaft radial play (PTO cover bearing) out of specification, replace plain bearings and recheck.

Crankshaft Assembly

For assembly, reverse the disassembly procedure. Pay attention to following details.

Clean the split surface on both sides (cracked area) carefully with compressed air.

Put plain bearings correctly in place.



1. Half plain bearing of connecting rod big end
2. Split surface of the connecting rod
3. Nose of plain bearing in line with connecting rod groove

Oil the plain bearing surface of the connecting rod and crank pin before installation.

NOTICE Lower cap and rod must match together since there is a cracked surface.

Oil NEW connecting rod screws.

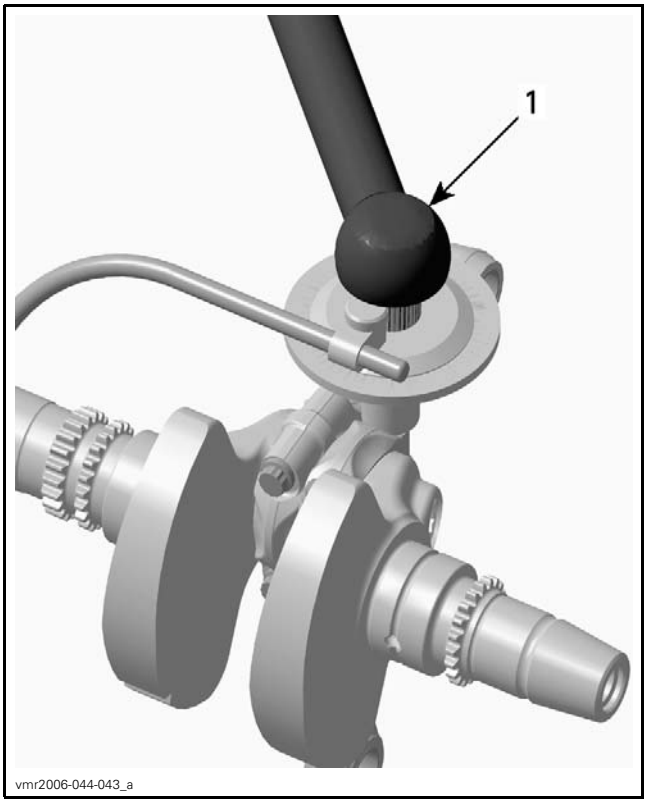
NOTICE Always use NEW connecting rod screws at final assembly. They are not reusable.

Thread screws in the connecting rods, then tighten as per following procedure.

NOTICE Strictly adhere following instructions:

- Do not apply any thread locker.
- The running direction of the big end bearings and of the piston pins must not change.
- Always perform each step on both connecting rod screws before going to the next step.
- Failure to strictly follow procedure may cause connecting rod screws to loosen and lead to severe engine damage.

REQUIRED TOOLS
Torque wrench
Angle torque wrench



1. Angle torque wrench

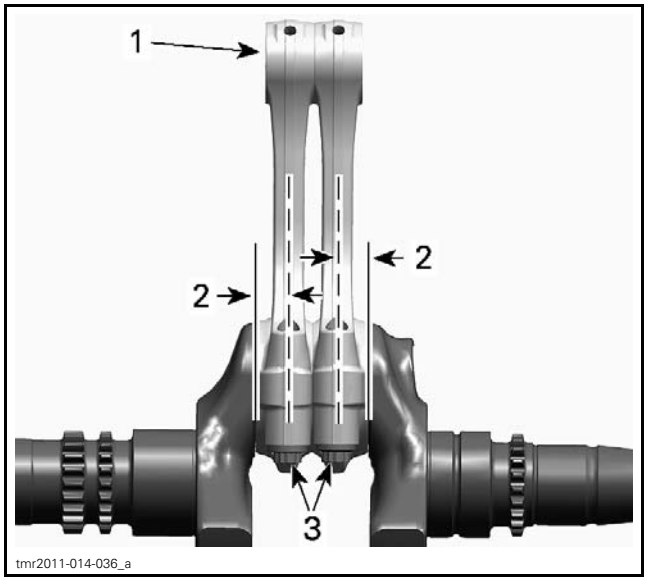
800R Engine:

NOTE: NEW connecting rods can be installed either way.

CONNECTING RODS SCREWS TIGHTENING SEQUENCE	
1.	Tighten to 1/2 of specified torque
2.	Tighten to 20 N•m ± 2 N•m (15 lbf•ft ± 1 lbf•ft)
3.	Torque by an additional 60 ± 5° turn using an angle torque wrench

1000 Engine:

NOTICE Connecting rods are asymmetric. There must be no gap between the small ends when they face each other.



1. Connecting rod small ends
2. Connecting rod offset
3. Connecting rod screws

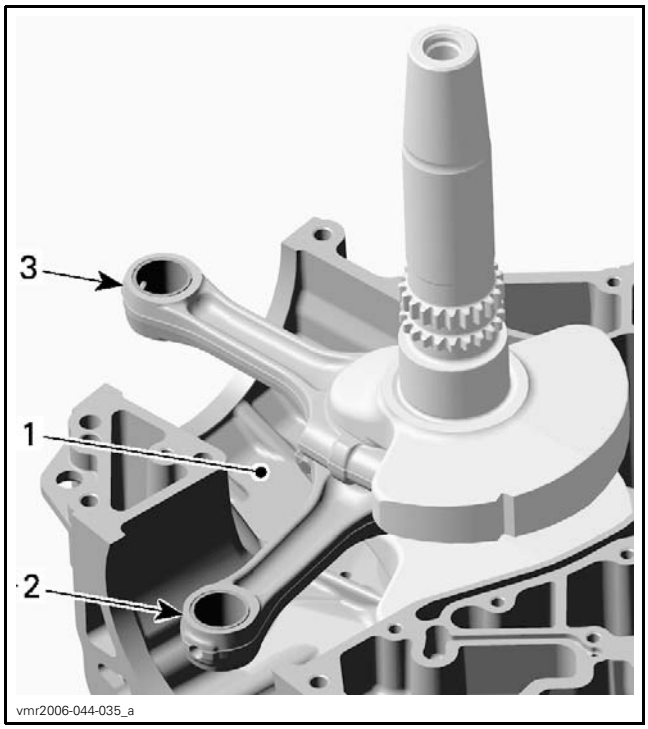
CONNECTING RODS SCREWS TIGHTENING SEQUENCE	
1.	Tighten to 1/2 of specified torque
2.	Tighten to 30 N•m ± 2 N•m (22 lbf•ft ± 1 lbf•ft)
3.	Torque by an additional 90 ± 5° turn using an angle torque wrench

Crankshaft Installation

For installation of crankshaft in crankcase reverse the removal procedure. Pay attention to the following details.

Do not mix up the connecting rods of cylinders 1 and 2 during installation.

NOTICE Observe the correct installation position when fitting the crankshaft with the connecting rods. The connecting rod MAG side has to face cylinder no. 1.



1. *Crankcase half MAG side*
2. *Connecting rod cylinder 1*
3. *Connecting rod cylinder 2*

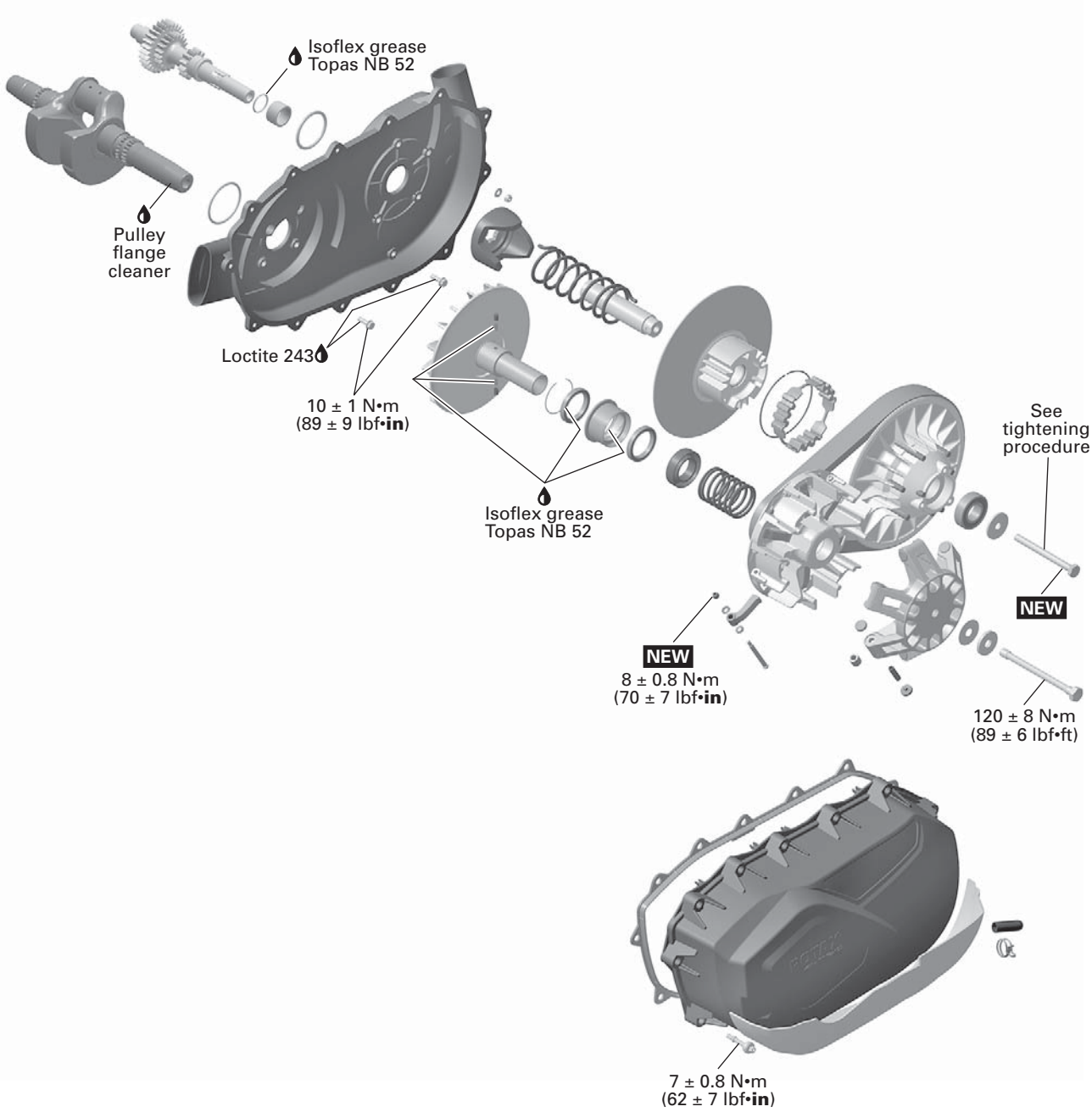
CONTINUOUSLY VARIABLE TRANSMISSION (CVT)

SERVICE TOOLS

Description	Part Number	Page
CLUTCH HOLDER	529 036 238	166, 173, 179
CLUTCH PULLER	529 035 746	166
PULLER/LOCKING TOOL	529 036 098	165, 180

SERVICE PRODUCTS

Description	Part Number	Page
ISOFLEX GREASE TOPAS NB 52	293 550 021	172
PULLEY FLANGE CLEANER	413 711 809	168, 175, 178



NEW = Component must be replaced when removed.

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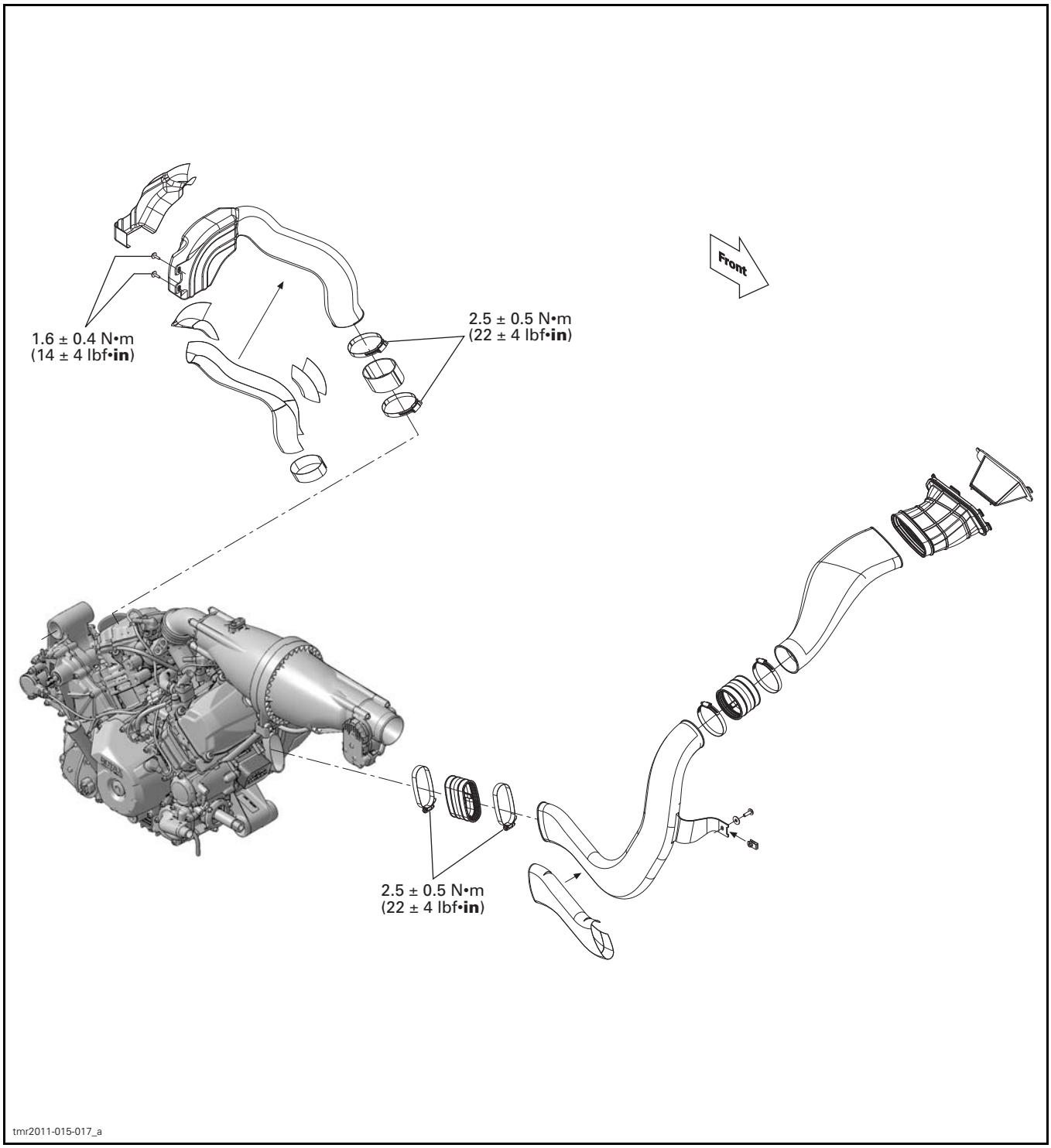

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GENERAL

NOTE: For a better understanding, the following illustrations are taken with engine out of vehicle. To perform the following instructions, it is not necessary to remove engine.

This CVT is lubrication free. Never lubricate any components except drive pulley one-way clutch.

⚠ WARNING

Never touch CVT while engine is running. Never drive vehicle when CVT cover is removed.

⚠ WARNING

Any drive pulley repairs must be performed by an authorized Can-Am dealer. Subcomponent installation and assembly tolerances require strict adherence to procedures detailed.

⚠ WARNING

The clutch assembly is a precisely balanced unit. Never replace parts with used parts from another clutch assembly.

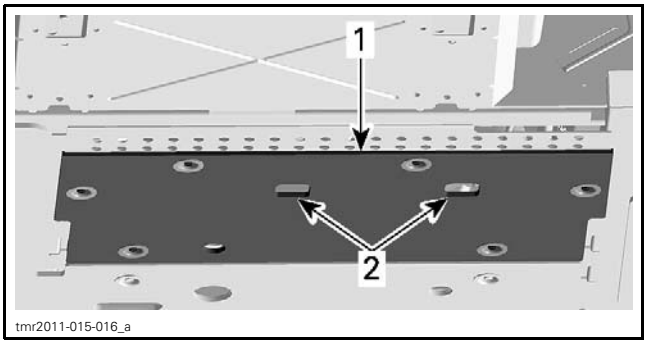
PROCEDURES

CVT COVER

CVT Cover Access

1. Refer to *BODY* and remove:
   – LH seat
   – LH lateral console panel.
2. Remove under seat storage compartment.

NOTE: The CVT cover lower screws are accessible through the square holes in the central skid plate.

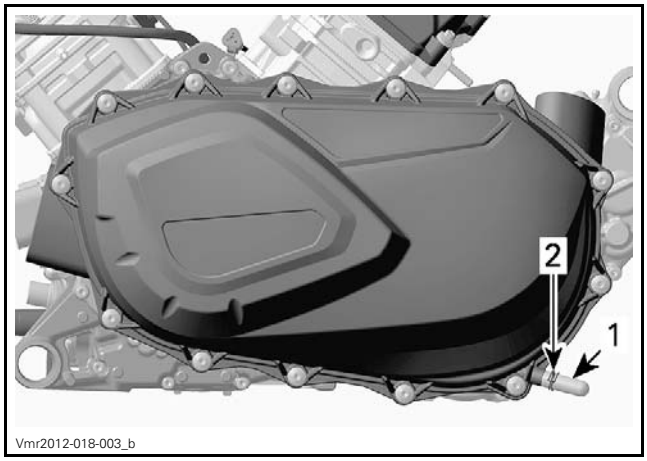


1. Central skid plate
2. Access holes

CVT Cover Draining

If water is present in CVT cover, it can be drained as follows:

1. Remove drain reservoir from CVT cover.



1. Drain reservoir
2. Spring clip

2. Let water drain from CVT cover.
3. Reinstall drain reservoir.

NOTICE **If any debris entered the CVT cover, CVT must be cleaned and inspected.**

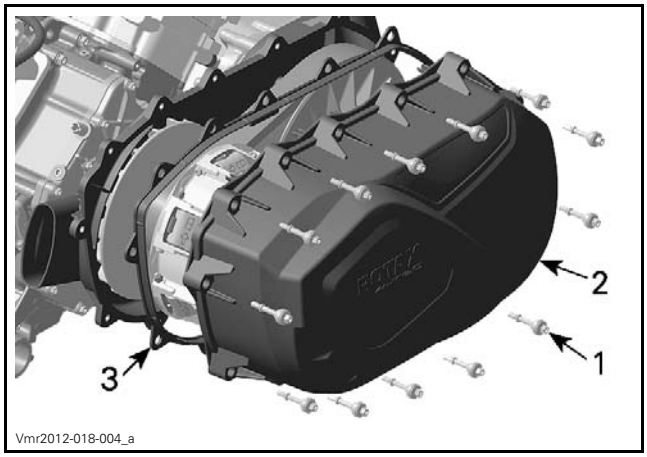
CVT Cover Removal

Remove CVT cover screws.

NOTE: Remove the center top screw last to support the cover during removal.

NOTE: Do not use and impact tool to remove CVT cover screws.

Remove the CVT cover and its gasket.

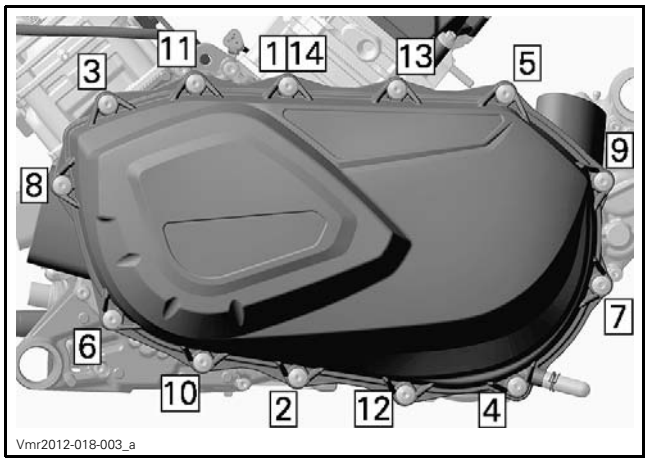


1. CVT cover screw
2. CVT cover
3. Gasket

CVT Cover Installation

Install the center top screw of first.

Tighten the CVT cover screws as per following sequence.



CVT COVER TIGHTENING SEQUENCE

CVT COVER SCREWS	
Tightening torque	7 N•m ± 0.8 N•m (62 lbf•**in** ± 7 lbf•**in**)

DRIVE BELT

Drive Belt Removal

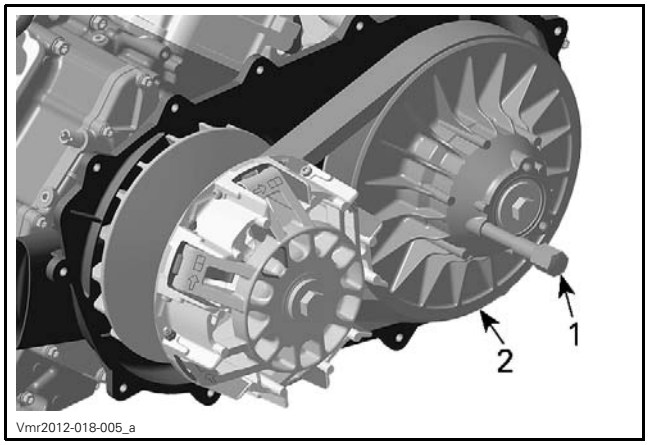
NOTICE **In case of a drive belt failure, the CVT, cover and air outlet must be cleaned.**

Remove *CVT COVER*.

Open driven pulley.

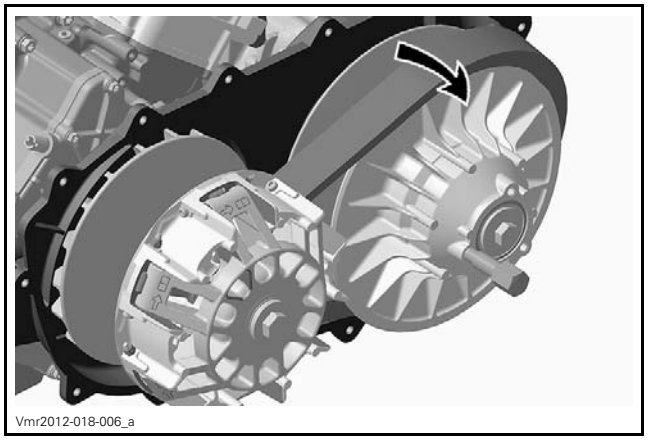
REQUIRED TOOL	
PULLER/LOCKING TOOL (P/N 529 036 098)	

Screw tool in the threaded hole of driven pulley and tighten to open the pulley.



TYPICAL
1. *Puller/locking tool*
2. *Fixed sheave of driven pulley*

To remove belt, slip the belt over the top edge of fixed sheave, as shown.



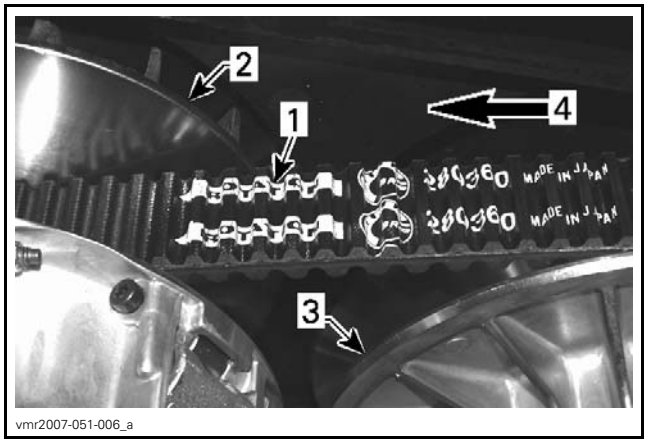
Drive Belt Inspection

For drive belt inspection refer to *DRIVE BELT INSPECTION* in the *PERIODIC MAINTENANCE PROCEDURES* subsection.

Drive Belt Installation

For installation, reverse the removal procedure. Pay attention to following details.

The maximum drive belt life span is obtained when the drive belt has the proper rotation direction. Install it so that the arrow printed on belt is pointing towards front of the vehicle, viewed from top.



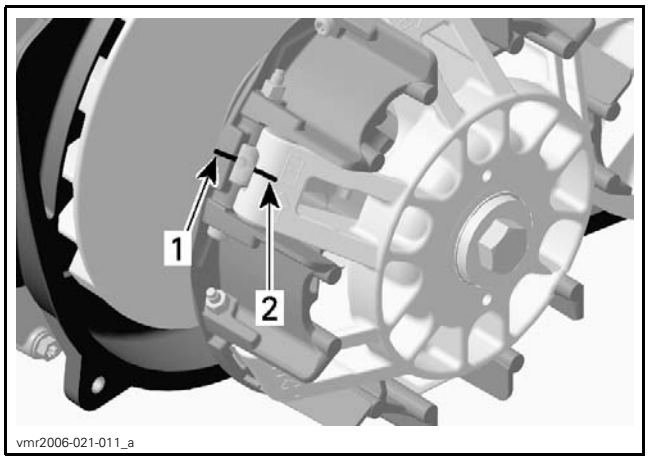
1. *Arrow printed on belt*
2. *Drive pulley (front)*
3. *Driven pulley (rear)*
4. *Rotation direction*

DRIVE PULLEY

Drive Pulley Removal

1. Remove *DRIVE BELT*, see procedure in this subsection.

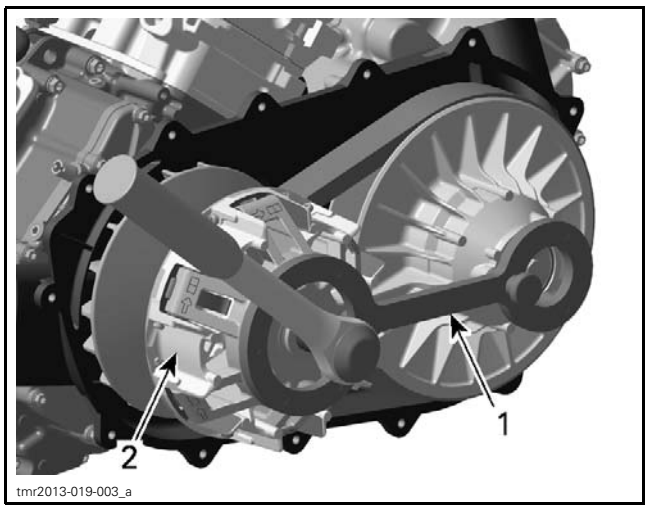
2. Prior to removing the drive pulley, mark sliding sheave and governor cup to ensure correct indexation at reinstallation.



1. Mark on drive pulley sliding sheave
2. Mark on governor cup

3. Lock the drive pulley.

REQUIRED TOOL	
CLUTCH HOLDER (P/N 529 036 238)	



1. Clutch holder
2. Drive pulley sliding sheave

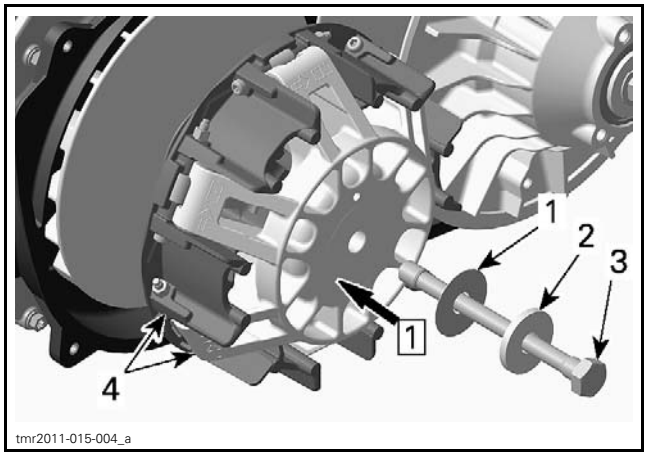
4. Loosen the drive pulley screw.

NOTICE Never use any type of impact wrench for drive pulley removal.

NOTE: Do not unscrew the drive pulley screw completely. If governor cup is stuck, hit it using a soft hammer.

5. Remove service tool.
6. Apply axial pressure with your hand on the sliding sheave and governor cup.
7. Remove drive pulley screw with its conical spring washer and thrust washer.

⚠ CAUTION Sliding sheave of drive pulley is spring loaded.



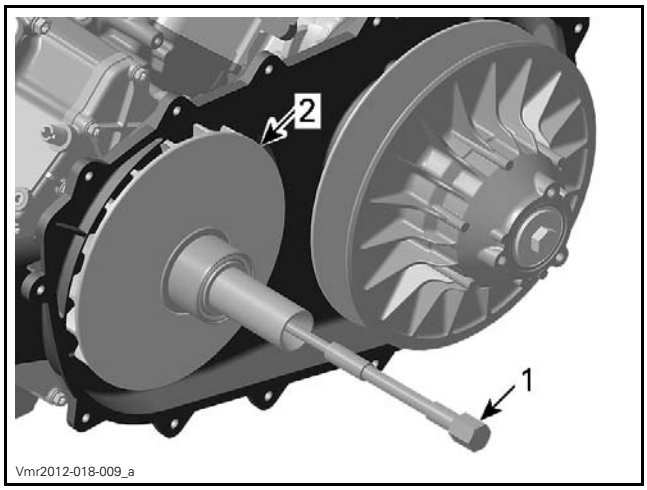
Step 1: Push

1. Thrust washer
2. Conical spring washer
3. Drive pulley screw
4. Sliding sheave with governor cup

8. Slowly release and remove sliding sheave.
9. Screw clutch puller in fixed sheave to remove fixed pulley.

NOTICE Use only recommended tool.

REQUIRED TOOL	
CLUTCH PULLER (P/N 529 035 746)	

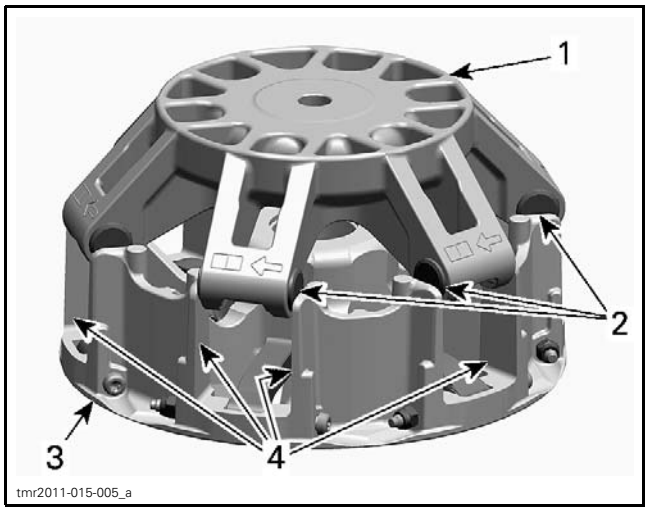


1. Drive pulley puller
2. Fixed sheave

Drive Pulley Disassembly

Governor Cup

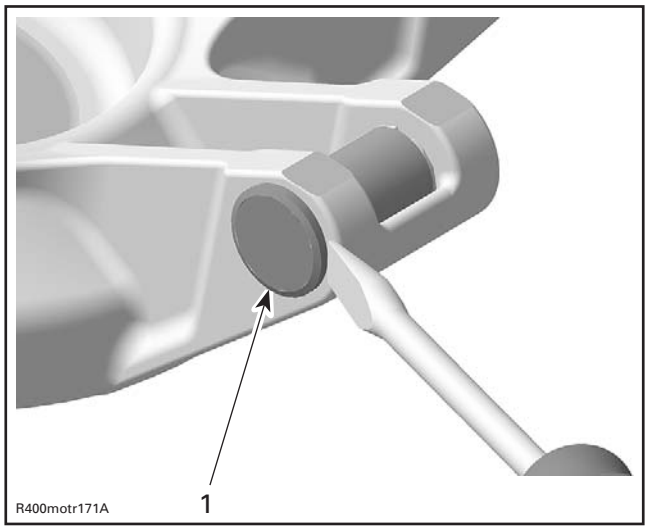
Carefully lift governor cup until slider shoes come at their highest position into guides.



1. *Governor cup*
2. *Slider shoes*
3. *Sliding shave*
4. *Guides*

NOTE: The following procedure is not necessary except if roller must be removed. Refer to *INSPECTION* before proceeding.

Remove slider shoes out of each bearing sleeve. Use a flat screwdriver if necessary.



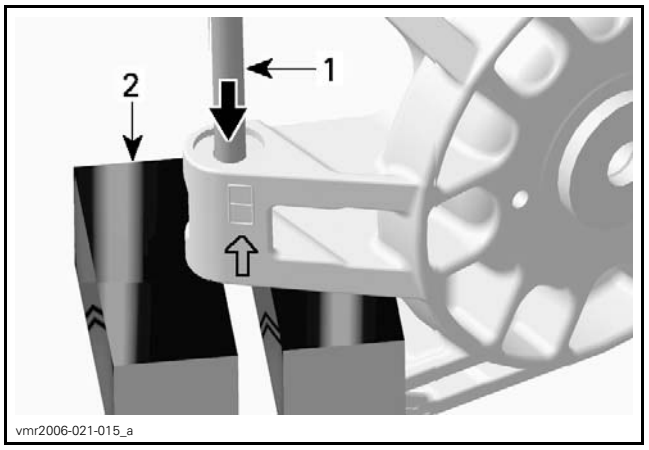
1. *Slider shoe*

Put governor cup on a vice to push out bearing sleeve of roller in the foreseen direction (against arrow). Use an appropriate punch (diameter of punch must be smaller than the bearing sleeve diameter).

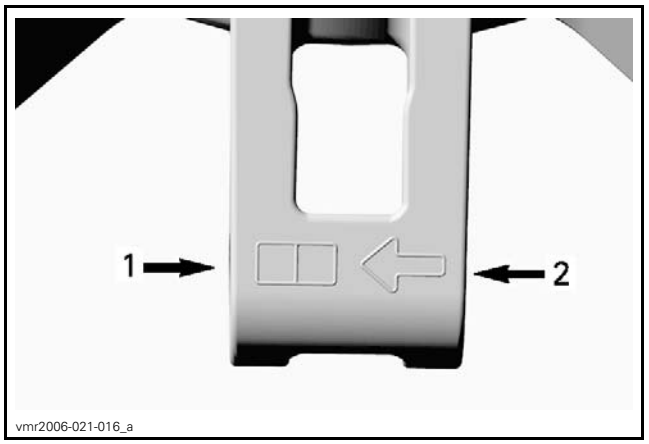
NOTICE Do not clamp the governor cup in the vice to push out bearing sleeve. Governor cup will be damaged.

NOTE: Use protection plates to avoid marks and/or damages to the governor cup.

NOTICE Always replace all rollers at the same time. Partly worn rollers may cause damage to the CVT system.

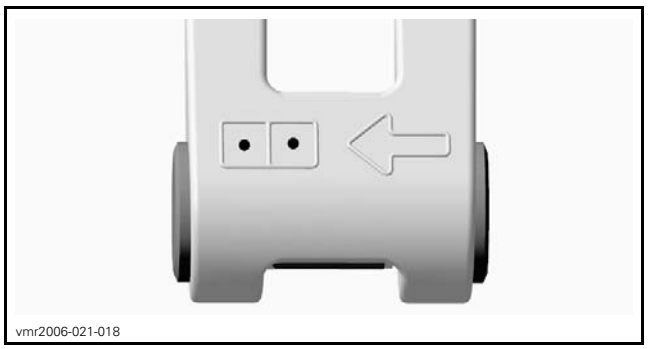


1. *Punch*
2. *Vice*



1. *Removal direction*
2. *Assembly direction*

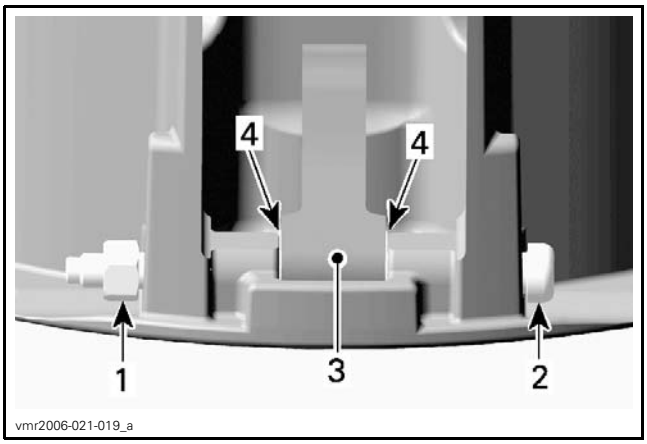
NOTE: Whenever removing a governor cup with already two marked boxes replace it by a new one.



Sliding Sheave

Unscrew lock nut and remove centrifugal lever pivot bolt. This drive pulley is equipped with 6 levers.

Remove centrifugal lever and both thrust washers.



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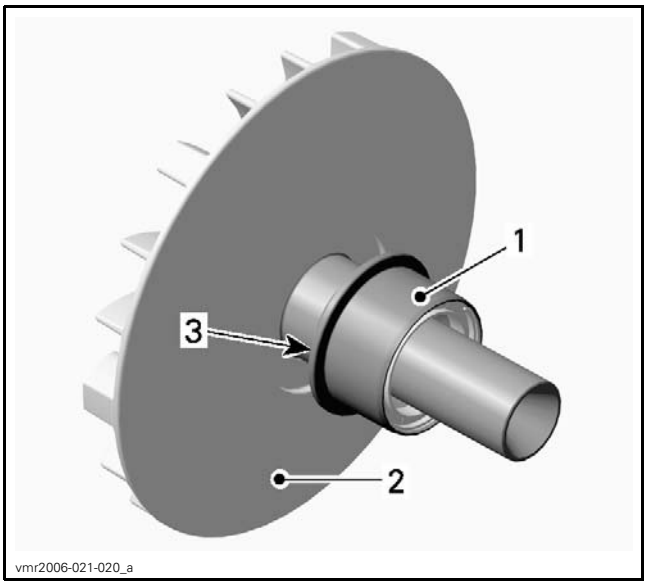
1. Lock nut
2. Centrifugal lever pivot bolt
3. Centrifugal lever
4. Thrust washers

Fixed Sheave

⚠ WARNING

Always wear safety glasses to remove spring sleeves.

Pull and rotate one-way clutch slowly until the sheave of spring sleeves are visible.



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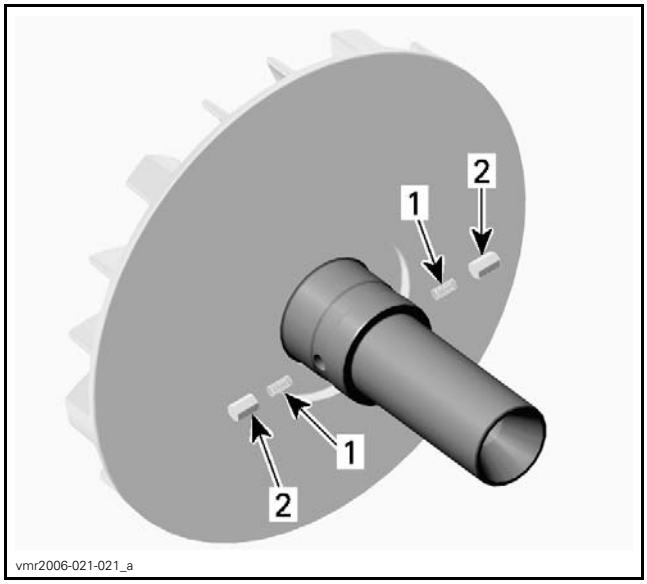
1. One-way clutch
2. Fixed sheave
3. Spring sleeve area

Hold both spring sleeves with fingers and release when one-way clutch is disengaged.



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1. Springs
2. Spring sleeves

Drive Pulley Cleaning

Clean pulley faces and shaft with fine steel wool and dry cloth.

Using a paper towel with PULLEY FLANGE CLEANER (P/N 413 711 809) cleaning solvent, clean crankshaft tapered end and the taper inside the fixed sheave of the drive pulley, crankshaft threads and threads of drive pulley screw.

NOTICE **Avoid contact between cleaner and crankshaft seal because damage may occur.**

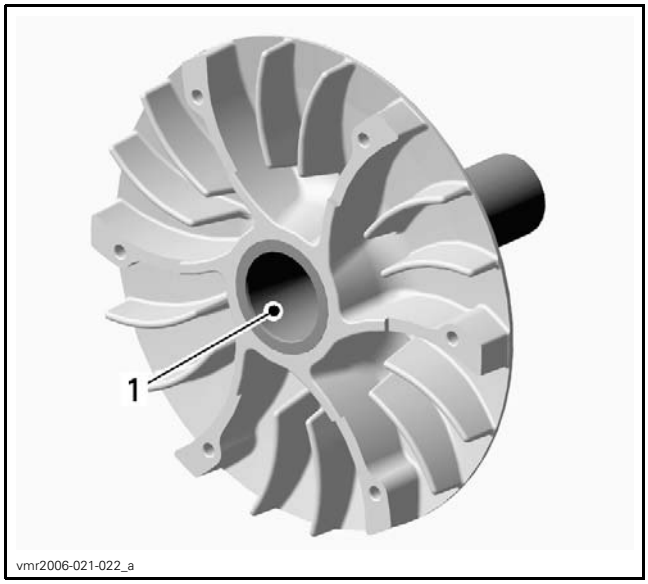
Remove all hardened oil deposits that have baked on crankshaft and pulley tapered surfaces with coarse or medium steel wool and/or sand paper no. 600.

NOTICE **Do not use any other type of abrasive.**

Reclean mounting surfaces with paper towel and PULLEY FLANGE CLEANER (P/N 413 711 809).

Wipe off the mounting surfaces with a clean, dry paper towel.

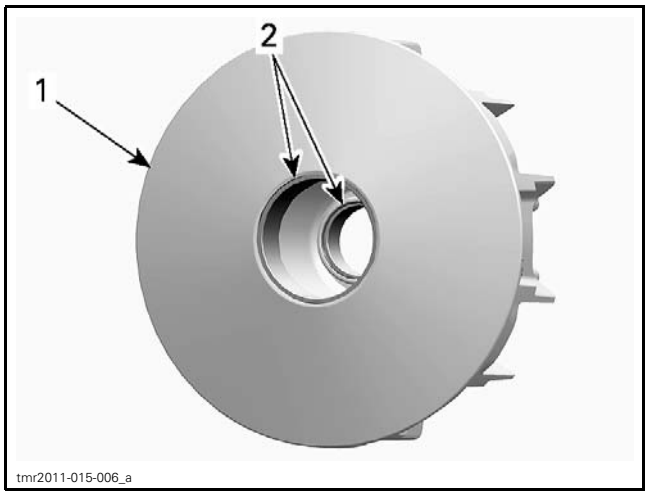
NOTICE **Mounting surfaces must be free of any oil, cleaner or towel residue.**



1. Taper of fixed sheave

Only use petrol base cleaner when cleaning bushings of sliding sheave.

NOTICE Do not use acetone to clean bushing.



1. Sliding sheave
2. Bushings

Drive Pulley Inspection

Bushings

For bushing inspection, refer to *SLIDING SHEAVE* in this subsection.

Governor Cup

Check governor cup for cracks or other visible damage. Replace if necessary.

Roller and Slider Shoe

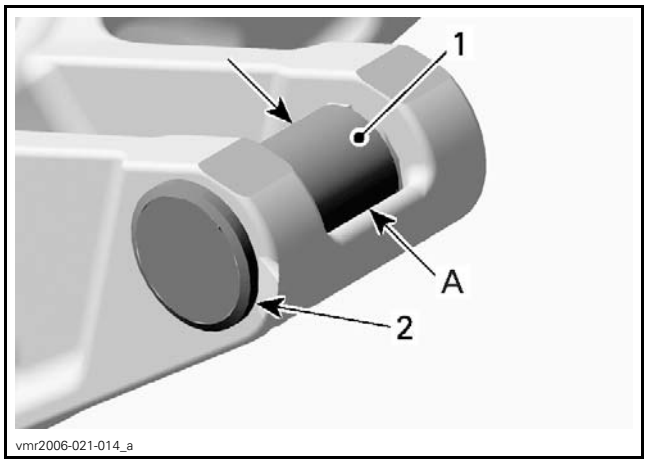
Check each roller for roundness of external diameter.

Check if rollers move freely.

NOTICE Whenever replacing rollers and slider shoes, always replace all rollers and slider shoes at the same time.

Check slider shoes for visible wear and replace if damaged.

NOTE: If necessary, use a screwdriver to remove slider shoes.

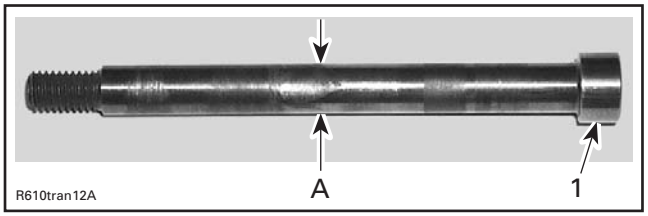


1. Roller
2. Slider shoe
A. Roller outer diameter

ROLLER OUTER DIAMETER	
NEW	13.70 mm to 13.80 mm (.539 in to .543 in)
SERVICE LIMIT	13.20 mm (.519 in)
ROLLER INNER DIAMETER	
NEW	8.05 to 8.15 mm (.317 to .321 in)
SERVICE LIMIT	9 mm (.354 in)

Centrifugal Lever Pivot Bolt

Measure diameter of centrifugal lever pivot bolt, replace if it is out of specification.

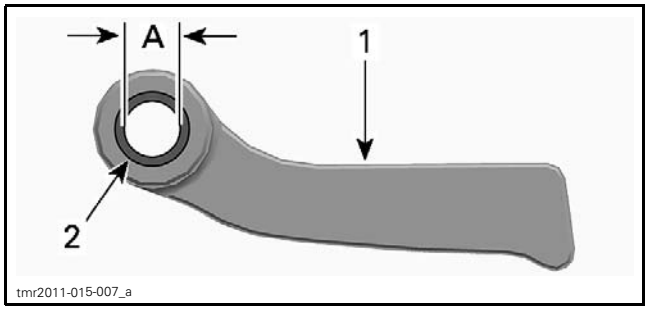


1. Centrifugal lever pivot bolt
A. Measure diameter here

CENTRIFUGAL LEVER PIVOT BOLT DIAMETER	
NEW	6.078 mm to 6.100 mm (.239 in to .24 in)
SERVICE LIMIT	6.00 mm (.236 in)

Centrifugal Lever

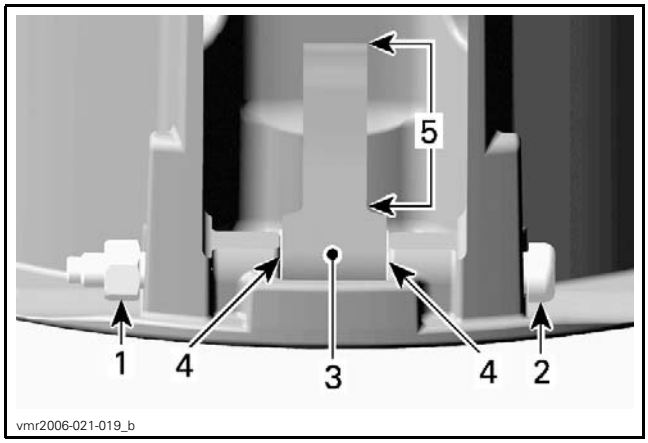
Check bushing diameter in the centrifugal lever for wear. Replace centrifugal lever if necessary.



1. Centrifugal lever
2. Bushing
A. Bushing inner diameter

CENTRIFUGAL LEVER BORE DIAMETER	
NEW	6.035 mm to 6.078 mm (.238 in to .239 in)
SERVICE LIMIT	6.200 mm (.244 in)

Replace centrifugal lever, thrust washers, centrifugal lever pivot bolts and lock nuts if the contact surfaces show heavy visible wear.



1. Lock nut
2. Centrifugal lever pivot bolt
3. Centrifugal lever
4. Thrust washers
5. Contact surface to the roller

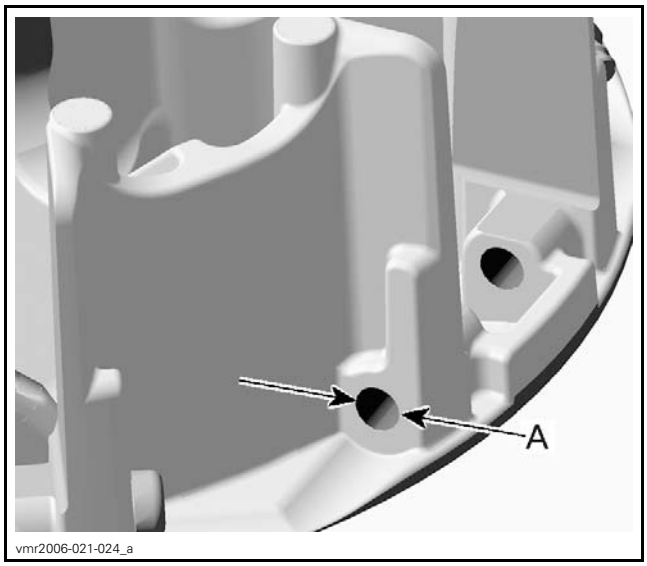
⚠ WARNING

Whenever replacing centrifugal levers, always replace all lever at the same time. Otherwise, unbalanced drive pulley will occur because of levers difference.

Sliding Sheave

Check sliding sheave for cracks and sliding contact surface for excessive wear. Replace sliding sheave if necessary.

Measure centrifugal lever pivot bolt bores. Replace sliding sheave if bores are out of specification or otherwise damaged.

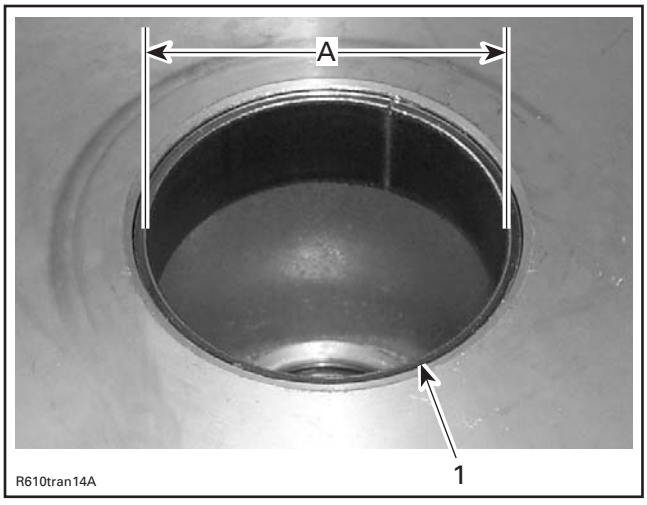


A. Centrifugal lever pivot bolt bore diameter

CENTRIFUGAL LEVER PIVOT BOLT BORE DIAMETER	
NEW	6.113 mm to 6.171 mm (.241 in to .243 in)
SERVICE LIMIT	6.300 mm (.248 in)

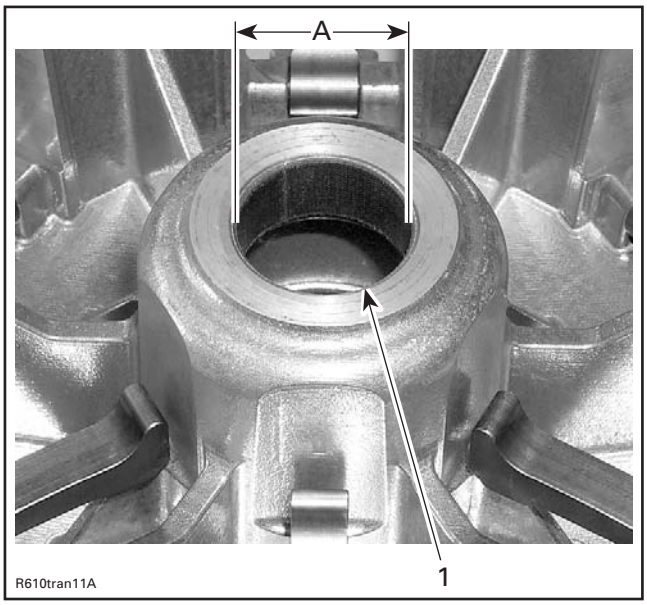
Measure bushing diameters of sliding sheave.

Use a dial bore gauge to measure bushing diameter. Measuring point must be at least 5 mm (1/4 in) from bushing edge.



1. Bushing on fixed sheave side
A. Bore diameter of bushing

SLIDING SHEAVE LARGE BUSHING	
NEW	55.000 mm to 55.040 mm (2.165 in to 2.167 in)
SERVICE LIMIT	55.200 mm (2.173 in)



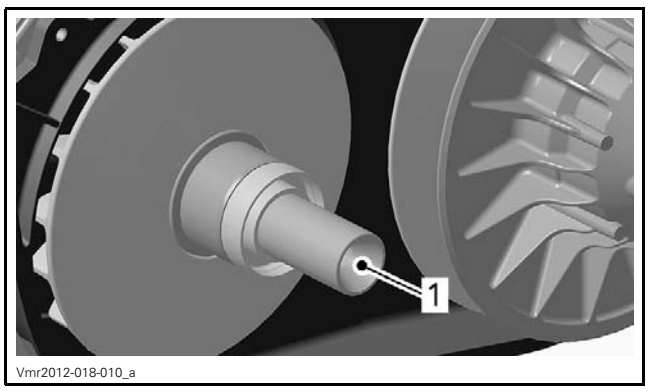
1. Bushing on governor cup side
A. Bore diameter of bushing

SLIDING SHEAVE SMALL BUSHING	
NEW	32.000 mm to 32.040 mm (1.26 in to 1.261 in)
SERVICE LIMIT	32.200 mm (1.268 in)

Replace sliding sheave if one of the bushings is out of specification. Visually inspect coatings.

Fixed Sheave

Check fixed sheave contact surface to the governor cup for scratches or other damages. If so, replace fixed sheave.



1. Visually check here

Check for any marks on fixed sheave plate. Replace if necessary.

Spring

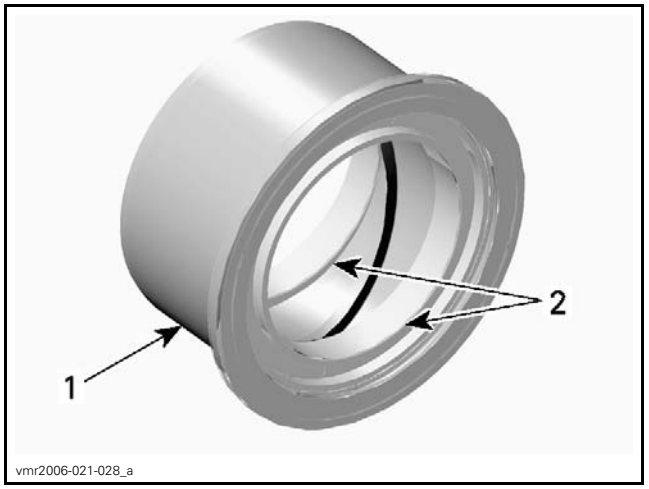
Measure spring free length and squareness. If spring is out of specification, replace by a new one.

CLUTCH SPRING SQUARENESS	
SERVICE LIMIT	4 mm (.157 in)

One-Way Clutch

Check bearings for excessive play and smooth operation. Replace one-way clutch bearings if necessary.

NOTICE **Be careful not to damage the inside of one-way clutch during bearing removal.**



1. One-way clutch
2. Bearings

Measure length of spring sleeves and check if edges on top of the spring sleeve are excessively worn. If they out of specifications, replace both spring sleeves at the same time.

SPRING SLEEVE LENGTH	
NEW	9.2 mm to 9.4 mm (.362 in to .37 in)
SERVICE LIMIT	9 mm (.354 in)

Drive Pulley Assembly

For assembly, reverse the disassembly procedure. Pay attention to following details.

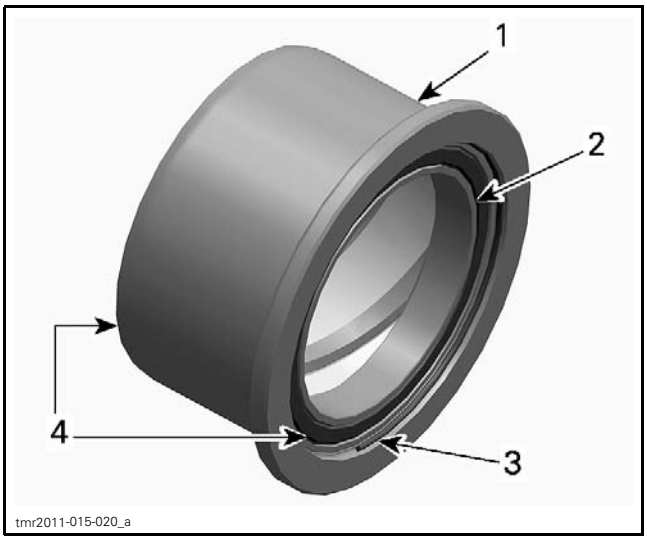
One-Way Clutch

Clean parts.

Lubricate springs, spring sleeves and between one way clutch bearings using ISOFLEX GREASE TOPAS NB 52 (P/N 293 550 021). Push grease inside bearings to ensure adequate lubrication.

NOTE: Ball bearings have a seal on one side only. Install bearings with the seal towards the outside of the one-way clutch.

NOTE: Apply ISOFLEX GREASE TOPAS NB 52 (P/N 293 550 021) inside ball bearings to ensure adequate lubrication.



1. *One-way clutch*
2. *Bearing*
3. *Retaining ring*
4. *Seal*

Sliding Sheave

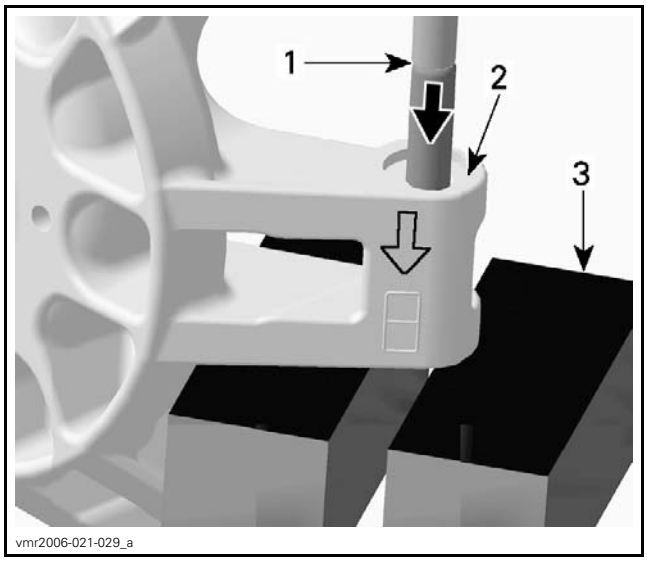
Install centrifugal levers with their thrust washers.

NOTICE Centrifugal levers must move easily after installation.

Governor Cup

Rebuild governor cup with new bearing sleeves, thrust washers, rollers and slider shoes.

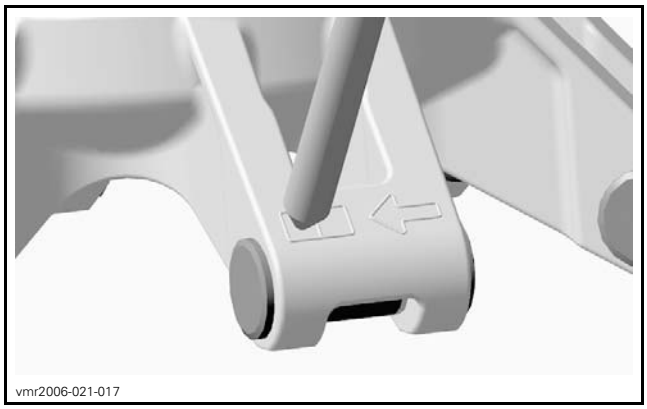
NOTICE Final position has to be aligned with the contact surface of the slider shoes (no protrusion).



1. *Top edge of bearing sleeve*
2. *Mating surface of slider shoes*
3. *Vice*

Each time when replacing the bearing sleeves sign the foreseen box with a punch.

NOTICE Do not tap too hard. Violent damage of the governor cup may appear.



NOTICE Rollers must move easily after installation.

Insert slider shoes into governor cup to properly slide in guides.

Drive Pulley Installation

For installation, reverse the removal procedure. Pay attention to the following details.

⚠ WARNING

Do not apply antiseize or any lubricant on crankshaft and drive pulley tapers.

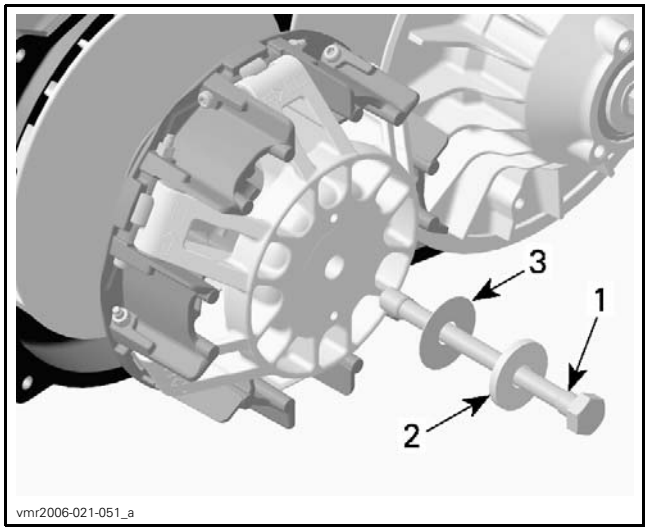
NOTICE Never use any type of impact wrench at drive pulley removal and installation.

Clean mounting surfaces as described in *CLEANING* above.

Install drive pulley on crankshaft extension.

NOTICE Do not forget to place thrust washer prior to install conical spring washer.

Install conical spring washer with its concave side towards drive pulley then install drive pulley screw.



1. *Drive pulley screw*
2. *Conical spring washer*
3. *Thrust washer*

⚠ WARNING

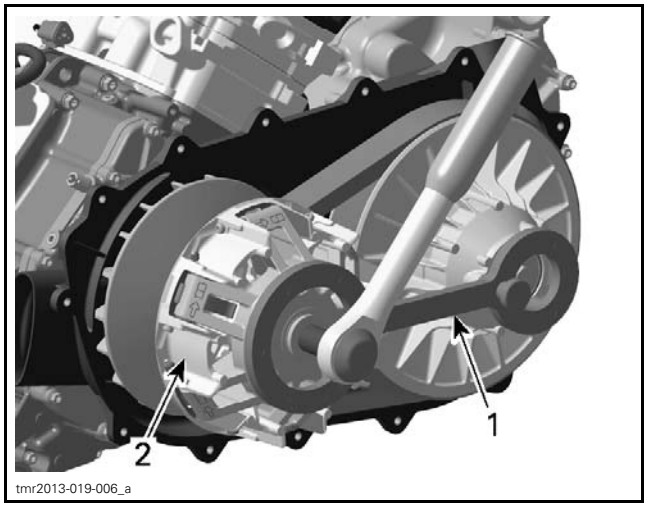
Never substitute conical spring washer and/or screw with jobber ones. Always use BRP genuine parts for this particular case.

Lock the drive pulley as per removal procedure.

Tighten drive pulley screw to specified torque.

NOTICE Never use any type of impact wrench for drive pulley installation.

DRIVE PULLEY SCREW	
Tightening torque	120 N•m ± 8 N•m (89 lbf•ft ± 6 lbf•ft)



1. *Clutch holder (P/N 529 036 238)*
2. *Drive pulley*

DRIVEN PULLEY

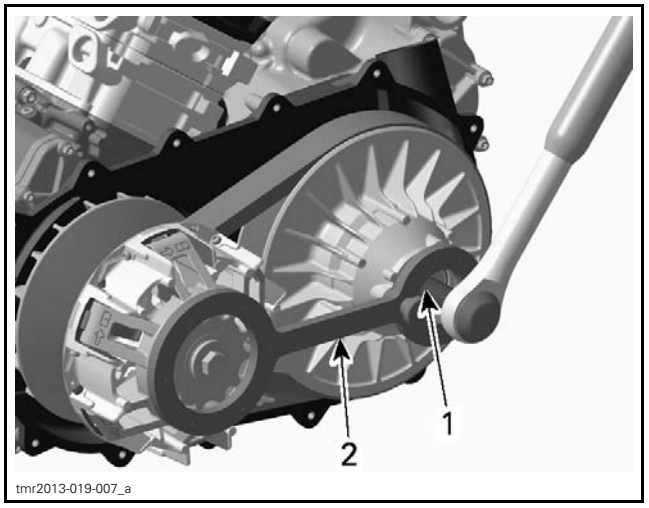
Driven Pulley Removal

Remove *DRIVE BELT*.

Hold the driven pulley and loosen the driven pulley screw.

NOTE: Do not unscrew the driven pulley screw completely.

REQUIRED TOOL	
CLUTCH HOLDER (P/N 529 036 238)	



1. *Driven pulley screw (to discard)*
2. *Clutch holder*

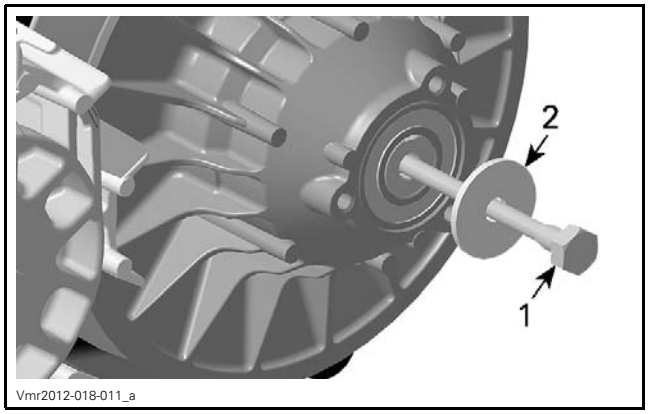
Remove service tool.

Apply axial pressure with your hand on driven pulley and maintain during screw removal.

Remove driven pulley screw and washer.

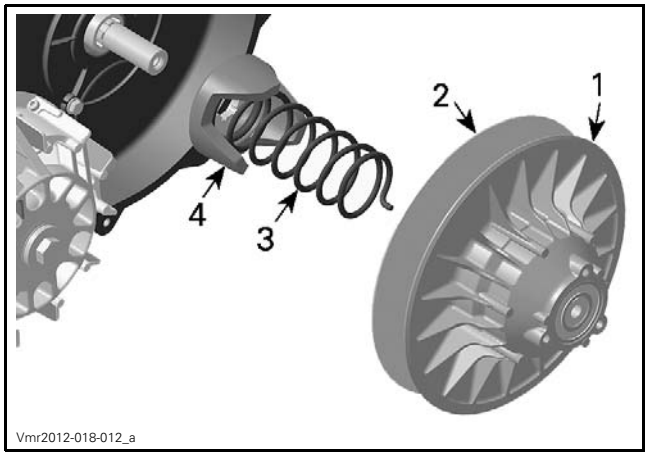
Discard screw.

⚠ CAUTION Driven pulley is spring loaded. Hold driven pulley tight and slowly remove the driven pulley screw to release spring tension.



1. Driven pulley screw
2. Thrust washer

Remove the driven pulley with the spring and the cam.

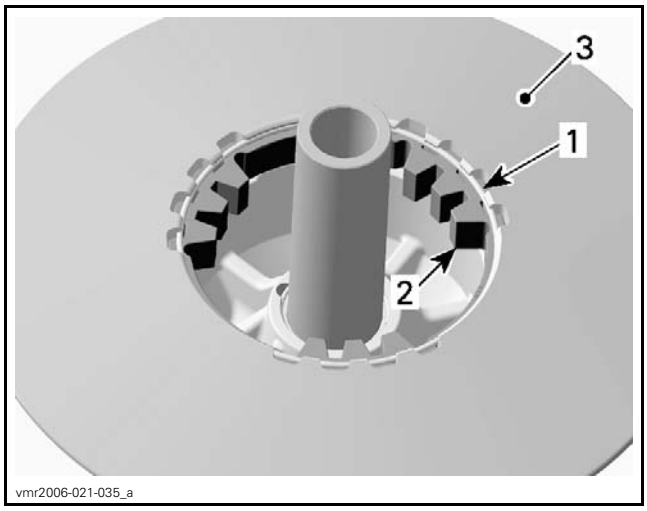


1. Fixed sheave of driven pulley
2. Sliding sheave of driven pulley
3. Spring
4. Cam

Driven Pulley Disassembly

Fixed Sheave

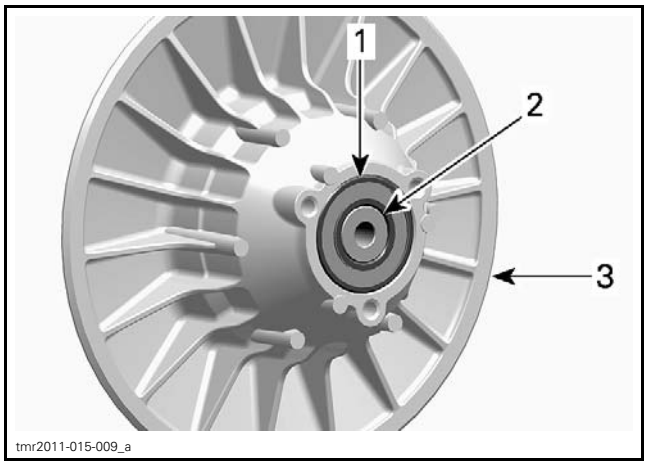
Remove retaining ring and lift torque gear.



1. Retaining ring
2. Torque gear
3. Fixed sheave of driven pulley

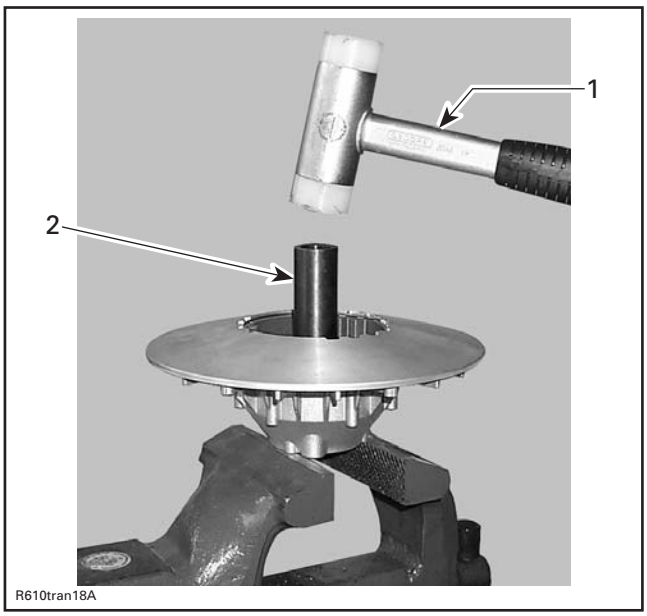
NOTE: The following procedure is not necessary except if ball bearing or shaft must be removed. Refer to *INSPECTION* before proceeding.

Heat ball bearing area up to 100°C (212°F) before removing ball bearing.



1. Ball bearing
2. Shaft
3. Fixed sheave of driven pulley

Use a soft hammer to push shaft with bearing out of fixed sheave.

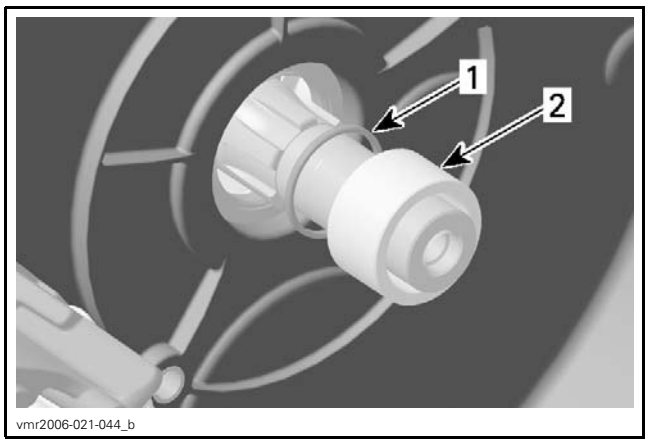


1. Soft hammer
2. Shaft

Remove shaft from ball bearing.

Remove distance sleeve and O-ring from countershaft.

Replace O-ring if brittle, hard or damaged.



1. O-ring
2. Distance sleeve

Driven Pulley Cleaning

When a dust deposit has to be removed from the cam or the shaft, use dry cloth.

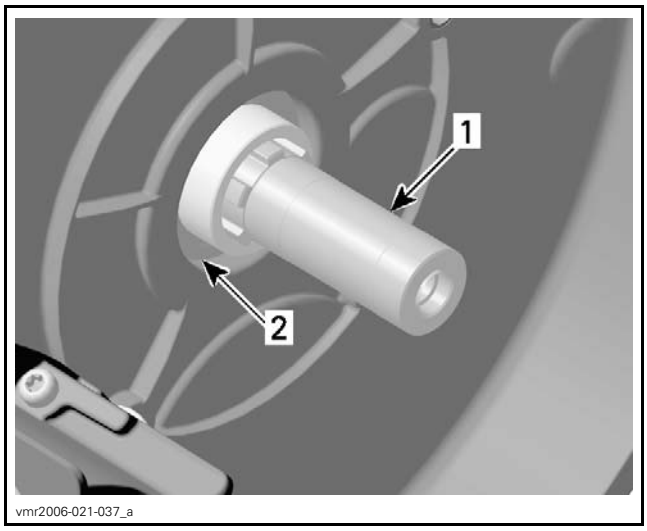
Clean pulley faces and shaft with fine steel wool and dry cloth.

Use PULLEY FLANGE CLEANER (P/N 413 711 809) to clean driven pulley.

Clean the CVT air guide area from contamination.

Using a paper towel with PULLEY FLANGE CLEANER (P/N 413 711 809) to clean countershaft end and the inside of the shaft.

NOTICE To avoid damage, make sure cleaner does not contact the countershaft oil seal.



1. Countershaft support
2. Countershaft oil seal

Driven Pulley Inspection

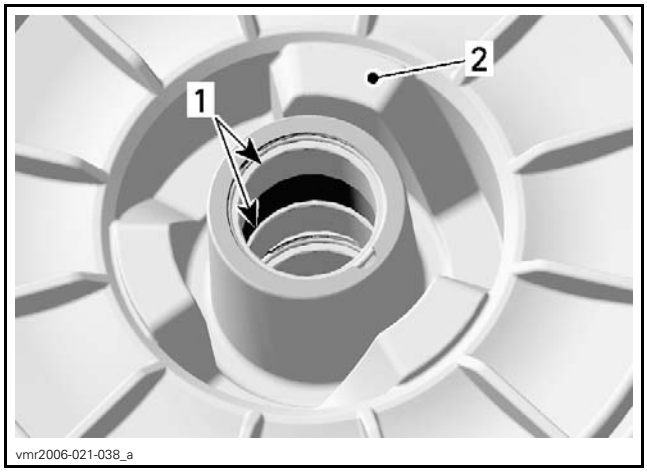
Sliding Sheave

Check sliding sheave for cracks and sliding contact surface for excessive wear. Replace sliding sheave if necessary.

Check bushings for cracks, scratch and for free movement when assembled to sliding sheave.

Using a dial bore gauge measure bushing diameter. Measuring point must be at least 5 mm (1/4 in) from bushing edge.

This bushing can not be replaced. Replace sliding sheave if bushings are out of specification. Visually inspect coatings.



1. Bushings
2. Backside of sliding sheave of driven pulley

BUSHINGS BORE DIAMETER	
NEW	30.060 mm to 30.100 mm (1.183 in to 1.185 in)
SERVICE LIMIT	30.200 mm (1.189 in)

Fixed Sheave

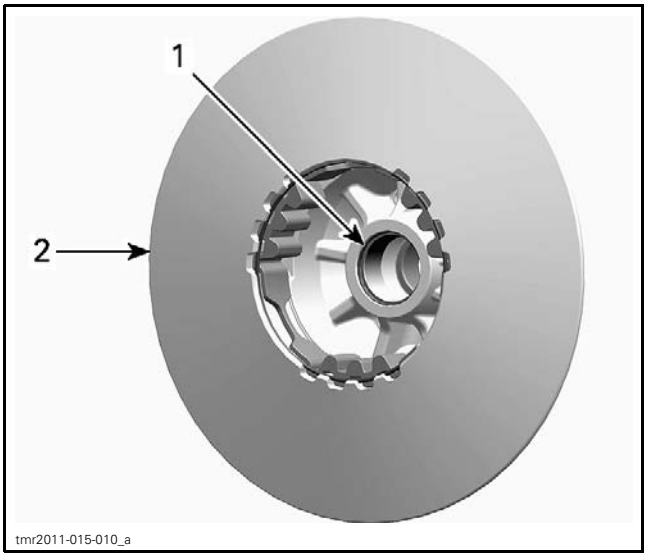
Check fixed sheave for cracks and excessive wear. Replace fixed sheave if necessary.

Check ball bearing for free play and smooth operation. Replace if necessary.

Check shaft for heavy wear or visible damage. Replace if necessary.

If the shaft is removed, using a dial bore gauge, measure bushing diameter. Measuring point must be at least 5 mm (1/4 in) from bushing edge.

This bushing can not be replaced. Replace fixed sheave if bushing is out of specification. Visually inspect coatings.

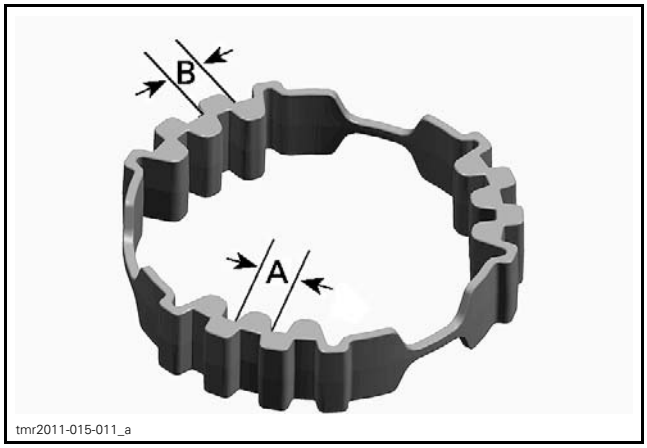


1. Bushing
2. Fixed sheave of driven pulley

BUSHING BORE DIAMETER	
NEW	30.060 mm to 30.100 mm (1.183 in to 1.185 in)
SERVICE LIMIT	30.200 mm (1.189 in)

Check torque gear for visible damage and cracks.

Measure wear limit with a caliper.

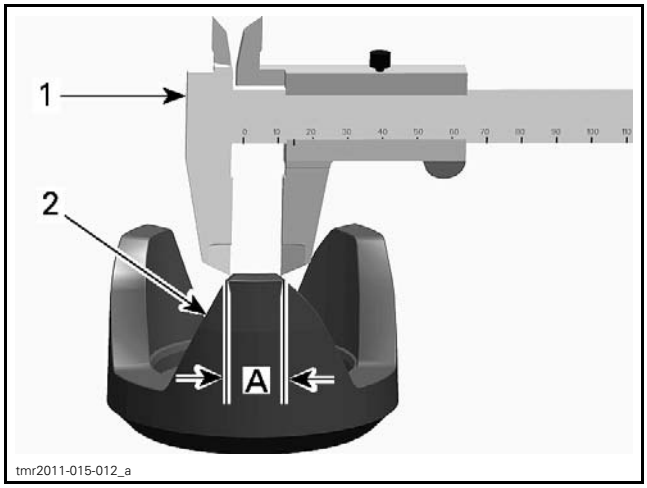


A. Measurement inside
B. Measurement outside

WEAR ON TEETH BOTH SIDES	
SERVICE LIMIT	7.500 mm (.295 in)

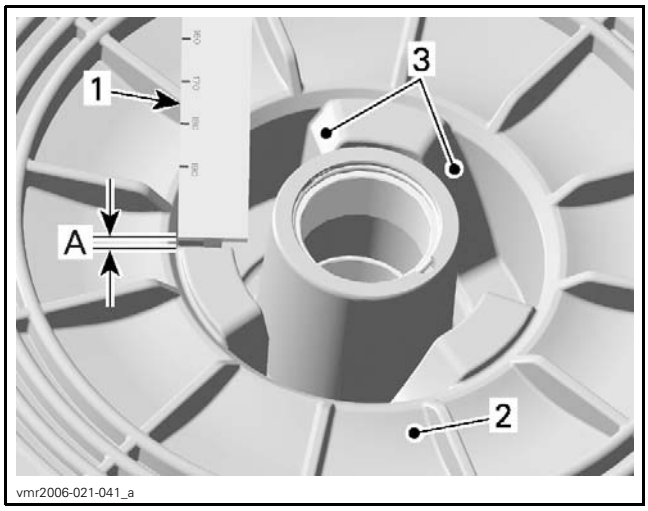
Cam

Check cam for visible damage and wear limit with a caliper.



1. Caliper
2. Contact surface
A. Width to be measured due to wear on contact surface

WIDTH ON TOP SURFACE	
SERVICE LIMIT	9.00 mm (.354 in)

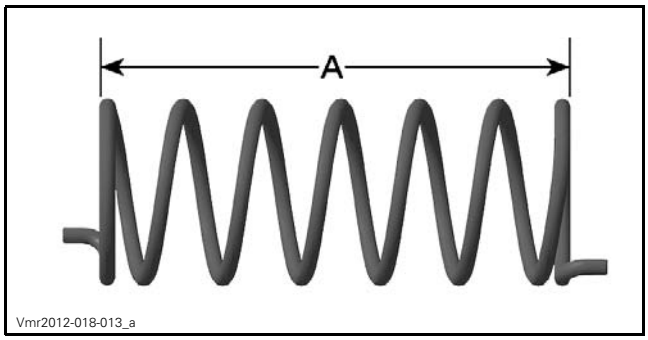


1. Caliper
2. Sliding sheave
3. Contact surface
A. Wear to be measured

WEAR ON CONTACT SURFACE	
SERVICE LIMIT	1.00 mm (.039 in)

Spring

Measure spring free length and squareness. If spring is out of specification, replace by a new.



CVT DRIVEN SPRING
A. Spring free length

SPRING FREE LENGTH	
SERVICE LIMIT	125 mm (4.921 in)
CLUTCH SPRING SQUARENESS	
SERVICE LIMIT	3.8 mm (.15 in)

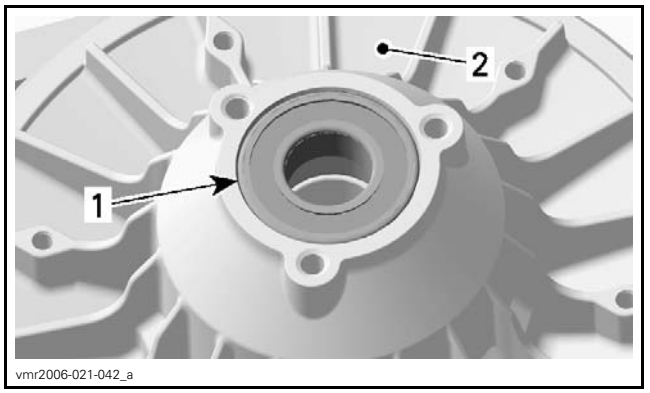
Driven Pulley Assembly

For installation, reverse the removal procedure. Pay attention to following details.

Heat ball bearing area up to 100°C (212°F) before ball bearing installation.

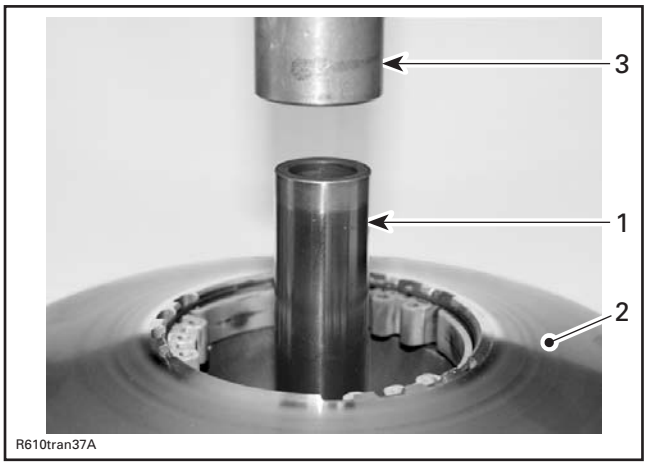
NOTE: Place new ball bearing in a freezer for 10 minutes before installation.

Install ball bearing with the writing on top and push only on the outer ring.



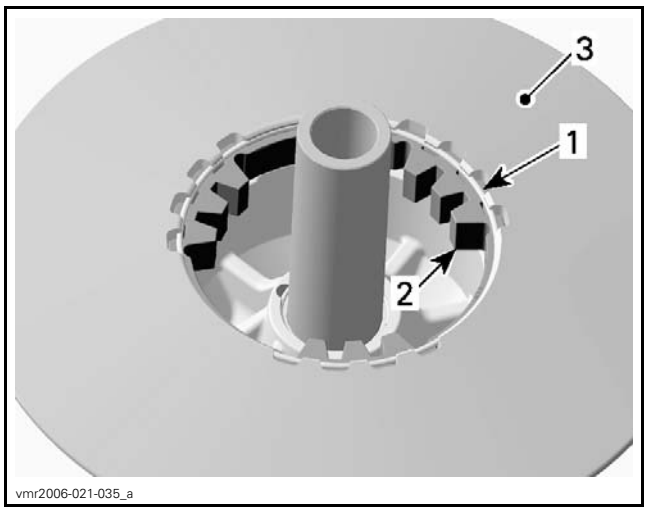
1. Ball bearing
2. Fixed sheave of driven pulley

NOTICE Do not use hammer, use press machine only.



1. Shaft
2. Fixed sheave
3. Press machine

Install torque gear then secure it with retaining ring.



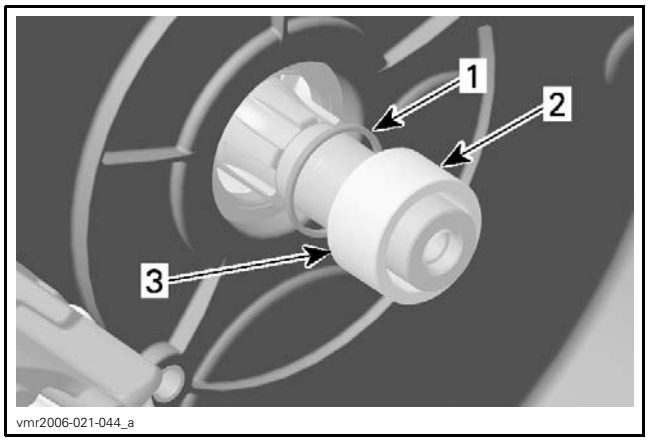
1. Retaining ring
2. Torque gear
3. Fixed sheave of driven pulley

Driven Pulley Installation

For installation, reverse the removal procedure. Pay attention to the following details.

Place O-ring on countershaft splines and move it with distance sleeve in end position.

NOTICE Chamfer on inside diameter of the distance sleeve must face to gearbox side.



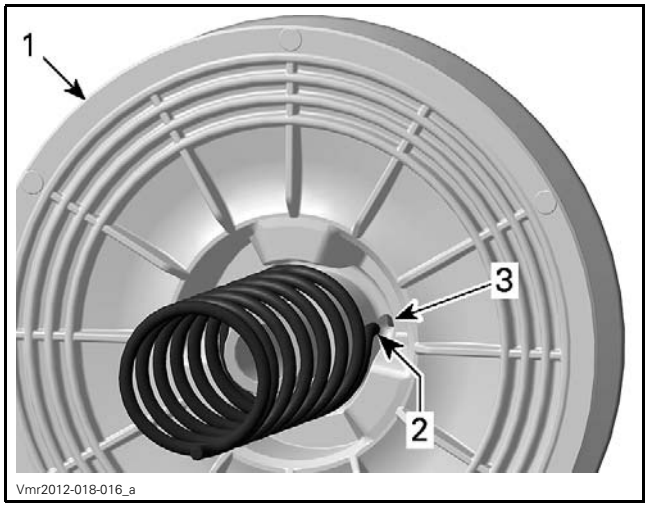
1. O-ring
2. Distance sleeve
3. Chamfered area of distance sleeve

NOTICE Threads of gearbox countershaft and driven pulley screw must be free of oil and grease. Lubricants in threads will create too high preload to tightened driven pulley screw.

Clean threads using PULLEY FLANGE CLEANER (P/N 413 711 809).

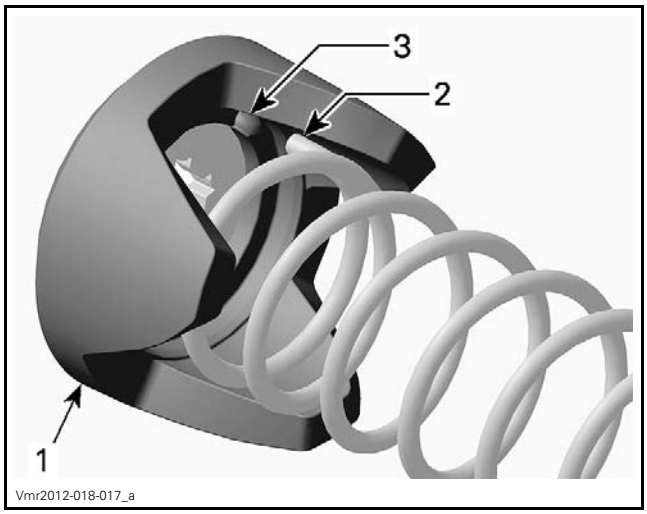
Insert the sliding sheave in the fixed sheave.

Place spring behind sliding sheave and engage spring end in the sliding sheave spring bore.



1000 ENGINE
1. Sliding sheave
2. Spring end
3. Spring bore

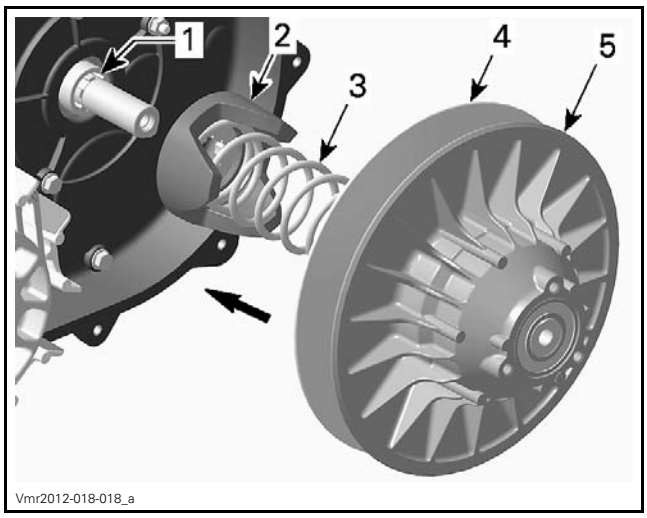
Place cam on the opposite end of the spring and engage the other spring end in the cam spring bore.



1000 ENGINE
1. Cam
2. Spring end
3. Spring bore

Install pre-assembled cam with spring and driven pulley on countershaft end.

NOTICE Cam must engage on countershaft splines.



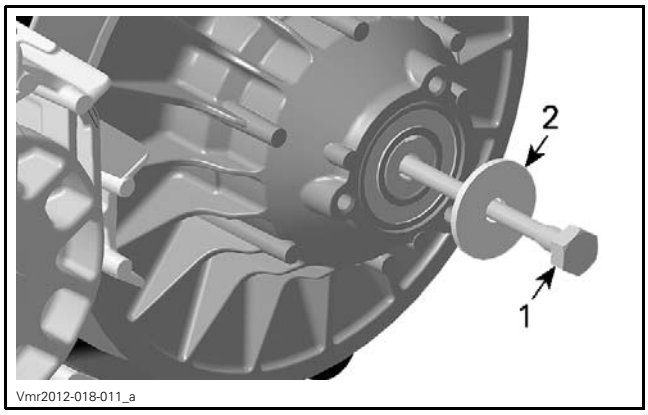
1000 ENGINE
1. Countershaft splines
2. Cam
3. Spring
4. Sliding sheave
5. Fixed sheave

With your hand, push the driven pulley onto the shaft to compress the spring.

As you hold the pulley in, install a **NEW** driven pulley screw and thrust washer.

NOTICE This assembly uses a stretch screw. Always install a **NEW** screw.

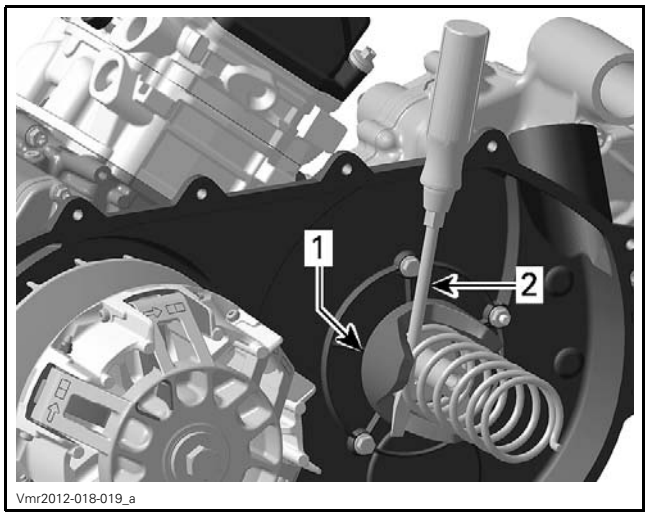
NOTE: Tighten the screw with your hand approximately 3 to 4 turns.



1. Driven pulley screw
2. Thrust washer

Insert a screwdriver of approximately 5 mm (.197 in) diameter in the cam.

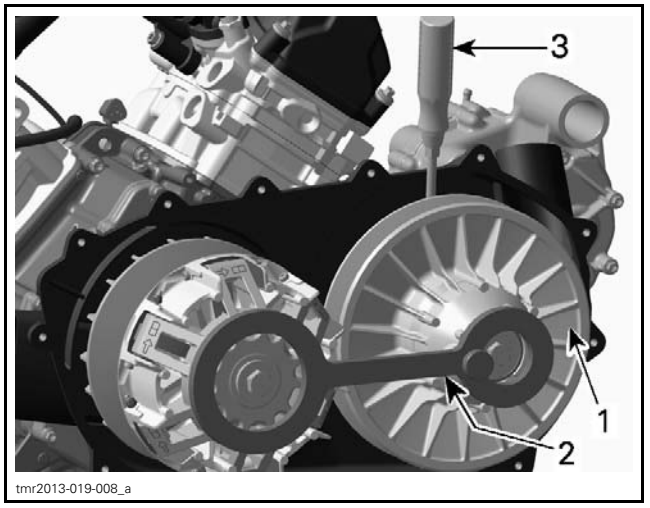
NOTE: For clarity of understanding, some parts not shown in the following illustration.



1000 ENGINE
1. Cam
2. Screwdriver, diameter 5 mm (.197 in)

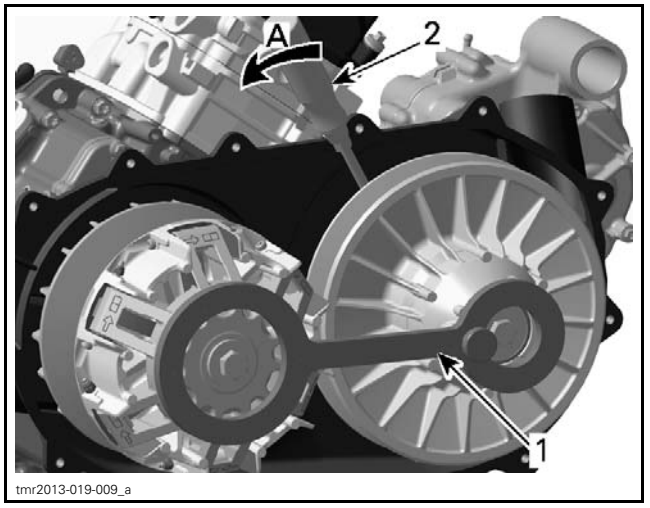
Hold the driven pulley in a fix position.

REQUIRED TOOL	
CLUTCH HOLDER (P/N 529 036 238)	



1. Fixed sheave
2. Clutch holder
3. Screwdriver

Turn the screwdriver approximately 20° counterclockwise until cam engages in the driven pulley sliding sheave and hold it in this position (spring preload).



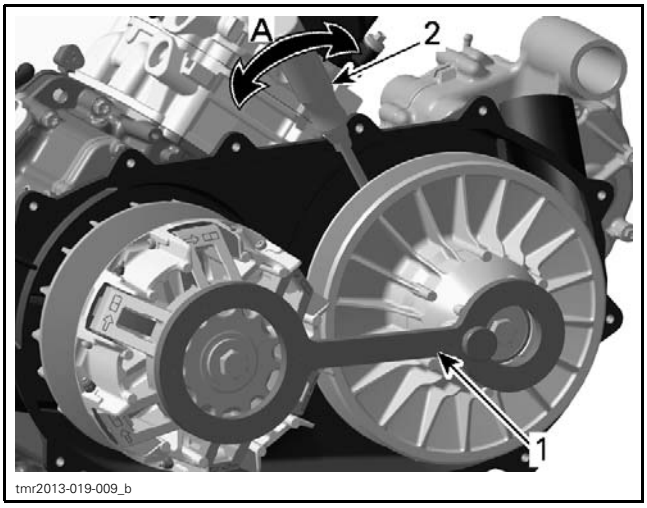
1. Clutch holder
2. Screwdriver
A. 20° turn

Using a socket and extension, hand tighten the driven pulley screw.

NOTE: Do not apply specified torque at this time.

Move the screwdriver back and forth to check cam for free movement.

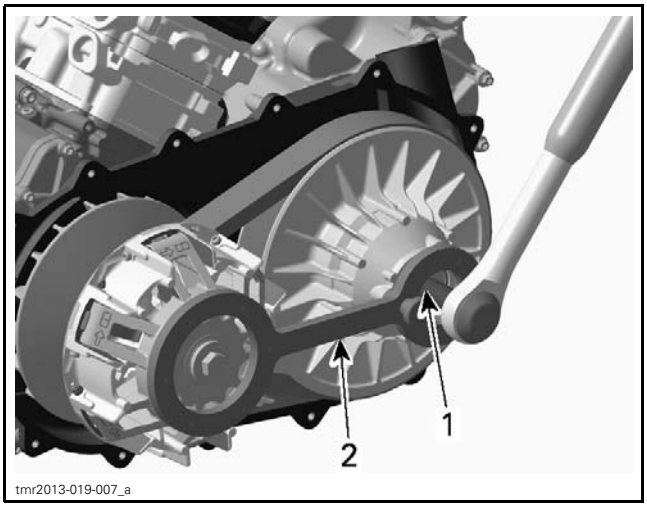
NOTICE **A cam not correctly engaged will cause damage to the driven pulley and cam.**



tmr2013-019-009_b

1. Clutch holder
2. Screwdriver
A. Cam freedom of movement

Tighten driven pulley screw as specified.



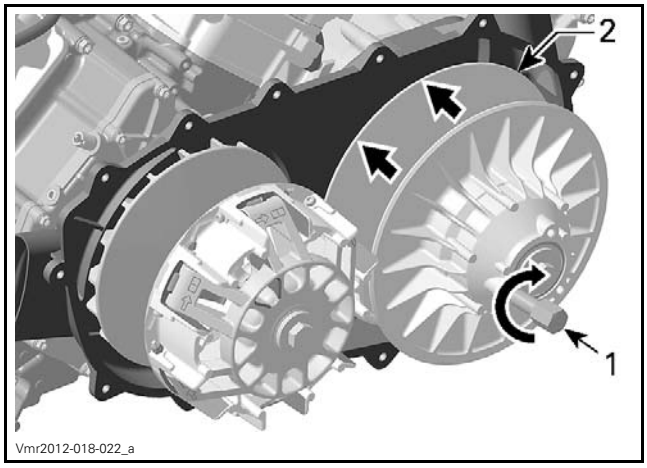
tmr2013-019-007_a

1. Driven pulley screw
2. Clutch holder

Remove service tool.

Install drive belt. Refer to *DRIVE BELT* in this subsection.

REQUIRED TOOL	
PULLER/LOCKING TOOL (P/N 529 036 098)	



Vmr2012-018-022_a

1. Puller/locking tool
2. Sliding sheave

NOTE: If driven pulley sheaves can to be opened when the service tool is screwed in, the cam is not correctly engaged in the sliding sheave.

TIGHTENING SEQUENCE (DRIVEN PULLEY SCREW)	
STEP 1	20 N•m ± 1 N•m (15 lbf•ft ± 1 lbf•ft)
STEP 2	180° ± 5°

CVT AIR GUIDE

CVT Air Guide Removal

Remove the *DRIVE PULLEY* and the *DRIVEN PULLEY*.

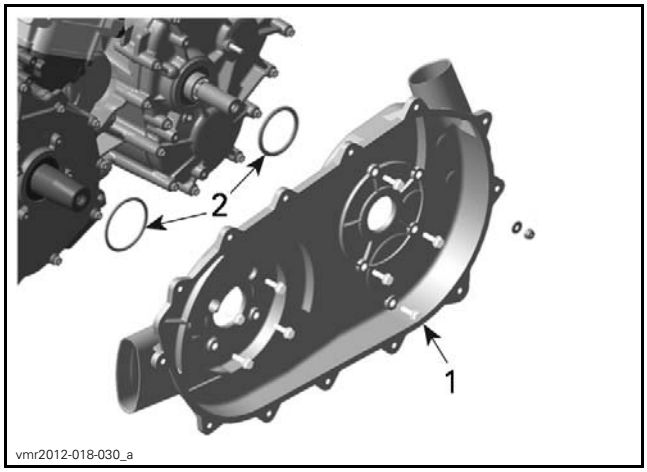
Unscrew the clamps retaining the CVT air hoses.

Remove CVT air guide.

CVT Air Guide Inspection

Clean CVT air guide from contamination

Check O-rings if brittle, hard or damaged. Replace if necessary.



vmr2012-018-030_a

1. CVT air guide
2. O-rings

CVT Air Guide Installation

For installation reverse the removal procedure.

GEARBOX AND 4X4 COUPLING UNIT

SERVICE TOOLS

Description	Part Number	Page
BLIND HOLE BEARING PULLER SET	529 036 117	199
COUNTERSHAFT OIL SEAL PUSHER	529 036 222	192
ECM ADAPTER TOOL	529 036 166	188
FLUKE 115 MULTIMETER	529 035 868	186, 190
HANDLE	420 877 650	192
OIL SEAL INSTALLER (GEARBOX)	529 035 758	192
OIL SEAL INSTALLER	529 036 204	193

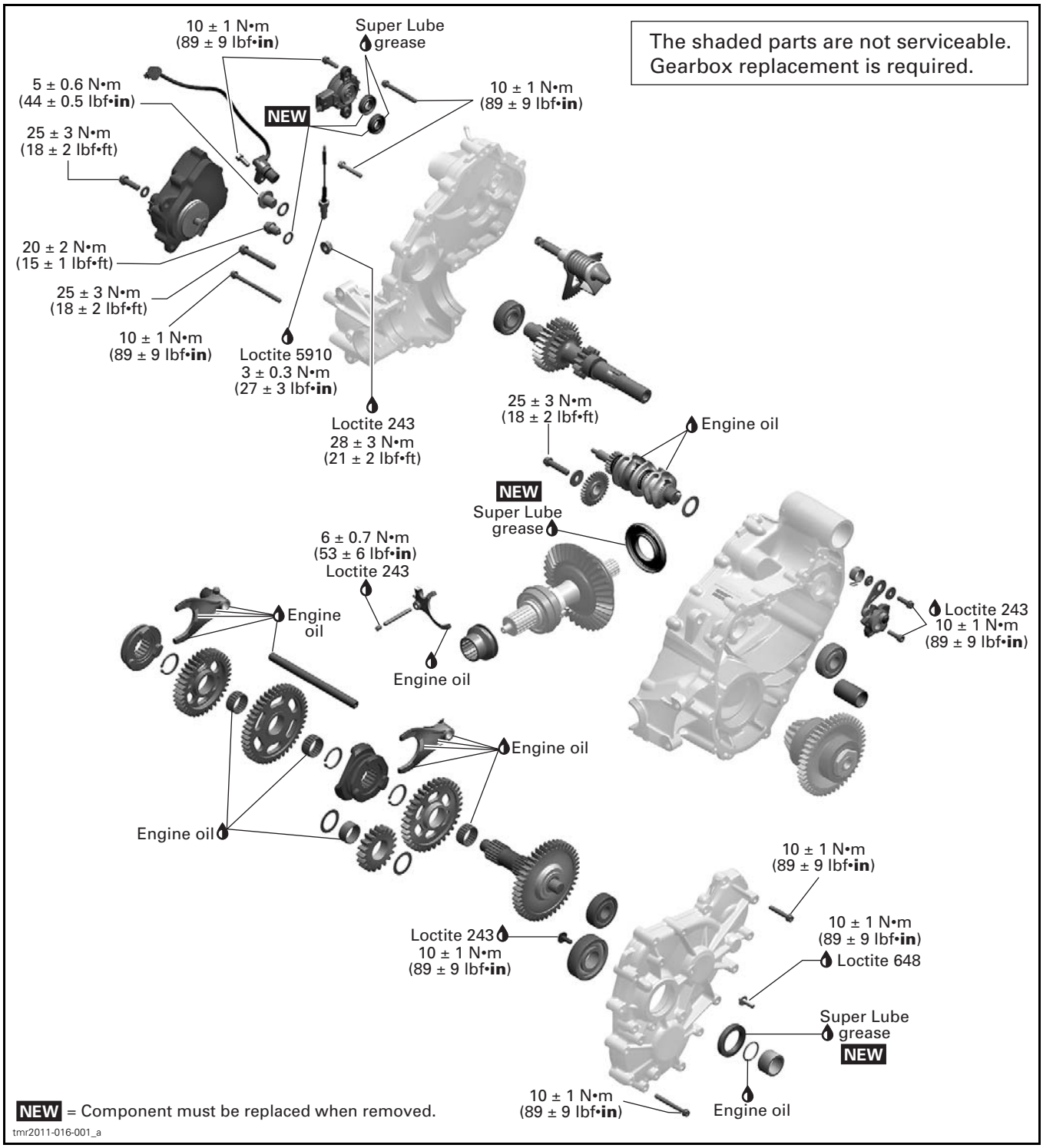
SERVICE TOOLS – OTHER SUPPLIER

Description	Part Number	Page
BACK PROBE TEST WIRES	529 036 063	186, 188

SERVICE PRODUCTS

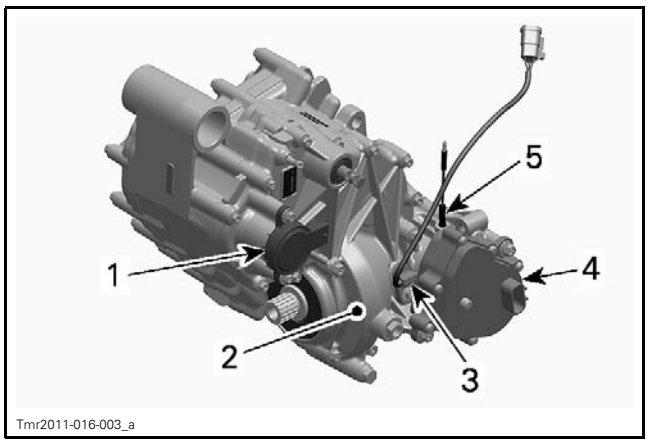
Description	Part Number	Page
LOCTITE 5910	293 800 081	189, 205
LOCTITE CHISEL (GASKET REMOVER)	413 708 500	205
SUPER LUBE GREASE	293 550 030	187, 190, 193

GEARBOX COMPONENTS AND 4X4 COUPLING MECHANISM

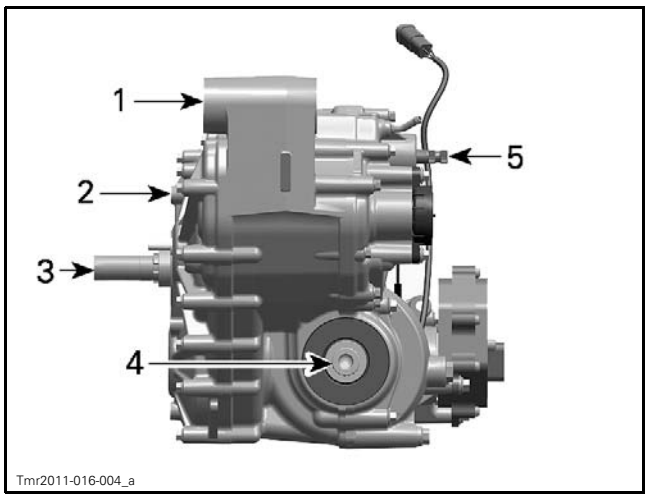


GENERAL

GEARBOX OVERVIEW



1. *Gearbox position sensor (GBPS)*
2. *Right cover*
3. *Vehicle speed sensor (VSS)*
4. *Actutator*
5. *4WD indicator switch*



1. *Center housing*
2. *Left cover*
3. *Countershaft*
4. *Output shaft*
5. *Shift shaft*

TROUBLESHOOTING

UNUSUAL GEARBOX NOISE AND/OR VIBRATIONS

1. Low oil level in gearbox.
   - *Oil leakage from gearbox. Replace damaged gasket(s) and/or oil seal(s).*
2. Defective bearings.
   - *Bearing(s) do(es) not turn smoothly. Replace bearing(s).*
3. Damaged or worn gears.
   - *Inspect gears for damages or missing teeth. Replace respective gears.*

GEAR INDICATION FAILS

1. Defective gearbox position sensor (GBPS).
   - *Perform a gearbox position sensor test.*
   - *Damaged wires. Repair as required.*

GEAR(S) IS (ARE) HARD TO SHIFT

1. Incorrect shifter cable adjustment.
   - *Adjust shifter cable (refer to SHIFTER CABLE in SHIFTER subsection.*

4 WHEEL DRIVE INDICATION FAILS

1. 4WD indicator switch failure.
   - *Test 4WD indicator switch. Replace as required.*
   - *Bad contact. Check for corrosion or loose connector.*
   - *Damaged wires. Repair as required.*

4 WHEEL DRIVE DOES NOT ENGAGE OR DISENGAGE

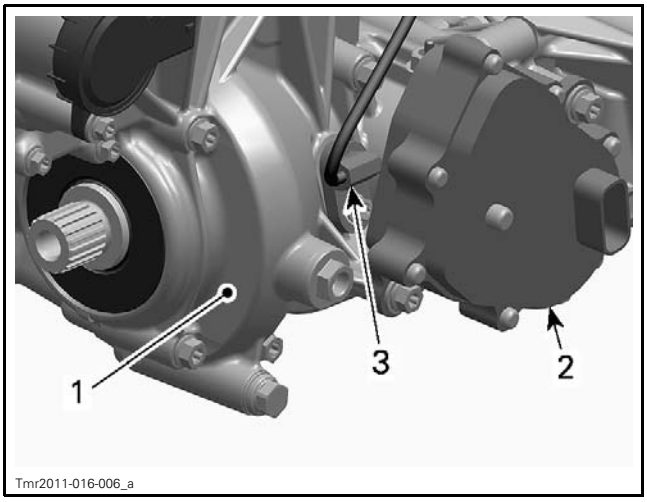
1. Defective 4WD switch.
   - *Check 4WD switch operation.*
2. Defective actuator.
   - *Test actuator.*
3. Damaged or worn shifting fork or sleeve.
   - *Remove actuator and inspect shifting fork and sleeve.*

PROCEDURES

VSS (VEHICLE SPEED SENSOR)

VSS Location

The vehicle speed sensor is located on the right housing of the gearbox behind the actuator.



Tmr2011-016-006_a

1. Right housing of gearbox
2. Actuator
3. VSS (Vehicle Speed Sensor)

VSS Access

To reach the VSS, remove the following parts:
– Passenger seat
– RH lateral console panel
– Fuel tank cowl.

VSS Wire Identification

FUNCTION	PIN	COLOR
12-volt input from fuse F5	A	RED
Speed signal (to ECM-A E1)	B	WHITE
Ground (to ECM-A D4)	C	BLACK/GREEN

VSS Circuit Protection

CONDITION	CIRCUIT PROTECTION
Supplied with main relay activated	Fuse 5 of fuse block 1 (from main relay R2)

VSS Input Voltage Test

1. Turn ignition switch ON.
2. Back-probe the VSS connector and measure voltage.

REQUIRED TOOLS	
BACK PROBE TEST WIRES (P/N 529 036 063)	
FLUKE 115 MULTIMETER (P/N 529 035 868)	

VSS INPUT VOLTAGE TEST		
TEST PROBES		RESULT (KEY ON)
PIN A (RED wire)	PIN C (BLACK/GREEN wire)	Battery voltage

If voltage is not as specified, test positive and ground separately.

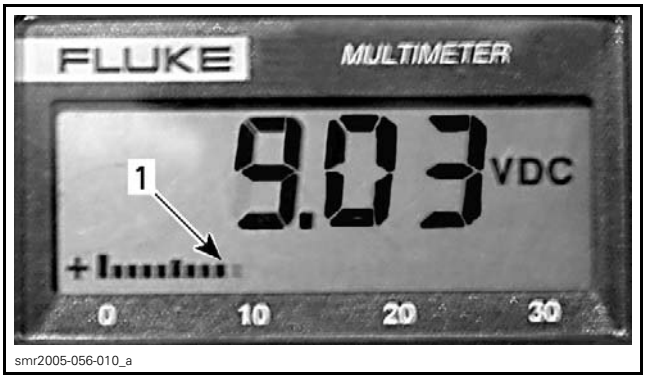
VSS Signal Test

1. Lift rear of vehicle so that rear wheels are off the ground.
2. Set transmission to 2WD and to Neutral.
3. Turn ignition switch ON.
4. Back-probe the VSS connector and measure voltage while slowly rotating rear wheels by hand.

REQUIRED TOOLS	
BACK PROBE TEST WIRES (P/N 529 036 063)	
FLUKE 115 MULTIMETER (P/N 529 035 868)	

VSS SIGNAL TEST		
TEST PROBES		RESULT (WHILE ROTATING WHEELS)
PIN B (WHITE wire)	PIN C (BLACK/GREEN wire)	Alternate reading between battery voltage and 0 Vdc

NOTE: Since we measure pulsating voltage, the numeric display will continuously change. The analog display may be easier to follow.



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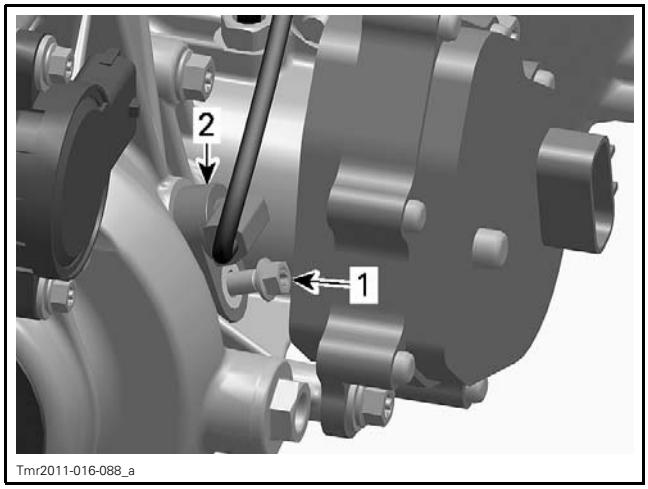
1. Analog display

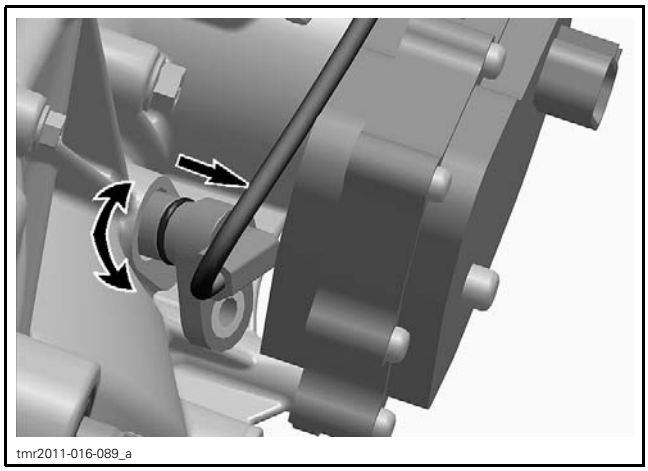
VSS Removal

Remove screw retaining the VSS.



1. Screw
2. VSS

Turn sensor and weave it out of the gearbox right cover.



VSS Installation

For installation, reverse the removal procedure. Pay attention to the following.

Apply SUPER LUBE GREASE (P/N 293 550 030) on VSS O-ring.

GBPS (GEARBOX POSITION SENSOR)

GBPS Reset

When replacing the gearbox position sensor (GBPS), it is required to reset (re-zero) its values for proper operation.

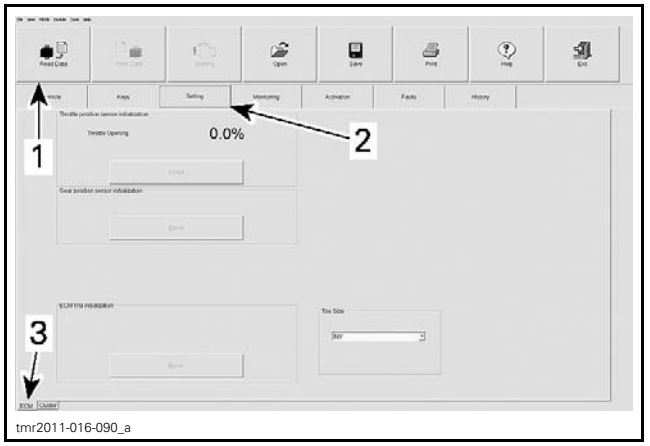
A reset must be carried out each time any of the following parts has been replaced:

– Gearbox assembly
– Shift drum
– GBPS
– ECM.

1. Connect vehicle to the latest applicable version of B.U.D.S. software, refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.

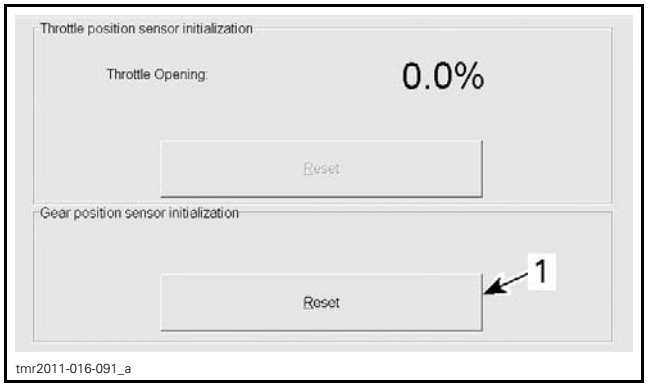
NOTE: Ignition key must stay ON during the reset procedure. If the key is turned off, the procedure must be carried out again.

2. In B.U.D.S., select the following:
   – **Read Data** button
   – **Setting** page tab
   – **ECM** tab.



1. Read data button
2. Setting page tab
3. ECM tab

3. Make sure that gearbox is set to NEUTRAL position.
4. In the **Gear Position Sensor Initialization** field, click on the **Reset** button.



GEAR POSITION SENSOR INITIALIZATION
1. Reset button

A message will be displayed if the operation is successful.

If an error occurred or the GBPS is not within the allowed range while resetting, the ECM will generate a fault code and will not accept the setting.

5. If a fault message is displayed, follow the instructions in the message(s).
6. Check for fault codes.

If a fault code is generated:

– Carry out the service action.
– Reset the fault code.
– Repeat the reset procedure.

7. Close and disconnect B.U.D.S.

NOTE: Do not turn ignition key OFF.

8. Verify gears engagement.
   8.1 With the vehicle on ground and in NEUTRAL position, start engine.
   8.2 During 4-5 seconds, rev engine to 2500 ± 200 RPM.
   8.3 Let engine returns to idle.
   8.4 Select an other position (P, R, H or L). Repeat substeps 8.2 and 8.3 until all position are verified.

   NOTE: The vehicle must be in movement to complete the procedure on R, H and L position.

GBPS Access

To reach the GBPS sensor, remove the following parts:

– Passenger seat
– RH lateral console panel
– Fuel tank cowl.

GBPS Input Voltage Test

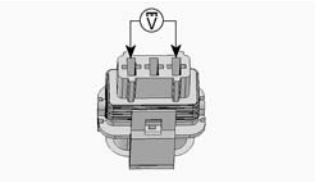
NOTE: Prior to conduct testing, check fault codes in B.U.D.S.

Set shift lever in NEUTRAL position.

Back-probe the GBPS connector.

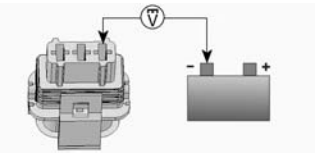
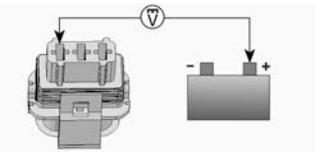
REQUIRED TOOL	
BACK PROBE TEST WIRES (P/N 529 036 063)	

Test as follow:

MULTIMETER PROBE POSITIONS	VOLTAGE
PIN 1 and PIN 3 of the GBPS connector 	5 volts

If voltage is adequate, check GBPS communication link (CAN).

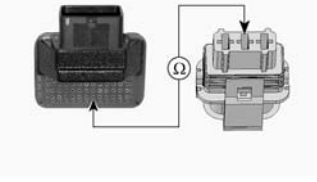
If there is no voltage, check each GBPS input as follows.

MULTIMETER PROBE POSITIONS	VOLTAGE
GBPS connector (pin 1) and battery ground 	5 volts
GBPS connector (pin 3) and battery + terminal 	Battery voltage

If there is no voltage, check wires and connector pins. Replace or repair defective parts and reset fault codes.

GBPS Communication Link Continuity Test

Unplug connector "A" from ECM and connect it to the ECM ADAPTER TOOL (P/N 529 036 166).

MULTIMETER PROBE POSITIONS	RESISTANCE @ 20°C (68°F)
GBPS connector (pin 2) and ECM adapter tool (pin F4) 	Below 1 Ω

If resistance is out of specification, check wires and connectors. Repair and reset fault codes.

If resistance is good and the other tests succeeded, replace the GBPS and reset fault codes.

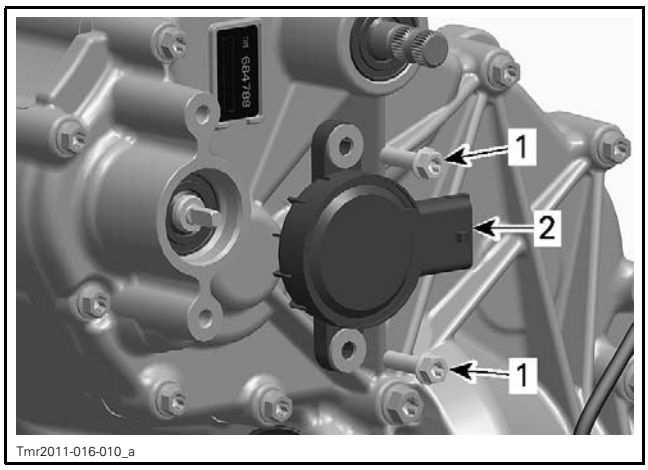
NOTE: The GBPS must be reset.

GBPS Removal

Set shift lever in NEUTRAL position.

Unplug GBPS connector.

Remove screws and withdraw GBPS.



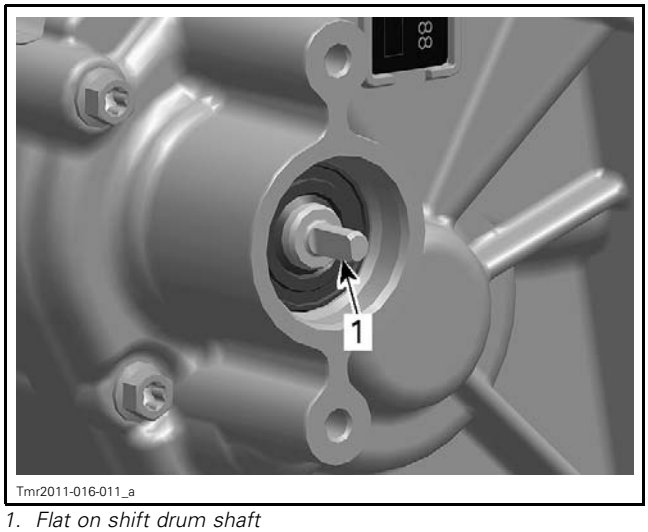
1. *Screws*
2. *Gearbox Position Sensor (GBPS)*

GBPS Installation

For installation, reverse the removal procedure. Pay attention to the following details.

Shift lever must be in the NEUTRAL position.

Align GBPS with the flat on the shift drum shaft.



1. *Flat on shift drum shaft*

Reset the GBPS. Refer to *GBPS RESET* in this subsection.

4WD INDICATOR SWITCH

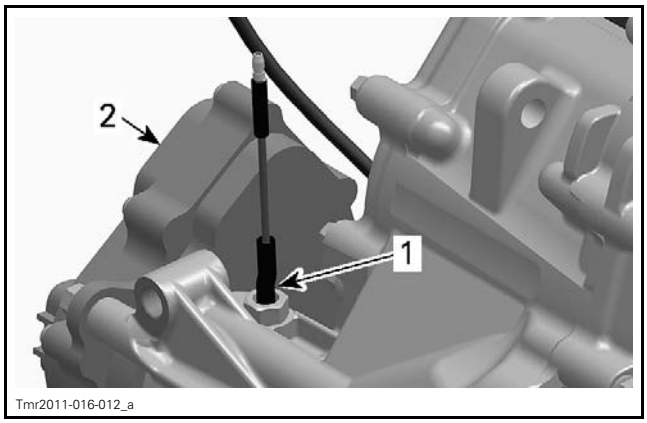
4WD Indicator Switch Access

To reach the 4WD indicator switch, remove the following parts:

– Passenger seat
– RH lateral console panel
– Fuel tank cowl.

4WD Indicator Switch Removal

Disconnect 4WD indicator switch connector.



1. *4 WD indicator switch*
2. *Actuator*

4WD Indicator Switch Test

Measure switch resistance as follows.

SWITCH POSITION	SWITCH WIRE		RESISTANCE
2WD	BLACK/ BEIGE	Engine ground	Infinite (OL)

If the resistance is out of specification, replace the 4WD indicator switch.

4WD Indicator Switch Installation

For installation, reverse the removal procedure. Pay attention to the following details.

Take care do not damage indicator switch threads during installation.

Apply carefully some LOCTITE 5910 (P/N 293 800 081) on threads of indicator switch.

NOTICE **Do not apply Loctite 5910 on switch plunger, as it will lead to switch malfunction.**

ACTUATOR

Actuator Access

To access the actuator, remove the following parts:

– Passenger seat
– RH lateral console panel
– Fuel tank cowl.

Remove screws securing fuel tank and move tank on passenger's floor without disconnecting hoses and connector from fuel pump.

Actuator Test

Check if the 2WD/4WD selector works properly.

Unplug actuator connector.

Turn ignition key ON.

Measure voltage as follows.

REQUIRED TOOL	
FLUKE 115 MULTIMETER (P/N 529 035 868)	

SWITCH POSITION	SWITCH WIRE		VOLTAGE
2WD	WHITE/BLUE	WHITE	Battery voltage
4WD	WHITE/BLACK		

If the selector is out of specifications, check wires, connectors and replace the selector if necessary.

If the selector is good, check the vehicle harness.

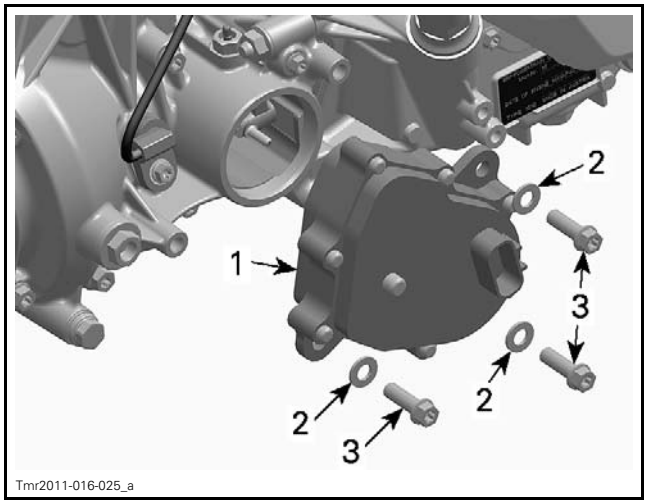
If the vehicle harness is good, replace the actuator.

Actuator Removal

NOTE: Before beginning any servicing on the actuator, make sure the vehicle is in 4WD position. No need to remove engine from vehicle.

Place a drain pan under actuator.

Remove actuator screws.

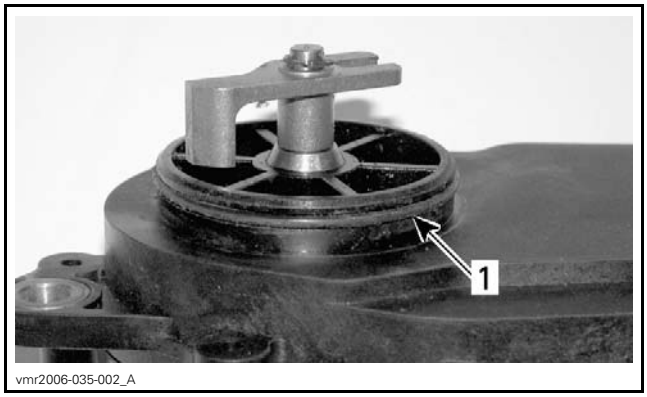


1. Actuator
2. Washer
3. Screw

Pull the actuator out of housing.

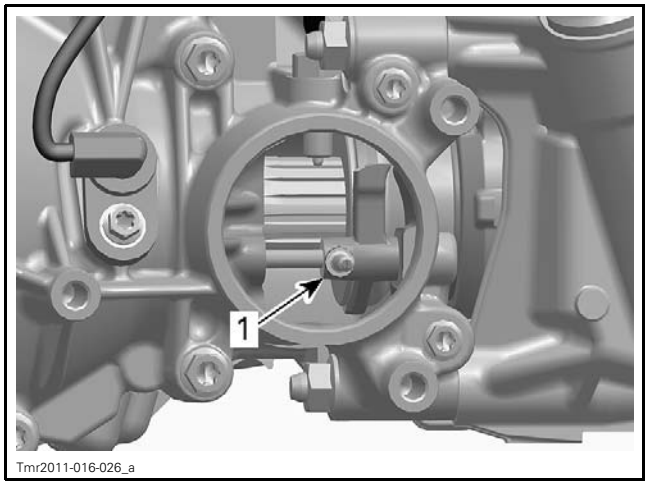
Actuator Installation

Apply a small amount of SUPER LUBE GREASE (P/N 293 550 030) on actuator O-ring.



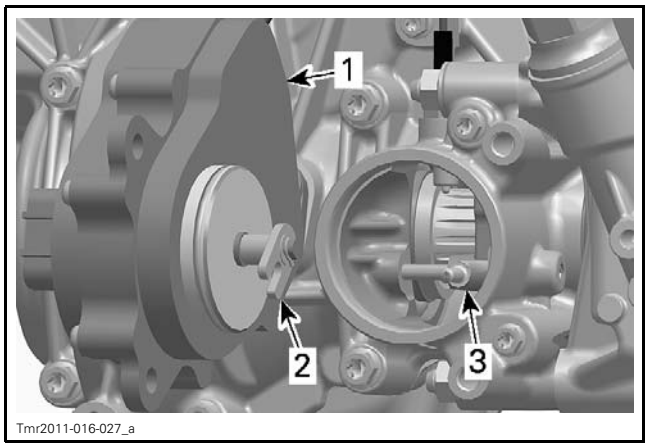
1. Actuator O-ring

Ensure coupling fork is in 4WD position (toward the front of vehicle).



1. Coupling fork in 4WD position

Align the actuator fork with the pin on coupling fork then push the actuator in the housing. See the following illustration to position the actuator correctly.



1. Actuator
2. Actuator fork
3. Coupling fork

Rotate the actuator counterclockwise until it orients itself to mounting position.

NOTICE **Do not cut or break the actuator O-ring.**

Install all actuator screws and tighten them.

ACTUATOR SCREWS	
Tightening torque	25 N•m ± 3 N•m (18 lbf•ft ± 2 lbf•ft)

Connect actuator.

Lift the front of vehicle.

Turn front wheels. The front propeller shaft should not turn (the PARK position must be selected).

If the front propeller shaft turns, the actuator is not installed correctly. Remove actuator and reinstall it.

Place ignition switch to ON position and select the 2WD position.

Turn front wheel again. The front propeller shaft should turn easily.

If the front propeller shaft does not turn, the actuator is not installed correctly. Remove actuator and reinstall it.

NOTICE **Refill missing gearbox oil, refer to *GEARBOX OIL REPLACEMENT* in *PERIODIC MAINTENANCE PROCEDURES* subsection.**

Install all other removed parts.

GEARBOX OIL SEALS

Gearbox Oil Seal Replacement

Replace oil seals if they are brittle, hard or damaged.

A small flat screwdriver can be used to remove most of these oil seals.

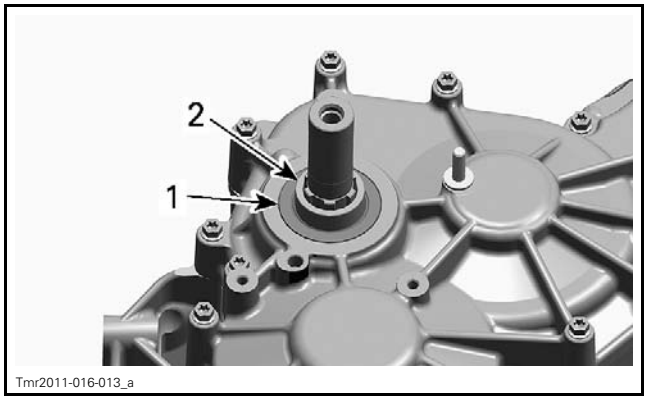
NOTICE **Avoid scoring parts during oil seal removal.**

When replacing an oil seal, take this opportunity to inspect the following:
– Check bearings behind each oil seal for contamination and/or metal shavings.
– Check oil seal running surfaces for scratches.

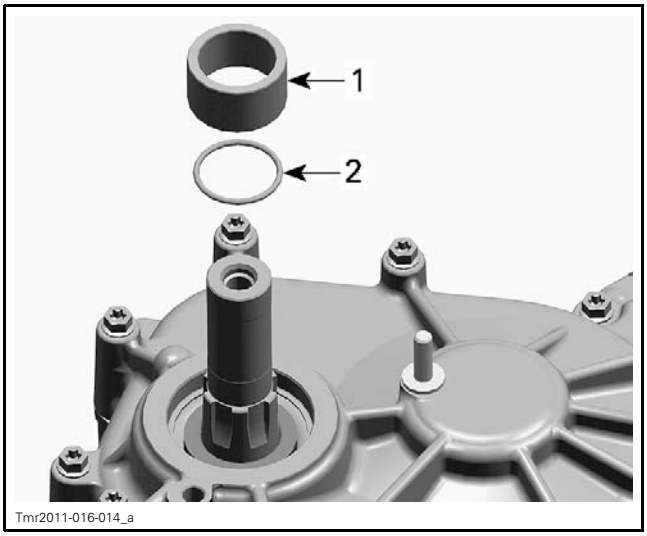
Countershaft Oil Seal

To replace the countershaft oil seal, remove:
– Drive and driven pulleys
– CVT air guide.

NOTE: When oil seal is removed also inspect O-ring behind distance sleeve.



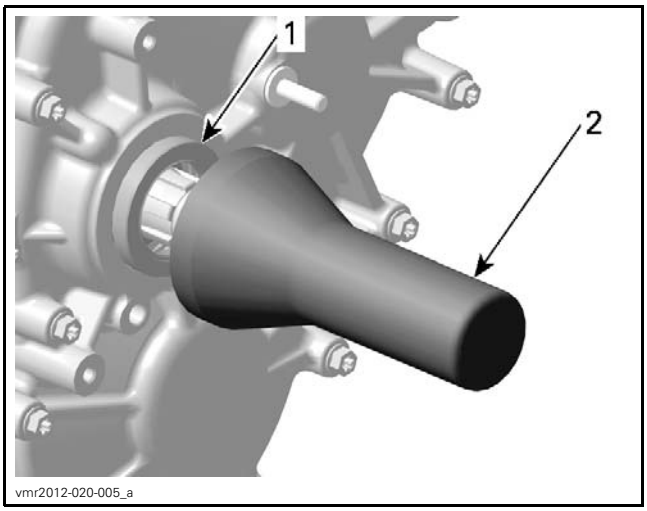
1. Countershaft oil seal
2. Distance sleeve



1. Distance sleeve
2. O-ring

Install countershaft oil seal.

REQUIRED TOOL	
COUNTERSHAFT OIL SEAL PUSHER (P/N 529 036 222)	



1. Countershaft oil seal
2. Oil seal installer

Shift Shaft Oil Seal

To replace the shift shaft oil seal, remove:
– RH lateral console panel and fuel tank cowl, refer to *BODY* subsection.
– Shift plate from shift shaft.

The shift shaft oil seal can be removed without removing the gearbox from the vehicle.

Use a suitable tube with the proper diameter to install the oil seal.

If gearbox housing is apart, use following tools for shift shaft oil seal installation.

REQUIRED TOOL	
OIL SEAL INSTALLER (GEARBOX) (P/N 529 035 758)	
HANDLE (P/N 420 877 650)	

NOTICE **Oil seal must be installed with sealing lip toward gearbox.**

Shift Drum Shaft Oil Seal

To replace the shift drum shaft oil seal, remove the *GBPS (GEARBOX POSITION SENSOR)*. See procedure in this subsection.

Use a suitable tube with the proper diameter to install the oil seal.

NOTICE **Oil seal must be installed with sealing lip toward gearbox.**

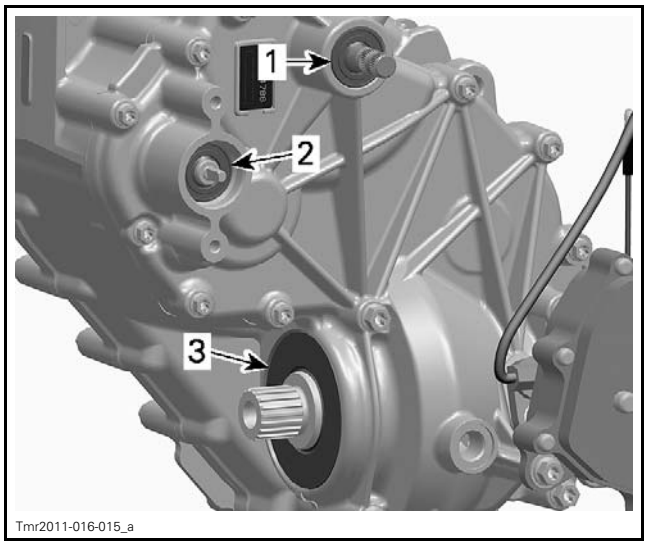
Output Shaft Oil Seal

To replace the output shaft oil seal, proceed as follows:

Remove propeller shaft screw from gearbox output shaft.

Remove rear final drive bolts.

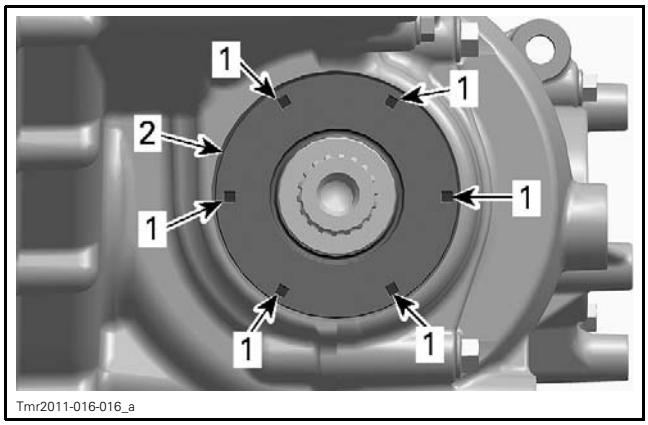
Move the rear final drive rearward to dislodge the propeller shaft from the gearbox output shaft.



1. Shift shaft oil seal
2. Shift drum shaft oil seal
3. Output shaft oil seal

Punch a sharp screwdriver through oil seal for removal.

NOTE: Position screwdriver only in marked areas to avoid damaging the ball bearing underneath oil seal during removal.



1. Marked areas for removal
2. Output shaft oil seal

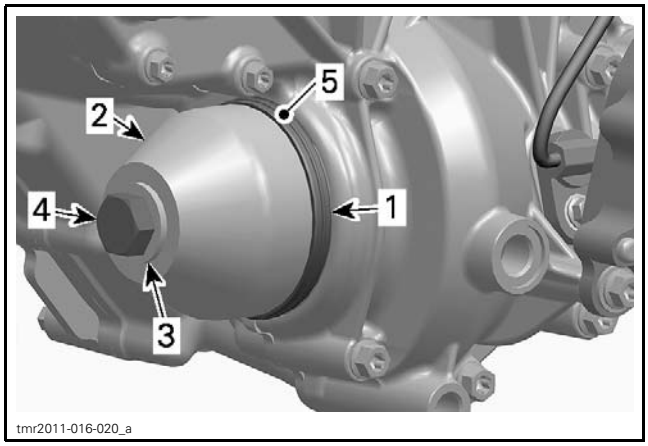
Before beginning the installation ensure gearbox is set to PARK position.

Apply SUPER LUBE GREASE (P/N 293 550 030) on sealing lips.

Apply engine oil on outer diameter of oil seal to avoid damaging it during installation.

Place oil seal on output shaft and install it using the following tools.

REQUIRED TOOLS AND PARTS	
OIL SEAL INSTALLER (P/N 529 036 204)	
Flat washer (P/N 250 200 102)	
M12 x 1.25 x 35 hexagonal screw	



1. Output shaft oil seal
2. Oil seal installer
3. Flat washer (P/N 250 200 102)
4. M12 x 1.25 x 35 hexagonal screw (P/N 207 683 544)
5. Apply engine oil on outer diameter of oil seal

GEARBOX

Gearbox Removal

Remove engine from vehicle. Refer to *ENGINE REMOVAL AND INSTALLATION* for the procedure.

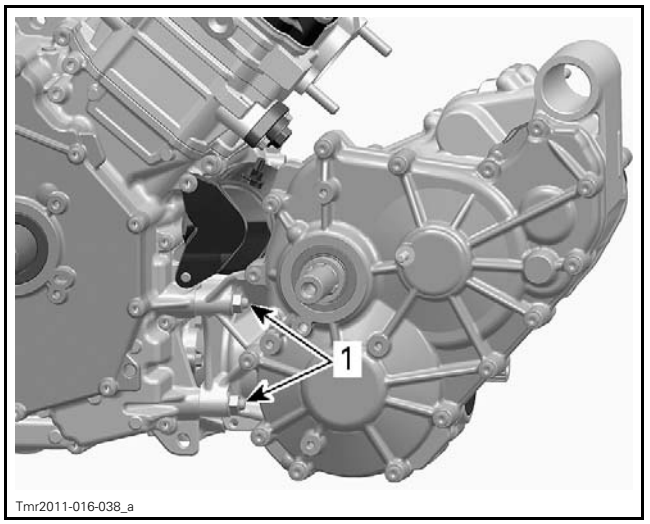
Refer to *CONTINUOUSLY VARIABLE TRANSMISSION (CVT)* subsection to remove following parts:

– CVT cover
– Drive and driven pulleys
– CVT air guide.

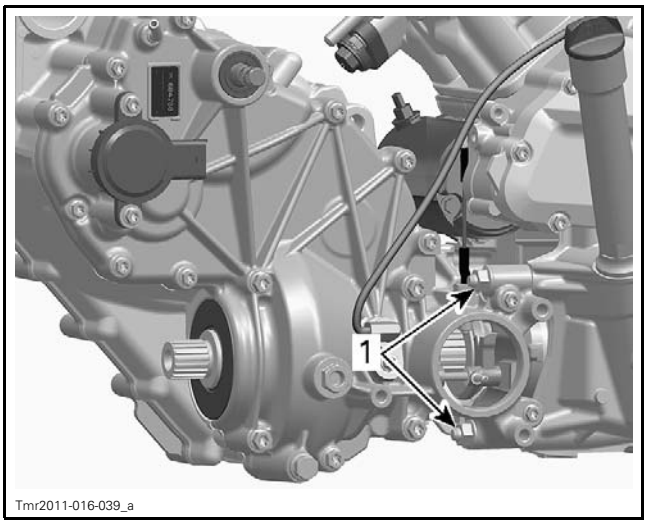
Drain gearbox. Refer to *GEARBOX OIL REPLACEMENT* in *PERIODIC MAINTENANCE PROCEDURES* subsection.

Remove *ACTUATOR*, see procedure in this subsection.

Unscrew the four (4) nuts that attach the gearbox to the engine.



LH SIDE OF ENGINE
1. Nut M8



RH SIDE OF ENGINE
1. Nut M8

Pull gearbox to separate it from engine.

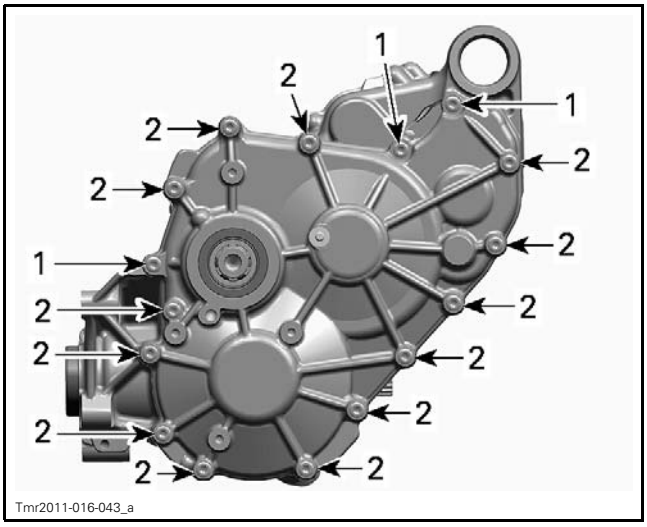
Gearbox Disassembly

NOTE: During gearbox disassembly, inspect the condition of each part closely.

Gearbox Left Cover

Set gearbox to NEUTRAL position.

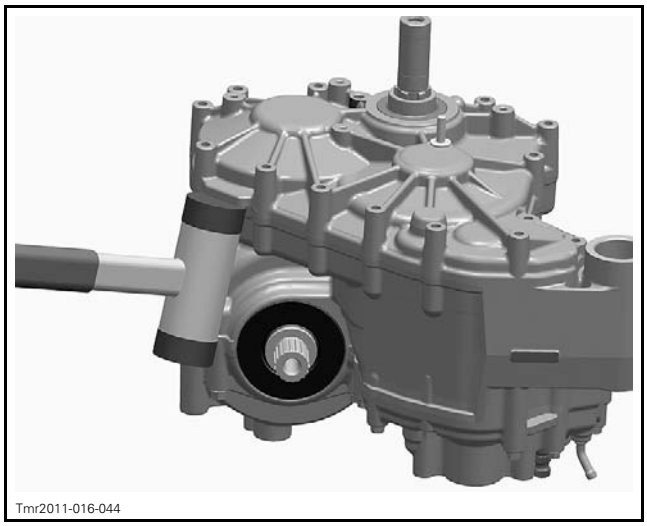
Unscrew all bolts retaining the gearbox left cover.



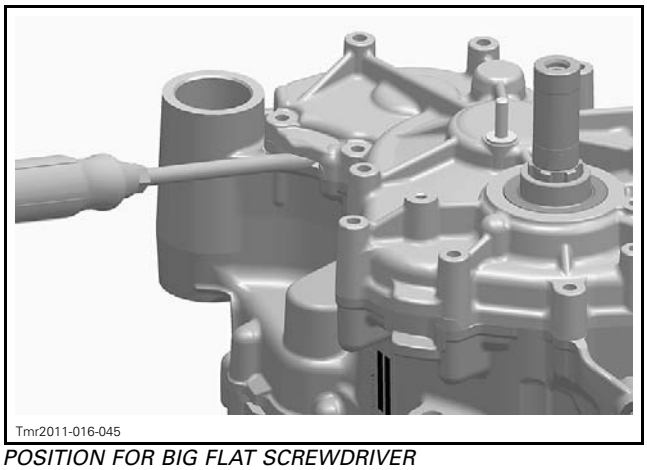
1. 3 screws M6 x 35
2. 13 screws M6 x 55

Place the center housing on a wood stand, left cover pointing upwards.

Using a big flat screwdriver and a soft hammer to lift the left cover.



POSITION FOR SOFT HAMMER

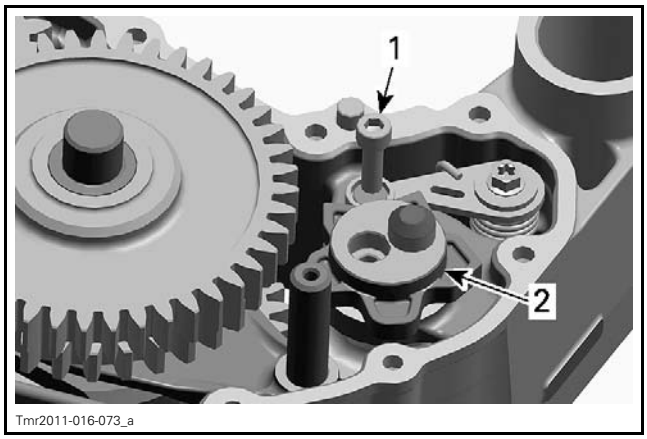


POSITION FOR BIG FLAT SCREWDRIVER

Index Lever and Index Washer

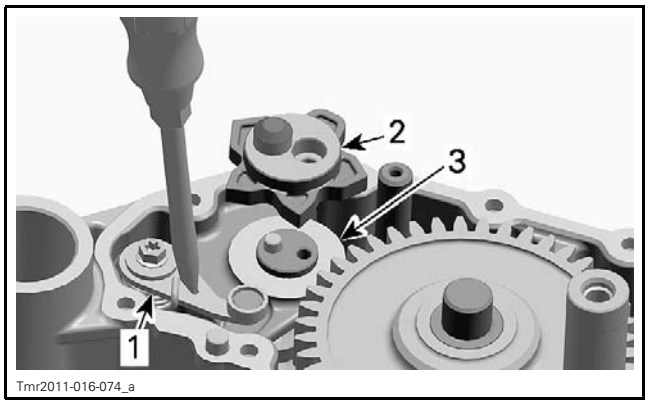
Set gearbox to NEUTRAL position.

Remove screw retaining the index washer to the shift drum.



1. Screw
2. Index washer

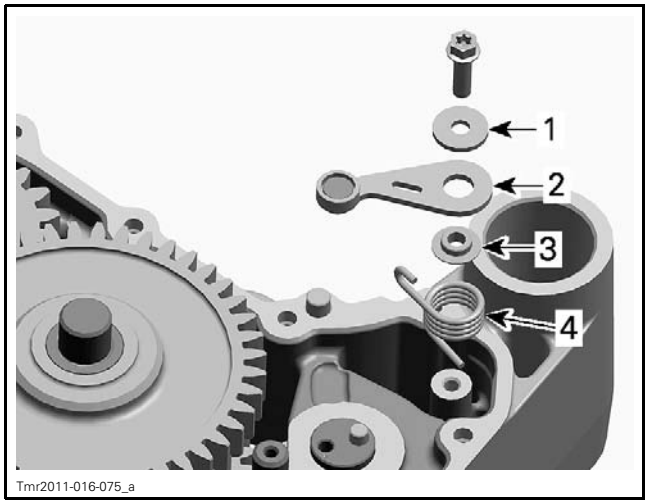
Insert a flat screwdriver in the slot of index lever. Turn screwdriver clockwise and remove index washer.



Tmr2011-016-074_a

1. Index lever
2. Index washer
3. Shift drum

Remove the index lever with washer, step ring and spring.



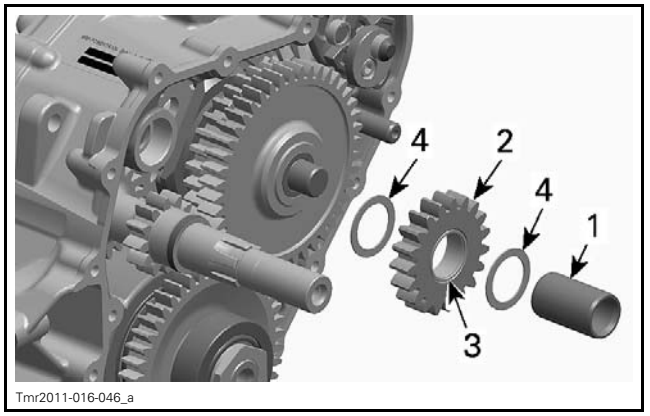
Tmr2011-016-075_a

1. Washer
2. Index lever
3. Step ring
4. Index spring

Main Shaft and Shift Forks

Remove bearing pin, reverse intermediate gear and thrust washers.

NOTE: Take care not to lose lower thrust washer during removal.

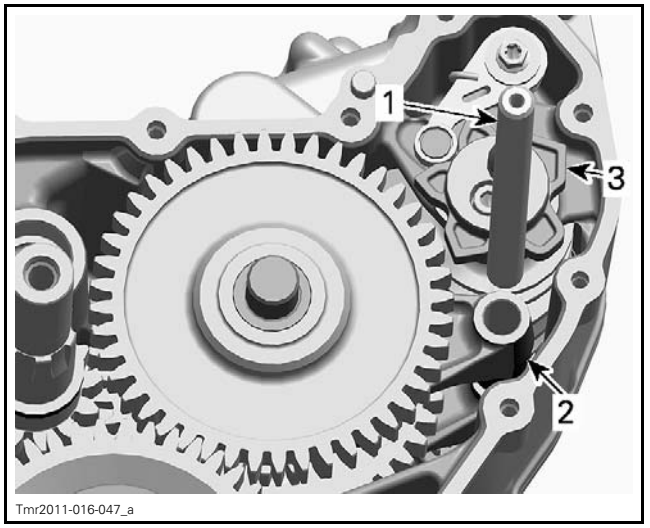


Tmr2011-016-046_a

1. Bearing pin
2. Reverse intermediate gear
3. Needle bearing
4. Thrust washers

Remove shift fork shaft.

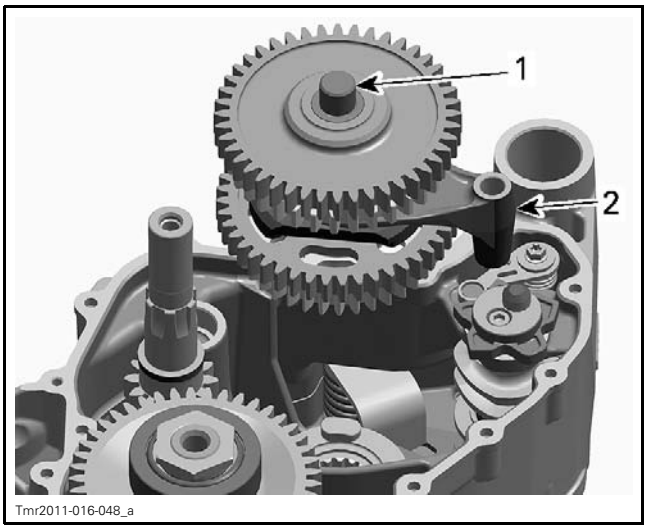
Disengage shift forks from shift drum.



Tmr2011-016-047_a

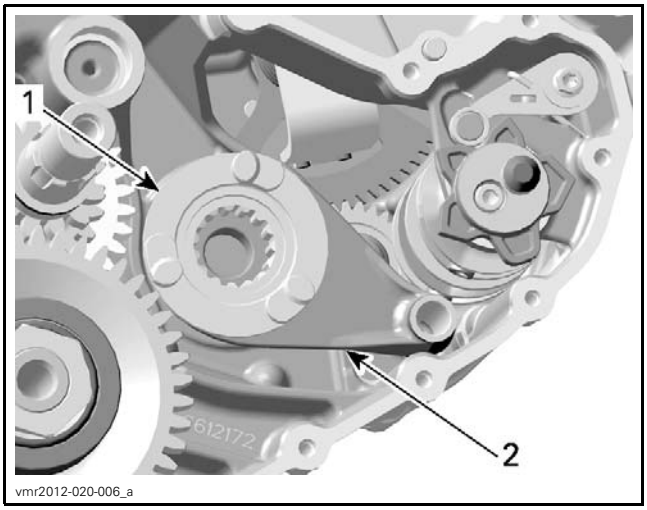
1. Shift fork shaft
2. Shift fork
3. Shift drum

Remove main shaft assembly with shift fork.



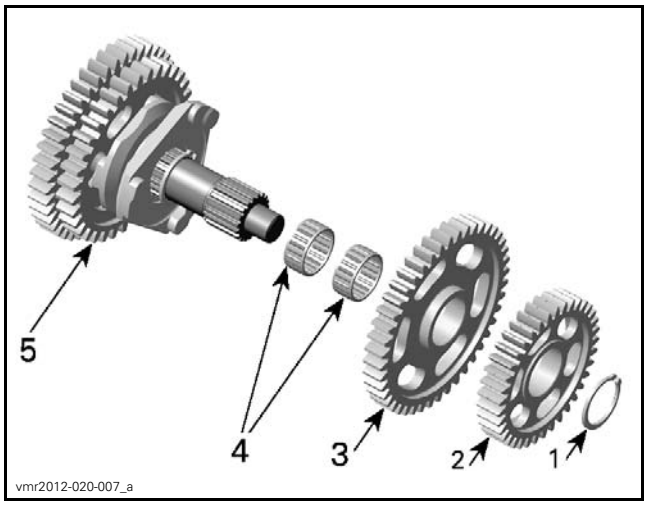
1. Main shaft assembly
2. Shift fork

Remove shifting sleeve (HIGH range gear) and shift fork.



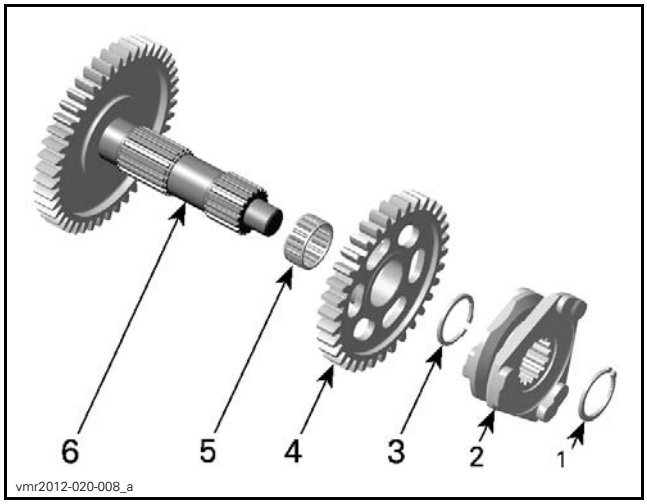
1. Shifting sleeve (HIGH range gear)
2. Shift fork

When required, remove from main shaft assembly:
– Snap ring (discard)
– HIGH range gear
– LOW range gear
– Needle bearings.



1. Snap ring
2. Free pinion (HIGH range gear)
3. Free pinion (LOW range gear)
4. Needle bearing
5. Main shaft assembly

Remove from main shaft assembly:
– Snap ring (discard)
– Shifting sleeve (LOW/REVERSE range gear)
– Snap ring (discard)
– REVERSE range gear
– Needle bearing.

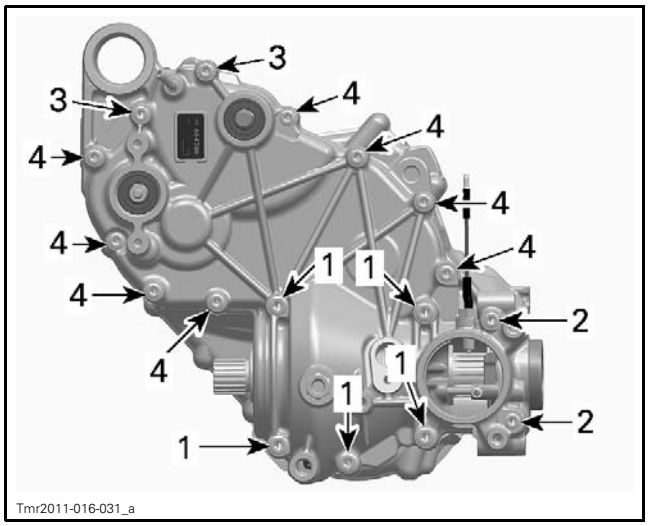


1. Snap ring
2. Shifting sleeve (LOW/REVERSE range gear)
3. Snap ring
4. Free pinion (REVERSE range gear)
5. Needle bearing
6. Main shaft assembly

Gearbox Right Cover

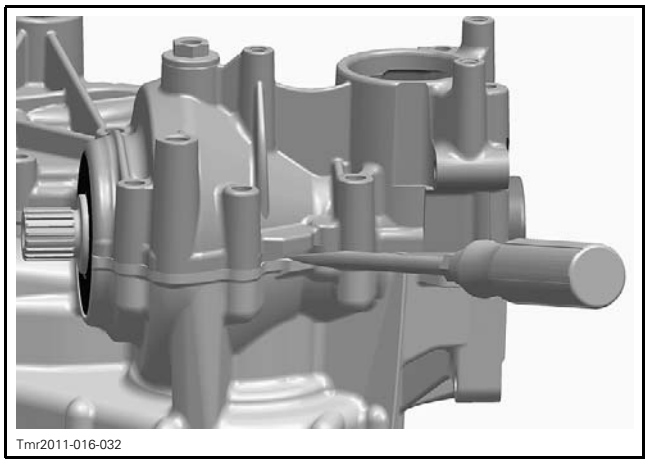
Remove *ACTUATOR* and *GBPS (GEARBOX POSITION SENSOR)*, see procedures in this subsection.

Unscrew all bolts retaining the gearbox right cover.

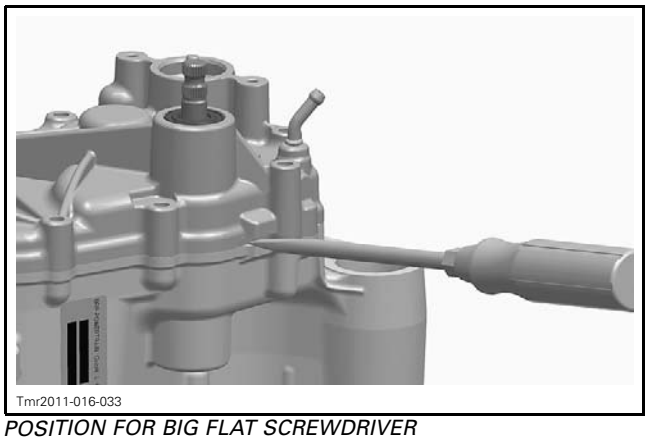


1. *5 screws M8 x 55*
2. *2 screws M6 x 85*
3. *2 screws M6 x 55*
4. *8 screws M6 x 35*

To remove cover, use 2 big screwdrivers.



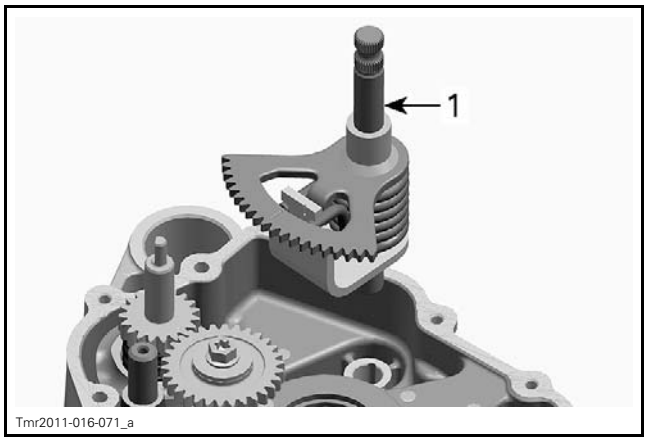
POSITION FOR BIG FLAT SCREWDRIVER



POSITION FOR BIG FLAT SCREWDRIVER

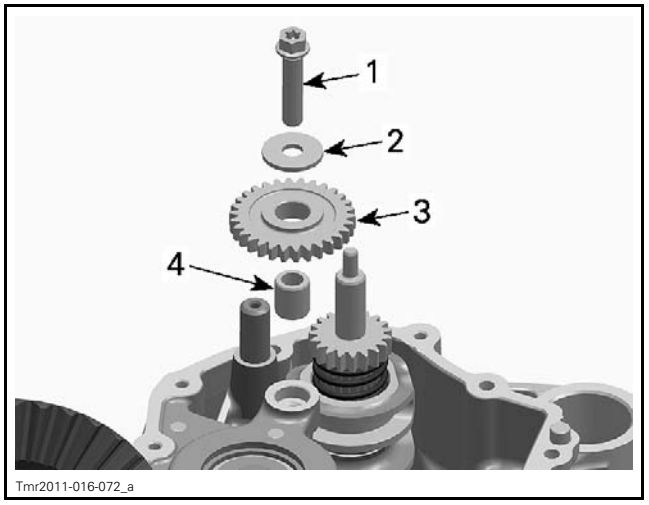
Shift Shaft and Shift Drum

Withdraw shift shaft assembly.



1. *Shift shaft assembly*

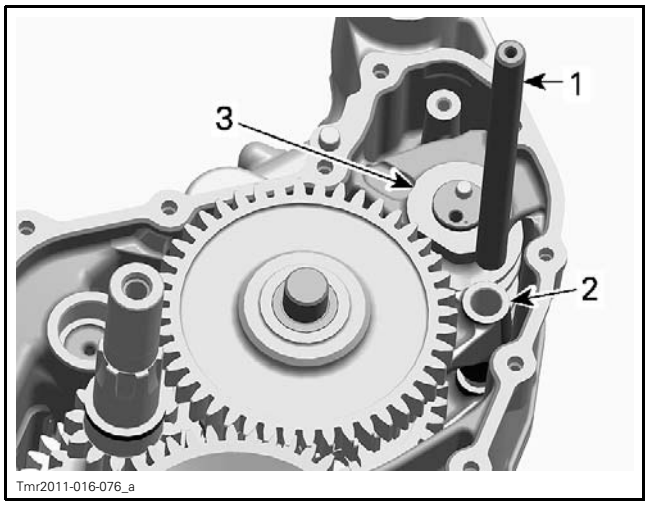
Remove screw retaining the shifting intermediate gear.



1. *Screw*
2. *Washer*
3. *Intermediate gear*
4. *Dowel pin*

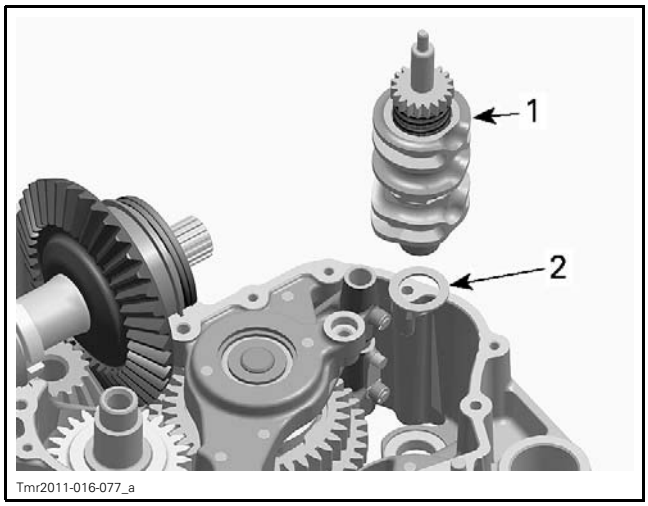
Remove shift fork shaft.

Disengage shift forks from shift drum.



1. *Shift fork shaft*
2. *Shift fork*
3. *Shift drum*

Remove shift drum and thrust washer.

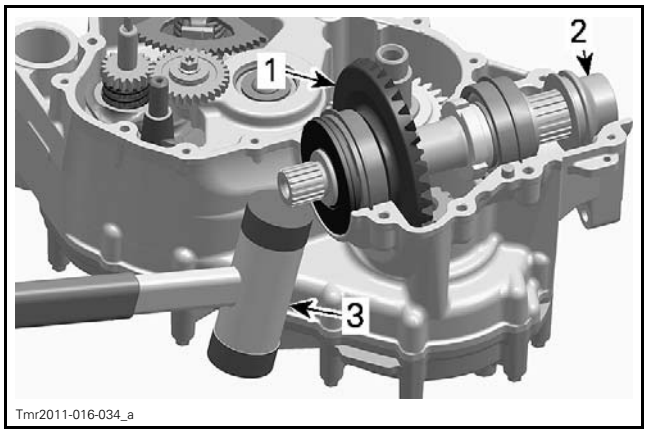


1. *Shift drum*
2. *Thrust washer*

Output Shaft and 4X4 Coupling Mechanism

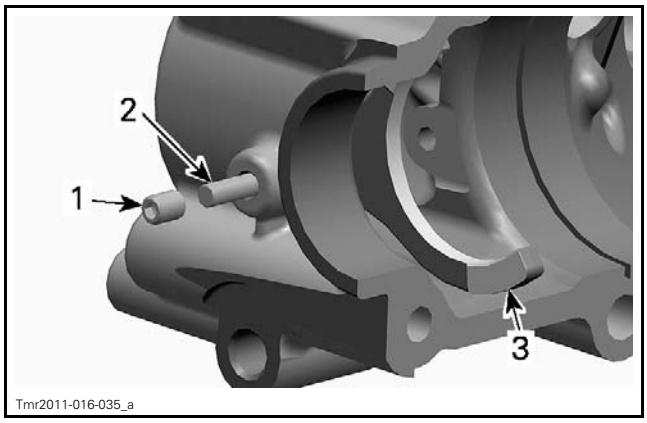
Remove output shaft from center housing and withdraw 4X4 coupling sleeve.

NOTICE Use a soft hammer to remove output shaft.



1. *Output shaft*
2. *4X4 coupling sleeve*
3. *Soft hammer*

Remove set screw, coupling fork shaft and coupling fork from right cover.

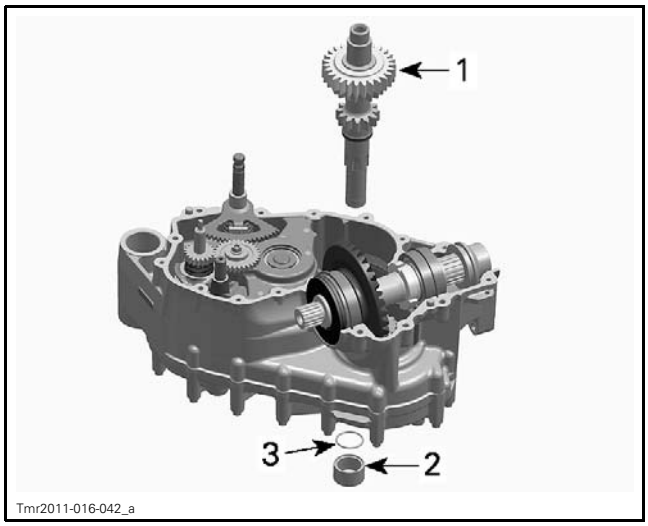


1. *Set screw*
2. *Coupling fork shaft*
3. *Coupling fork*

Countershaft

Use a soft hammer to push out countershaft from gearbox CVT side.

Remove distance sleeve and O-ring.



1. *Countershaft*
2. *Distance sleeve*
3. *O-ring*

Gearbox Bearings

If necessary heat housing up to 100°C (212°F) before removing ball bearings.

⚠ WARNING

Clean oil, outside and inside, from housing before heating.

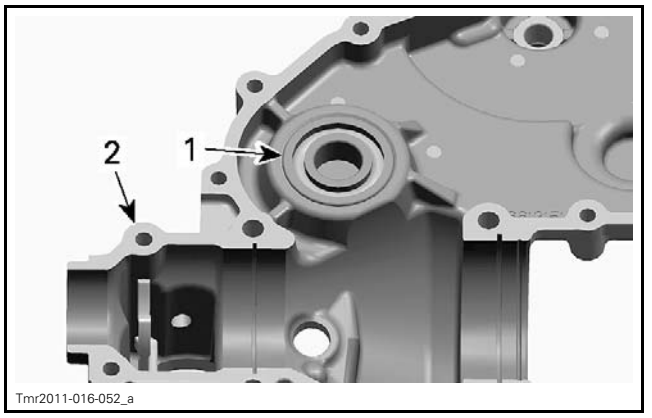
NOTICE **Always support gearbox housings properly when ball bearings are removed. Housing damages may occur if this procedure is not performed correctly.**

To remove ball bearings of countershaft (right cover) and main shaft (left cover) use following tool.

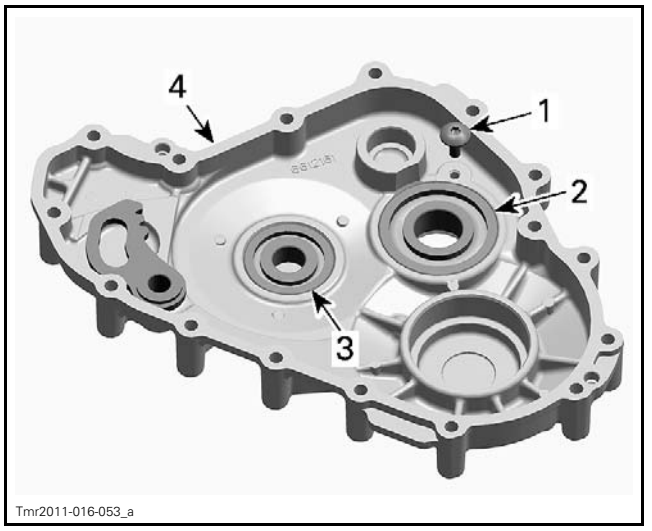
REQUIRED TOOL	
BLIND HOLE BEARING PULLER SET (P/N 529 036 117)	

Remove screw securing the countershaft bearing in the left cover.

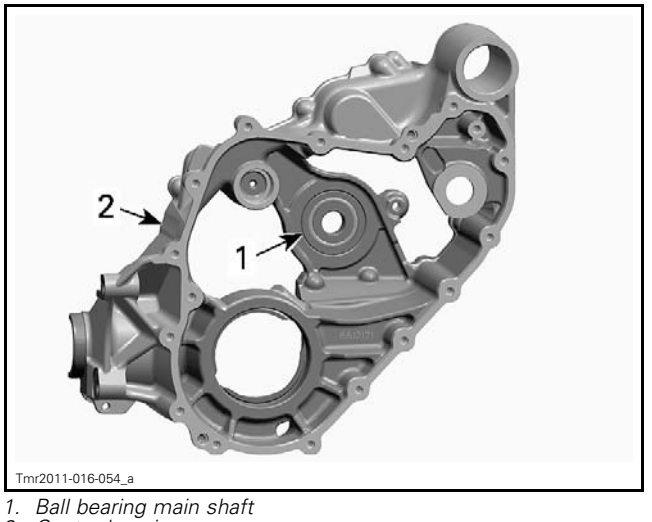
For ball bearings of countershaft (left cover) and main shaft (center housing) push with a suitable puller from outside in.



1. *Ball bearing countershaft*
2. *Right cover*



1. *Screw*
2. *Ball bearing countershaft*
3. *Ball bearing main shaft*
4. *Left cover*



1. *Ball bearing main shaft*
2. *Center housing*

Gearbox Inspection

Always verify for the following when inspecting gearbox components:

- Gear teeth damage
- Worn or scoured bearing surfaces
- Rounded engagement dogs and slots
- Worn shift fork engagement groove
- Worn splines on shafts and shifting sleeves.

Bearings

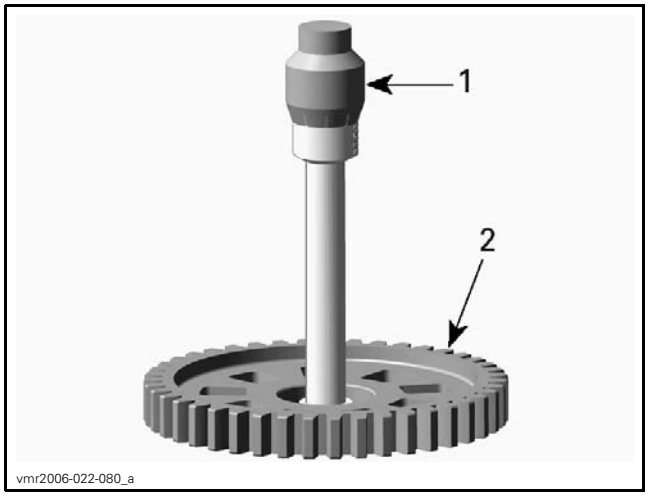
Check if ball bearings turn freely and smoothly.

Check all bearings, bearing points, tooth flanks and taper grooves.

Free Pinions

NOTE: Always replace snap rings and use special pliers to install them.

Check free pinions for wear.

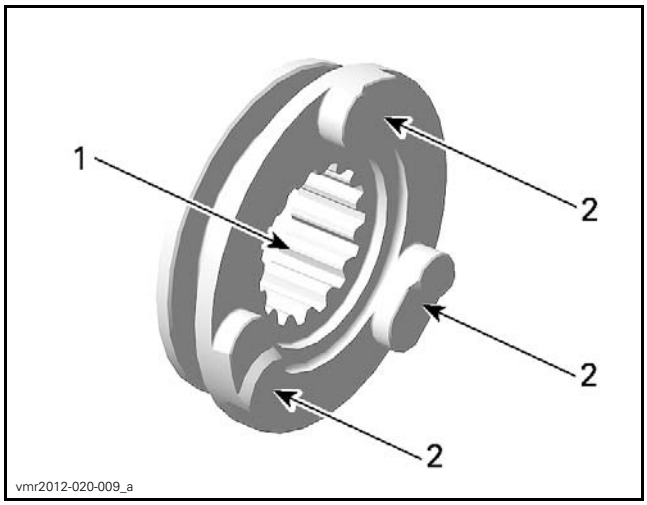


TYPICAL
1. Micrometer
2. Free pinion

DIAMETER FREE PINION	
NEW	29.000 mm to 29.013 mm (1.1417 in to 1.1422 in)
SERVICE LIMIT	29.015 mm (1.1423 in)

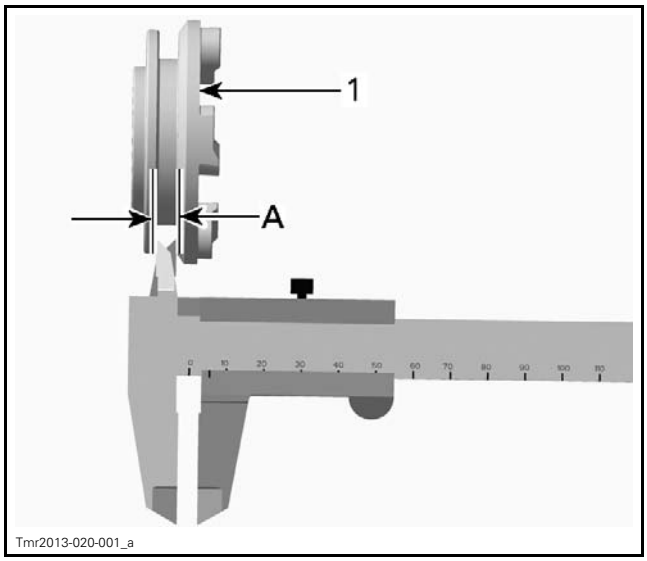
Shifting Sleeves

Check shifting sleeves for worn inner splines and rounded or damaged engagement dogs.



TYPICAL
1. Inner splines
2. Engagement dogs

Measure the width of shift fork engagement groove.

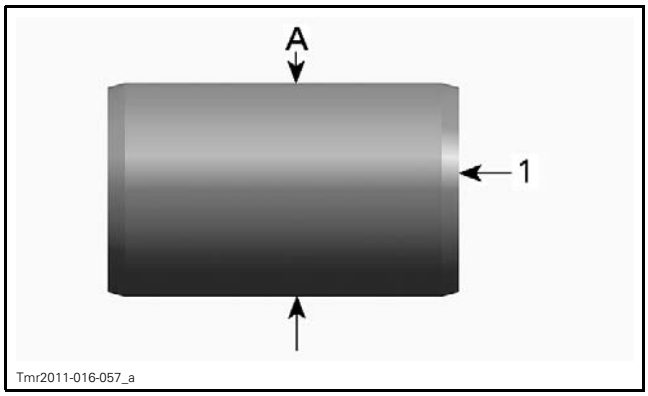


TYPICAL
1. Shifting sleeve
A. Width of shift fork engagement groove

WIDTH OF SHIFT FORK ENGAGEMENT GROOVE	
NEW	5.30 mm to 5.40 mm (.209 in to .213 in)
SERVICE LIMIT	5.50 mm (.217 in)

Shafts

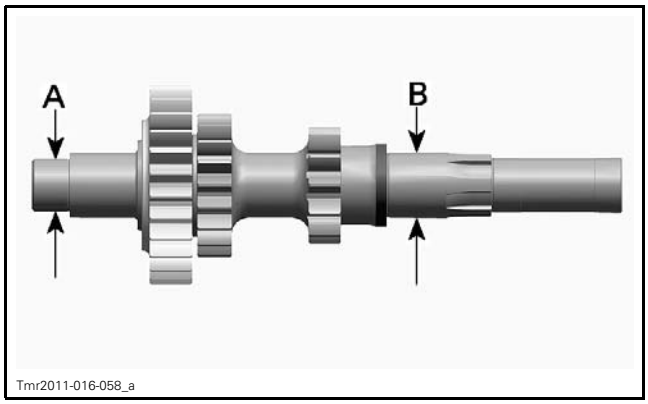
Check bearing pin of reverse intermediate gear for wear.



1. Bearing pin
A. Outer diameter

BEARING PIN OUTER DIAMETER	
NEW	24.987 mm to 25.000 mm (.984 in to .984 in)
SERVICE LIMIT	24.977 mm (.9833 in)

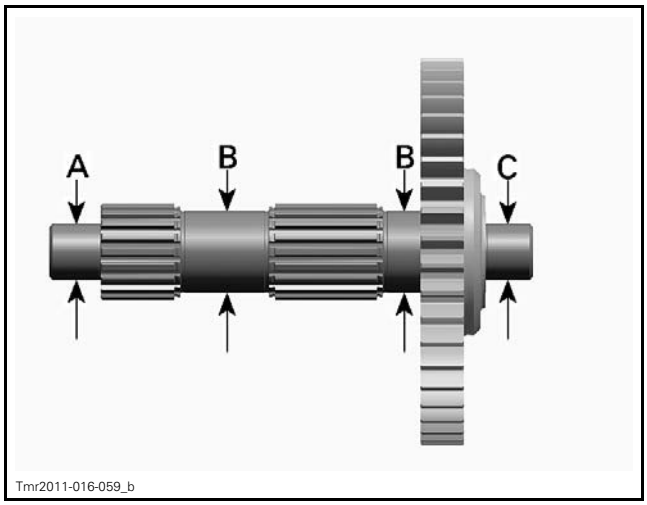
Check countershaft bearing journals for wear.



A. MAG side
B. Bearing journal CVT side

COUNTERSHAFT BEARING JOURNALS	
MAG SIDE	
NEW	19.977 mm to 19.990 mm (.786 in to .787 in)
SERVICE LIMIT	19.973 mm (.786 in)
CVT SIDE	
NEW	24.977 mm to 24.990 mm (.983 in to .984 in)
SERVICE LIMIT	24.970 mm (.983 in)

Check main shaft for wear.



A. Bearing journal MAG side
B. Free pinion bearing
C. Bearing journal CVT side

MAIN SHAFT	
FREE PINION BEARING	
NEW	24.987 mm to 25.000 mm (.984 in to .984 in)
SERVICE LIMIT	24.984 mm (.984 in)
BEARING JOURNAL CVT/MAG SIDE	
NEW	16.980 mm to 16.991 mm (.669 in to .669 in)
SERVICE LIMIT	16.976 mm (.668 in)

Shift Shaft

Check shift shaft for worn splines and gears.

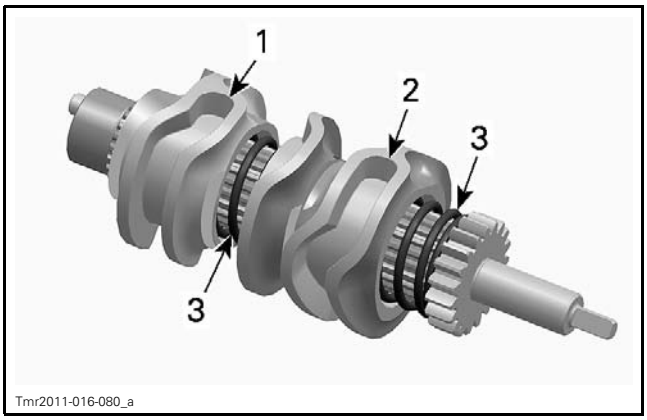
Check shift shaft spring for damages.

Shift Drum

NOTICE Do not disassemble shift drum.

Check if shifting gates move easily on shift drum splines and check condition of springs.

Check shift drum tracks for scouring or heavy wear, like rounded engagement slots.



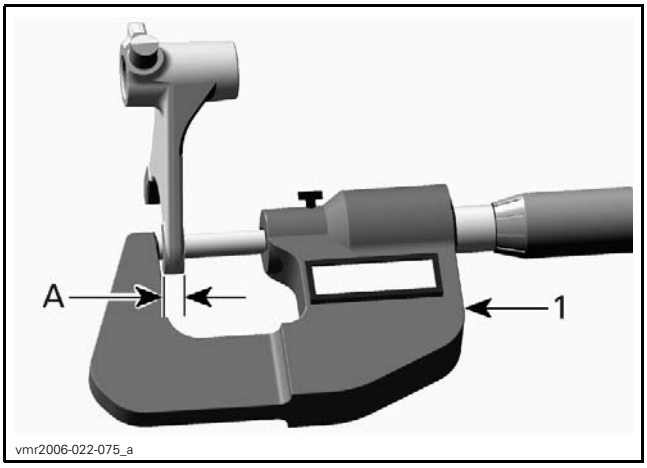
1. Track for the low/reverse range gear shift fork
2. Track for the high range gear shift fork
3. Springs

Shift Forks

Check both shift forks for visible damage, wear or bent shift fork claws.

Check engagement rollers for wear and smooth movement.

Measure the shift fork claw thickness.



1. Micrometer
A. Shift fork claw thickness

SHIFT FORK CLAW THICKNESS	
NEW	5.10 mm to 5.20 mm (.201 in to .205 in)
SERVICE LIMIT	5.00 mm (.197 in)

Shift Fork Shaft

Check shift fork shaft for visible damage or wear.

Check if shift fork shaft is straight.

Index Lever and Parking Lever

Index lever with roller must move freely.

Check parking lever for cracks or other damages.

Output Shaft

Check output shaft and its gear for cracks, bend, pitting or other visible damages.

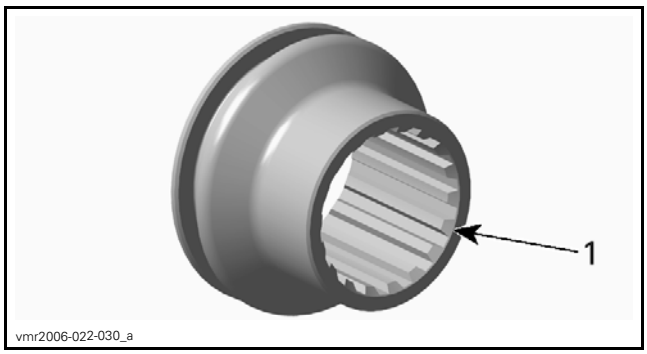
Check output shaft splines for wear or other damages.

Check if the output shaft bearings turn freely and smoothly.

Replace oil seal if brittle, hard or damaged.

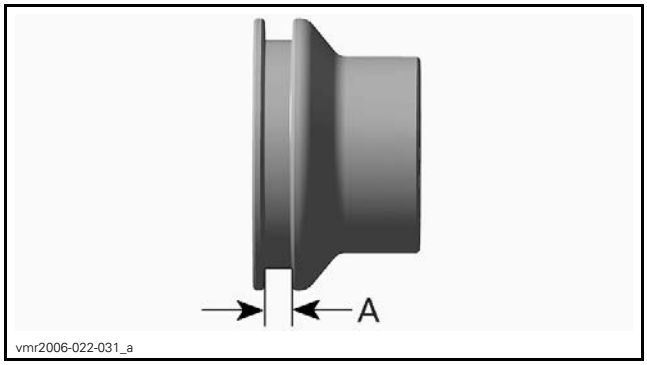
4X4 Coupling Sleeve

Check splines of coupling sleeve for wear or other damages.



1. Inspect splines

Measure the coupling sleeve groove width.



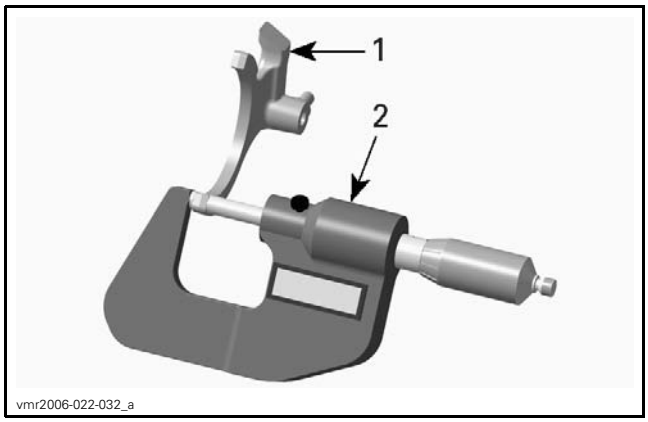
A. Groove width

COUPLING SLEEVE GROOVE WIDTH	
NEW	5.25 mm to 5.35 mm (.207 in to .211 in)
SERVICE LIMIT	5.50 mm (.217 in)

Coupling Fork

Check coupling fork for visible damage, wear or bent coupling fork claws.

Check coupling fork claw thickness.



1. Coupling fork
2. Micrometer

COUPLING FORK CLAW THICKNESS	
NEW	4.95 mm to 5.05 mm (.195 in to .199 in)
SERVICE LIMIT	4.80 mm (.189 in)

Gearbox Assembly

The assembly of gearbox is essentially the reverse of disassembly procedure. However, pay attention to the following details.

Gearbox Bearings

Unless otherwise instructed, never use hammer to install ball bearings. Use press machine only.

If necessary heat housings up to 100°C (212°F) before installing ball bearings.

⚠ WARNING

Clean oil, outside and inside, from housing before heating.

Place new bearing in freezer for 10 minutes before installation.

Use a suitable installer for installing ball bearings of countershaft and main shaft.

NOTE: Place gearbox housings on a wood stand before installing ball bearings.

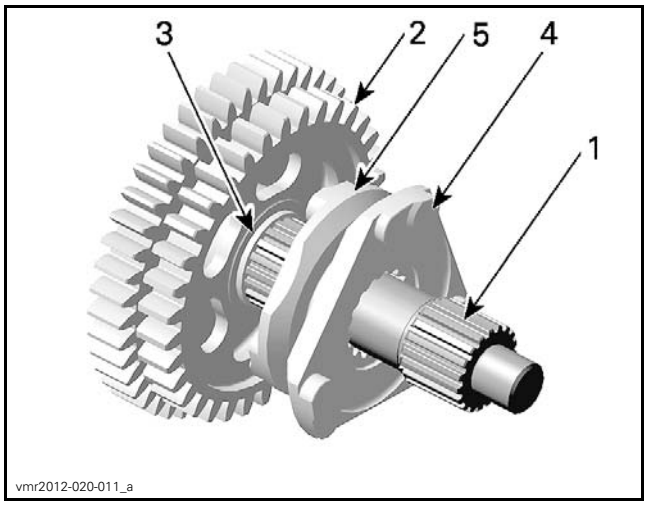
Install new oil seals with the proper installer (refer to *OIL SEALS* in this subsection).

Main Shaft and Shift Forks

Install NEW snap rings.

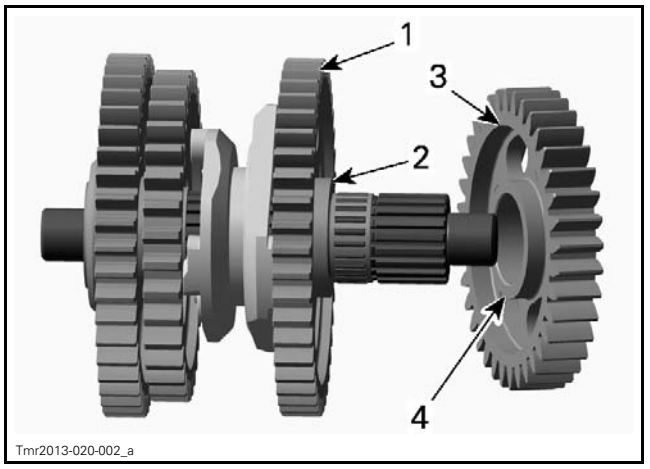
NOTE: Ensure snap rings are installed in the grooves properly.

Install free pinion (REVERSE range gear) and shifting sleeve (LOW/REVERSE range gear) properly.



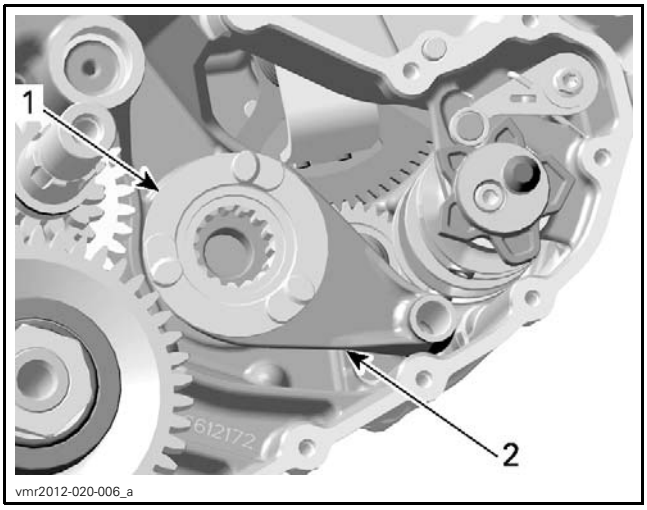
1. Main shaft
2. Free pinion (REVERSE range gear)
3. Snap ring
4. Shifting sleeve (LOW/REVERSE range gear)
5. Shifting dogs (REVERSE range gear)

Collars of free pinion (LOW range gear) and free pinion (HIGH range gear) must point together.



1. Free pinion (LOW range gear), 44 T
2. Collar
3. Free pinion (HIGH range gear), 36 T
4. Collar

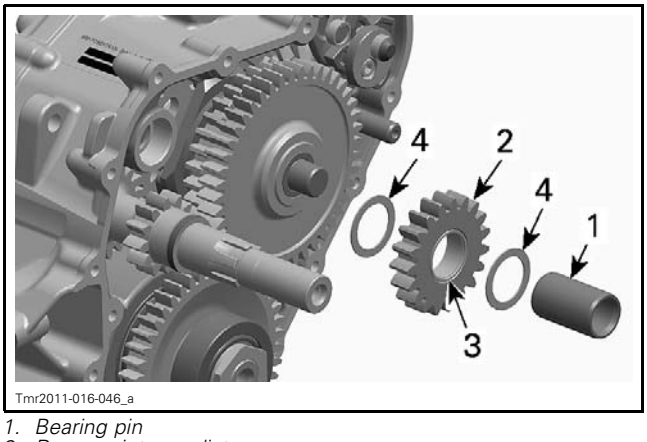
Place shifting sleeve (HIGH range gear) with shift fork in the center of on main shaft bearing in center housing.



1. Shifting sleeve (HIGH range gear)
2. Shift fork

Carefully fit main shaft assembly with shift fork (LOW/REVERSE range gear) into inner splines of shifting sleeve (HIGH range gear).

Install reverse intermediate gear.



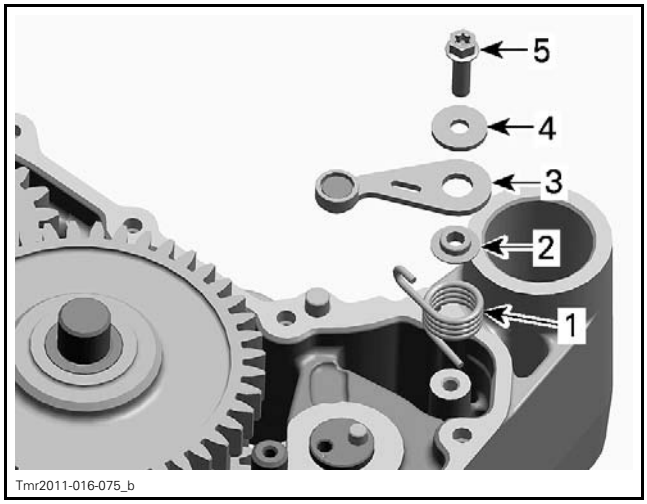
1. Bearing pin
2. Reverse intermediate gear
3. Needle bearing
4. Thrust washers

Finally engage shift forks in shift drum and install shift fork shaft.

NOTE: Run all gears as a final function check before installing left housing.

Index Lever and Index Washer

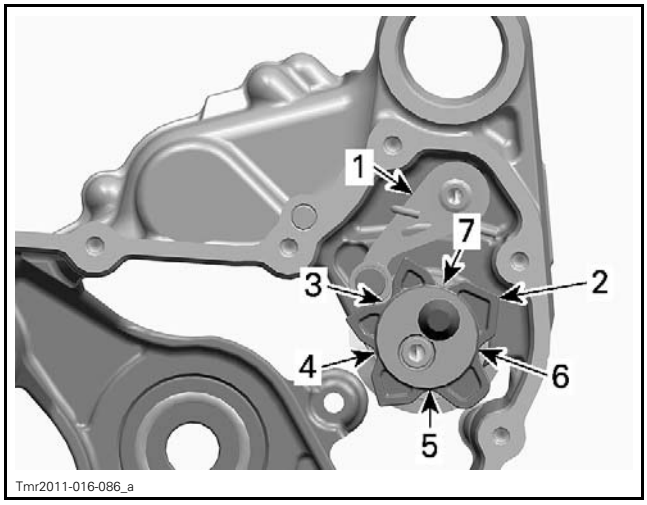
Fit step ring into index lever.



1. Index spring
2. Step ring
3. Index lever
4. Washer
5. Screw

Install index washer on shift drum.

Insert a flat screwdriver in the slot of the index lever, turn screwdriver clockwise and engage lever in index washer in neutral position as per following illustration.



1. Index lever
2. Index washer
3. Neutral position
4. High range gear position
5. Low range gear position
6. Parking position
7. Reverse range gear position

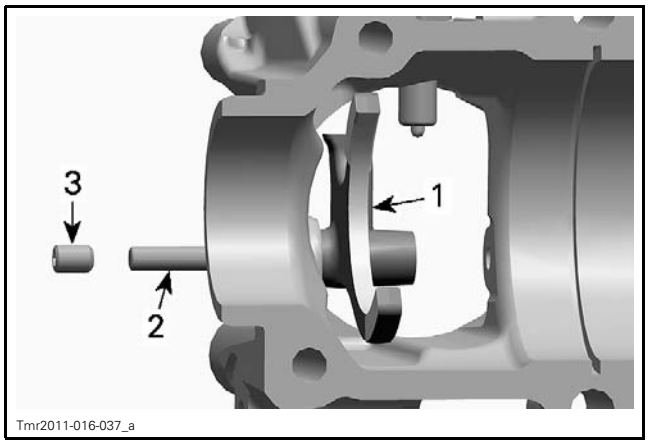
Output Shaft and 4X4 Coupling Mechanism

Install coupling sleeve onto the output shaft.

Place the output shaft with oil seal and coupling sleeve into the center housing.

NOTE: If same oil seal is installed, turn oil seal 90° offset to its original position to avoid leakage at housing mating surface.

Install coupling fork, coupling fork shaft and set screw in right cover before applying sealant to the mating surface.

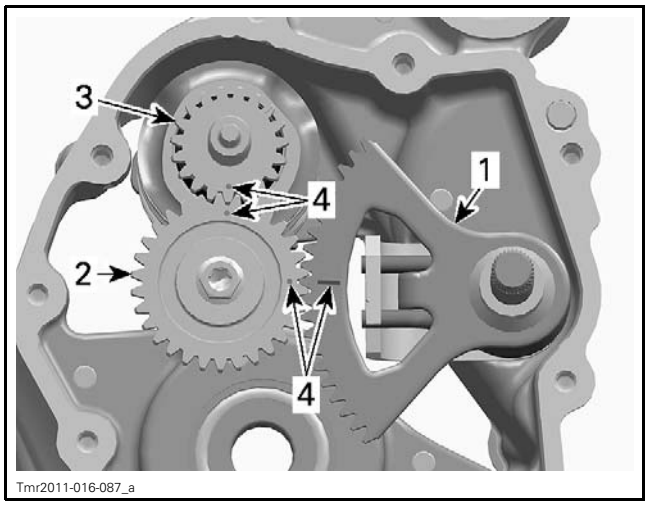


1. Coupling fork
2. Coupling fork shaft
3. Set screw

Shift Shaft and Shift Drum

Install shift drum and shift shaft.

Install shifting intermediate gear. Align its marks with the marks on shift drum gear and shift shaft.



1. Shift shaft assembly
2. Shifting intermediate gear
3. Shift drum gear
4. Marks

Engage both shift fork pins in their corresponding groove on the shift drum.

Install shift fork shaft.

NOTE: Turn gears to validate proper operation.

Sealing Compound Application

NOTE: Unless otherwise specify, the procedure to apply the sealant is the same for right or left cover.

Clean all metal components in a solvent.

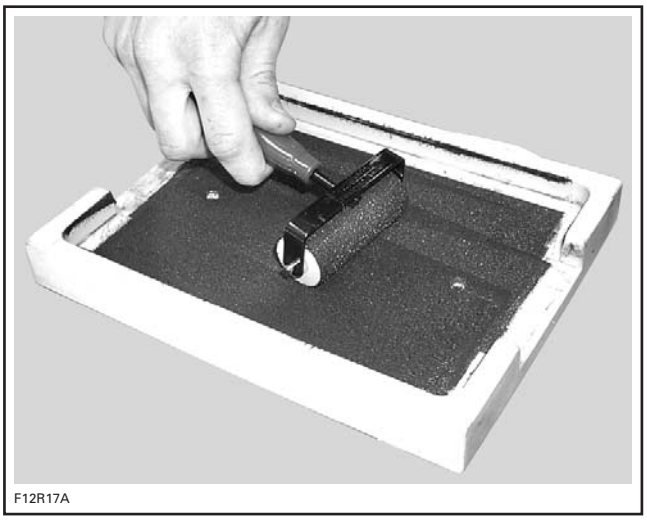
Gearbox housing mating surfaces are best cleaned using a combination of LOCTITE CHISEL (GASKET REMOVER) (P/N 413 708 500) and a brass brush. Brush a first pass in one direction then make the final brushing perpendicularly (90°) to the first pass cross (hatch).

NOTICE **Do not wipe with rags. Use a new clean hand towel only.**

IMPORTANT: When beginning the application of the gear housing sealant, the assembly and the first torquing should be done within 10 minutes. It is suggested to have all you need on hand to save time.

Use LOCTITE 5910 (P/N 293 800 081) on mating surfaces.

Use a plexiglass plate and apply some sealant on it. Use a soft rubber roller (50 mm - 75 mm (2 in - 3 in)), available in arts products suppliers for printing, and roll the sealant to get a thin uniform coat on the plate (spread as necessary). When ready, apply the sealant on gear housing mating surfaces.



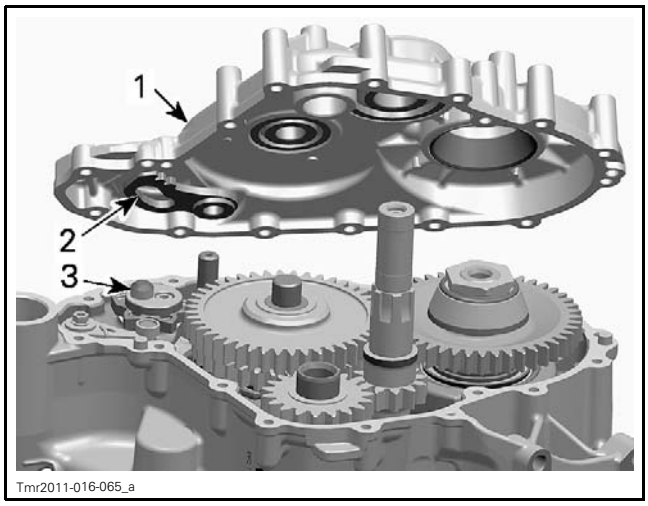
Do not apply in excess as it will spread out inside gear housing.

NOTE: It is recommended to apply this specific sealant as described here to get a uniform application without lumps. If you do not use the roller method, you may use your finger to uniformly distribute the sealant (using a finger will not affect the adhesion).

Left Cover

Apply sealing compound on mating surfaces of central housing. Refer to *SEALING COMPOUND APPLICATION*.

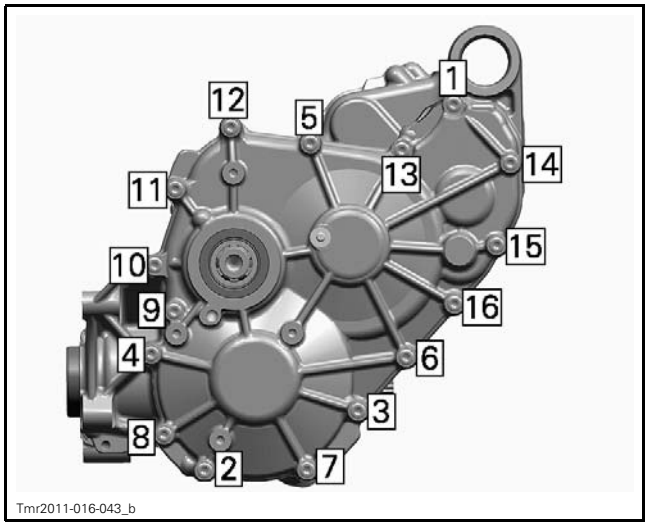
At installation of left cover, engage parking lock lever slot onto index washer pin.



Tmr2011-016-065_a

1. Left cover
2. Parking lock lever slot
3. Index washer pin

Install all screws on left cover and tighten them as per following sequence.

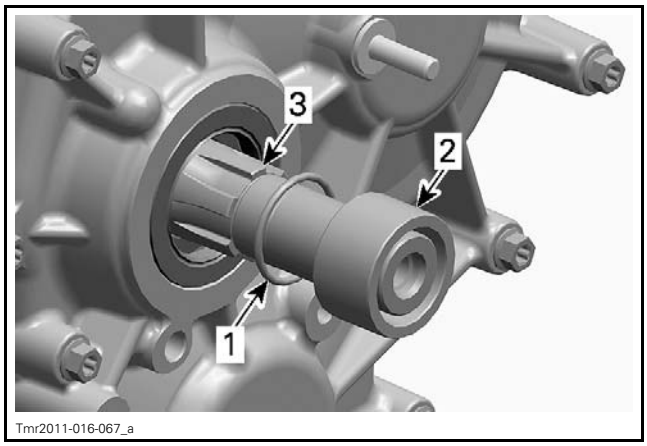


Tmr2011-016-043_b

M6 SCREWS - LEFT COVER	
Tightening torque	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

Install O-ring including distance sleeve on countershaft CVT side.

NOTICE **Place O-ring including distance sleeve right away. Chamfered bore of distance sleeve has to face the gearbox.**



Tmr2011-016-067_a

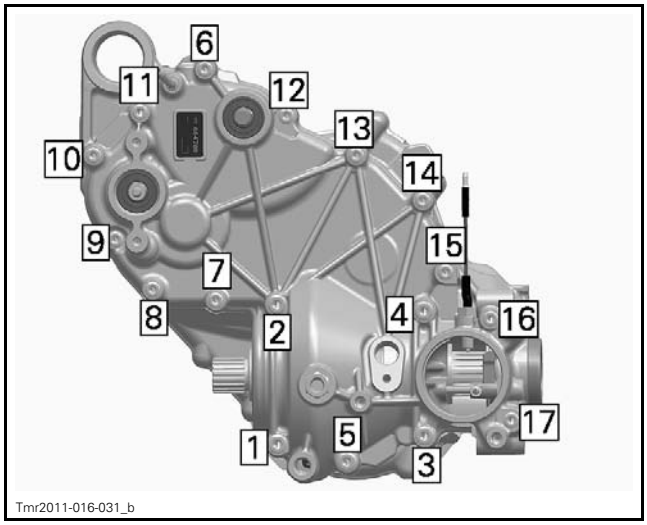
COUNTERSHAFT END CVT SIDE
1. O-ring
2. Distance sleeve
3. Countershaft end CVT side

Right Cover

Apply sealing compound on mating surfaces of central housing. Refer to *SEALING COMPOUND APPLICATION*.

To install the right cover align the coupling fork with the groove in the coupling sleeve.

Install all screws on right cover and tighten them as per following sequence.



Tmr2011-016-031_b

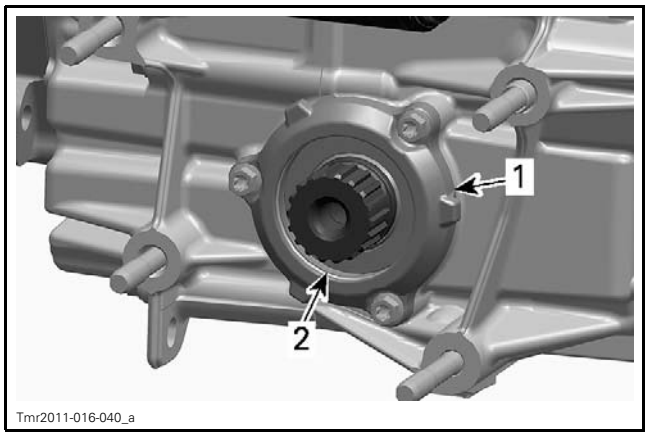
SCREWS - RIGHT COVER	
Tightening torque - M6	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)
Tightening torque - M8	25 N•m ± 3 N•m (18 lbf•ft ± 2 lbf•ft)

Install the actuator, refer to *ACTUATOR*.

Gearbox Installation

For installation reverse the removal procedure. Pay attention to following.

Before gearbox installation check O-ring in bearing cover if brittle, hard or damaged. Replace if necessary.



1. Bearing cover
2. O-ring

After installation refill gearbox oil, refer to *PERIODIC MAINTENANCE PROCEDURES*.

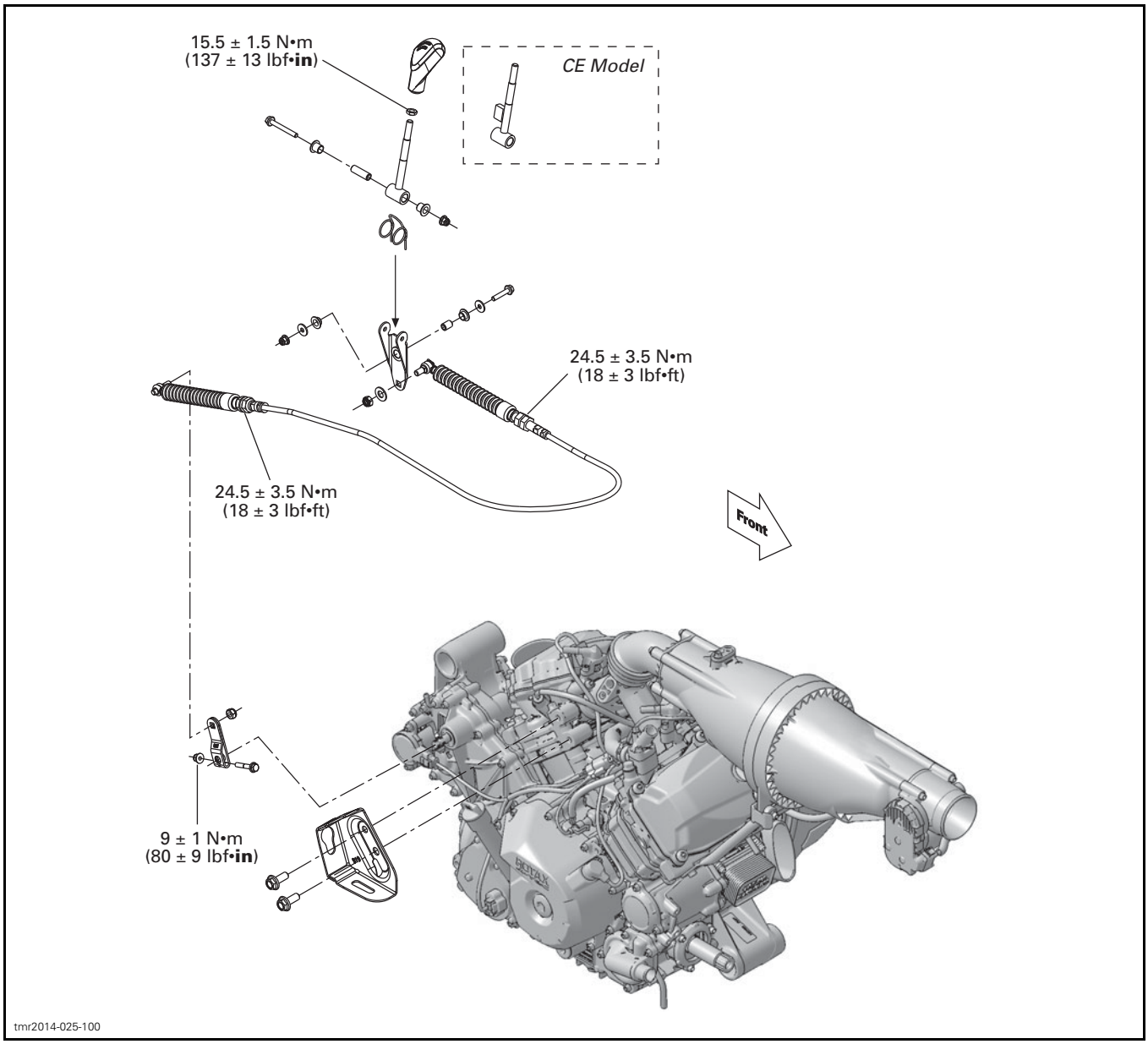
SHIFTER

SERVICE TOOLS

Description	Part Number	Page
TRANSMISSION ADJUSTMENT TOOL	529 036 252	2

All Models

New shifter cable adjustment procedure.



PROCEDURES

SHIFTER CABLE

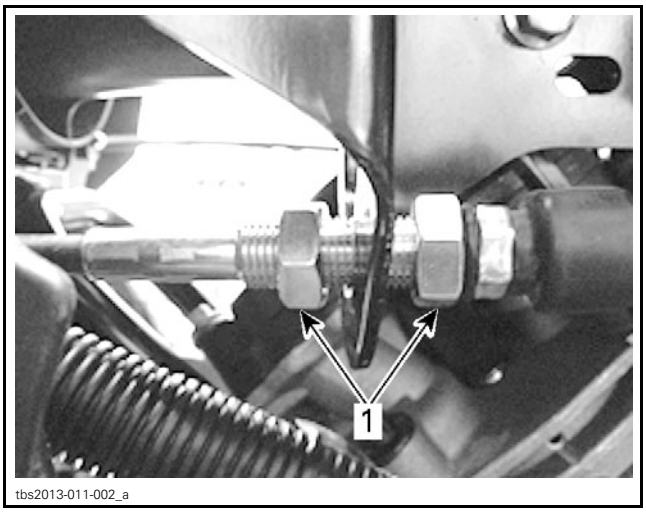
Shifter Cable Adjustment

REQUIRED TOOLS		
TRANSMISSION ADJUSTMENT TOOL (P/N 529 036 252)		
T1	Shift Lever Locking Tool (included in P/N 529 036 252)	
T2	Shift Plate Locking Tool (included in P/N 529 036 252)	

1. Place shift lever in NEUTRAL position.

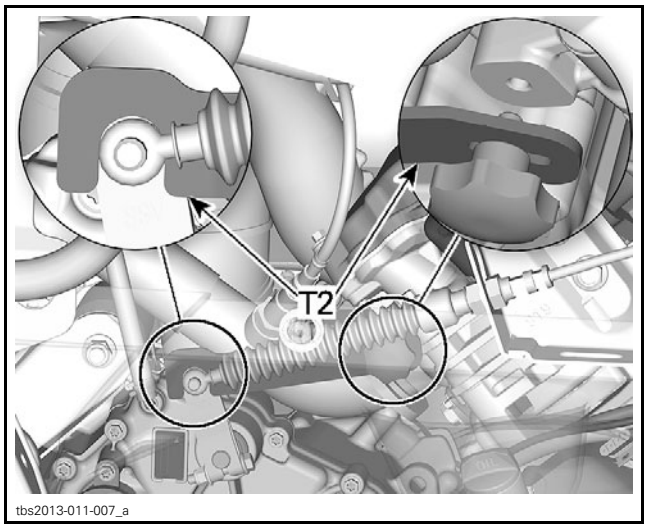
NOTICE **Move vehicle back and forth to ensure gearbox is set in neutral position.**

2. Secure vehicle using wheel blocks.
3. Remove lower console and both lateral console panels. Refer to *BODY* subsection in appropriate shop manual.
4. Loosen shift lever end cable adjustment nuts.

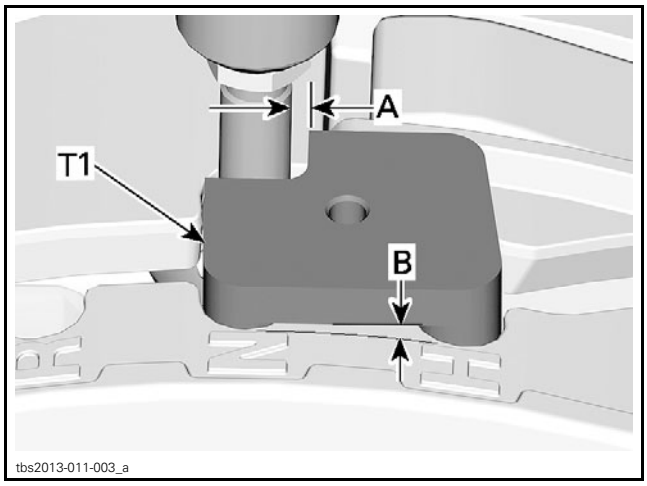


1. Adjustment nuts

5. Rock forward and backward the shift plate on the gearbox to ensure it is well centered in the "N" position.
6. Using the shift plate locking tool no. T2, locked shift plate and screwed the knob in the rear cylinder head

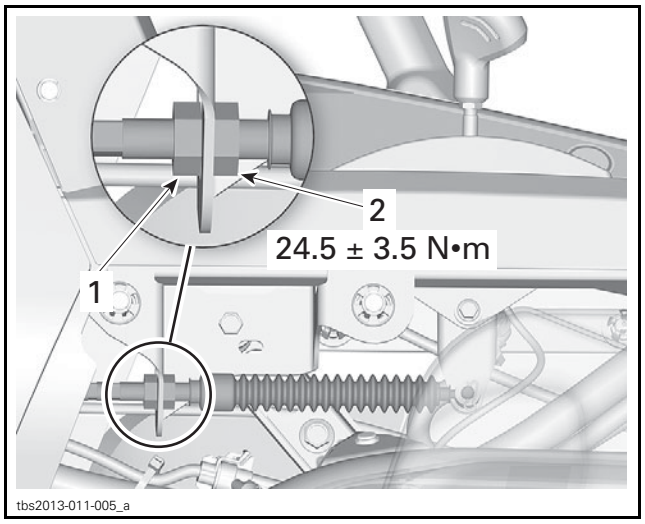


7. Insert the shift lever locking tool no. T1 in shift lever indicator to lock shift lever in place. Leave a gap of 2 mm to 3 mm (5/64 in to 1/8 in) between locking tool and shift lever.



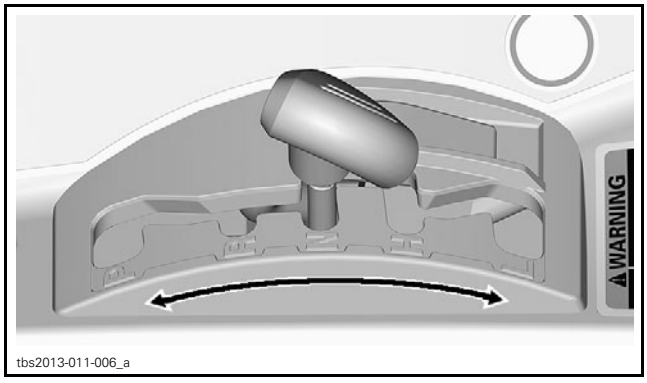
A. Gap between shift lever and locking tool
B. Normal angle between shift lever indicator and locking tool

8. Tighten the front cable adjustment nut by hand until gap between shift lever and locking tool disappear.
9. Tighten second adjustment nut and torque it to specification.



1. Tighten to remove the gap
2. Torque to specification

10. Remove shift plate locking tool **no. T2**.
11. Remove shift lever locking tool **no. T1**. It should be easy to do. If not, repeat tightening sequence with less pressure from the shift lever on the locking tool.
12. Shift transmission to R, L, P, H and back to N.
13. Verify maximum free play in cable. Shift lever should move from P to L without high restriction (only spring load restriction).

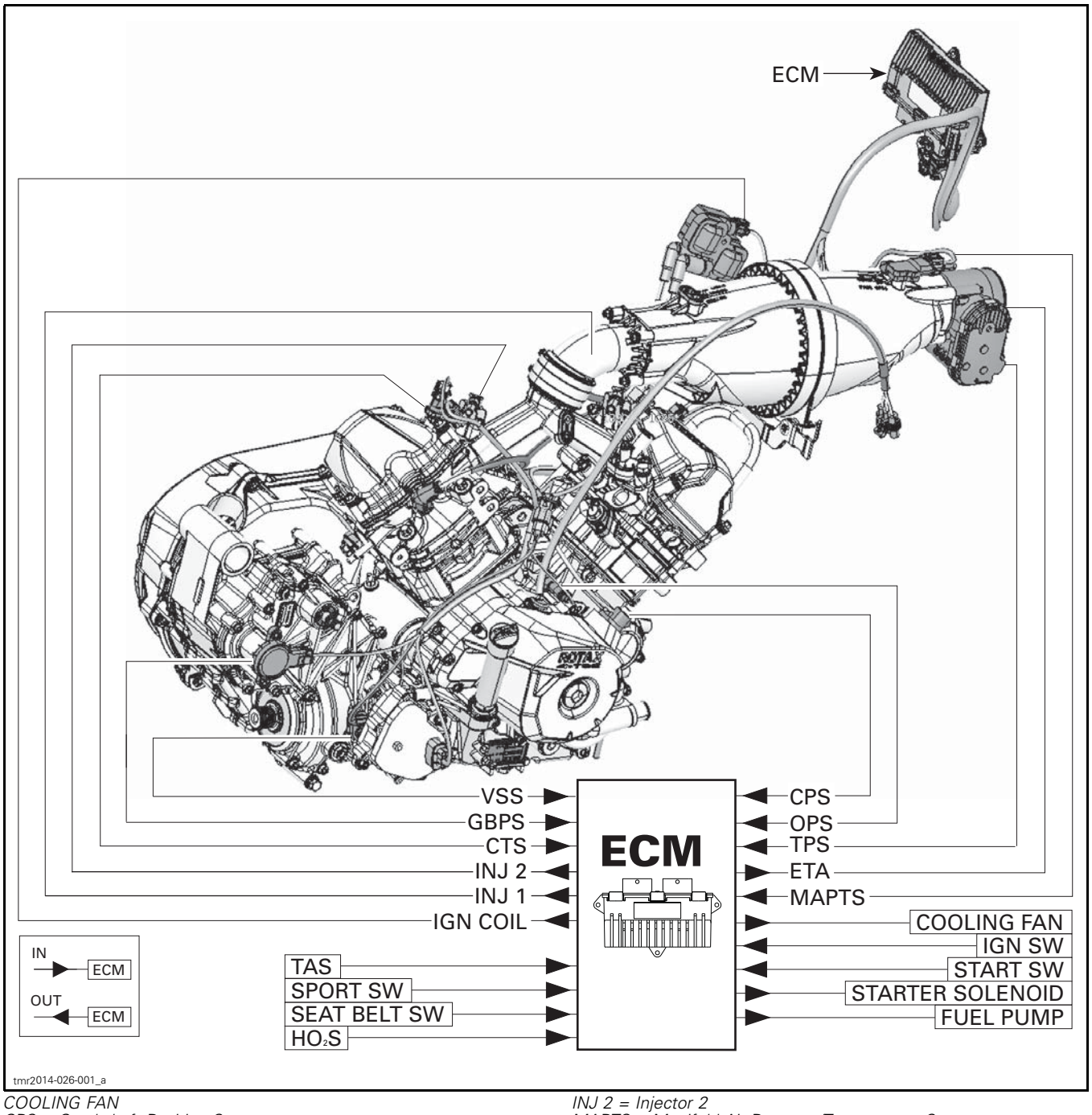


14. Reinstall all removed parts. Start engine, select P-R-N-H and L to ensure the transmission shifts into every gear.

⚠ WARNING

After adjustment, make sure that PARK position works properly.

ENGINE MANAGEMENT SYSTEM (EMS)



COOLING FAN
CPS = Crankshaft Position Sensor
CTS = Cooling Temperature Sensor
ECM = Engine Control Module
ETA = Electric Throttle Actuator
FUEL PUMP
GBPS = Gear Box Position Sensor
HO_2S (Heated Oxygen Sensor)
IGN COIL = Ignition coil
IGN SW = Ignition switch
IN = Input
INJ 1= Injector 1
INJ 2 = Injector 2
MAPTS = Manifold Air Pressure/Temperature Sensor
OPS = Oil Pressure Switch
OUT = Output
SEAT BELT SWITCH
SPORT SWITCH
START SWITCH
STARTER SOLENOID
SW = Switch
TAS = Throttle Accelerator Sensor
TPS = Throttle Position Sensor
VSS = Vehicle Speed Sensor

CONTROLLER AREA NETWORK (CAN)

GENERAL

SYSTEM DESCRIPTION

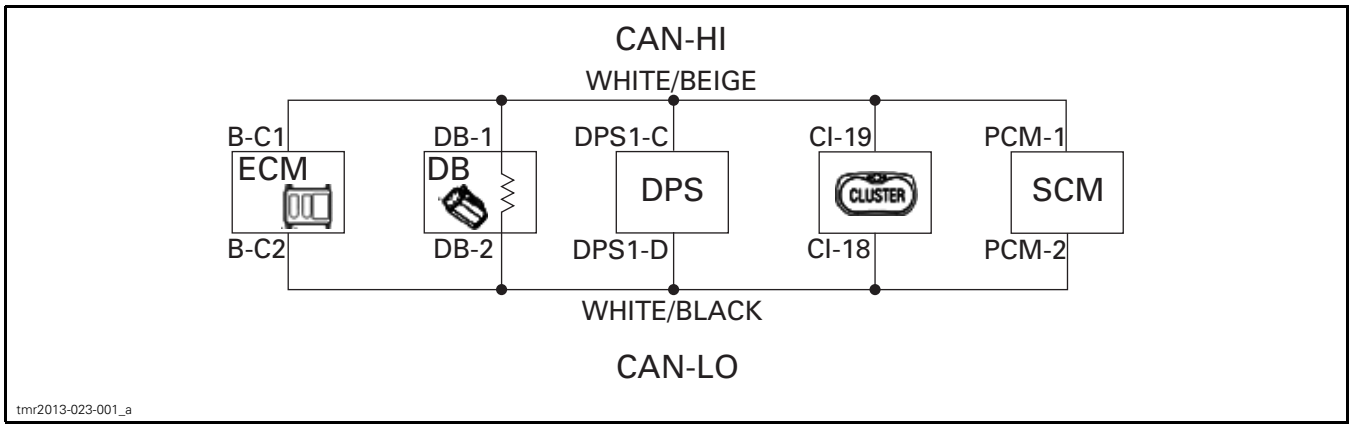
The CAN (Controller Area Network) protocol is an ISO standard for serial data communication.

The CAN bus links the following modules together so that they communicate to interact as required.

– ECM (Engine Control Module)
– Multifunction gauge
– DPS (Dynamic Power Steering)
– SCM (Suspension Control Module).

The components are connected together by 2 wires and they are in constant communication with each other at a rate of about every 20 milliseconds. CAN lines consist of a pair of wires (WHITE/BEIGE and WHITE/BLACK).

If a component or system malfunction is detected, a module may generate a fault code, which it transmits through the CAN bus as a signal. The fault signal may be used for various functions such as triggering the display of an error message in the multifunction gauge cluster, turning on a fault indicator light, limiting or inhibiting vehicle or engine operation, or viewed using the B.U.D.S. software for troubleshooting.



CLUSTER: Multifunction Gauge
DB: Diagnostic Connector
DPS: Dynamic Power Steering
ECM: Engine Control Module
SCM: Suspension Control Module

COMMUNICATION TOOLS AND B.U.D.S.

SERVICE TOOLS

Description	Part Number	Page
MPI-2 DIAGNOSTIC CABLE	710 000 851	223
MPI-2 INTERFACE CARD	529 036 018	223

SERVICE TOOLS – OTHER SUPPLIER

Description	Part Number	Page
MALE-FEMALE EXTENSION SERIAL CABLE	DB9	223

GENERAL

Refer to *PROCEDURES* for instructions on the communication tools.

If communication problems occur, refer to *TROUBLESHOOTING* in this subsection.

TROUBLESHOOTING

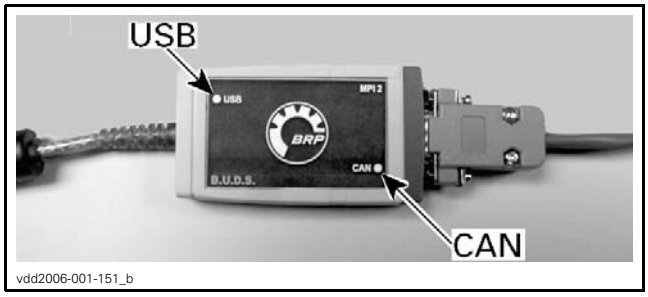
DIAGNOSTIC TIPS

IMPORTANT: Make sure all connections are made and vehicle is powered up **before starting B.U.D.S.** to allow proper communication between the vehicle and B.U.D.S. software.

MPI-2 Connection Troubleshooting

MPI-2 Status Lights

The MPI-2 includes 2 status lights that indicate the connection condition: USB and CAN. **Both lights must be GREEN** for the MPI-2 to function properly. Otherwise, refer to the following charts.



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Prerequisite for USB Communication:
- PC Computer turned on.
- MPI-2 connected to PC computer.

USB LIGHT	
STATUS	WHAT TO DO
Light is OFF	– Check USB connection between MPI-2 and PC computer. – Check USB operation on PC computer (hardware or Windows drivers).
Light is GREEN	– Connections are GOOD. Communication can take place on USB side.

Prerequisite for CAN Communication:
- MPI-2 connected to diagnostic connector on vehicle.
- ECM turned on (electrical system powered up without engine started).
- Ignition key installed and turned to ON.
- B.U.D.S. started and logged on.

CAN LIGHT	
STATUS	WHAT TO DO
Light is OFF	Check connection between MPI-2 and diagnostic connector on vehicle.
Light is RED	Check CAN wires/connectors on vehicle.
Light is GREEN	Connections are GOOD. Communication can take place on CAN side.

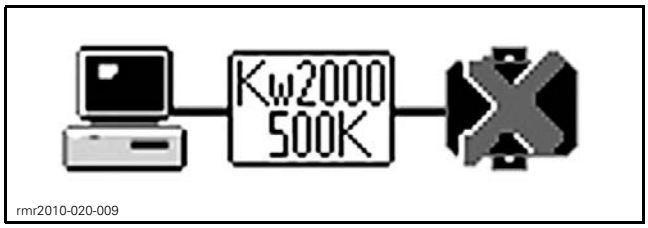
Communication Problems when Using B.U.D.S.

Missing Module

If one or more "ECU" is (are) not communicating with the MPI, refer to *DIAGNOSTIC AND FAULT CODES* subsection.

No Vehicle Detected

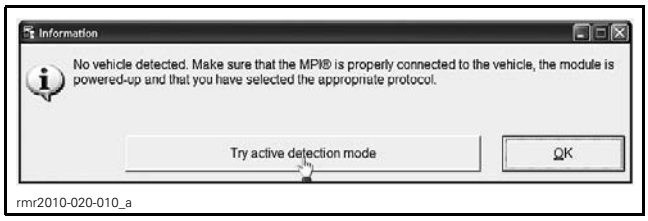
If an "X" is shown in the status bar and the protocol tool is blinking between Kw2000 500K and Kw2000, it means that no "ECU" is communicating with the MPI.



rmr2010-020-009

TYPICAL

1. Check connections between the PC computer and the vehicle.
2. Activate the vehicle electrical system without starting the engine. Refer to *POWER DISTRIBUTION SYSTEM* subsection.
3. Ensure both USB and CAN lights on the MPI-2 are GREEN. Refer to *MPI-2 CONNECTION TROUBLESHOOTING* subsection.
4. If B.U.D.S. does not automatically exit the following message box, click the **Try active detection mode** button. This will manually establish the communication with the ECUs.



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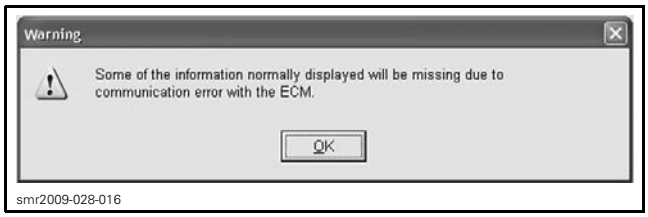
Message Box: "Some of the Information Normally Displayed..."

If the following message box is displayed in B.U.D.S.:



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1. Click on the **OK** button in the box.
2. Click on the **Read Data** button in B.U.D.S.

Message Box: "Engine must be Stopped..."

If the following message box is displayed in B.U.D.S.:

smr2009-028-015

1. Click on the **Cancel** button in B.U.D.S.
2. Continue with the procedure undertaken prior to the appearance of the message box.
3. If the message persists, ensure battery is fully charged.

PROCEDURES

MPI-2

The MPI-2 (Multi-Purpose Interface-2) in conjunction with the MPI-2 diagnostic cable is used with B.U.D.S. software to communicate with the ECM (engine control module) and other modules.

MPI-2 Power

The MPI-2 interface card uses the power from the PC computer's USB port.

Diagnostic Connector Location

The 6-pin diagnostic connector is located under the dashboard on the driver's side. It is stored in its protective cap on the lower RH side of the battery rack.

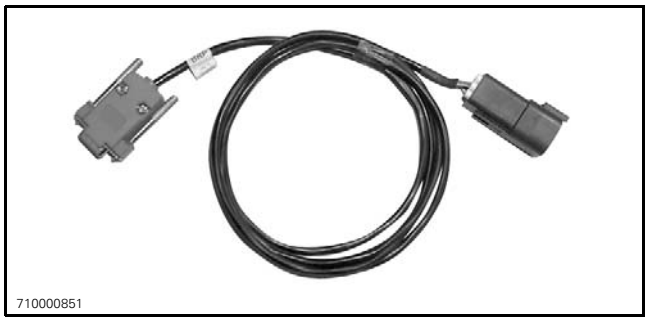
tmr2011-019-001_a

1. Diagnostic connector

NOTE: Do not mismatch the diagnostic connector with the one on the LH side of the battery rack. This connector has only 2 wires attached to it and is for manufacturer's use only.

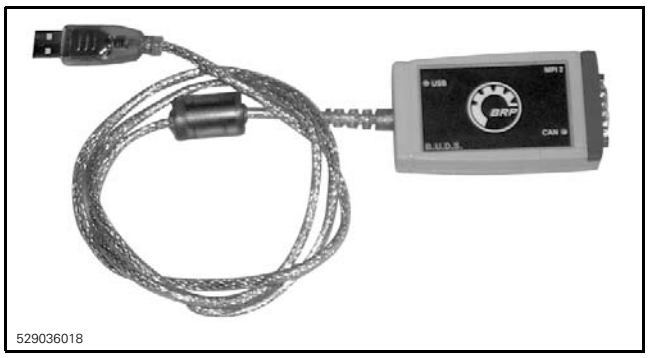
Connecting the PC to the Vehicle

1. Locate the 6-pin diagnostic connector, refer to *DIAGNOSTIC CONNECTOR LOCATION* in this subsection.
2. Disconnect the 6-pin diagnostic connector from its holder (protective cap).
3. Connect one end of the MPI-2 DIAGNOSTIC CABLE (P/N 710 000 851) to the vehicle connector.

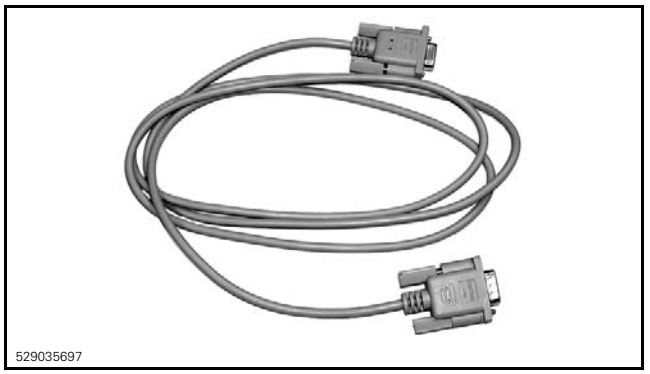


DIAGNOSTIC CABLE CONNECTED TO VEHICLE

4. Connect the other end of diagnostic cable to the MPI-2 INTERFACE CARD (P/N 529 036 018).

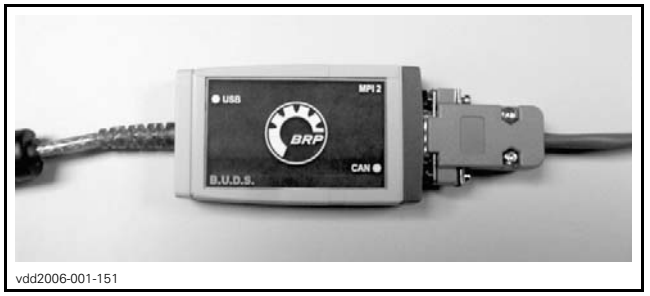


NOTE: An optional MALE-FEMALE EXTENSION SERIAL CABLE (P/N DB9) available at electronic retail outlets can be used between diagnostic cable and MPI-2 interface. Do not exceed 7.6 m (25 ft).

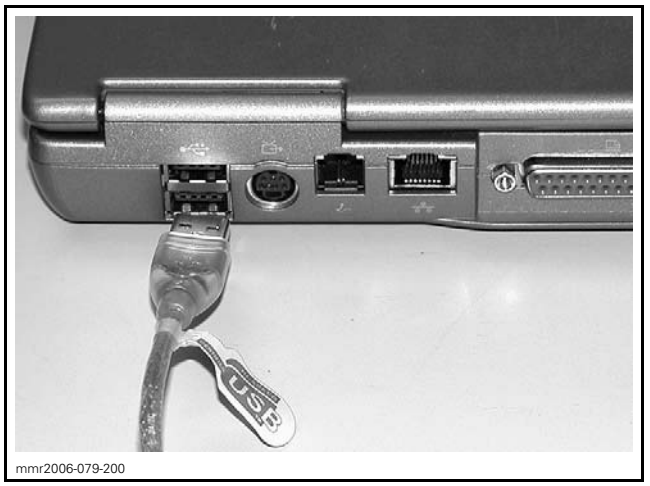


OPTIONAL MALE-FEMALE EXTENSION SERIAL CABLE

5. Connect the MPI-2 INTERFACE CARD (P/N 529 036 018) to the USB port of a PC (personal computer).



DIAGNOSTIC CABLE CONNECTED TO MPI-2 INTERFACE CARD



MPI-2 INTERFACE CARD CONNECTED TO USB PORT

6. Use B.U.D.S. software as described further in *B.U.D.S. SOFTWARE*.

B.U.D.S. SOFTWARE

B.U.D.S. (BRP Utility and Diagnostic Software) is designed to allow programming key(s) to the vehicle, allow electrical and electronic component monitoring, activation of certain components for diagnostic purposes, and to carry out setting changes.

For more information pertaining to the use of the B.U.D.S. software, use its **Help** menu which contains detailed information on its functions.

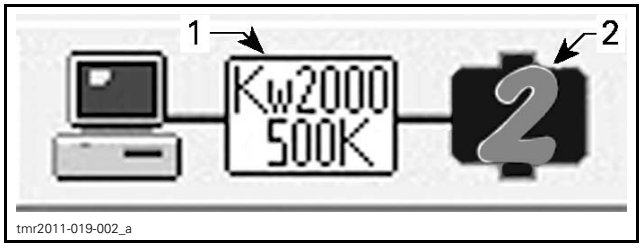
Always use the latest applicable B.U.D.S. version available on BOSSWeb.

How to Establish Communication Using B.U.D.S. Software

IMPORTANT: Ensure all connections have been made **before starting B.U.D.S.** to allow proper operation. Refer to *MPI-2* in this subsection.

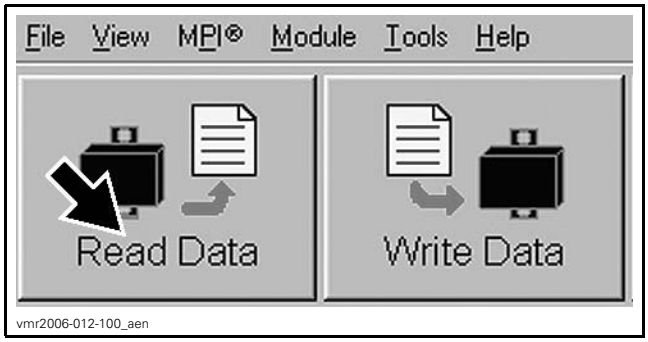
1. Turn ignition switch to ON using any of the keys provided with the vehicle. Do not start the engine.
2. Start B.U.D.S. and logon.
3. Ensure the status bar shows the Kw2000 (500K) protocol and the appropriate number of modules to its right according to the vehicle model.

MODULE	MODEL
ECM (Engine Control Module)	All
Cluster (Multifunction Gauge)	All
DPS (Dynamic Power Steering)	DPS equipped vehicle
ACS (Air Controlled Suspension)	ACS equipped vehicle



TYPICAL - SUCCESSFUL CONNECTION
1. Connection protocol
2. Number of modules read

4. Read ECUs by clicking the **Read Data** button.



B.U.D.S. is now ready to use.

When clicking on the **Read Data** button, B.U.D.S. will read the electronic modules through CAN bus.

Electronic Modules ("ECU") Updates

NOTICE **Failure to strictly follow a procedure to update a module may permanently damage the module.**

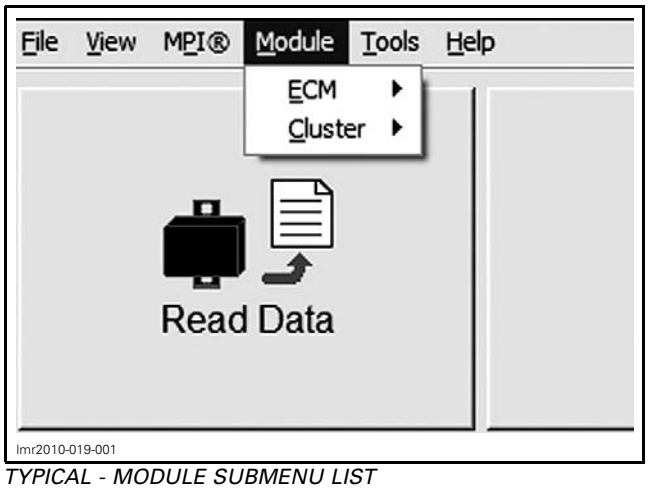
Whenever B.U.D.S. is started, check for an update icon in the B.U.D.S. status bar.

TYPICAL

If the icon is visible, it indicates that a file is available in B.U.D.S. to update at least one of the electronic modules:

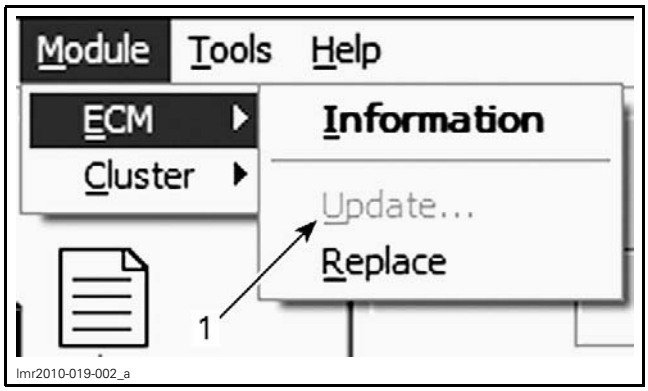
NOTE: If an update file is available on BOSSWeb but the B.U.D.S. software being used is not up to date, the update icon will not appear. Refer to the Service Bulletins to see if there is an update available.

Use the **Module** submenu and check all modules one at a time to see which module(s) can be updated.



TYPICAL - MODULE SUBMENU LIST

1. If the **Update** option is **greyed out**, no update file is available for this module.
2. If the **Update** option is **black**, an update file is available for this module.

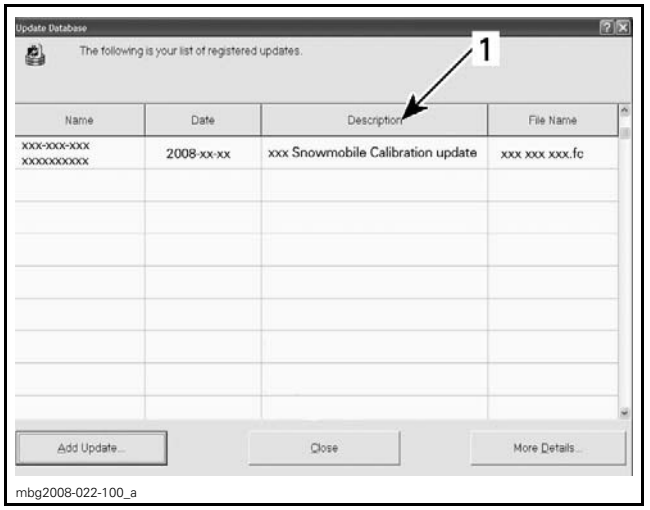


1. Greyed out: No update to perform
Black: Update file available

Before applying an update, log onto BOSSWeb and look in **Service** menu for the **Unit history** to find out if any information or publication related to the vehicle is available. If so, carefully follow the given instructions.

SERVICE, UNIT HISTORY

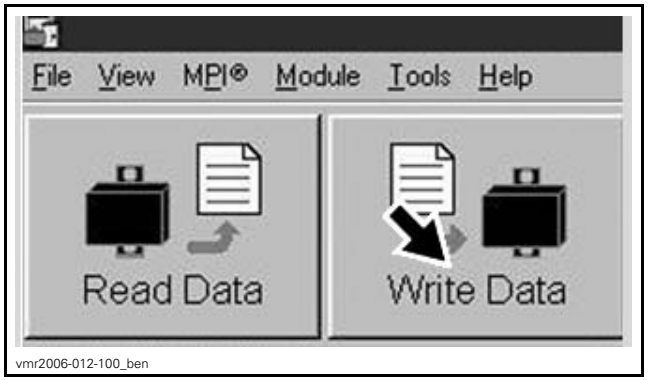
NOTE: When selecting the update menu in B.U.D.S., a dialog box will appear and the update file description may give some clue to finding the vehicle-related information in BOSSWeb.



TYPICAL
1. File description

Writing Changes (Saving) to a Module

1. When making a data or setting change in a module using B.U.D.S., save the new data (or setting) in the module by clicking the **Write Data** button.



NOTE: A message box will confirm a successful operation.

2. After the write data operation, turn the ignition key to the OFF position.

Disconnect MPI connections and store the vehicle diagnostic connector in its protective cap.

TYPICAL
1. Diagnostic connector in its storage cap

NOTICE Failure to secure the diagnostic connector in its protective cap may result in corrosion or other damage to the terminals.

NOTE: There is a 120 Ω resistor in the protective cap to minimize the possibility of communication error.

DIAGNOSTIC SYSTEM AND FAULT CODES

GENERAL

MONITORING SYSTEM

The Engine Management System (EMS) features a monitoring system that self-diagnoses various electrical and electronic components. This mode becomes active when the ignition key is turned ON.

NOTE: Some components require the engine to be running to be monitored (fuel injectors for example).

The monitoring system continuously validates that the components (control modules, sensors and actuators) are not faulty or defective. When a malfunction is detected, the related electronic module(s):

– Sets an active fault code.
– Adapts the proper protection strategy according to the failure.
– Sends out signals to the multifunction gauge to inform the rider of a particular condition.

If a minor fault occurs, the engine and vehicle will continue to operate without noticeable loss of performance.

If a more important fault occurs, engine RPM may be limited. The engine/vehicle will continue to operate with reduced performance.

If a major component of the EMS fails, engine RPM will be limited as well as vehicle speed.

These strategies are used to protect engine/electrical system from damage and to maintain safe operation of the vehicle. In extreme cases, the engine may also be completely shut down.

Messages in Gauge for Problematic Conditions

If an abnormal condition occurs, the gauge will display one of the following messages. It can be combined with a pilot lamp.

MESSAGE	DESCRIPTION
CHECK ENGINE	All active or previously activated faults that require attention. No engine limitation engaged.
LIMP HOME	Critical faults requiring diagnostic as soon as possible. An engine limitation is engaged and/or the engine behavior is modified.
LO BATT VOLT	Low battery voltage detected by ECM.
HIGH BATT VOLT	High battery voltage detected by ECM.
LOW OIL	Low oil pressure detected by the ECM.
D.E.S.S. KEY NOT RECOGNIZED	D.E.S.S. KEY is not recognized by ECM.
HI TEMP	High temperature detected by the ECM.
ECM CRC ERROR	Error message from ECM.
TPS FAULT	TPS (throttle position sensor) fault, generally followed by a Limp Home message.
BRAKE SWITCH FAULT	Brake signal fault.
ECM NOT RECOGNIZED	Message displayed when the gauge is unable to identify the ECM.
CHECK DPS	Check engine pilot light on. Indicates that the DPS (Dynamic Power Steering) does not work properly. See an authorized Can-Am dealer.

MESSAGE	DESCRIPTION
TRANSMISSION SIGNAL FAULT	Gearbox position sensor fault active. "E" is also displayed in the gear display.
PPS FAULT	When one or both sensor of the TAS (throttle accelerator sensor) is/are faulty, erratic or out of range or that the ratio between the two is incorrect, the message will be displayed and the check engine pilot lamp will be lit.
MANUAL LIMP HOME	When the TAS Limp Home (throttle accelerator sensor) is engaged, the message will be displayed.
ACS FAULT	Leak or problem detected in the ACS system.
SUSPENSION PUMP OVERHEAT	ACS compressor overheated. Do not run compressor for more than 2 minutes. Let compressor cool down.

Limp Home Mode

When a major component of the EMS is not operating properly, limp home mode will be set.

Engine RPM will be limited and/or engine behavior and control may be modified depending on the cause of the failure.

This mode allows the rider to return home, which would otherwise not be possible without this advanced system.

LIMP HOME will be displayed in the multifunction gauge and the CHECK ENGINE light symbol will be on in the gauge.

FAULT CODES

Fault Code Categories

A fault code consists of an alphanumeric designator followed by a hexadecimal number of 3 digits. The alphanumeric designator defines the category of the fault code while the hexadecimal number refers to a unique fault.

FAULT CODE CATEGORIES		
ALPHANUMERIC DESIGNATOR	MODULE/ SYSTEM	EXAMPLE OF FAULT CODE
From P0 to P3	Power train and DPS	P0116
From U0 to U3	Communication between module and sensors	U0073

RELATED MODULE AND FAULTS	
MODULE	FAULT CODE CATEGORY
ECM	P and U
DPS	P and U
Cluster	P and U

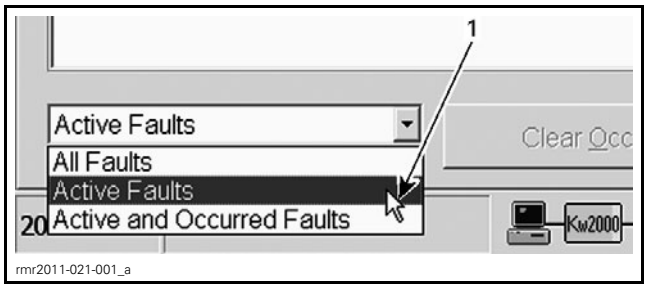
Fault Code States

Fault codes have 3 possible states:

– Active
– Occurred
– Inactive.

Click the **Fault** tab then click on the drop-down list on the LH lower corner.

Choose the fault code state you want to display.



TYPICAL
1. Drop down list

Active Fault Codes

An active fault code is an indication of a fault that is **currently triggered**.

The active fault may or may not compromise normal operation of the system(s). Service action should be taken to correct the problem that caused the fault code.

Once the fault condition(s) of the active fault is no longer present, its state will change to "occurred".

Occurred Fault Codes

An occurred fault code indicates a fault that was active, but **no longer** is.

The occurred fault does not presently affect system or component operation but is retained as a history of the faults that were detected.

The fault may have been generated due to a system or component that was momentarily operating outside normal parameters. Repeated occurred faults of this type should be considered when troubleshooting a problem, and may require that maintenance action be taken.

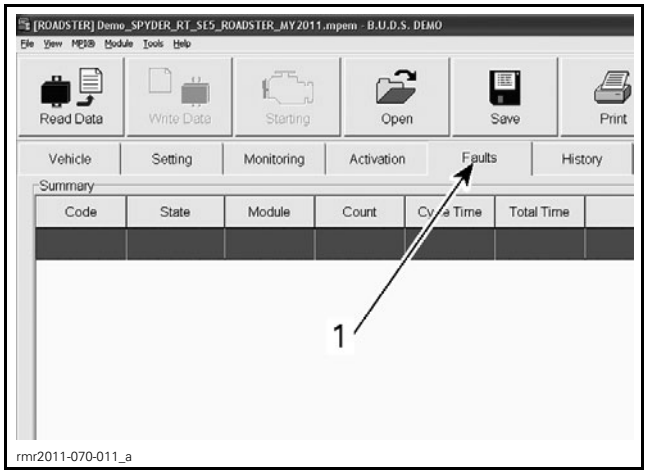
An occurred fault may also be generated when disconnecting and reconnecting a component, replacing a burnt fuse, when the software update of an electronic module has been carried out, or may be due to a momentary high or low voltage.

Inactive Fault Codes

An inactive fault code represents a fault code that is neither active, nor occurred. It is simply part of a list of all possible faults that can be monitored by the ECM and multifunction gauge, which may become active or occurred if the monitoring system detects an applicable fault. These codes can be viewed in B.U.D.S.

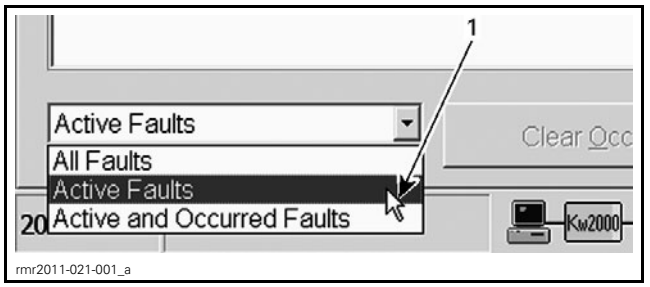
How to Read Fault Codes Using B.U.D.S. Software

1. Connect vehicle to the applicable version of B.U.D.S. software, refer to *COMMUNICATION TOOLS AND B.U.D.S. SOFTWARE* subsection.
2. Click on the **Read Data** button.
3. Select the **Faults** tab.



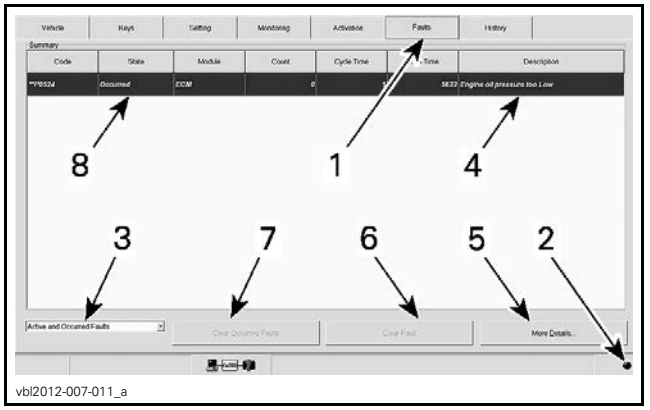
1. Fault tab

4. Click on the drop-down list on the LH lower corner.
5. Choose the fault state to display.



1. Drop down list

FAULT STATE	INFORMATION
All faults	Display all possible faults regardless of state
Active faults	Display only faults matching this state Empty area if there is no active fault
Active and occurred faults	Display only faults that have either state Empty area if there is neither active nor occurred fault



FAULT PAGE
1. **Fault** *tab*
2. *Fault indicator light*
3. *Fault code state drop box*
4. *Fault description*
5. *More Details button*
6. *Clear Fault button*
7. *Clear Occurred Faults button*
8. *Selected fault*

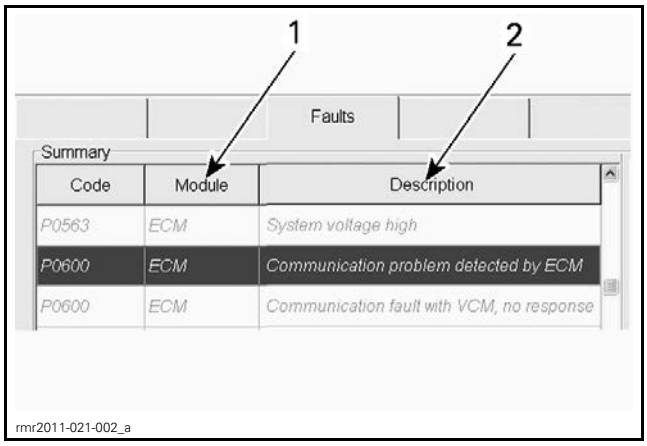
FAULT PAGE DESCRIPTION	
ITEM	INFORMATION
Faults tab	Click tab to display the fault page
Fault indicator light	When flashing, it indicates there is active fault(s)
Fault code state drop box	Click drop box to select the type of faults to display
Fault description	Display specific information related to the fault

FAULT PAGE DESCRIPTION	
ITEM	INFORMATION
More Details button	To display possible causes and service actions related to the selected fault
Clear Occurred Faults button	To clear all occurred faults in related ECU(s)
Selected fault	When a fault is selected, additional information pertaining to that fault will be displayed when clicking the "More details" button. To select a fault, click on the fault with the mouse or use the cursor up or down to scroll to the desired fault

FAULT DESCRIPTION	
COLUMN	INFORMATION
Code	Fault code number. When 2 stars (**) precedes the code, detailed conditions when the fault occurred, can be displayed by clicking the "More details" button
State	Display the fault state (active, occurred, inactive)
Module	Displays the module that reports the fault code. This is the module that detects or has received a message of an anomaly and reports it. List of modules: - Cluster (multifunction gauge) - DPS (dynamic power steering) - ECM (engine control module)
Count	Number of times this fault occurred within the driving cycle. Value: From 0 to 255
Total time	Engine hours when the fault happened. Displayed in hours and minutes format.
Description	Provides a short description of the fault

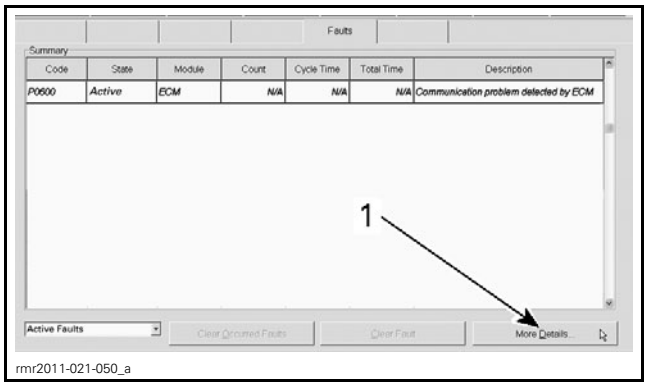
When reading a fault code in B.U.D.S., pay particular attention to which module reports a fault. It is indicated in the **Module** column.

The **Description** column gives a short description of the fault.

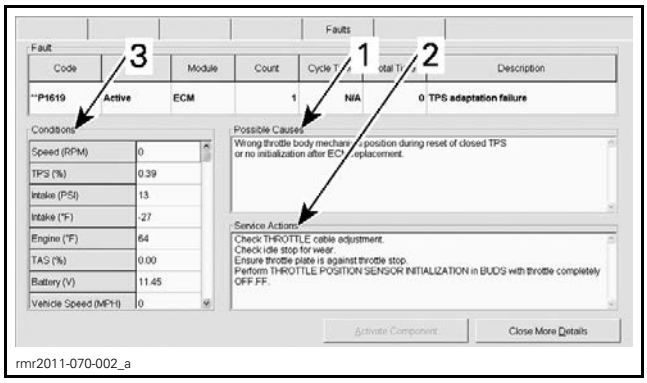


SOME COLUMNS REMOVED FOR CLARITY PURPOSE
1. *Module that reports a fault*
2. *Fault description*

Click on the **More Details** button, on the RH lower corner, to display the "Possible Causes" and the "Service Actions" to step further in the diagnosis.



1. *Click here*



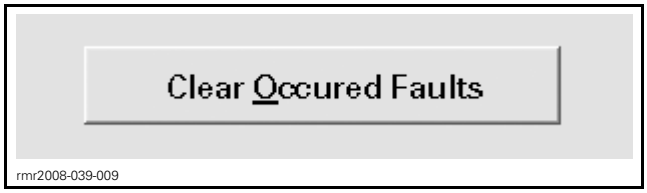
MORE DETAILS PAGE
1. *Possible causes related to the selected fault*
2. *Service actions*
3. *Operating conditions when fault occurred*

MORE DETAILS PAGE DESCRIPTION	
ITEM	INFORMATION
Possible causes	List the possible causes that triggered the fault
Service actions	List the possible actions to perform to solve the fault
Conditions when fault occurred	List the operating conditions of the engine and/or vehicle when the fault was triggered

How to Clear Fault Codes Using B.U.D.S.

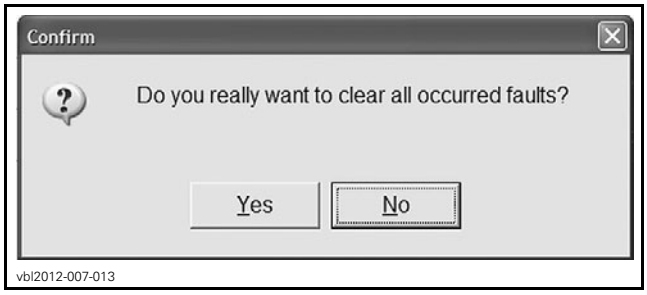
1. Connect vehicle to the latest applicable B.U.D.S. software. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.
2. Click on the **Read Data** button.
3. Click on the **Faults** tab.

The fault(s) (occurred state only) can be cleared by pressing the **Clear Occurred Faults**or **Clear Fault** buttons in B.U.D.S.



FAULTS PAGE TAB, CLEAR OCCURRED FAULTS

4. Click YES on the following message box.



5. Turn ignition OFF and wait until the message disappears.

This will reset the appropriate counter(s) and will also record that the problem has been fixed in the related ECU memory.

NOTE: An active fault code cannot be cleared. In other words, the problem relevant to the fault code must be repaired before the fault can be cleared.

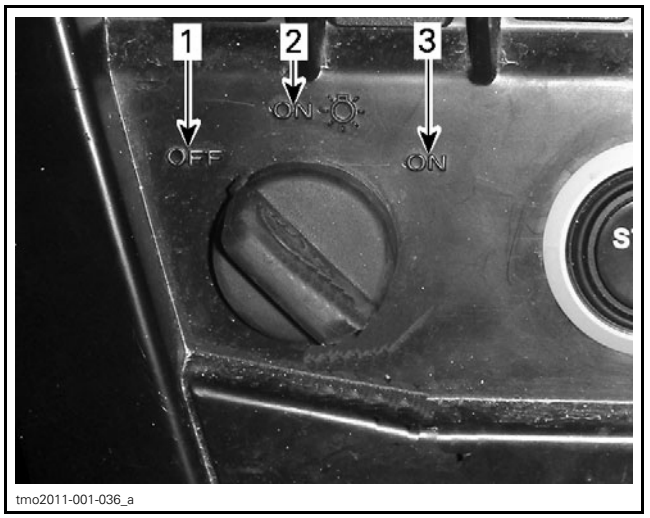
How to Read Fault Codes Using the Multifunction Gauge

NOTE: A fault code must be in an "Active" state to be displayed in the multifunction gauge. B.U.D.S. must be used to read all fault codes states.

Analog/Digital Gauge

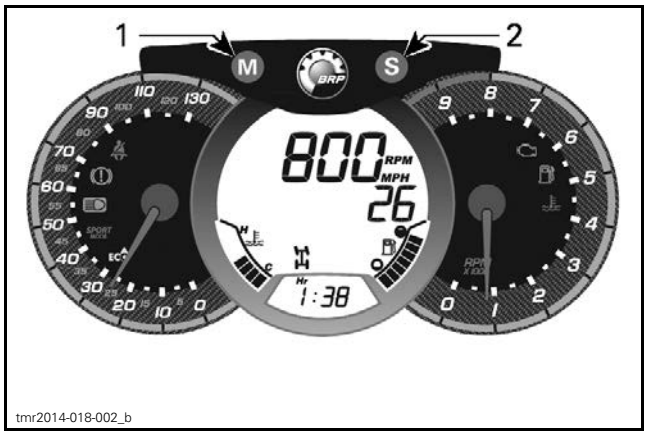
Proceed as follows to view the active fault codes:

1. Turn ignition key to ON **with lights** position.

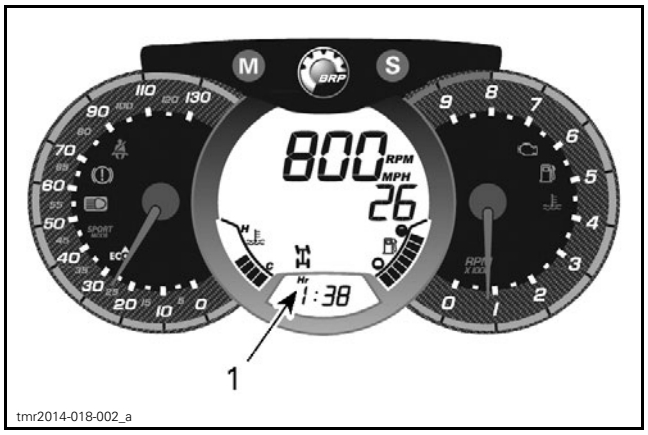


IGNITION SWITCH POSITION
1. *OFF*
2. *ON with lights (turn key to this selection)*
3. *ON*

2. Wait for the multifunction gauge to complete its self test function.
3. Press the S (set) button repeatedly until Hr (hour) is displayed in the secondary digital display.



1. *M (mode) button*
2. *S (set) button (pressed repeatedly to toggle secondary display)*



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1. Toggle this digital display to Hr

4. Press and hold the M (mode) button while quickly toggling the HI - LO beam switch to enter the fault code display function.

NOTE: A minimum of 3 HI - LO toggles must be completed within 2 seconds.

tmo2011-001-507_c

1. Low/High beam headlight switch

If a fault code is active, it will be displayed in the main digital display.

If no fault code is active, a scrolling NO ACTIVE FAULT CODE message will be displayed.

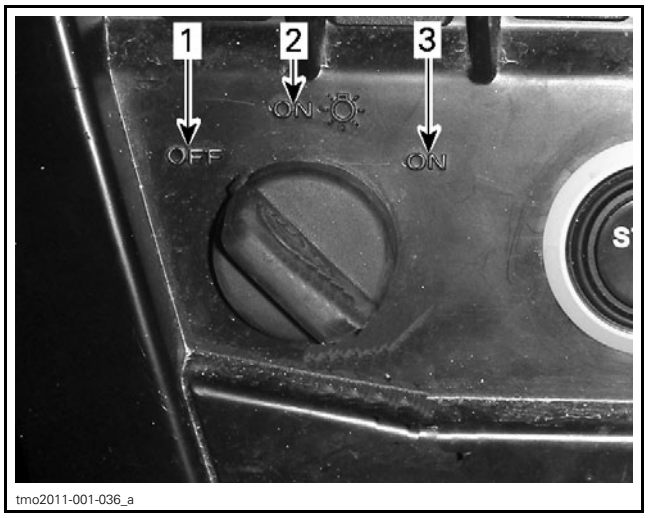
If there are multiple fault codes, the display will cycle through each fault code repeatedly. A maximum of 10 fault codes may be displayed.

If the fault code display function has been interrupted by another message, a fault code(s) may not have been displayed. Repeat the fault code display procedure to view all active fault codes.

To exit the fault code display function, press both the M and S buttons simultaneously.

LCD Gauge

1. Turn ignition key to ON **with lights** position.



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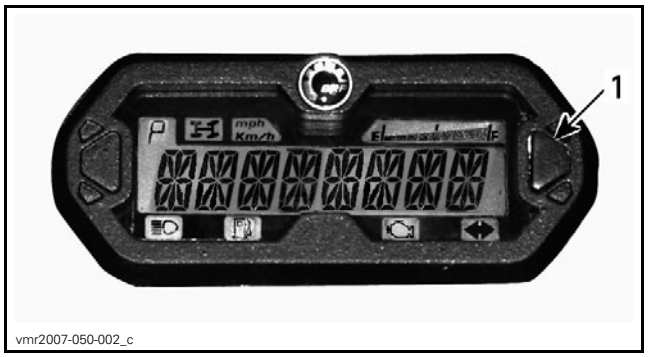
IGNITION SWITCH POSITION
1. OFF
2. ON (with lights)
3. ON

2. Press the selector button on the gauge repeatedly until Engine Hour (EH) is displayed on the gauge.



vmr2007-050-002_c

1. Selector button to toggle indication

vdd2008-001-095

TYPICAL - EH (ENGINE HOUR DISPLAY)

3. Press and HOLD the M button while QUICKLY toggling HI - LO beam switch to enter the fault code display function.

NOTE: A minimum of 3 HI - LO toggles must be completed within 2 seconds.

1. Low/High beam headlight switch to toggle quickly

If no P-Code is active, a "No Active P Codes" scrolling message will be displayed.

If there is an active P-Code, it will be displayed.

If there are multiple fault codes, the display will cycle through each fault code.

Once the last fault code is displayed, the gauge displays END then defaults back to normal operation.

How to Find Fault Code Descriptions

For the latest fault code table, use the **Info Center** submenu in BOSSWeb and enter the following search criteria:

– Enclose the search within quotes " "
– Enter: "2014 ATV and SSV DTC Table".

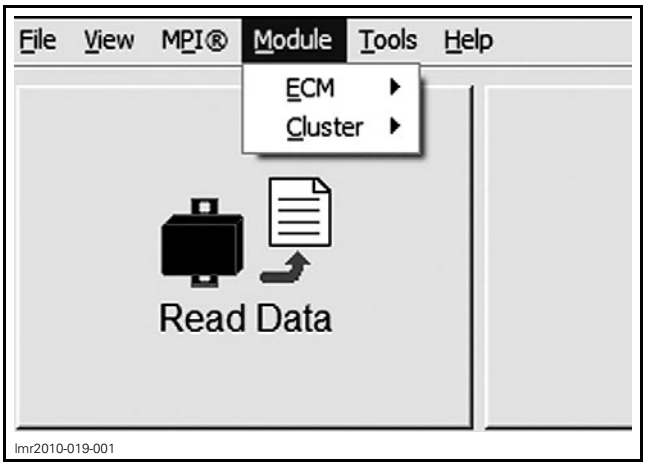
FAULT CODE DIAGNOSTIC

Missing Module

If a module is missing, several fault codes will appear.

To quickly find which module is missing, perform the following:

1. Connect vehicle to the latest applicable B.U.D.S. software. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.
2. Click on the **Read Data** button.
3. Click **Module** in the menu bar.
4. Look at the list of modules.
5. If a module is not visible, then it is not communicating through the CAN bus (controller area network).



TYPICAL - MODULE SUBMENU LIST

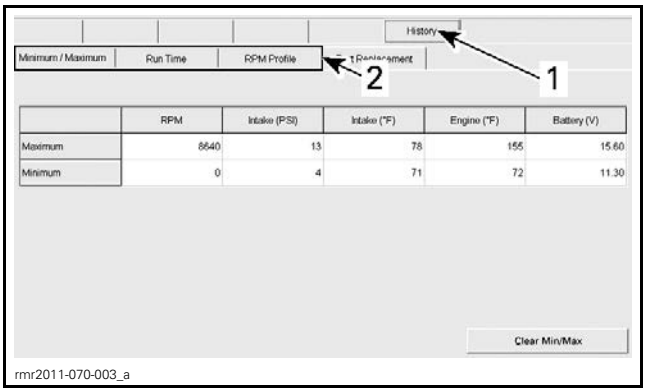
6. Refer to the following table to find the appropriate subsection in this manual to diagnose the missing module.

MISSING MODULE	SECTION TO REFER TO
ECM	*ELECTRONIC FUEL INJECTION (EFI)*
Cluster	*LIGHTS, GAUGE AND ACCESSORIES*
ACS	*AIR CONTROLLED SUSPENSION (ACS)*
DPS	*DYNAMIC POWER STEERING (DPS)*

Diagnostic Tips

To see the last minute of operating conditions, click on the **History** tab in B.U.D.S.

NOTE: The page displays data whatever there is fault code(s) or not.



1. History tab
2. Additional history pages

HISTORY PAGE DESCRIPTION	
ITEM	INFORMATION
Minimum/ Maximum	Display the minimum and maximum values encountered since last clear. Click "Clear Min/Max" to reset the values
Run time	Display the time proportion in what mode the engine was running in
RPM profile	Display the RPM range proportion in which the engine was running in

When a minor fault occurs:

– Turn ignition key OFF.
– Wait 30 seconds.
– Turn ignition key ON.

This should change the fault state from "Active" to "Occurred".

The vehicle should then operate normally.

If a sensor-related fault persists, you may try disconnecting/reconnecting the sensor.

Read the following for a general approach to troubleshoot fault codes (active or occurred).

GENERAL GUIDELINES TO SOLVE FAULT CODES	
CONDITION	ACTION
Troubleshooting vehicle	Use B.U.D.S. to: Read fault codes. Display "Active" faults to see components currently not operating normally. Display "Occurred" faults to troubleshoot intermittent problems. Monitor system(s), sensor(s), switches and actual conditions. Activate component(s) for troubleshooting. Set components (resets etc). Know the last minute of operating conditions by using the "History" page. Know the operating conditions, if available, when a fault code occurred by using the "More details" button in the fault page.
New fault(s) appear after a vehicle maintenance or repair	Check sensor connections or mixed up connections. Before vehicle maintenance: Read the electronic modules with B.U.D.S. Save and print the B.U.D.S. file (keep faults option only). After vehicle maintenance: Read the electronic modules with B.U.D.S. Compare the fault code(s) before and after the maintenance using the printed copy and the current B.U.D.S. reading. Investigate only the newly fault codes. Clear all occurred faults in B.U.D.S.
Sensor "Active" fault	Read the fault description in B.U.D.S. Click on the "More Details" button. Look at the "Conditions" when available. Read the "Possible Causes". Apply the "Service Actions".
Low system voltage on one module. Power problem on sensor(s)	Check related fuse(s) and relay. Check related power and ground wires. Check for common power supply to several sensors/modules (refer to *POWER DISTRIBUTION AND GROUNDS)*. NOTE: Some sensors are supplied by the battery while others are supplied by a module.
Low system voltage on several modules (several communication faults will also appear)	Check battery condition and connections. Check related fuse(s) and relay. Check voltage regulator/rectifier.
High system voltage on several modules	A battery charger has likely been used to substitute the vehicle battery. Clear all occurred faults and check again. Check voltage regulator/rectifier.
When all modules report that a module is missing	Check the module that is reported as missing. Check related fuse(s) and relay. Check related power and ground wires.
When several modules are in fault	Search for a common problem such as a faulty sensor.
CAN buss OFF	When several modules and sensors report that a module is missing. A missing module may be reported as CAN bus off by any other module. Check related CAN wires (continuity, short to ground, short between CAN low and high). Check module pins and wiring terminals. Then, the other modules should stop reporting that module is missing.

GENERAL GUIDELINES TO SOLVE FAULT CODES	
CONDITION	ACTION
Occurred fault(s)	May have been generated due to a system or component that was momentarily operating outside normal parameters.
	May be generated when disconnecting and reconnecting a component, replacing a burnt fuse, or may be due to a momentary high or low voltage.
	Before being "Occurred", a fault has always been "Active" for a certain time, indicating that an unexpected condition or problem has been present during the driving cycle. A frequent momentarily fault or an intermittent fault may never be seen as "Active" in B.U.D.S. while there is still a pending problem. This type of malfunctions can be discovered by looking at the "Occurred" faults and then by evaluating the fault count. As long as a fault is present, it is displayed as "Active".
Fault count (0 - 255)	**Low value:** Suggests handling problems (connections, terminal contact/ shape etc.). **High value:** Suggests a frequent and unsolved problem. The problem should be investigated.
Fault conditions (more details button)	Look for abnormal, excessive values.
Hard to find problems	When the basic troubleshooting has been done and the fault code(s) persists, often the problem is related to the wiring harness, connections or electromechanical components. Short to ground, to battery or between wires. Wire splices, chafing, terminal problems (pulled out, bent, out of shape, corroded etc.). Bad contacts in switch or relay.

ECUs share information and their systems may interact with each other. Certain faults may cause more than one ECU to set a fault code or indication (pilot lamp or message) as the failure of some components may affect the operation of several systems.

SPECIFIC FAULTS

TPS Fault

A TPS fault may be considered to be a major fault as the TPS provides the most important feedback (2 signals) to the ECM on throttle position.

A TPS fault affects engine control as the throttle plate is moved by the ETA (electric throttle actuator) which, is controlled by the ECM (see *INTELLIGENT THROTTLE CONTROL (ITC)* subsection).

A TPS fault is generally followed by LIMP HOME mode and the engine is brought back to idle, or may be completely shutdown.

Low Battery Voltage Fault

If the battery voltage is low when the engine is running at idle RPM, the ECM will command an increase in RPM to a set value, thereby increasing the charging system output in order to prevent the battery from being discharged, and to allow normal system operation.

TAS Fault

If one TAS (throttle accelerator sensor) signal is missing, LIMP HOME MODE will be activated and the check engine light will come ON. Pressing and holding the OVERRIDE button will allow normal control of the accelerator pedal.

If both sensors in the TAS are at fault, a TAS FAULT message will appear in the gauge, the check engine light will come ON and the engine will run at idle. The accelerator pedal will not have any affect on engine RPM. However, the vehicle may be driven in LIMP HOME MODE by pressing the OVERRIDE button.

When limp home mode is engaged using the override button, a MANUAL LIMP HOME message will appear in the gauge. The OVERRIDE button can then be used as the accelerator, vehicle speed is controlled by pressing and/or releasing the button.

BRAKE ACTIVATION Fault Message in Gauge

If a brake signal is received continuously for 15 seconds above 5 km/h (3 MPH), a BRAKE message will be displayed in the gauge.

DIAGNOSTIC SYSTEM AND FAULT CODES

FAULT CODE TABLE

P-CODE	MODULE	DESCRIPTION	CAUSE	ACTION
C2109	SCM	Release Valve Activation delay Exceed	If pressure threshold not reach after calibrated time delay (When release valve activated)	Open SCM Activation page in BUDS, performe a combined test in System self test sequence section
C210A	SCM	Suspension Valve Activation time Exceed	If the suspension valve maximum allowed activation time in a specific time window is exceeded for (counter > CntExceed).	Open SCM Activation page in BUDS, performe a combined test in System self test sequence section
C210B	SCM	Outlet Valve Activation time Exceed	If the suspension valve maximum allowed activation time in a specific time window is exceeded for (counter > CntExceed).	Open SCM Activation page in BUDS, performe a combined test in System self test sequence section
C2111	SCM	Pressure sensor signal Invalid	Sensor input voltage < 0.5V for hardcoded debounce time	Open SCM Activation page in BUDS, performe a pressure sensor test in System self test sequence section
C21D0	SCM	Pressure threshold not Reach outlet adjustment	If pressure threshold not reach after calibrated time delay (threshold change in function of compressor temperature) (When outlet pressure adjustment activated)	Open SCM Activation page in BUDS, performe a combined test in System self test sequence section
C21D2	SCM	Compressor over temperature condition	If over temp threshold reach for time delay	Open SCM Activation page in BUDS, performe a pressure test in System self test sequence section
C21D3	SCM	Over pressure detected	If pressure > 350PSI	Open SCM Activation page in BUDS, performe a pressure sensor test in System self test sequence section
C21E0	SCM	Pressure threshold not reach Rear suspension adjustment	If pressure threshold not reach after calibrated time delay (threshold change in function of compressor temperature) (When Rear suspension adjustment activated)	Open SCM Activation page in BUDS, performe a combined test in System self test sequence section

C21E1	SCM	Air Leak Plausibility check Rear suspension	If maximum number of readjustment for rear suspension is reach	Open SCM Activation page in BUDS, performe a combined test in System self test sequence section
C21F0	SCM	Pressure threshold not reach Front suspension adjustment	If pressure threshold not reach after calibrated time delay (threshold change in function of compressor temperature) (When front suspension adjustment activated)	Open SCM Activation page in BUDS, performe a combined test in System self test sequence section
C21F3	SCM	Air Leak Plausibility check Front Right suspension	If maximum number of readjustment for front right suspension is reach	Open SCM Activation page in BUDS, performe a combined test in System self test sequence section
C21F4	SCM	Air Leak Plausibility check Front left suspension	If maximum number of readjustment for front left suspension is reach	Open SCM Activation page in BUDS, performe a combined test in System self test sequence section
P0030	ECM	Internal fault path number for Signal error : power stage of heater of Sensor upstream catalyst	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S1. Measure voltage between harness connector HO2S1-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S1 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S1-D and ground (expected value > open). Measure resistance from harness connector: HO2S1-D to ECMB-L2 (expected value: < 2 ohms).
P0031	ECM	Internal fault path number for Min error : power stage of heater of Sensor upstream catalyst	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S1. Measure voltage between harness connector HO2S1-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S1 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S1-D and ground (expected value > open). Measure resistance from harness connector: HO2S1-D to ECMB-L2 (expected value: < 2 ohms).

P0032	ECM	Internal fault path number for Max error: power stage of heater of Sensor upstream catalyst	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S1. Measure voltage between harness connector HO2S1-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S1 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S1-D and ground (expected value > open). Measure resistance from harness connector: HO2S1-D to ECMB-L2 (expected value: < 2 ohms).
P0037	ECM	Internal fault path number for Min error : power stage of heater of Sensor upstream catalyst, LSU 2	Blown fuse, damaged or disconnected O2 sensor, damaged or disconnected circuit wires, damaged ECM output pins.	Check fuse. Disconnect HO2S2. Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).
P0038	ECM	Internal fault path number for Max error: power stage of heater of Sensor upstream catalyst, LSU 2	Blown fuse, damaged or disconnected O2 sensor, damaged or disconnected circuit wires, damaged ECM output pins.	Check fuse. Disconnect HO2S2. Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).

P0106	ECM	Manifold Absolute Pressure circuit range/performance	Damaged sensor, damaged circuit wires, damaged connector or damaged ECM pins, ECM voltage supply	Make sure sensor connector is fully inserted. Measure voltage between harness connector pins 1 and 4 . (Expected value: 4.8 to 5.1 volts) Measure resistance from connector: ECMA-H3 to MAPTS-2 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-G4 to MAPTS-3 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-H2 to MAPTS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-B4 to MAPTS-4 (Expected value: < 2 ohms)
P0107	ECM	Manifold Air Pressure Sensor voltage too Low	Damaged sensor, damaged circuit wires, damaged connector or damaged ECM pins, ECM voltage supply Low	Make sure sensor connector is fully inserted. Measure voltage between harness connector pins 1 and 4 . (Expected value: 4.8 to 5.1 volts) Measure resistance from connector: ECMA-H3 to MAPTS-2 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-G4 to MAPTS-3 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-H2 to MAPTS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-B4 to MAPTS-4 (Expected value: < 2 ohms)

P0108	ECM	Manifold Air Pressure Sensor voltage too High	Damaged sensor, wires shorted to battery +, ECM voltage supply too High.	Make sure sensor connector is fully inserted. Measure voltage between harness connector pins 1 and 4 . (Expected value: 4.8 to 5.1 volts) Measure resistance from connector: ECMA-H3 to MAPTS-2 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-G4 to MAPTS-3 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-H2 to MAPTS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-B4 to MAPTS-4 (Expected value: < 2 ohms)
P0112	ECM	Intake Air Temperature Sensor 1 circuit Low	Damaged sensor, damaged circuit wires, damaged connector or damaged ECM pins, ECM voltage supply Low	Make sure sensor connector is fully inserted. Measure voltage between harness connector pins 1 and 4 . (Expected value: 4.8 to 5.1 volts) Measure resistance from connector: ECMA-H4 to ATS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-J4 to ATS-2 (Expected value: < 2 ohms)
P0113	ECM	Intake Air Temperature Sensor 1 circuit High	Damaged sensor, wires shorted to battery +, ECM voltage supply too High.	Make sure sensor connector is fully inserted. Measure voltage between harness connector pins 1 and 4 . (Expected value: 4.8 to 5.1 volts) Measure resistance from connector: ECMA-H4 to ATS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-J4 to ATS-2 (Expected value: < 2 ohms)

P0116	ECM	Engine Coolant Temperature Sensor 1 circuit range/performance	Damaged sensor, wires shorted to battery +, ECM voltage supply.	Disconnect the sensor and check for a change in the fault code. If the fault code stays the same, look for a short circuit on the harness. If the fault code is different, replace the sensor. Measure resistance from connector: ECMA-A1 to CTS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-J2 to CTS-2 (Expected value: < 2 ohms) Measure CTS resistance value (Expected value: 2280 to 2736 ohms at 19 to 21°C (66 to 70°F))
P0117	ECM	Engine Coolant Temperature Sensor 1 circuit Low	Engine temperature sensor or circuit wires shorted to ground.	Disconnect the sensor and check for a change in the fault code. If the fault code stays the same, look for a short circuit on the harness. If the fault code is different, replace the sensor. Measure resistance from connector: ECMA-A1 to CTS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-J2 to CTS-2 (Expected value: < 2 ohms) Measure CTS resistance value (Expected value: 2280 to 2736 ohms at 19 to 21°C (66 to 70°F))
P0118	ECM	Engine Coolant Temperature Sensor 1 circuit High	Disconnected sensor, or sensor resistance too High.	Check for disconnected engine temperature sensor. Measure resistance from connector: ECMA-A1 to CTS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-J2 to CTS-2 (Expected value: < 2 ohms) Measure CTS resistance value (Expected value: 2280 to 2736 ohms at 19 to 21°C (66 to 70°F))
P0122	ECM	First Throttle Accelerator Sensor (TAS) Short circuit to GND	Damaged circuit wires, damaged sensor or damaged ECM pins.	Make sure sensor connector is fully inserted. Measure resistance from connector: ECMB-K1 to TAS-C (Expected value: < 2 ohms) Measure resistance from connector: ECMB-K3 to TAS-B (Expected value: < 2 ohms) Measure resistance from connector: ECMB-J3 to TAS-D (Expected value: < 2 ohms)

P0123	ECM	First Throttle Accelerator Sensor (TAS) shorted to battery +	Damaged circuit wires, damaged sensor or damaged ECM pins.	Make sure sensor connector is fully inserted. Measure resistance from connector: ECMB-K1 to TAS-C (Expected value: < 2 ohms) Measure resistance from connector: ECMB-K3 to TAS-B (Expected value: < 2 ohms) Measure resistance from connector: ECMB-J3 to TAS-D (Expected value: < 2 ohms)
P0127	ECM	Intake Air Temperature too High	Air Temperature in intake High	
P0130	ECM	ECU int. fault path no.: electrical diagnosis for lambda sensor upstream catalyst. npl-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S1. Measure voltage between harness connector HO2S1-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S1 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S1-D and ground (expected value > open). Measure resistance from harness connector: HO2S1-D to ECMB-L2 (expected value: < 2 ohms).
P0131	ECM	ECU int. fault path no.: electrical diagnosis for lambda sensor upstream cat. min-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S1. Measure voltage between harness connector HO2S1-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S1 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S1-D and ground (expected value > open). Measure resistance from harness connector: HO2S1-D to ECMB-L2 (expected value: < 2 ohms).

P0132	ECM	ECU int. fault path no.: electrical diagnosis for lambda sensor upstream cat. max-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S1. Measure voltage between harness connector HO2S1-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S1 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S1-D and ground (expected value > open). Measure resistance from harness connector: HO2S1-D to ECMB-L2 (expected value: < 2 ohms).
P0133	ECM	ECU int. fault path no.: diagnosis lambda sensor upstream catalyst	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S1. Measure voltage between harness connector HO2S1-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S1 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S1-D and ground (expected value > open). Measure resistance from harness connector: HO2S1-D to ECMB-L2 (expected value: < 2 ohms).
P0135	ECM	ECU int. fault path no.: lambda sensor heating upstream cat.	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S1. Measure voltage between harness connector HO2S1-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S1 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S1-D and ground (expected value > open). Measure resistance from harness connector: HO2S1-D to ECMB-L2 (expected value: < 2 ohms).

P0136	ECM	ECU int. fault path no.: electrical diagnosis for second lambda sensor upstream cat. npl-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S2. Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).
P0137	ECM	ECU int. fault path no.: electrical diagnosis for second lambda sensor upstream cat. min-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S2. Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).
P0138	ECM	ECU int. fault path no.: electrical diagnosis for second lambda sensor upstream cat. max-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S2. Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).

P0139	ECM	ECU int. fault path no.: diagnosis lambda sensor upstream catalyst (exhaust bank2)	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S2. Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).
P0141	ECM	ECU int. fault path no.: lambda sensor heating upstream cat.	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S2. Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).
P0201	ECM	Power stage sig error injector 2	ECM injector power stage error	Open ECM ACTIVATION page in BUDS. Activate injector and check if injector is reacting as expected
P0202	ECM	Power stage sig error injector 1	ECM injector power stage error	Open ECM ACTIVATION page in BUDS. Activate injector and check if injector is reacting as expected
P0217	ECM	Engine Coolant over temperature condition	Coolant fluid temperature too high	Check for coolant fluid leak and coolant fluid level Check radiator condition Check for other fault, Check thermostat

P0222	ECM	2nd Throttle Accelerator Sensor (TAS) shorted to GND	Damaged circuit wires, damaged sensor, or damaged ECM pins.	Make sure sensor connector is fully inserted. Measure resistance from connector: ECMB-E1 to TAS-A (Expected value: < 2 ohms) Measure resistance from connector: ECMB-B3 to TAS-F (Expected value: < 2 ohms) Measure resistance from connector: ECMB-A3 to TAS-E (Expected value: < 2 ohms)
P0223	ECM	2nd Throttle Accelerator Sensor (TAS) shorted to battery +	Damaged circuit wires, damaged sensor, or damaged ECM pins.	Make sure sensor connector is fully inserted. Measure resistance from connector: ECMB-E1 to TAS-A (Expected value: < 2 ohms) Measure resistance from connector: ECMB-B3 to TAS-F (Expected value: < 2 ohms) Measure resistance from connector: ECMB-A3 to TAS-E (Expected value: < 2 ohms)
P0231	ECM	Fuel Pump circuit shorted to ground, or open circuit	Blown fuse, damaged or disconnected fuel pump, damaged circuit wires, damaged connectors or damaged ECM output pins.	Check fuse Measure voltage between harness connector FP-B and ground (Expected value: 11 to 13 volts) Measure resistance on the fuel pump connector between terminals B and C (Expected value: < 2 ohms) Measure resistance from harness connector: ECMB-M1 to FP-C (Expected value: < 2 ohms) Measure voltage between harness connector FP-C and ground (Expected value: 0 volts)
P0232	ECM	Fuel Pump circuit shorted to battery +	Damaged fuel pump, damaged circuit wires, damaged connectors or damaged ECM output pins.	Check fuse Measure voltage between harness connector FP-B and ground (Expected value: 11 to 13 volts) Measure resistance on the fuel pump connector between terminals B and C (Expected value: < 2 ohms) Measure resistance from harness connector: ECMB-M1 to FP-C (Expected value: < 2 ohms) Measure voltage between harness connector FP-C and ground (Expected value: 0 volts)

P0261	ECM	Cylinder 1 injector open circuit or shorted to ground	Blown fuse, damaged or disconnected injector, damaged or disconnected circuit wires, damaged ECM output pins.	Check fuse Disconnect injector 1 Measure resistance between injector pin 1 and 2 (Expected value = 14 to15 ohms). Measure resistance from harness connector: ECMA-J1 to INJ1-1 (Expected value: < 2 ohms) Measure voltage between harness connector INJ1-2 and ground. (Expected value: 11 to 13 volts) Check if HIC connector is connecting the engine harness to the vehicle harness.
P0262	ECM	Cylinder 1 injector shorted to battery +	Damaged injector, damaged circuit wires, damaged connector or damaged ECM output pins.	Disconnect injector 1 Measure resistance between injector pin 1 and 2 (Expected value = 14 to15 ohms). Measure resistance from harness connector: INJ1-1 to INJ1-2 (Expected value: > OPEN) Measure voltage between harness connector ECMA-J1 and ground. (Expected value: 0 volts) Check if HIC connector is connecting the engine harness to the vehicle harness.
P0264	ECM	Cylinder 2 injector open circuit or shorted to ground	Blown fuse, damaged or disconnected injector, damaged or disconnected circuit wires, damaged ECM output pins.	Check fuse Disconnect injector 2 Measure resistance between injector pin 1 and 2 (Expected value = 14 to15 ohms). Measure resistance from harness connector: ECMA-K1 to INJ2-1 (Expected value: < 2 ohms) Measure voltage between harness connector INJ2-2 and ground. (Expected value: 11 to 13 volts) Check if HIC connector is connecting the engine harness to the vehicle harness.

P0265	ECM	Cylinder 2 injector shorted to battery +	Damaged injector, damaged circuit wires, damaged connector or damaged ECM output pins.	Disconnect injector 2 Measure resistance between injector pin 1 and 2 (Expected value = 14 to15 ohms). Measure resistance from harness connector: INJ2-1 to INJ2-2 (Expected value: > OPEN) Measure voltage between harness connector ECMA-K1 and ground. (Expected value: 0 volts) Check if HIC connector is connecting the engine harness to the vehicle harness.
P0324	ECM	Diagnostic Fault Code for min error of knock sensor	Damaged knock sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Make sure sensor connector is fully inserted and check knock system.
P032A	ECM	Diagnostic Fault Code for min error of knock sensor	Damaged knock sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Make sure sensor connector is fully inserted and check knock system.
P0335	ECM	Crankshaft Position Sensor	Damaged CPS, damaged circuit wires, damaged connector or damaged ECM output pins.	Make sure sensor connector is fully inserted. Measure resistance from connector: ECMA-H1 to CPS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-K2 to CPS-2 (Expected value: < 2 ohms)
P0359	ECM	Ignition coil	Damaged ignition coil, damaged circuit wires, damaged connector or damaged ECM output pins.	Open the ECM Activation page in BUDS Perform an ignition coil activation and check if ignition coil is reacting as expected Check fuse & HIC connector Measure resistance from harness connector: ECMA-M1 to BA-1 (Expected value: < 2 ohms) Measure voltage between harness connector BA-2 and ground. (Expected value: 11 to 13 volts) Check connector HIC that connects to engine harness to the vehicle harness. Refer to the service manual for detailed ignition coil testing procedure.

P0360	ECM	Ignition coil	Damaged ignition coil, damaged circuit wires, damaged connector or damaged ECM output pins.	Open the ECM Activation page in BUDS Perform an ignition coil activation and check if ignition coil is reacting as expected Check fuse & HIC connector Measure resistance from harness connector: ECMA-M2 to BA-3 (Expected value: < 2 ohms) Measure voltage between harness connector BA-2 and ground. (Expected value: 11 to 13 volts) Check connector HIC that connects to engine harness to the vehicle harness. Refer to the service manual for detailed ignition coil testing procedure.
P0361	ECM	Ignition coil range/performance	Damaged ignition coil, damaged circuit wires, damaged connector or damaged ECM output pins.	Open the ECM Activation page in BUDS Perform an ignition coil activation and check if ignition coil is reacting as expected Check fuse & HIC connector Measure resistance from harness connector: ECMA-M1 to BA-1 (Expected value: < 2 ohms) Measure voltage between harness connector BA-2 and ground. (Expected value: 11 to 13 volts) Check connector HIC that connects to engine harness to the vehicle harness. Refer to the service manual for detailed ignition coil testing procedure.

P0362	ECM	Ignition coil range/performance	Damaged ignition coil, damaged circuit wires, damaged connector or damaged ECM output pins.	Open the ECM Activation page in BUDS Perform an ignition coil activation and check if ignition coil is reacting as expected Check fuse & HIC connector Measure resistance from harness connector: ECMA-M2 to BA-3 (Expected value: < 2 ohms) Measure voltage between harness connector BA-2 and ground. (Expected value: 11 to 13 volts) Check connector HIC that connects to engine harness to the vehicle harness. Refer to the service manual for detailed ignition coil testing procedure.
P0461	CLUSTER	Fuel sender range performance	Damaged sender, damaged circuit wires, damaged connector or damaged Cluster pins	Measure resistance between FP-1 and CL-21 (Expected value < 2 ohms). Measure resistance between FP-2 and CL-4 (Expected value < 2 ohms). Measure resistance between FP-1 and FP-2 (Expected value = 80 to 300 ohms).
P0480	ECM	Radiator cooling fan relay	Blown fuse, damaged or disconnected relay, damaged circuit wires or connectors, damaged ECM output pins, damaged Relay.	Check fuse Disconnect relay. Measure resistance between terminals 85 and 86 on relay. (Expected value: 70 to 90 Ohms) Measure resistance between harness connector PF-1E and ground. (Expected value > OPEN). Measure resistance from harness connector: ECMB-J4 to PF-1E (Expected value: < 2 ohms)
P0500	DPS	Invalid or missing vehicle speed	No vehicle speed available & Vehicle is in (H or L Gear) with Engine RPM over 4000RPM. Damaged Vehicle Speed sensor circuit, Damaged sensor, Wrong mounting position of speed sensor.	Check if vehicle speed is available in Monitoring page in BUDS. Check fuse Measure voltage between harness connector CV-A and ground. (Expected value: 11 to 13 volts) Measure resistance from connector: A-E1 to CV-B (Expected value: < 5 ohms) on SSV

P0501	ECM	Vehicle speed not plausible	Vehicle speed correlation check failed	Check if vehicle speed is available in Monitoring page in BUDS. Check fuse Measure voltage between harness connector CV-A and ground. (Expected value: 11 to 13 volts) Measure resistance from connector: ECMA-E1 to VC-B (Expected value: < 2 ohms) Measure resistance from connector: ECMA-D4 to CTS-C (Expected value: < 2 ohms)
P0504	ECM	Brake signal not plausible	Brake signal correlation check failed	Open the ECM Monitoring page in BUDS. Check fuse Press on brake pedal. Ensure that brake switch light comes on ECM Monitoring page
P0512	ECM	Starter control circuit	Damaged or disconnected relay, damaged circuit wires, damaged connectors or damaged ECM output pins.	Measure voltage between harness connector SS1 and ground (Expected value: 11 to 13 volts) Measure resistance from connector: ECMB-L4 to SS2 (Expected value: < 2 ohms)
P0513	ECM	Invalid Access Key Detected	A non stored access key was detected when key switch was turned to ON.	Use a stored access key to turn key switch. If no stored access keys are available program one and try again
P0520	ECM	Engine oil pressure sensor circuit malfunction	Damaged switch, damaged circuit wires, damaged connector, damaged ECM pins.	Measure resistance between harness connector EOP and ground When engine stopped. (Expected value < 2 ohms) Measure resistance between harness connector EOP and ground When engine running. (Expected value = open) Measure resistance from harness connector: EOP to ECMA-E3 (Expected value: < 2 ohms) Check if HIC connector is properly connected (engine harness to the vehicle harness).

P0523	ECM	Engine oil pressure sensor sticking	Damaged switch, damaged circuit wires, damaged connector, damaged ECM pins.	Measure resistance between harness connector EOP and ground When engine stopped. (Expected value < 2 ohms) Measure resistance between harness connector EOP and ground When engine running. (Expected value = open) Measure resistance from harness connector: EOP to ECMA-E3 (Expected value: < 2 ohms) Check if HIC connector is properly connected (engine harness to the vehicle harness).
P0524	ECM	Engine oil pressure too Low	Damaged switch, damaged circuit wires, damaged connector, damaged ECM pins.	Measure resistance between harness connector EOP and ground When engine stopped. (Expected value < 2 ohms) Measure resistance between harness connector EOP and ground When engine running. (Expected value = open) Measure resistance from harness connector: EOP to ECMA-E3 (Expected value: < 2 ohms) Check if HIC connector is properly connected (engine harness to the vehicle harness)
P0551	DPS	TORQUE_SENSOR_OPEN	Damaged DPS	External troubleshooting is not possible Replace the DPS.
P0552	DPS	TORQUE_SENSOR_SHORT_GND	Damaged DPS	External troubleshooting is not possible Replace the DPS.
P0553	DPS	TORQUE_SENSOR_SHORT_5V	Damaged DPS	External troubleshooting is not possible Replace the DPS.
P0560	ECM	Non-plausibility error on system voltage	Battery failure, voltage regulator failure, damaged circuit wires or connection, damaged magneto generator. An external battery charger may have been used.	Measure battery voltage with engine stopped. (Expected value: 11 to 13 volts) Measure battery voltage with engine running. (Expected value: 13 to 14.7 volts) Check connections on voltage regulator. Check ground and positive connections on battery. Check ground on vehicle frame

P0562	ECM	System voltage low	Blown fuse FC, battery failure, voltage regulator failure, damaged circuit wires or connection, damaged magneto generator. An external battery charger may have been used.	Measure battery voltage with engine stopped. (Expected value: 11 to 13 volts) Measure battery voltage with engine running. (Expected value: 13 to 14.7 volts) Check connections on voltage regulator. Check ground and positive connections on battery. Check ground on vehicle frame
P0562	DPS	System voltage low	Blown fuse, battery low (damaged magneto/regulator), damaged circuit wires or connection	Check the two DPS fuses Validate that all the DPS connectors are secured Measure voltage between harness connector DPS2-A&B and ground. (Expected value = 11 to 13 volts) Measure battery voltage with engine stopped. (Expected value: 11 to 13 volts) Check ground and positive connections on battery.
P0563	ECM	System voltage high	Damaged regulator. An external battery charger may have been used.	Measure battery voltage with engine stopped. (Expected value: 11 to 13 volts) Measure battery voltage with engine running. (Expected value: 13 to 14.7 volts) Check connections on voltage regulator. Check ground and positive connections on battery. Check ground on vehicle frame
P0563	DPS	system voltage high	Rectifier failure, damaged circuit wires or connection.	Measure battery voltage with engine stopped. (Expected value: 11 to 13 volts) Measure battery voltage with engine Running at 3500RPM. (Expected value: 13 to 14.7 volts) Check connections on voltage regulator. Check ground and positive connections on battery.
P0601	SCM	SCM calibration fault	Calibration Checksum err	Update SCM
P0601	DPS	CALIBRATION FAULT	DPS not calibrated or damage DPS	Try updating the DPS
P0605	SCM	EEPROM COMMUNICATION FAULT	Last minute memory or last modes memory check	External troubleshooting is not possible Check for communication fault using BUDS

P0606	ECM	Control Module Processor	Faulty calibration Faulty programming Damaged ECM	Try updating the ECM calibration If the problem persists, reflash ECM If the problem persists, replace the ECM.
P060D	ECM	Throttle Accelerator Sensor (TAS) synchronistic error between sensor 1 and 2	Throttle Accelerator Sensors (TAS) plausibility check error	Make sure sensor connector is fully inserted. Measure resistance from connector: ECMB-K1 to TAS-C (Expected value: < 2 ohms) Measure resistance from connector: ECMB-K3 to TAS-B (Expected value: < 2 ohms) Measure resistance from connector: ECMB-E1 to TAS-A (Expected value: < 2 ohms) Measure resistance from connector: ECMB-J3 to TAS-D (Expected value: < 2 ohms) Measure resistance from connector: ECMB-B3 to TAS-F (Expected value: < 2 ohms) Measure resistance from connector: ECMB-A3 to TAS-E (Expected value: < 2 ohms)
P060E	ECM	Throttle position performance	TPS plausibility check error	Measure resistance from harness connector: TPS-1 to ECMA-F3 (Expected value: < 2 ohms) Measure resistance from harness connector: TPS-2 to ECMA-K4 (Expected value: < 2 ohms) Measure resistance from harness connector: TPS-4 to ECMA-K3 (Expected value: < 2 ohms) Measure resistance from harness connector: TPS-6 to ECMA-A2 (Expected value: < 2 ohms)
P0610	ECM	Variant Coding error	Faulty variant coding Faulty programming Wrong ECM after replacement	Try updating the ECM variant or calibration If the problem persists, reflash ECM If the problem persists, replace ECM.
P062F	ECM	Internal control module EEPROM error	Faulty calibration or variant Faulty programming Damaged ECM	Try updating the ECM variant or calibration If the problem persists, reflash ECM If the problem persists, replace ECM.
P0636	DPS	MOTOR LOW CURRENT FAULT	Internal error or damaged DPS	External troubleshooting is not possible Replace the DPS.

P0637	DPS	MOTOR HIGH CURRENT FAULT	Internal error or damaged DPS	External troubleshooting is not possible Replace the DPS.
P0658	DPS	PHASE A_LOW	DPS motor supply Damaged DPS	External troubleshooting is not possible Replace the DPS.
P0659	DPS	PHASE A_HIGH	DPS motor supply Damaged DPS	External troubleshooting is not possible Replace the DPS.
P0666	DPS	HIGH TEMPERATURE	High temperature of the DPS. Extreme usage of the unit.	Let the unit cool down.
P0685	ECM	Accessory relay circuit	Blown fuse, damaged or disconnected relay, damaged circuit wires, damaged connectors or damaged ECM output pins	Check fuse Disconnect Accessory relay and Lights relay & turn key switch (on w/lights) Measure voltage between harness connector PF1-10E and ground. (Expected value: 11 to 13 volts) Measure voltage between harness connector PF1-8D and ground. (Expected value: 11 to 13 volts) Measure resistance from harness connector: ECMB-G1 to PF1-12D (Expected value: < 2 ohms) Measure resistance from harness connector: ECMB-G1 to PF1-7C (Expected value: < 2 ohms) Measure resistance between terminals 85 and 86 on the 2 relays. (Expected value: 70 to 90 ohms)

P0686	ECM	Accessory relay circuit shorted to ground or open circuit	Blown fuse, damaged or disconnected relay, damaged circuit wires, damaged connectors or damaged ECM output pins	Check fuse Disconnect Accessory relay and Lights relay & turn key switch (on w/lights) Measure voltage between harness connector PF1-10E and ground. (Expected value: 11 to 13 volts) Measure voltage between harness connector PF1-8D and ground. (Expected value: 11 to 13 volts) Measure resistance from harness connector: ECMB-G1 to PF1-12D (Expected value: < 2 ohms) Measure resistance from harness connector: ECMB-G1 to PF1-7C (Expected value: < 2 ohms) Measure resistance between terminals 85 and 86 on the 2 relays. (Expected value: 70 to 90 ohms)
P0687	ECM	Accessory relay circuit shorted to battery +	Damaged relay, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse Disconnect Accessory relay and Lights relay & turn key switch (on w/lights) Measure voltage between harness connector PF1-10E and ground. (Expected value: 11 to 13 volts) Measure voltage between harness connector PF1-8D and ground. (Expected value: 11 to 13 volts) Measure resistance from harness connector: ECMB-G1 to PF1-12D (Expected value: < 2 ohms) Measure resistance from harness connector: ECMB-G1 to PF1-7C (Expected value: < 2 ohms) Measure resistance between terminals 85 and 86 on the 2 relays. (Expected value: 70 to 90 ohms)

P0691	ECM	Radiator fan circuit shorted to ground or open circuit	Blown fuse, damaged or disconnected fan relay, damaged circuit wires, damaged connectors or damaged ECM output pins.	Check fuse Disconnect radiator fan relay Measure voltage between harness connector PF1-3D and ground. (Expected value: 11 to 13 volts) Measure resistance from harness connector: ECM-J4 to PF1-1E (Expected value: < 2 ohms) Measure resistance between terminals 85 and 86 on relay. (Expected value: 70 to 90 ohms)
P0692	ECM	Radiator fan circuit shorted to battery +	Damaged fan relay, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse Disconnect radiator fan relay Measure voltage between harness connector PF1-3D and ground. (Expected value: 11 to 13 volts) Measure resistance from harness connector: ECM-J4 to PF1-1E (Expected value: < 2 ohms) Measure resistance between terminals 85 and 86 on relay. (Expected value: 70 to 90 ohms)
P0790	ECM	Check of Override Button	Damaged switch, damaged circuit wires, damaged connector, damaged ECM pins.	Open the ECM Monitoring page in BUDS. Press on Override button. Ensure that the 2 switch light change of state.
P0811	ECM	Clutch slippage detected	Excessive clutch slippage	Check clutch for proper clutch behavior
P1036	ECM	Internal fault path number for Signal error : power stage of heater of Sensor upstream catalyst, LSU 2	Blown fuse, damaged or disconnected O2 sensor, damaged or disconnected circuit wires, damaged ECM output pins.	Check fuse. Disconnect HO2S2. Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).
P1120	ECM	Wrong Throttle Accelerator Sensor (TPS) position	Wrong TPS sensor position. Both TPS position failed test.	Check TAS adjustment.

P1130	ECM	ECU int. fault path no.: electrical diagnosis for lambda sensor upstream cat. Sig-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S1. Measure voltage between harness connector HO2S1-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S1 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S1-D and ground (expected value > open). Measure resistance from harness connector: HO2S1-D to ECMB-L2 (expected value: < 2 ohms).
P1136	ECM	ECU int. fault path no.: electrical diagnosis for second lambda sensor upstream cat. Sig-error	Damaged O2 sensor, damaged circuit wires, damaged connector or damaged ECM output pins.	Check fuse. Disconnect HO2S2. Measure voltage between harness connector HO2S2-C and ground (expected value = 11 to 13 volts). Measure resistance between HO2S2 pin C and D (expected value = 7 to 12 ohms). Disconnect ECM-B. Measure resistance between harness connector HO2S2-D and ground (expected value > open). Measure resistance from harness connector: HO2S2-D to ECMB-L3 (expected value: < 2 ohms).
P1171	ECM	Diagnostic Fault code for Fuel Supply System (ORA Max Fault)	Injection and fuel supply system.	Check injector and fuel supply system.
P1172	ECM	Diagnostic Fault code for Fuel Supply System (ORA Min Fault)	Injection and fuel supply system.	Check injector and fuel supply system.
P1174	ECM	Diagnostic Fault code for Fuel Supply System (ORA Max Fault) Exhaust Bank2	Injection and fuel supply system.	Check injector and fuel supply system.
P1175	ECM	Diagnostic Fault code for Fuel Supply System (ORA Min Fault) Exhaust Bank2	Injection and fuel supply system.	Check injector and fuel supply system.
P1339	ECM	Signal fault at phase determination	backup phase detection strategies not able to find the correct phase	

P1606	ECM	Control Module Processor	Internal ECM problem	Check for ECM fault External troubleshooting not possible
P160E	ECM	Electrical Throttle Actuator (ETA) control fault	Damaged ETC, damaged circuit wires, damaged connector or damaged ECM output pins.	Disconnect ETC Measure resistance from connector: ECMA-L1 to ETC-3 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-L2 to ETC-5 (Expected value: < 2 ohms)
P1610	ECM	Electrical Throttle Actuator (ETA) shorted to V +	Damaged ETC, damaged circuit wires, damaged connector or damaged ECM output pins.	Disconnect ETC Measure resistance from connector: ECMA-L1 to ETC-3 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-L2 to ETC-5 (Expected value: < 2 ohms)
P1611	ECM	Electrical Throttle Actuator (ETA) shorted to ground	Damaged ETC, damaged circuit wires, damaged connector or damaged ECM output pins.	Disconnect ETC Measure resistance from connector: ECMA-L1 to ETC-3 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-L2 to ETC-5 (Expected value: < 2 ohms)
P1612	ECM	Electrical Throttle Actuator (ETA) signal not plausible	Damaged ETC, damaged circuit wires, damaged connector or damaged ECM output pins.	Disconnect ETC Measure resistance from connector: ECMA-L1 to ETC-3 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-L2 to ETC-5 (Expected value: < 2 ohms)
P1613	ECM	Electrical Throttle Actuator (ETA)	Damaged ETC, damaged circuit wires, damaged connector or damaged ECM output pins.	Disconnect ETC Measure resistance from connector: ECMA-L1 to ETC-3 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-L2 to ETC-5 (Expected value: < 2 ohms)
P1614	ECM	Throttle idle position failure on throttle release	Throttle mechanical adjustment No initialization after throttle body/ ECM replacement	Check throttle mechanical adjustment. Check idle stop for wear. Ensure throttle plate is against throttle stop. Check throttle angle at idle. Perform THROTTLE POSITION SENSOR RESET in BUDS with throttle completely OFF. Refer to the service manual for more details.

P1615	ECM	TPS position deviation fault	Throttle mechanical adjustment No initialization after throttle body/ ECM replacement	Check throttle mechanical adjustment. Check idle stop for wear. Ensure throttle plate is against throttle stop. Check throttle angle at idle. Perform THROTTLE POSITION SENSOR INITIALIZATION in BUDS with throttle completely OFF. Refer to the service manual for more details.
P1616	ECM	Throttle limp-home-position failed	Throttle mechanical stop No initialization after throttle body/ ECM replacement	Check throttle mechanical adjustment. Check idle stop for wear. Ensure throttle plate is against throttle stop. Check throttle angle at idle. Perform THROTTLE POSITION SENSOR INITIALIZATION in BUDS with throttle completely OFF.. Refer to the service manual for more details.
P1619	ECM	TPS adaptation failure	Wrong throttle body mechanical position during reset of closed TPS or no initialization after ECM replacement.	Check THROTTLE cable adjustment. Check idle stop for wear. Ensure throttle plate is against throttle stop. Perform THROTTLE POSITION SENSOR INITIALIZATION in BUDS with throttle completely OFF.FF.
P1620	ECM	TPS adaptation failure	Wrong throttle body mechanical position during reset of closed TPS or no initialization after ECM replacement.	Check cable adjustment. Check idle stop for wear. Make sure throttle plate is against throttle stop. Perform THROTTLE POSITION SENSOR INITIALIZATION in BUDS with throttle completely OFF.
P1621	ECM	TPS adaptation cancelled lower mechanical stop failed	Throttle mechanical stop No initialization after throttle body/ ECM replacement	Check cable adjustment. Check idle stop for wear. Ensure throttle plate is against throttle stop. Check throttle angle at idle. Perform THROTTLE POSITION SENSOR INITIALIZATION in BUDS with throttle completely OFF. Refer to the service manual for more details.

P1622	ECM	TPS adaptation failed	Throttle mechanical stop No initialization after throttle body/ ECM replacement	Check cable adjustment. Check idle stop for wear. Ensure throttle plate is against throttle stop.. Check throttle angle at idle. Perform THROTTLE POSITION SENSOR INITIALIZATION in BUDS with throttle completely OFF. Refer to the service manual for more details.
P16C0	ECM	ECU ADC plausibility check	Monitoring plausibility check failed	Check for ECM fault
P16C1	ECM	ECU ADC test failed	Monitoring plausibility check failed	Check for ECM fault
P16C2	ECM	ECU monitoring error	Monitoring plausibility check failed	Check for ECM fault
P16C3	ECM	Throttle Accelerator Sensors (TAS) monitoring check fault	Monitoring plausibility check failed	Check for ECM fault
P16C4	ECM	Engine speed monitoring check fault	Monitoring plausibility check failed	Check for ECM fault
P16C5	ECM	Safety fuel cut-off activated monitoring check level 1	Monitoring plausibility check failed	Check for ECM fault
P16C6	ECM	Safety fuel cut-off activated monitoring check level 2	Monitoring plausibility check failed	Check for ECM fault
P16C7	ECM	Throttle valve plausibility check failed	Monitoring plausibility check failed	Check for ECM fault
P16C8	ECM	Permitted throttle valve position monitoring check exceeded	Monitoring plausibility check failed	Check for ECM fault
P1F01	DPS	Power output overload	Motor short circuit or power output failed	Reset fault, If fault re-occur, replace DPS unit
P1F02	DPS	Power output overload (18V).	High voltage at the unit input.	Measure battery voltage with engine stopped. (Expected value: 11 to 13 volts) Measure battery voltage with engine running. (Expected value: 13 to 14.7 volts) test charging system as per shop manual
P1F03	DPS	Electronic Circuit Overheat	Hi temperature detected by on board temperature sensor.	Fault may become Active in extreme use situations. Reset fault and let DPS cool down. If fault re-occur in normal riding conditions, replace DPS unit
P1F05	DPS	Motor current sensor range/performance	Motor input vs output Current correlation check failed	External troubleshooting is not possible Replace the DPS.

P20EB	ECM	Main relay de-energized too late or sticking	Damaged circuit wires, damaged connectors or damaged ECM output pins. Damaged relay	Disconnect main relay Measure resistance between terminals 85 and 86 on relay. (Expected value: 70 to 90 Ohms)
P212C	ECM	2nd Throttle Accelerator Sensors (TPS) low	Damaged TPS, damaged circuit wires, damaged connector or damaged ECM output pins.	Ensure sensor connector is fully inserted. Measure resistance from connector: ECMB-J3 to TAS-D (Expected value: < 2 ohms) Measure resistance from connector: ECMB-B3 to TAS-F (Expected value: < 2 ohms) Measure resistance from connector: ECMB-A3 to TAS-E (Expected value: < 2 ohms)
P212D	ECM	2nd Throttle Accelerator Sensors (TPS) high	Damaged TPS, damaged circuit wires, damaged connector or damaged ECM output pins.	Ensure sensor connector is fully inserted. Measure resistance from connector: ECMB-J3 to TAS-D (Expected value: < 2 ohms) Measure resistance from connector: ECMB-B3 to TAS-F (Expected value: < 2 ohms) Measure resistance from connector: ECMB-A3 to TAS-E (Expected value: < 2 ohms)
P2228	ECM	Ambient pressure sensor shorted to ground	Damaged sensor, damaged circuit wires, damaged connector or damaged ECM pins, ECM voltage supply low	Make sure sensor connector is fully inserted. Measure voltage between harness connector pins 1 and 4 . (Expected value: 4.8 to 5.1 volts) Measure resistance from connector: ECMA-F2 to APS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-G3 to APS-3 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-B4 to APS-4 (Expected value: < 2 ohms)
P2229	ECM	Ambient pressure sensor short to V +	Damaged sensor, wires shorted to battery +, ECM voltage supply too high.	Make sure sensor connector is fully inserted. Measure voltage between harness connector pins 1 and 4 . (Expected value: 4.8 to 5.1 volts) Measure resistance from connector: ECMA-F2 to APS-1 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-G3 to APS-3 (Expected value: < 2 ohms) Measure resistance from connector: ECMA-B4 to APS-4 (Expected value: < 2 ohms)
P2279	ECM	Intake Air System leak	Check for cracked plenum	Intake or throttle body air leak

P2299	ECM	Throttle and break pedal are used at the same time	If the accelerator pedal and the brake are activated simultaneously for a delay time and the vehicle is moving faster than Speed-threshold	
P2416	ECM	exchanged lambda sensors upstream catalyst	Wrong O2 sensor position after O2 replacement or wire replacement.	Swap O2 sensor wires.
P2530	ECM	Ignition switch state not plausible	Ignition key switch connection or internal switch fault	Check ignition key contacts and wire connections
P2620	ECM	Throttle Accelerator Sensors (TPS) position	Wrong TPS sensor position.	Check TAS adjustment.
P2621	ECM	First Throttle Accelerator Sensor (TPS) low	Damaged TPS, damaged circuit wires, damaged connector or damaged ECM output pins.	Ensure sensor connector is fully inserted. Measure resistance from connector: ECMB-K1 to TAS-C (Expected value: < 2 ohms) Measure resistance from connector: ECMB-K3 to TAS-B (Expected value: < 2 ohms) Measure resistance from connector: ECMB-E1 to TAS-A (Expected value: < 2 ohms)
P2622	ECM	First Throttle Accelerator Sensors (TPS) high	Damaged TPS, damaged circuit wires, damaged connector or damaged ECM output pins.	Ensure sensor connector is fully inserted. Measure resistance from connector: ECMB-K1 to TAS-C (Expected value: < 2 ohms) Measure resistance from connector: ECMB-K3 to TAS-B (Expected value: < 2 ohms) Measure resistance from connector: ECMB-E1 to TAS-A (Expected value: < 2 ohms)
P2670	DPS	PHASE B_LOW	DPS motor supply Damaged DPS	External troubleshooting is not possible Replace the DPS.
P2671	DPS	PHASE B_HIGH	DPS motor supply Damaged DPS	External troubleshooting is not possible Replace the DPS.

P2801	ECM	Gear position sensor invalid range	Damaged circuit wires, damaged gear position sensor, damaged ECM pins or damaged transmission.	Open ECM Monitoring page in BUDS, Verify that gear position information changes with gear selection changes on vehicle. Disconnect GBPS Measure voltage between harness connector 5-GBPS-1 and 5-GBPS-3. (Expected value: 4.8 to 5.1 volts) Measure resistance from connector: 5-ECM-B13 to 5-GBPS-2 (Expected value: < 2 ohms) Measure resistance from connector: 5-ECM-B22 to 5-GBPS-3 (Expected value: < 2 ohms)
P2806	ECM	Gear position sensor angle defined area vs position not plausible	Damaged circuit wires, damaged gear position sensor, damaged ECM pins or damaged transmission.	Open ECM Monitoring page in BUDS, Verify that gear position information changes with gear selection changes on vehicle. Disconnect GBPS Measure voltage between harness connector 5-GBPS-1 and 5-GBPS-3. (Expected value: 4.8 to 5.1 volts) Measure resistance from connector: 5-ECM-B13 to 5-GBPS-2 (Expected value: < 2 ohms) Measure resistance from connector: 5-ECM-B22 to 5-GBPS-3 (Expected value: < 2 ohms)
U0073	CLUSTER	CAN bus off, no messages	Damaged circuit wires or damaged CLUSTER pins.	Disconnect MPI2 from DB connector. Measure resistance between DB-1 and DB-2 (Expected value = 50 to 70 ohms). Measure resistance between DB-1 and CL-19 (Expected value < 2 ohms). Measure resistance between DB-2 and CL-18 (Expected value < 2 ohms).
U0073	SCM	CAN-Bus failure, CAN-Bus OFF	Damaged circuit wires or damaged SCM pins.	Disconnect MPI2 from DB connector. Measure resistance between DB-1 and DB-2 (Expected value = 50 to 70 ohms). Measure resistance between DB-1 and PCM-1 (expected value < 2 ohms). Measure resistance between DB-2 and PCM-2 (expected value < 2 ohms).

U0073	DPS	CAN bus off, no messages	Damaged circuit wires or damaged DPS pins.	Disconnect MPI2 from DB connector. Measure resistance between DB-1 and DB-2 (Expected value = 50 to 70 ohms). Measure resistance between DB-1 and DPS1-C (Expected value < 5 ohms). Measure resistance between DB-2 and DPS1-D (Expected value < 5 ohms).
U0100	CLUSTER	ECM, lost of communication	Missing CAN ID from ECM Internal module error Damaged circuit wires or damaged module pins.	Measure voltage between harness connector ECMB-A2 and ground. (Expected value = 11 to 13 volts). Measure voltage between harness connector ECMB-M4 and ground. (Expected value = 11 to 13 volts). Disconnect MPI2 from DB connector. Measure resistance between DB-1 and DB-2. (Expected value = 50 to 70 ohms). Measure resistance between DB-1 and ECMB-C1. (Expected value < 2 ohms). Measure resistance between DB-2 and ECMB-C2. (Expected value < 2 ohms).
U0100	SCM	Lost Communication With ECM (lost of CAN ID's)	Missing CAN ID from ECM Internal module error Damaged circuit wires or damaged module pins.	Measure voltage between harness connector ECMB-A2 and ground (expected value = 11 to 13 volts). Measure voltage between harness connector ECMB-M4 and ground (expected value = 11 to 13 volts). Disconnect MPI2 from DB connector. Measure resistance between DB-1 and DB-2 (expected value = 50 to 70 ohms). Measure resistance between DB-1 and ECMB-C1 (expected value < 2 ohms). Measure resistance between DB-2 and ECMB-C2 (expected value < 2 ohms).

U0100	DPS	Lost communication with ECM (lost of CAN ID's)	Damaged CAN Bus wires to ECM, damaged DPS/ECM pins.	Disconnect MPI2 from DB connector. Measure resistance between DB-1 and DB-2 (Expected value = 50 to 70 ohms). Measure resistance between DB-1 and ECM B-C1 (Expected value < 5 ohms). Measure resistance between DB-2 and ECM B-C2 (Expected value < 5 ohms).
U0155	ECM	Lost communication with CLUSTER (lost of CAN ID's)	Missing CAN ID Module internal error Damaged circuit wires or damaged module pins.	Check for Cluster fault or ECM fault Measure voltage between harness connector CL-17 and ground. (Expected value = 11 to 13 volts) Disconnect MPI2 from DB connector. Measure resistance between DB-1 and DB-2 (Expected value = 50 to 70 ohms). Measure resistance between DB-1 and ECMB-C1 (Expected value < 2 ohms). Measure resistance between DB-2 and ECMB-C2 (Expected value < 2 ohms). Measure resistance between DB-1 and CL-19 (Expected value < 2 ohms). Measure resistance between DB-2 and CL-18 (Expected value < 2 ohms).
U0155	ECM	Lost communication with CLUSTER (lost of CAN ID's)	Missing CAN ID Module internal error Damaged circuit wires or damaged module pins.	Check for Cluster fault or ECM fault Measure voltage between harness connector CL-17 and ground. (Expected value = 11 to 13 volts) Disconnect MPI2 from DB connector. Measure resistance between DB-1 and DB-2 (Expected value = 50 to 70 ohms). Measure resistance between DB-1 and ECMB-C1 (Expected value < 2 ohms). Measure resistance between DB-2 and ECMB-C2 (Expected value < 2 ohms). Measure resistance between DB-1 and CL-19 (Expected value < 2 ohms). Measure resistance between DB-2 and CL-18 (Expected value < 2 ohms).

U0155	SCM	Lost Communication With Cluster (lost of CAN ID's)	Missing CAN ID Module internal error Damaged circuit wires or damaged module pins.	Check for Cluster fault Measure voltage between harness connector CL-17 and ground. (Expected value = 11 to 13 volts) Disconnect MPI2 from DB connector. Measure resistance between DB-1 and DB-2 (expected value = 50 to 70 ohms). Measure resistance between DB-1 and PCM-1 (expected value < 2 ohms). Measure resistance between DB-2 and PCM-2 (expected value < 2 ohms). Measure resistance between DB-1 and CL-19 (expected value < 2 ohms). Measure resistance between DB-2 and CL-18 (expected value < 2 ohms).
U0155	DPS	Lost communication with CLUSTER	Damage CAN Bus wires to cluster Damaged circuit wires or damaged Cluster module pins.	Measure voltage between harness connector CI-17 and ground. (Expected value = 11 to 13 volts) Disconnect MPI2 from DB connector. Measure resistance between DB-1 and DB-2 (Expected value = 50 to 70 ohms). Measure resistance between DB-1 and CI-19 (Expected value < 2 ohms). Measure resistance between DB-2 and CI-18 (Expected value < 2 ohms).
U0167	ECM	Lost communication with Vehicle Immobilizer Control Module	The Vehicle Immobilizer is reporting an electrical fault on the communication line.	Check for dirty or oxidized Key contact. Clean key contact if needed. Check for broke key contact Ensure sensor connector is fully inserted. Measure resistance between ECMB-A1 and CC-C (Expected value < 2 ohms). Measure resistance between ECMB-C2 and CC-E (Expected value < 2 ohms).
U0300	ECM	Invalid Security Exchange received	Incorrect ECM or CLUSTER, Incorrect software version.	Install the proper ECM or CLUSTER on vehicle. Update security coding using BUDS

U0301	ECM	Variant Coding, software incompatibility (DFC_MoFVar)	Faulty calibration or variant Faulty programming Damaged ECM	Try updating the ECM variant or calibration If the problem persists, reflash ECM If the problem persists, replace ECM.
U0302	ECM	Variant Coding, software incompatibility (DFC_MTVARNPL)	Faulty calibration or variant Faulty programming Damaged ECM	Try updating the ECM variant or calibration If the problem persists, reflash ECM If the problem persists, replace ECM.
U0400	SCM	Variant Coding failure Software incompatibility	SCM not install on expected vehicle Faulty programming	Check if SCM is install on a valid vehicle Update SCM Open Vehicle Configuration in Setting page in BUDS & if check vehicle configuration is set as expected for the vehicle.
U0400	DPS	Variant Coding failure Software incompatibility	Faulty variant coding Faulty programming	Check in the BUDS Tab "vehicle configuration" if the DPS option is checked. Reflash the DPS with the latest software
U0426	ECM	Invalid Data Received From Vehicle Immobilizer Control Module	The Vehicle Immobilizer could not read the number of the access key.	Check for dirty or oxidized Key contact. Clean key contact if needed. Check for broke key contact Ensure sensor connector is fully inserted. Measure resistance between ECMB-A1 and CC-C (Expected value < 2 ohms). Measure resistance between ECMB-C2 and CC-E (Expected value < 2 ohms).
U2100	CLUSTER	Invalid message counter ECM (ECM_1 of VEHICLE_SPEED)	Message counter plausibility check failed	External troubleshooting is not possible Check for communication fault using BUDS
U220A	CLUSTER	Invalid message checksum ECM	Check Sum error	External troubleshooting is not possible Check for communication fault using BUDS

U220E	ECM	Invalid Check Sum from CLUSTER message	Check Sum error	External troubleshooting is not possible Check for communication fault
U3001	SCM	Module improper shutdown	Lost of power on SCM Damaged circuit wires or damaged SCM pins.	Check fuse Ensure SCM connector is fully inserted. Check for Damaged circuit wires or damaged SCM pins.
U3001	DPS	Module improper shutdown	Lost of power on DPS that can be caused by damaged circuit wires or damaged DPS pins.	Check the two DPS fuses Ensure DPS connector is fully inserted. Check for Damaged tail light, DPS, Cluster circuit wires Check for damaged DPS pins.

INTELLIGENT THROTTLE CONTROL (iTC)

GENERAL

SYSTEM DESCRIPTION

The iTC is an electronic throttle control system that includes:

– Throttle accelerator sensor (TAS)
– Electric throttle actuator (ETA)
– Throttle position sensor (TPS).

The TAS is part of the accelerator pedal module. The ETA and TPS are comprised in the throttle body.

The iTC is often referred to as a "throttle by wire" system (no throttle cable is used).

According to the accelerator pedal position and other EMS inputs, the ECM powers the ETA motor using pulse width modulation (PWM), to control the throttle plate. When the ECM detects through the TPS that the throttle plate has reached the targeted position, the ECM stops the throttle actuator.

Depending on various conditions and the type of key used, the iTC can modify the ETA response, limit the engine torque or vehicle speed.

For torque limitation, the ECM processes the TAS input differently depending on the specific mode. In other words, the driver's demand may not necessarily result in the corresponding throttle opening.

For vehicle speed limitation, the iTC controls the throttle opening to maintain a maximum set speed even if the accelerator is pedal fully depressed.

SYSTEM MAIN FEATURES

The use of the iTC allows the following features:

– Key modes
– Sport/ECO modes
– Override functions.

Key Modes

Normal Key

When a normal key is used, engine delivers approximately 70% of the accelerator pedal demand (less if normal mode is selected). Vehicle speed is limited to 70 km/h (43 MPH).

Performance Key

When a performance key is used, engine delivers 100% of the accelerator pedal demand (less if normal mode is selected). The vehicle speed is limited to 120 km/h (75 MPH).

Work Key (Option)

When a work key is used, engine delivers approximately 50% of the accelerator pedal demand (less if normal mode is selected). Vehicle speed is limited to 40 km/h (25 MPH).

Sport/ECO Modes

When sport mode is selected, the full potential of the specific ignition key is deployed except when gearbox is in reverse or low gear. This mode can be activated with all key types.

NOTE: The sport mode is not available in low and reverse gears (ECO mode automatically enabled).

When ECO (fuel economy mode) mode is selected, the fuel consumption is reduced by limiting throttle response and maximum throttle opening to maintain an optimal cruising setting.

Reverse Override Function

In reverse gear, engine delivers less than the accelerator pedal demand and vehicle speed is limited to 20 km/h (12 MPH). Also, the accelerator pedal response is smoother than in high gear.

If the override button is depressed, vehicle speed and engine acceleration are increased. Even with the override is activated, the ECM will not allow the engine to deliver 100% of the accelerator pedal demand.

SYSTEM OTHER FEATURES

Driver's Seat Belt Monitoring

If driver's seat belt not fastened, speed is limited to approximately 20 km/h (12 MPH).

Brake Monitoring

If the ECM receives a brake switch signal while gearbox is in gear and the vehicle moving, the ETA will decrease throttle plate opening and engine speed will drop to idle.

NOTE: A defective brake light switch that would stay in a closed position would force the engine to run at idle.

Low Range Operation

When gearbox is in low range, engine delivers less than the accelerator pedal demand and the accelerator pedal response is smoother than in high gear.

Drive Shaft Saver

In a case where the drive wheels would momentarily leave the ground while the driver holds the throttle, this mode protects the drive system.

The system will enter the drive shaft saver mode if the ECM detects an excessive wheel acceleration rate. In such a case, the iTC will reduce the engine torque. When the wheels slow down, the system returns to normal mode.

Engine Temperature Monitoring

If coolant gets too hot, engine will deliver less than the accelerator pedal demand. The limitation is proportional to the overheat degree.

Battery Voltage Monitoring

If the battery voltage gets low, the engine idle RPM will be increased at approximately 1500 RPM.

Drowned Mode

In case of a fuel flood, the engine can be cranked without fuel injection.

To enter the drowned mode, depress and hold accelerator pedal (at least 20% of the travel) while cranking engine.

Limp Home Mode

When certain faults are occurring, the ECM will enter the limp home mode. In this mode, the engine will deliver less than the accelerator pedal demand.

PROCEDURES

SPORT/NORMAL SWITCH

Sport/Normal Switch Wire Information

FUNCTION	PIN	COLOR
Signal (to ECM B pin D4)	1	BROWN/GREEN
Ground through ECM (to ECM B pin A1)	2	ORANGE/VIOLET

SEAT BELT SWITCH

Seat Belt Switch Wire Information

FUNCTION	PIN	COLOR
Signal (to ECM B pin E3)	1	YELLOW/GREY
Ground through ECM (to ECM B pin A1)	2	ORANGE/VIOLET

OVERRIDE SWITCH

Override Switch Wire Information

FUNCTION	PIN	COLOR
Normal position signal (to ECM B pin D3)	1	VIOLET/YELLOW
Ground through ECM (to ECM B pin B1)	2	VIOLET/GREY
Override position signal (to ECM B pin F3)	3	VIOLET/ORANGE

THROTTLE ACCELERATOR SENSOR (TAS)

TAS Description

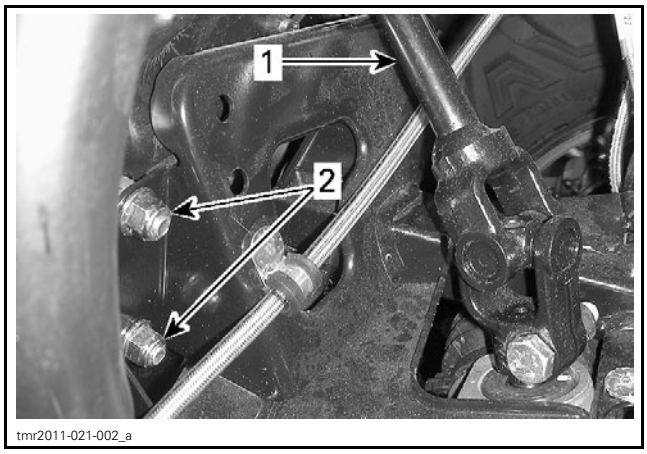
The throttle accelerator sensor (TAS) is a double hall effect sensor that sends a signal to the ECM which is proportional to the accelerator pedal. The redundancy is used for security purposes.

The voltage output of the hall effect sensors are different.

TAS Removal and Installation

The TAS is part of the accelerator pedal.

1. Note the wire routing and tie-wrap position.
2. Disconnect electrical connector.
3. Remove both accelerator pedal retaining nuts by outside the passenger compartment. Reach nuts by the RH side of the vehicle.



1. Steering column
2. Accelerator pedal retaining nuts

To install, reverse the removal procedure, however pay attention to the following:

Route and attach wires correctly.

Tighten nuts to the specified torque.

ACCELERATOR PEDAL RETAINING NUTS TIGHTENING TORQUE
13 N•m ± 1 N•m (115 lbf•**in** ± 9 lbf•**in**)

Carry out the *ECM FIRST INITIALIZATION*, refer to *ELECTRONIC FUEL INJECTION (EFI)* subsection.

TAS Wire Information

FUNCTION	PIN	COLOR
Signal	A	BLUE/GREEN
Ground through ECM	B	BLUE/RED
Voltage input (5 volt)	C	BLUE/ORANGE
Voltage input (5 volt)	D	BLUE/BLACK
Signal	E	BLUE/PINK
Ground through ECM	F	BLUE/VIOLET

TAS Failure

If one TAS signal fails, the vehicle will enter the limp home mode. In this case, depressing the override button will temporarily restore accelerator pedal operation (while button is depressed).

If both TAS signals fail, the engine speed will drop to idle. Depressing the override button will force the ECM to open the ETA to an angle that allows the vehicle to move.

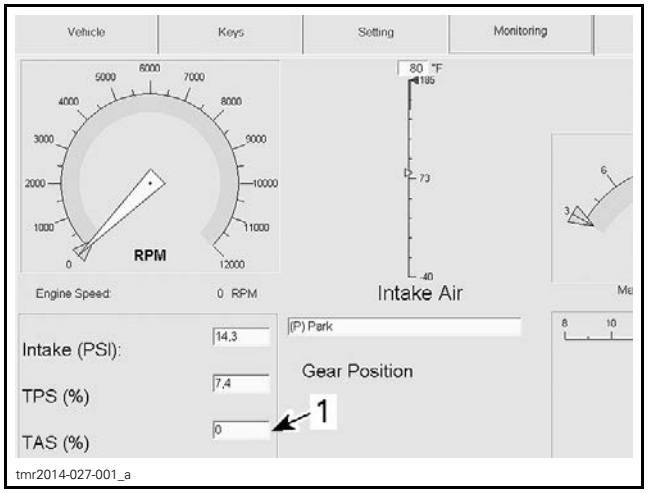
TAS Test with B.U.D.S.

The TAS signal can be monitored in B.U.D.S.

Connect to the latest applicable B.U.D.S. software. Refer to *COMMUNICATION TOOLS AND B.U.D.S.*zd subsection.

Select the **Monitoring** and **ECM** tabs.

Look at the **TAS (%)** window as you depress the accelerator pedal.



1. TAS % window

The TAS signal should vary from near 0% to near 100% depending on the pedal position, which confirms the TAS signal reaches the ECM.

ELECTRONIC FUEL INJECTION (EFI)

SERVICE TOOLS

Description	Part Number	Page
DIGITAL INDUCTION TACHOMETER	529 014 500	2
ECM ADAPTER TOOL	529 036 166	5, 16, 18–21
FLUKE 115 MULTIMETER	529 035 868	5, 11, 16, 19–20
OETIKER PLIERS	295 000 070	13

SERVICE PRODUCTS

Description	Part Number	Page
LOCTITE 243 (BLUE)	293 800 060	21
XPS SYNTHETIC GREASE	293 550 010	18

GENERAL

⚠ WARNING

Fuel is flammable and explosive under certain conditions.
Ensure work area is well ventilated.
Do not smoke or allow open flames or sparks in the vicinity.
Fuel lines remain under pressure at all times. Always proceed with care and use appropriate safety equipment when working on pressurized fuel system.
Wipe off any fuel spillage.
Do not allow fuel to spill on hot engine parts and/or on electrical connectors.
Replace any damaged, leaking or deteriorated fuel lines or connections.
Always, pressurize the fuel system if any fuel related component was disconnected or removed.
Proceed with care when removing/installing high pressure test equipment.

SYSTEM DESCRIPTION

The electronic fuel injection system (EFI) is comprised of various sensors used for detecting ongoing operating conditions of the engine and vehicle, and includes all the components that perform the required adjustments to the engine.

Electrical System

ECM (Electronic Control Module)

From input signals, the ECM acknowledges driver demands and converts them to an engine torque requirement through calculation of several variables. Then, the ECM controls the iTC, the injection system and the ignition system to meet the torque requirement.

The ECM manages the engine torque requirements and controls engine operation to ensure it is delivering optimum performance and fuel economy. The ECM also controls idle RPM and limits maximum engine speed through the iTC system.

EFI Sensors

The ECM reads the inputs from the sensors which it compares to predetermined parameters stored in the ECM, makes computations, and activates the outputs accordingly (injectors, ignition coils etc.).

Signals from sensors are used by the ECM to determine the injection and ignition parameters (referenced to fuel maps) as required to maintain the optimum air-fuel ratio.

Air Intake System

Air Filter

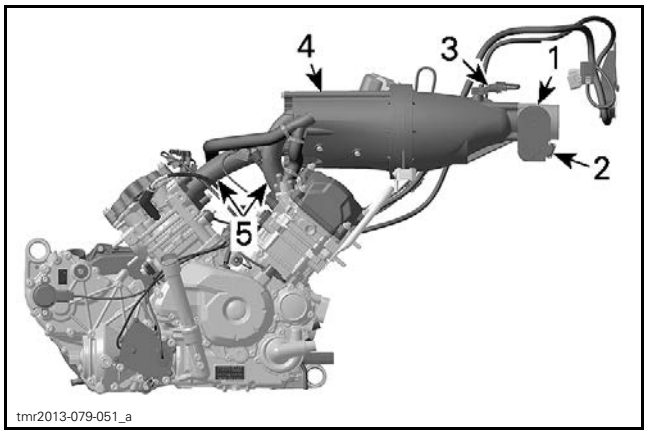
Air, drawn into the air filter housing, first passes through an inlet duct.

After it passes through the air filter, an air duct (intake adapter) is used to channel the air to the throttle body.

Throttle Body

The throttle body is mounted on the front end of the plenum, aft of the air filter housing.

Air for combustion, drawn in by the engine, flows through the air intake system, then through the throttle body where it is regulated by a throttle plate.



1. *Throttle body*
2. *ETA and TPS*
3. *MAPTS (Manifold Air Pressure Temperature Sensor)*
4. *Plenum*
5. *Air intake manifolds*

Fitted on the throttle body, an electronic throttle actuator (ETA) allows the ECM to electronically control the throttle plate opening which regulates the amount of air that enters the engine, and therefore engine torque.

There is no idle air control valve (IACV).

The TPS is also incorporated in the throttle body. It provides a signal to the ECM of the actual throttle plate position.

Plenum

After the air flows through the throttle body, it enters the plenum. The plenum provides a resonance effect which leads to an improved cylinder charge.

Fuel System

Fuel Rail

Two fuel rails, one for each injector, are mounted on the intake manifold. The fuel rails, which are used to secure the injectors to the manifold, also provide to the injectors the fuel pressure that they receive from the fuel pump.

The fuel pressure applied to the fuel rails is regulated by the fuel pressure regulator located in the fuel pump module.

Fuel Injectors

The fuel injectors are used to inject fuel into the intake ports of the cylinder head. One injector is used per cylinder.

Fuel Pump

An electric fuel pump with an integrated pressure regulator and fuel system filters is used. For more details on the fuel pump unit, refer to *FUEL TANK AND FUEL PUMP* subsection.

ADJUSTMENT

IDLE SPEED

Idle speed is not adjustable. The ECM controls the idle speed of the engine primarily through control of the throttle plate position.

The vehicle multifunction gauge can provide an accurate digital readout of the engine's idle speed.

If desired, the engine RPM can be verified using a DIGITAL INDUCTION TACHOMETER (P/N 529 014 500).

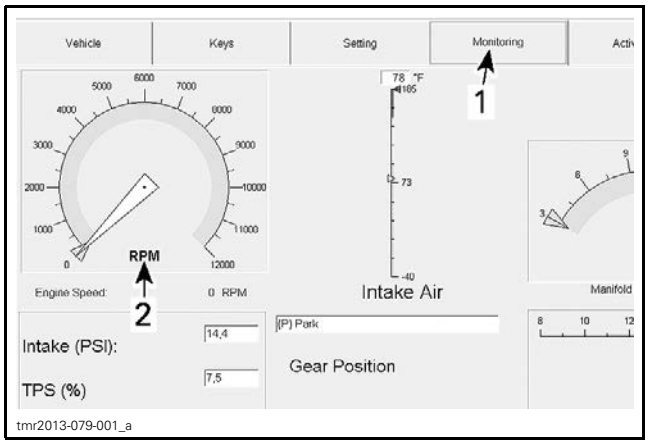
Install the tachometer wire on a spark plug cable.

VERIFYING ENGINE RPM USING A DIGITAL INDUCTION TACHOMETER

The engine RPM may also be verified using the applicable B.U.D.S. software version, refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.

In B.U.D.S., select the following:

– **Read Data** button
– **Monitoring** tab
– **ECM** tab.



VERIFYING ENGINE RPM USING B.U.D.S.
1. **Monitoring** *tab*
2. *Engine RPM indication*

NOTE: The multifunction gauge and B.U.D.S. use the same signal to provide the engine RPM indication.

TROUBLESHOOTING

DIAGNOSTIC TIPS

Engine problems are not necessarily related to the fuel injection system.

It is important to ensure that the engine and propulsion system, fuel delivery and electrical systems are functioning normally.

For diagnostics purposes, use B.U.D.S. software. See *COMMUNICATION TOOLS AND B.U.D.S.* subsection.

After a problem has been solved, be sure to clear the fault(s) in the ECM using the B.U.D.S. software.

⚠ WARNING

Electrical actuators and electronic modules may be powered up as soon as the ignition switch is set to ON. Always disconnect the battery prior to disconnecting any electrical or electronic parts.

Never use a battery charger to temporarily substitute the battery as it may cause the ECM to function erratically, or not at all.

Check related-circuit fuse solidity and condition with an ohmmeter. A visual inspection could lead to a false diagnosis.

Electrical Related Problems

It is important to check the following in the electrical system:

– Battery voltage
– Fuses
– Ground connections
– Wiring and connectors.

Ensure that all electronic components are genuine OEM. Any modification to the wiring harness may lead to poor system operation or generate fault codes.

Electrical Connections

Pay particular attention to ensure that terminals and pins are not out of their connectors, corroded, or out of shape.

When probing terminals, pay attention not to deform the terminals as this could cause a loose or intermittent connection that would be difficult to troubleshoot.

PROCEDURES

ENGINE CONTROL MODULE (ECM)

NOTE: As a first troubleshooting step, always check for applicable fault codes using B.U.D.S. software.

Quick Test to Validate ECM Operation

Turn ignition key to ON.

NOTE: Setting the ignition switch to ON wakes up the ECM, which then turns on the following.

QUICK INDICATION THAT ECM IS FUNCTIONING (ASSUMING THE OBSERVED COMPONENT IS IN GOOD WORKING ORDER)
Multifunction gauge turns ON.
Fuel pump turns on for approx. 5 seconds.
Rear lights turn on.
Headlamps turn on (ignition key on with lights position).

ECM First Initialization

This procedure performs a reset of the following values in the ECM:

– TAS (Throttle Accelerator Sensor)
– TPS (Throttle Position sensor)
– GBPS (Gearbox Position Sensor).

This reset **must** be carried out whenever the ECM has been replaced.

This reset **may** be carried out whenever any of the following components have been replaced instead of their respective reset procedures:

– Throttle body (for TPS)
– GBPS (Gearbox Position Sensor).

1. Connect vehicle to the applicable B.U.D.S. version, refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.
2. In B.U.D.S., select the following:
   – **Read Data** button
   – **Setting** tab
   – **ECM** tab.

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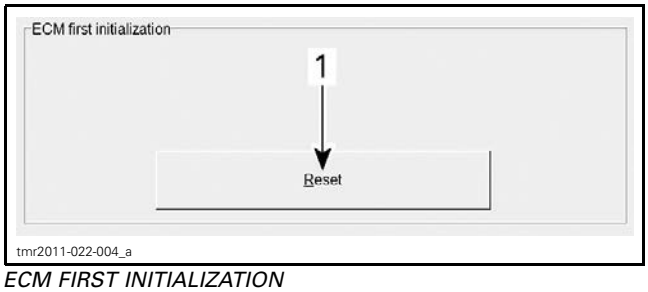
*1. **Read Data** button*
*2. **Setting** tab*
*3. **ECM** tab*

3. In the **ECM first initialization** field, click on the **Reset** button.



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ECM FIRST INITIALIZATION
*1. **Reset** button*

4. Follow the instructions in the message boxes that appear in B.U.D.S.

If the operation is successful, a message will be displayed stating that the reset was successful.

If an error occurred or a component is out of range, a message may be displayed. Follow the instructions in the message and repeat the procedure.

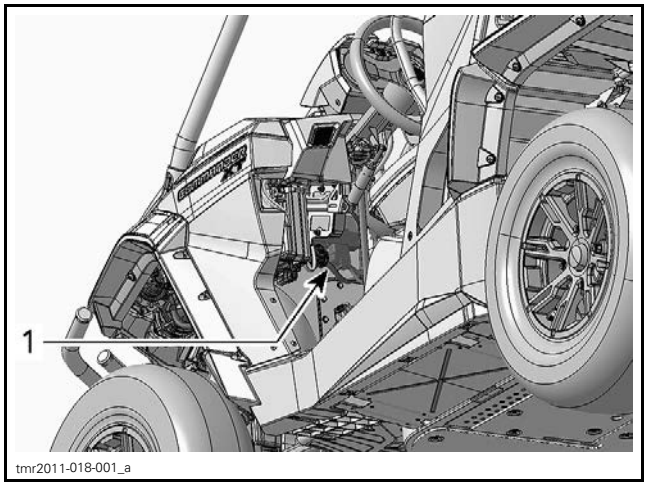
5. Check for fault codes.

If a fault code is generated, carry out the service actions, reset the fault and repeat the reset procedure.

6. Start engine and make sure it operates normally throughout its full engine RPM range.

ECM Access

The ECM is located under the dashboard, driver's side, above the control pedals.



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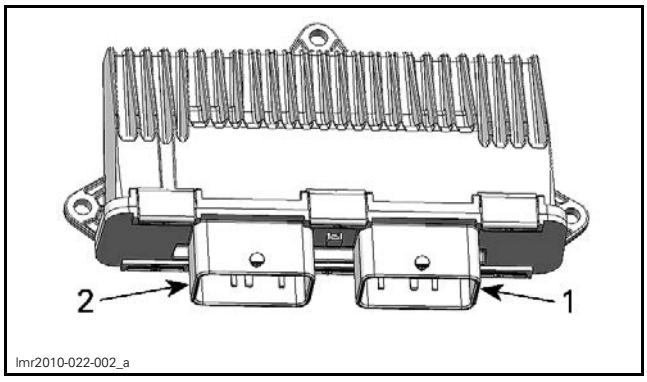
TYPICAL - ECM LOCATION
1. ECM location

ECM Connector Identification

There are 2 connectors connected to the ECM:

– Engine harness connected to ECM-A
– Vehicle system control harness connected to ECM-B.



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1. Connector A
2. Connector B

The ECM connectors have 48 pins.

NOTE: For connector information, cleaning and probing, refer to *CONNECTOR INFORMATION* subsection.

ECM Adapter Tool

To probe ECM connector terminals, use the ECM ADAPTER TOOL (P/N 529 036 166).

NOTE: This tool will prevent deforming or enlarging terminals which would lead to bad ECM terminal contact creating intermittent or permanent problems.

ECM Power Supply Test

1. Disconnect connector "B" from the ECM.
2. Install ECM connector "B" on the ECM ADAPTER TOOL (P/N 529 036 166).
3. Install a jumper wire between B-H2 and B-M2 on the ECM adapter tool.
4. Turn the ignition switch to ON.
5. Use the FLUKE 115 MULTIMETER (P/N 529 035 868) and select Vdc.
6. Check for voltage as follows.

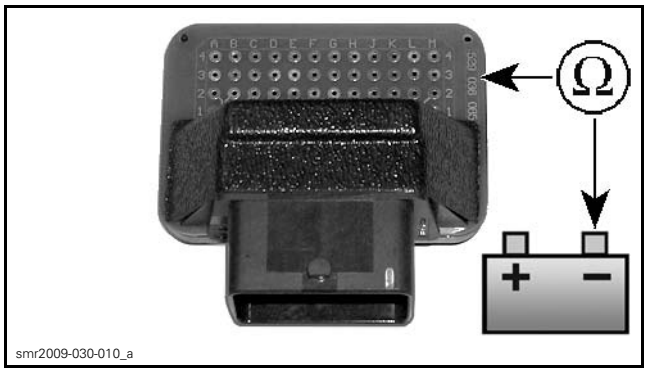
ECM ADAPTER	BATTERY	VOLTAGE
B-M4	Negative post	Battery voltage

If voltage is not measured, check the following:
– Main relay
– Wiring and connections, refer to the *WIRING DIAGRAM*.

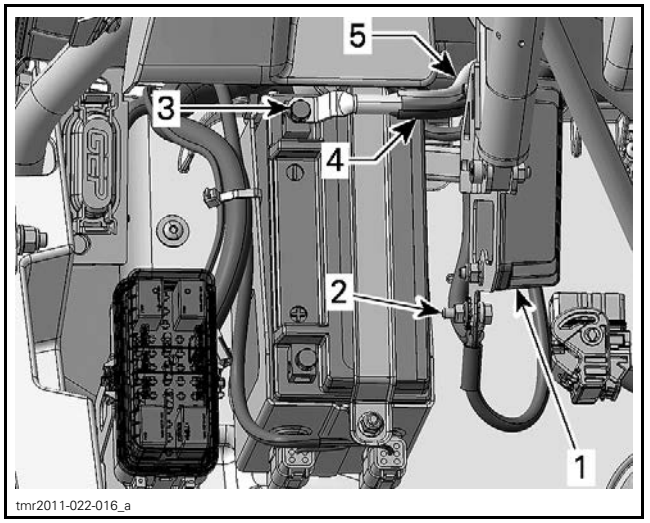
Continuity Test of ECM Ground Circuits

1. Disconnect connector "B" from ECM.
2. Install the ECM ADAPTER TOOL (P/N 529 036 166) on ECM-B connector.
3. Use the FLUKE 115 MULTIMETER (P/N 529 035 868) and select Ω.
4. Probe adapter terminals as per following table.

ECM ADAPTER	BATTERY POST	RESISTANCE
Pins B-L1, B-M2 and B-M3	Ground	Close to 0 Ω (continuity)



If any measurement is out of specification, check the following:
– Engine ground
– Battery ground
– Frame ground.



1. Voltage regulator/rectifier
2. Frame ground stud
3. Negative (-) battery post
4. Battery ground wire
5. Engine ground wire

ECM Removal

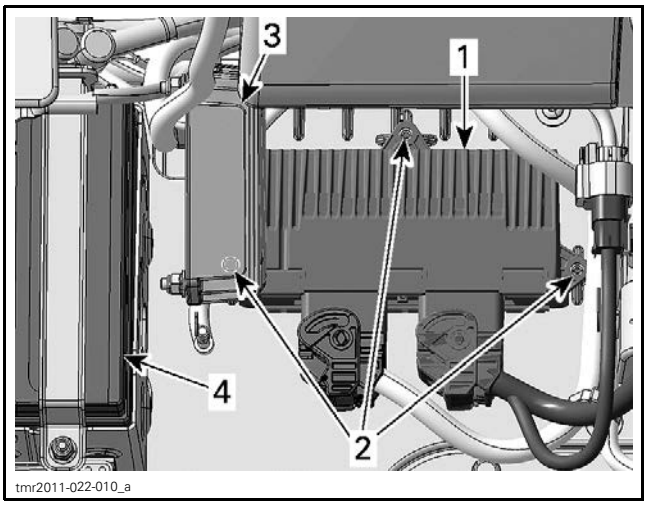
NOTE: If a new ECM is to be installed, first read the procedures in *ECM REPLACEMENT* in this subsection.

1. Disconnect battery cables.

NOTICE **Always disconnect the BLACK negative (–) battery cable first, then disconnect RED positive (+) cable.**

2. Disconnect both ECM connectors from ECM.

3. Unscrew all retaining screws and remove the ECM from its support.



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1. ECM
2. Retaining screws
3. Voltage regulator/rectifier
4. Battery

ECM Installation

Reverse removal procedure however, pay attention to the following.

ECM INSTALLATION	
TORQUE	2 N•m ± 0.2 N•m (18 lbf•**in** ± 2 lbf•**in**)

1. Reconnect ECM connectors.
2. Reconnect battery cables.

⚠ WARNING

Always reconnect the RED positive (+) battery cable first, then reconnect BLACK negative (–) cable.

3. If a new ECM is installed, refer to *ECM REPLACEMENT* in this subsection.

ECM Replacement

Prior to replacing an ECM, ensure that all the recommendations in the general introduction of this section have been followed.

NOTE: Proceed with an *ECM FIRST INITIALIZATION* as it may resolve the problem.

If the ECM is replaced, data must be manually entered into the new ECM.

ECM Manual Data Entry

There are 2 possible methods to collect the required information. The 1st being the easiest:

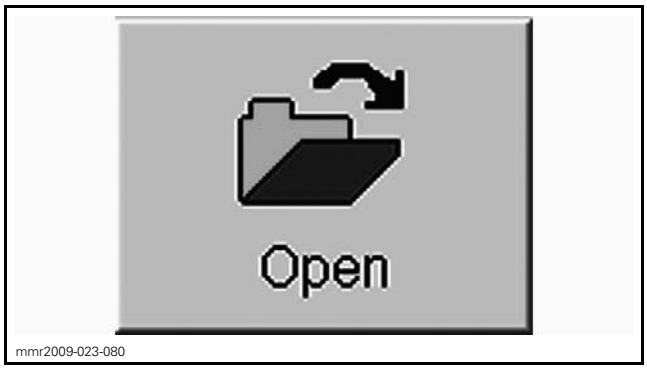
1. Use B.U.D.S. to obtain the data from a saved .mpem file on your PC computer.
2. Collect the information from the vehicle and BOSSWeb.

1st Collecting Method: Obtaining the Data from a Saved .mpem File

1. Use the B.U.D.S.

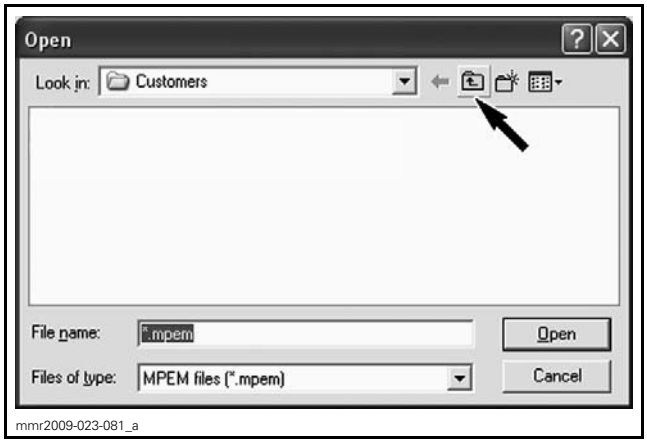
NOTE: It is not necessary to perform any connection. The PC computer can be used alone.

2. In B.U.D.S., click on the **Open** button.



mmr2009-023-080

3. Click once on the **Folder Up** button in the Open box.



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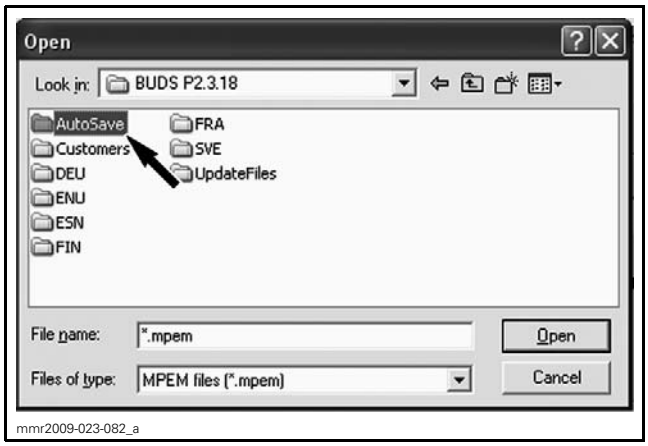
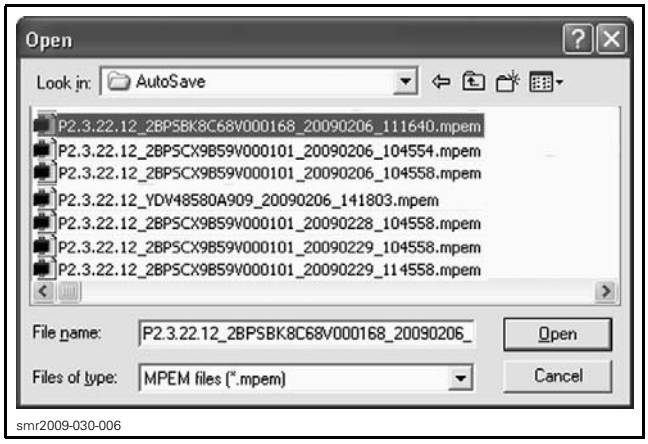
Double click on the **AutoSave** folder.



mmr2009-023-082_a

NOTE: You may have to go to another AutoSave folder from a previous version of B.U.D.S.

4. Choose the latest file saved for this specific vehicle.

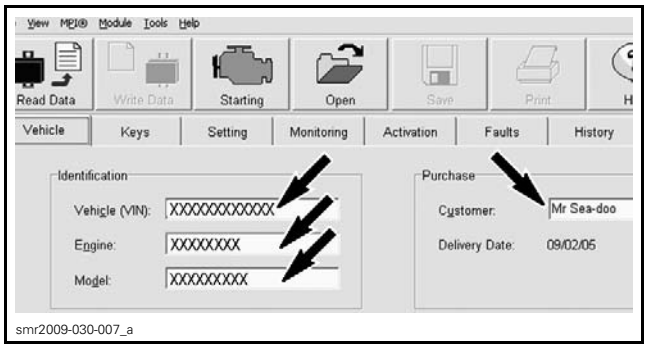


smr2009-030-006

IMPORTANT: Be sure to use the file that specifically matches the vehicle you are servicing.

NOTE: The file name structure is as follows:
B.U.D.S. version_VIN_date read (yyyymmdd)_hour read (hhmmss).mpem
Example: **P2.3.22.12_2BPSBK8C68V000168_20090206_111640.mpem** Therefore: B.U.D.S. version: P2.3.22.12 VIN: 2BPSBK8C68V000168 Date: 2009 02 06 Hour: 11h 16m 40s

5. Select the **Vehicle** tab and record (write down) the following information.
   1. Vehicle serial number
   2. Engine serial number (without the leading "M")
   3. Vehicle model number
   4. Customer name.



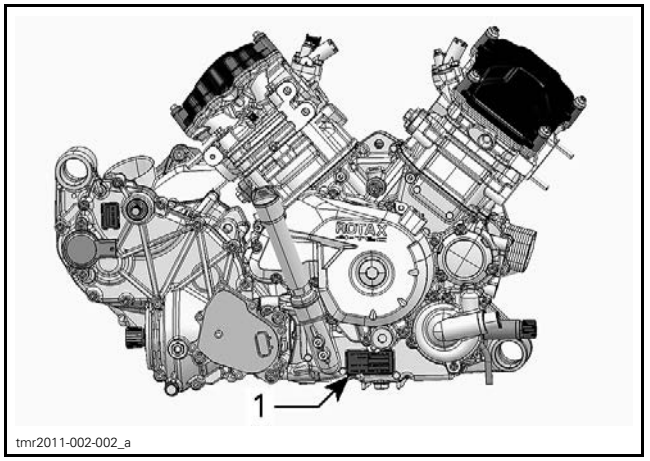
smr2009-030-007_a

VEHICLE TAB

6. Enter recorded data in ECM as detailed in *ENTERING THE COLLECTED INFORMATION INTO THE ECM*.

2nd Collecting Method: Collect the Information from the Vehicle and BOSSWeb

1. Record engine serial number.



tmr2011-002-002_a

TYPICAL - RH SIDE OF ENGINE
1. Engine serial number

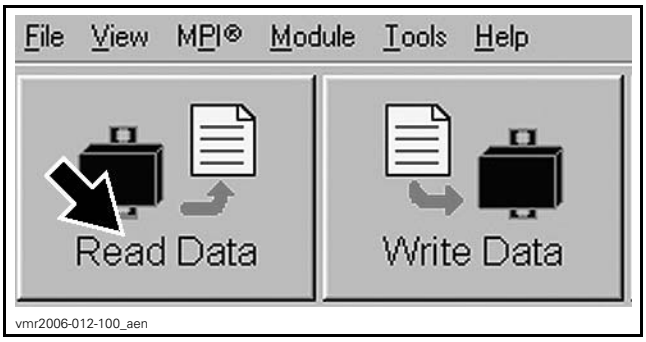
2. Record the following numbers using BOSSWeb. Look in **Sales** menu and choose **Unit History**.
   1. Vehicle serial number
   2. Vehicle model number
   3. Customer name.

SALES, UNIT HISTORY

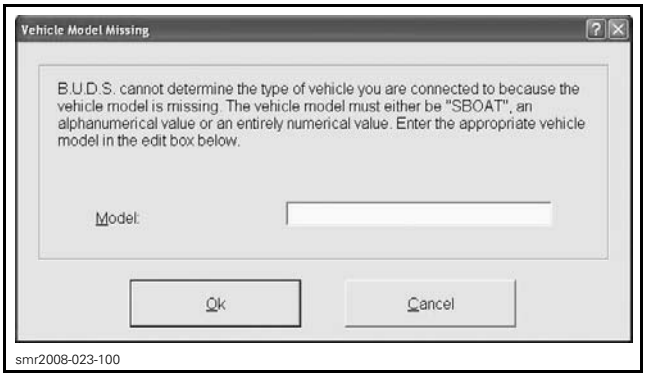
3. Enter the recorded data in the new ECM as detailed in *ENTERING THE COLLECTED INFORMATION INTO THE ECM*.

Entering the Collected Information Into the ECM

1. Use the applicable B.U.D.S. version. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.
2. Turn ignition key to ON position.
3. In B.U.D.S., click the **Read Data** button to read the new ECM.

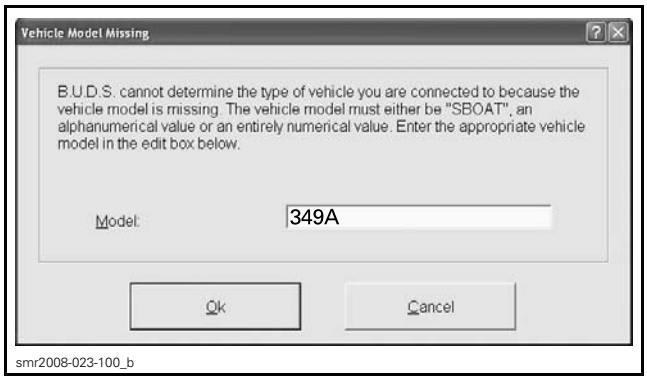


The following screen window will pop up.

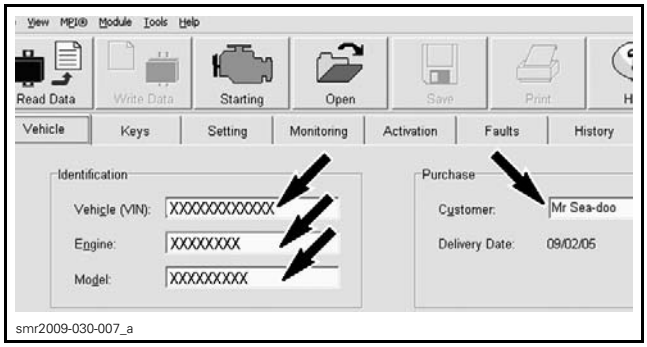


4. Enter the vehicle model number.

NOTICE Enter only the appropriate product model number as obtained when gathering the information.

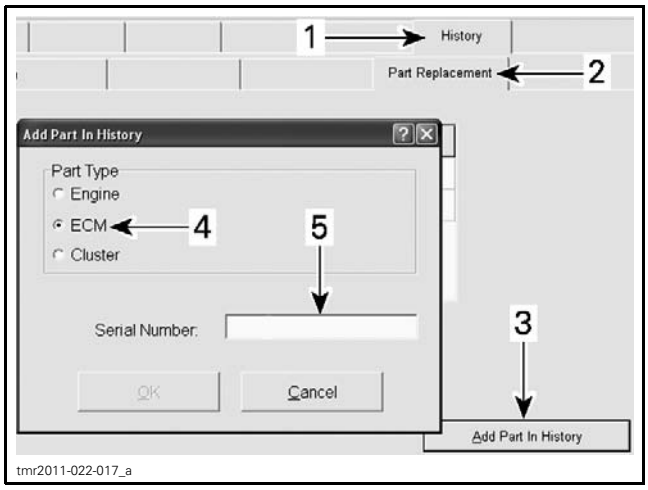


5. Select the **Vehicle** tab and enter the information you recorded previously.
   1. Vehicle serial number
   2. Engine number (do not enter the "M" at the beginning of the engine number)
   3. Customer name.



VEHICLE TAB

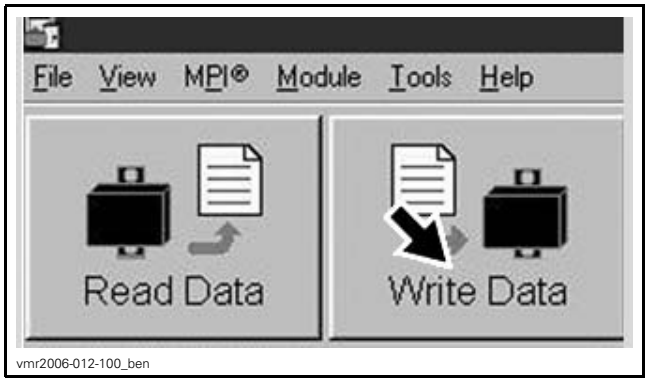
6. Click on the following tabs:
   - **History**
   - **Part Replacement**
   - **Add Part in History**.
7. Enter the **old** ECM serial number in the **Add Part In History** window.



ADDING PART IN HISTORY
1. History *tab*
2. Part Replacement *tab*
3. Add part in history *button*
4. ECM *selection*
5. *Add ECM serial number here*

NOTE: The ECM serial number can be found on the ECM sticker that also identifies the part number.

8. Click on the OK button.
9. Set the proper options in the following pages:
   - ECM
   - Cluster
   - Vehicle configuration.
10. Click on the Write Data button.



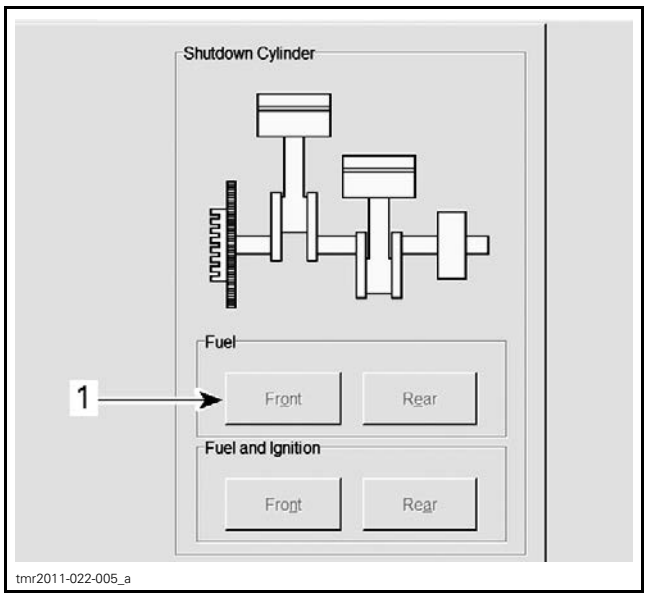
11. Perform the *ECM FIRST INITIALIZATION* reset.
12. Program the vehicle ignition keys into the new ECM, refer to *DIGITAL ENCODED SECURITY SYSTEM (D.E.S.S.)* subsection.
13. Reinstall any remaining removed parts.

FUEL INJECTOR

Fuel Injector Operation Test Using B.U.D.S. (Dynamic)

NOTE: As a first troubleshooting step, always check for applicable fault codes using B.U.D.S.

1. Connect vehicle to the applicable B.U.D.S. version. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.
2. Start engine.
3. In B.U.D.S., select the following:
   - Read Data button
   - Monitoring tab
   - ECM tab.
4. Using the B.U.D.S., shut down fuel injection to each engine cylinder one at a time by clicking on the button under the applicable cylinder.



1. *Click on cylinder number to be tested*

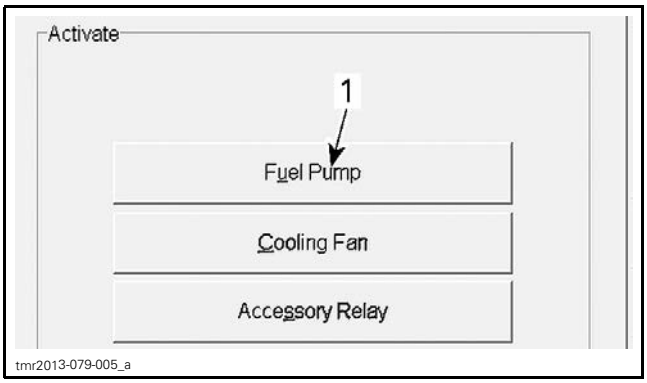
If the engine RPM drops momentarily when clicking on a cylinder, the injector on this cylinder is functioning normally.

If the engine RPM does not drop momentarily when clicking on a cylinder, this cylinder is not functioning properly. Check the following:
- Fuel injector operation. Refer to *FUEL INJECTOR BALANCE TEST USING B.U.D.S.*
- Spark plug and ignition coil. Refer to *IGNITION SYSTEM* subsection.
- Engine condition.

Fuel Injector Balance Test Using B.U.D.S.

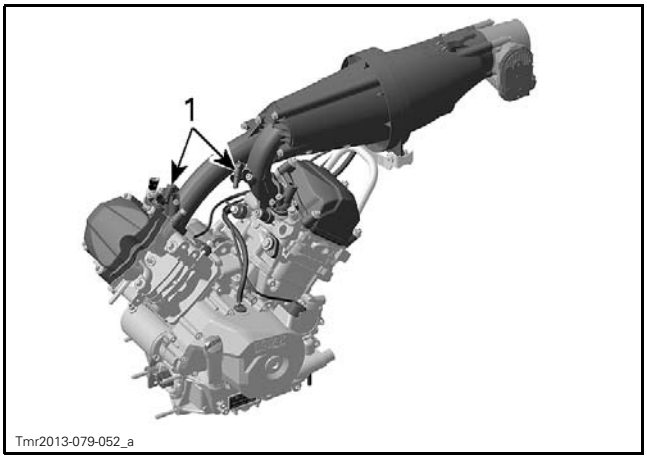
NOTICE After fuel injector activation using B.U.D.S., always crank engine in drowned mode to ventilate engine and prevent a potential backfire due to fuel accumulation in engine.

1. Install a fuel pressure gauge as described in *FUEL PUMP PRESSURE TEST* of *FUEL TANK AND FUEL PUMP* subsection.
2. Connect vehicle to the applicable B.U.D.S. software version. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.
3. Turn the ignition key to ON.
4. In B.U.D.S., select the following:
   – **Read Data** button
   – **Activation** tab.
5. In B.U.D.S., click on the **Fuel Pump** button to activate fuel pump.



1. Fuel Pump activation button

6. Fuel pressure must be within specification. Refer to *FUEL TANK AND FUEL PUMP* subsection. Re-activate fuel pump as necessary.
7. In B.U.D.S., energize fuel injector **no. 1**.



1. Click on injector to activate

8. Record the fuel pressure drop for injector **no. 1**.
9. Click on the Fuel Pump button to activate fuel pump.
10. Repeat the procedure for fuel injector **no. 2** and record the pressure drop for each injector.
11. The maximum fuel pressure drop between injectors should not exceed the following specification:

MAXIMUM FUEL PRESSURE DROP ALLOWED BETWEEN FUEL INJECTORS
10 kPa (1.5 PSI)

If pressure drop of any fuel injector is greater than the specification, replace injector then repeat the test.

12. Using the valve on the fuel pressure gauge, release the pressure in the system (if so equipped).
13. Remove fuel pressure gauge and reinstall removed parts.

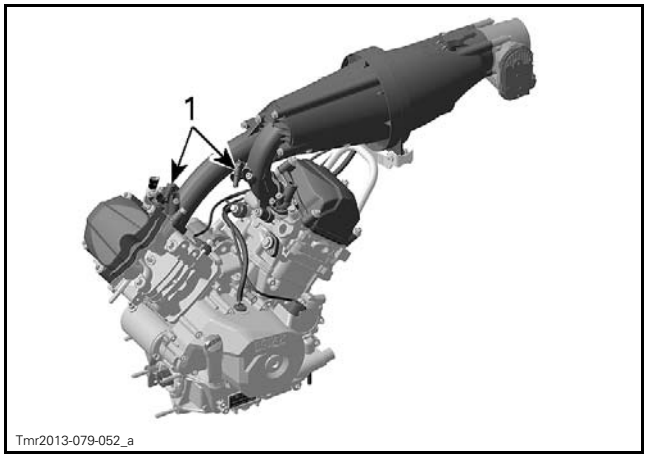
Fuel Injector Leak Test

Carry out the *FUEL PUMP PRESSURE TEST* as detailed in the *FUEL TANK AND FUEL PUMP* subsection.

Fuel Injector Activation Test Using B.U.D.S.

Turn ignition key to ON.

On the **Activation** page of B.U.D.S. software, energize the fuel injector to be tested.



TYPICAL
1. Click on injector to activate

You should hear the injector functioning.

This will validate the injector mechanical and electrical operation.

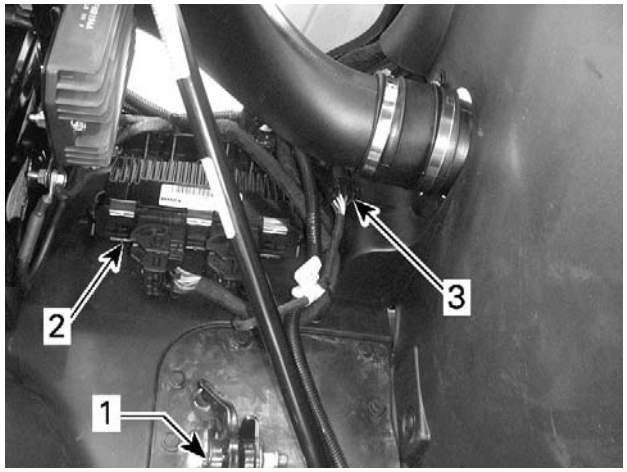
If the injector does not function, carry out the *FUEL INJECTOR RESISTANCE TEST*.

Fuel Injector Resistance Test

Disconnect connector "A" from the ECM.

Disconnect the engine connector (HIC).

NOTE: The HIC connector is located to the right of the ECM.



tmr2011-022-018_a

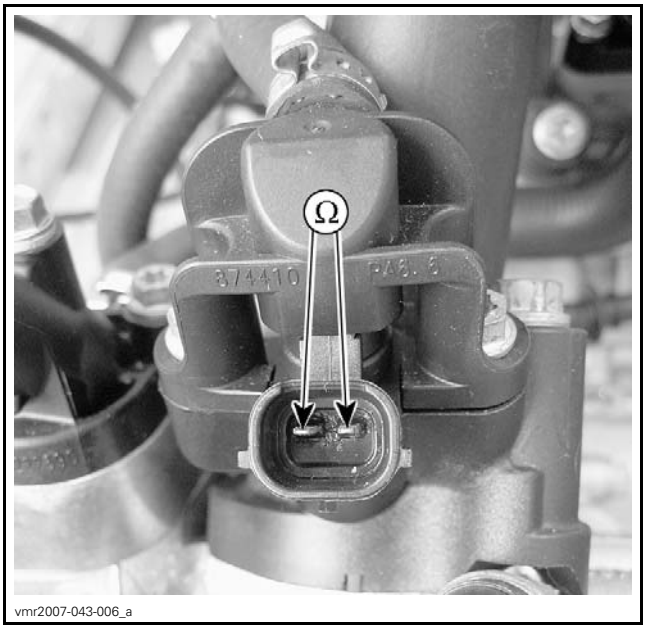
HIC CONNECTOR LOCATION
1. *Accelerator pedal (not visible)*
2. *ECM*
3. *HIC connector*

Using a FLUKE 115 MULTIMETER (P/N 529 035 868), check resistance value between terminals as follows.

FUEL INJECTOR RESISTANCE TEST AT HIC CONNECTOR			
INJECTOR	**HIC CONNECTOR**	**ECM CONNECTOR "A"**	**RESISTANCE @ 20°C (68°F)**
FRONT	D	A-J1	11.4 - 12.6 Ω
REAR		A-K1	

If resistance value obtained is incorrect, remove injector connector and check resistance value between injector pins as follows.

FUEL INJECTOR RESISTANCE TEST AT INJECTOR CONNECTOR			
INJECTOR	**INJECTOR PIN**		**RESISTANCE @ 20°C (68°F)**
FRONT	1	2	11.4 - 12.6 Ω
REAR			



vmr2007-043-006_a

TYPICAL

If readings are out of specifications, replace injector.

If readings are good, carry out a *FUEL INJECTOR INPUT VOLTAGE* test.

Fuel Injector Input Voltage Test

Disconnect the fuel injector connector.

NOTE: If the connector is hard to unlock, gently use a screwdriver to release connector.

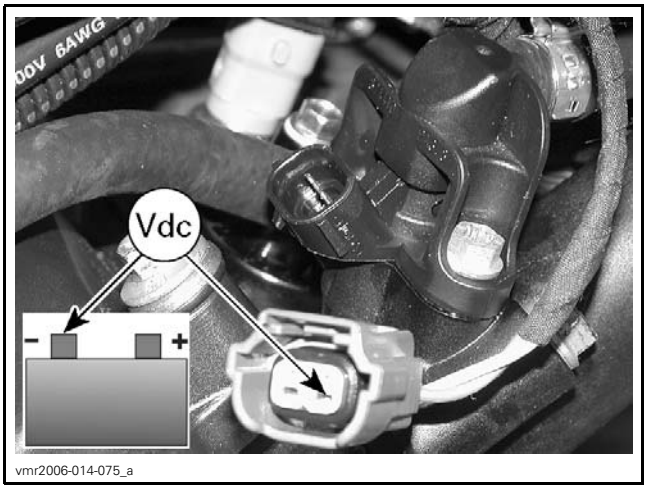
vmr2006-014-001_a

TYPICAL

NOTE: It is not necessary to activate the injector since it is continuously powered when the ignition key is set to ON.

Use a multimeter and set it to Vdc. Read voltage.

CYLINDER	INJECTOR CONNECTOR		MEASUREMENT
	WIRE		
FRONT	VIOLET/ BLUE	Battery ground	Battery voltage
REAR			



vmr2006-014-075_a

TYPICAL

NOTICE When probing, be careful to avoid enlarging connector pins. For this type of connector, back probes should be used.

If supply voltage is not good, check continuity between fuse F5 and injector (see *WIRING DIAGRAMS*).

NOTE: Probe fuse exactly as shown. This validates fuse at the same time.

Use a multimeter and set it to Ω. Read resistance.

CYLINDER	INJECTOR CIRCUIT		MEASUREMENT
	WIRE		
FRONT	VIOLET/ BLUE	Fuse F5	Close to 0 Ω
REAR			

If continuity is good, check relay and wiring from battery.

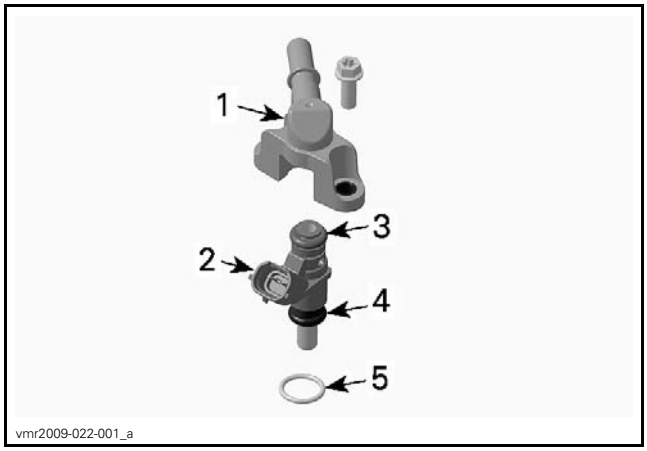
If continuity is faulty, check fuse and if OK, repair/replace wiring going to injector.

If supply voltage is good, check ground circuit between injector and ECM (see *WIRING DIAGRAMS*).

– If ground circuit is faulty, repair/replace wiring and connectors.
– If ground circuit is good, refer to *ECM REPLACEMENT*.

Fuel Injector Removal

To remove the injector, first remove the fuel rail refer to *FUEL RAIL* for the procedure.



vmr2009-022-001_a

TYPICAL - FUEL RAIL ASS'Y
1. *Fuel rail*
2. *Fuel injector*
3. *Injector top O-ring*
4. *Injector bottom O-ring*
5. *Manifold O-ring*

Then pull fuel injector out of the fuel rail.

Fuel Injector Installation

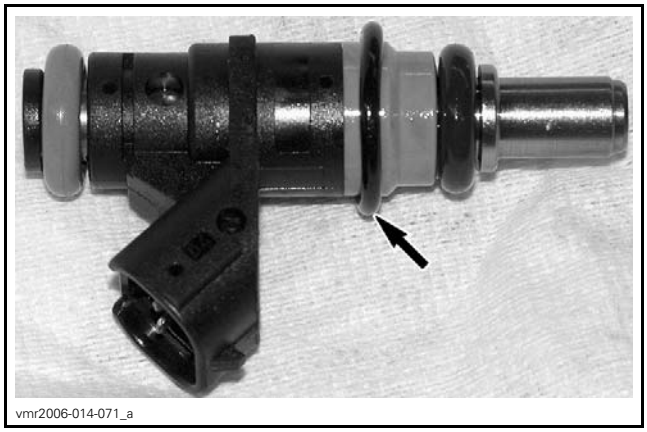
For the installation, reverse the removal procedure. Pay attention to the following details.

Apply a thin film of engine oil to O-rings to ease insertion in rail.

Install fuel injector with your hand. Do not use any tool.

FUEL INJECTOR INSTALLATION		
O-RINGS	New	Lubricate with engine oil

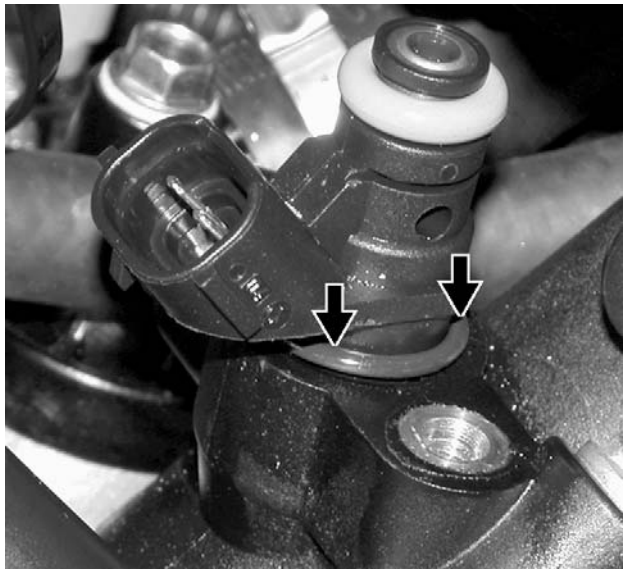
Position the manifold O-ring on injector as in following illustration.


vmr2006-014-071_a

TYPICAL - MANIFOLD O-RING POSITION

Carefully insert injector in manifold paying attention to the manifold O-ring.

NOTICE Gently push O-ring in evenly all around while inserting injector. O-ring must be completely inserted and not visible, before completing the insertion of the injector.


vmr2006-014-072_a

Firmly push injector until it bottoms out.

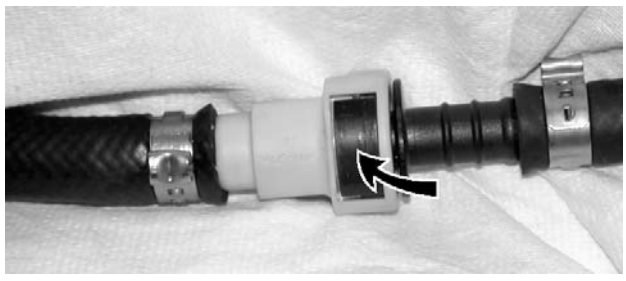
Reinstall fuel rail.

FUEL RAIL

Fuel Rail Replacement

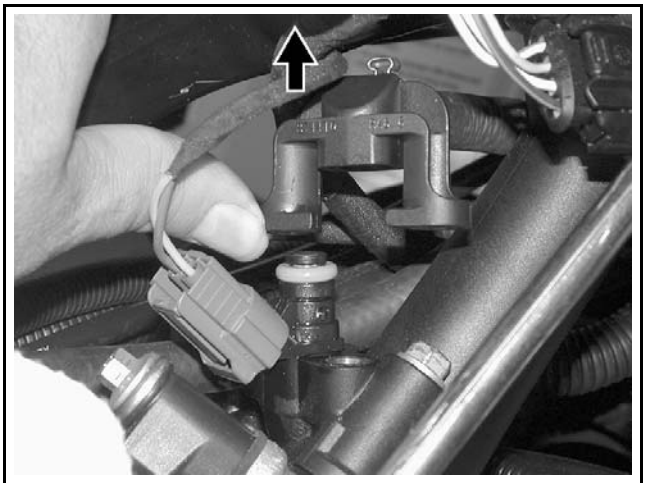
Fuel Rail Removal

1. Wrap a rag around the inlet hose and release the quick fitting.


vmr2006-014-070_a

TYPICAL

2. Unscrew rail retaining screws.
3. Gently pull rail off by hand.


vmr2006-014-073_a

TYPICAL

To disconnect fuel rail from hose, cut clamp on fuel hose using OETIKER PLIERS (P/N 295 000 070). Refer to *FUEL TANK AND FUEL PUMP* for clamp removal/installation procedures.

NOTE: If fuel rail is removed for access to fuel injector, it is not necessary to cut hose clamp. Only to replace fuel rail.

Fuel Rail Installation

For installation, reverse the removal process however, pay attention to the following.

Install new clamps using pliers as per removal (if fuel rail was replaced).

Install fuel rail and evenly tighten screws a little at a time each side.

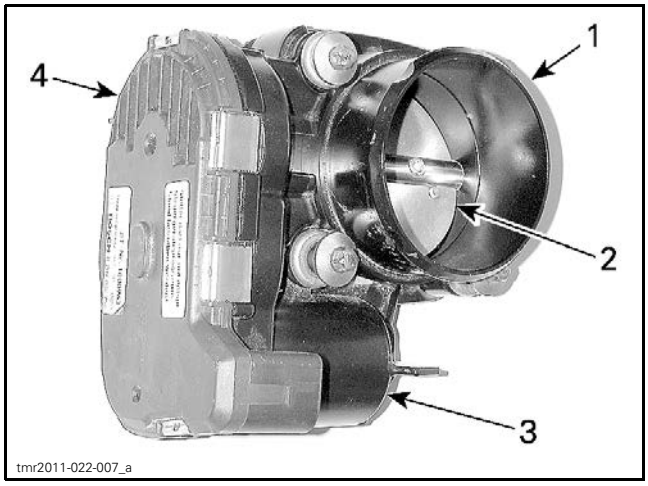
FUEL RAIL INSTALLATION	
INJECTOR O-RINGS	RETAINING SCREW TORQUE
NEW (Lubricate with engine oil)	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

⚠ WARNING

Perform a fuel pressure test and ensure that there is no leak. Refer to *FUEL TANK AND FUEL PUMP*. Run engine and check for leaks.

THROTTLE BODY

Throttle Body Description



1. Throttle body
2. Throttle plate
3. Electronic throttle actuator (electric motor inside)
4. Throttle position sensor (TPS) (inside)

Throttle Body Access

Refer to *AIR INTAKE SYSTEM* and remove the following parts:

– Air filter housing
– Air intake adapter.

Throttle Body Lubrication

No lubrication is required.

Throttle Body Cleaning

1. Remove air inlet hose from throttle body.
2. Check throttle body cleanliness using a flashlight. Fully open throttle plate and verify:

– Throttle body bore
– Throttle plate edge.

Look for:

– Dirt
– Oily surfaces
– Carbon and salt deposits on throttle plate and the surrounding bore.

3. Clean as necessary.
4. Use a throttle body cleaner such as GUNK INTAKE MEDIC or an equivalent.

NOTICE **Only use an appropriate throttle body cleaner that will not damage O-rings and EFI sensors.**

⚠ **CAUTION** **Use the product in a well ventilated area. Refer to product manufacturer's warnings.**

5. To avoid getting dirt into engine, spray cleaner on a clean rag then rub rag against throttle plate and bore. A toothbrush may also be used.

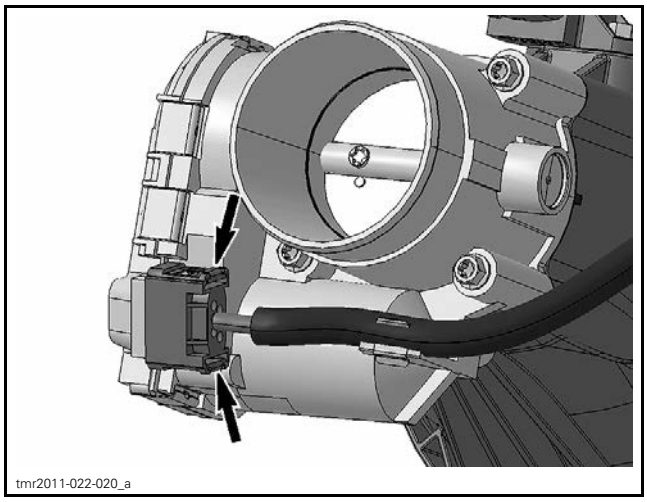
⚠ **CAUTION** **Ensure ignition key is removed so that nobody can activate the electrical system, otherwise the ECM would turn on and the throttle actuator (ETA) would cycle. This could cause serious finger injury as the throttle plate moves quickly.**

6. Gently open throttle plate and hold fully open to reach all surfaces.
7. To remove residual dirt, spray cleaner on throttle plate and on bore.
8. Reinstall removed parts.

Throttle Body Removal

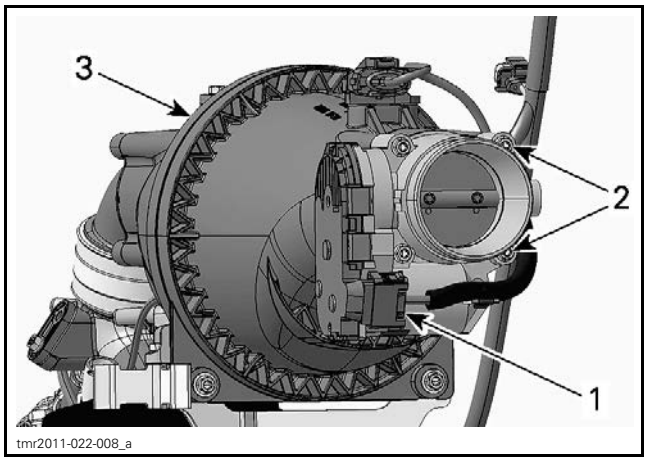
1. Disconnect air inlet hose from throttle body.
2. Disconnect throttle body connector.

To remove connector from throttle body, simultaneously press the end of both connector locking tabs illustrated.



THROTTLE BODY CONNECTOR- PRESS HERE TO UNLOCK

3. Remove screws retaining throttle body to plenum.



1. *Throttle body connector*
2. *Screws (4)*
3. *Plenum*

4. Pull throttle body off plenum.

Throttle Body Installation

Installation of the throttle body is the reverse of the removal procedure. However, pay attention to the following.

TORQUE FOR THROTTLE BODY RETAINING SCREWS
10 N•m ± 1.2 N•m (89 lbf•**in** ± 11 lbf•**in**)

1. Perform the *THROTTLE POSITION SENSOR INITIALIZATION* reset procedure. Refer to *THROTTLE POSITION SENSOR (TPS)* in this subsection.

THROTTLE POSITION SENSOR (TPS)

TPS Description

NOTE: The TPS is part of the throttle body.

The throttle position sensor (TPS) is a double potentiometer that sends signals to the ECM that are proportional to the throttle plate angle.

NOTE: As a first troubleshooting step, always check for applicable fault codes using B.U.D.S. software.

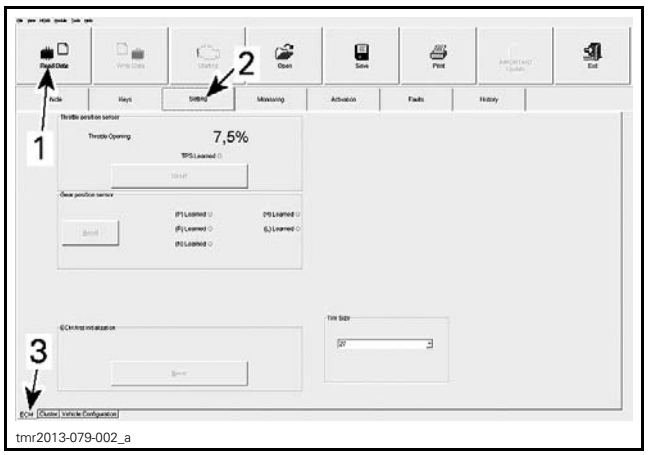
Throttle Position Sensor Initialization

NOTE: The TPS initialization procedure **must** be carried out whenever the throttle body is replaced, unless an ECM first initialization reset is carried out.

This operation performs a reset of the TPS basic values in the ECM. This reset is very important as the TPS values are part of the basic parameters for all fuel mapping calculations and control of several settings such as for idle speed, LIMP HOME mode and maximum RPM of the engine.

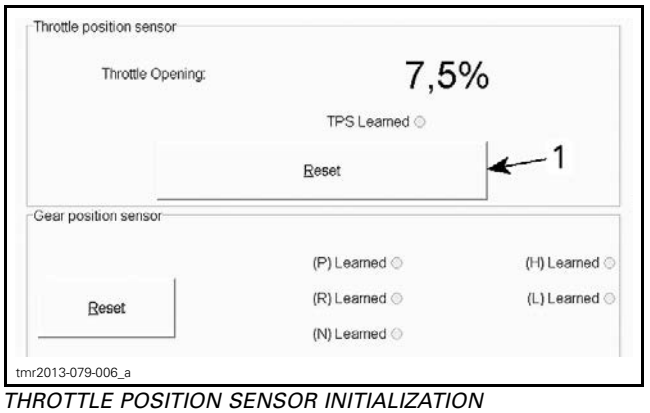
NOTICE **An improperly set TPS may lead to improper idle speed (too low or too high), poor engine performance, poor engine starting and engine stop on deceleration, fault codes and possible engine damage. Emission compliance may also be affected.**

1. Connect vehicle to the applicable B.U.D.S. software version, refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.
2. In B.U.D.S., select the following:
   - **Read Data** button
   - **Setting** tab
   - **ECM** tab.



1. **Read Data** *button*
2. **Setting** *tab*
3. **ECM** *tab*

3. Ensure the accelerator pedal is fully released and at the idle position.
4. In the **Throttle position sensor initialization** field, click on the **Throttle Opening Reset** button.



THROTTLE POSITION SENSOR INITIALIZATION
1. **Throttle Opening Reset** *button*

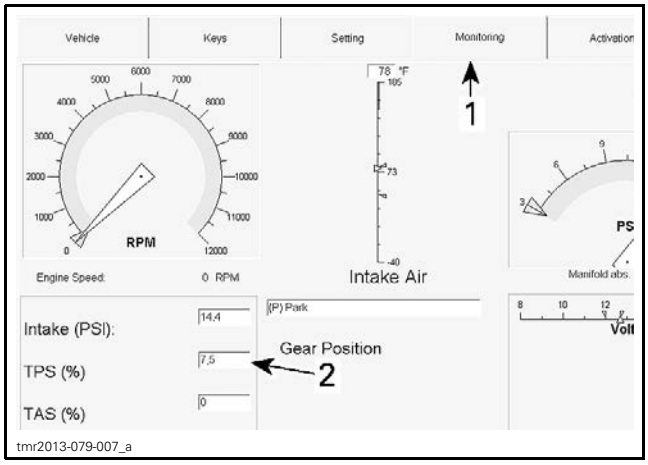
A message will be displayed if the operation is successful.

If an error occurred or the TPS is not within the allowed range while resetting, the ECM will generate a fault code and will not accept the setting.

5. If a fault message is displayed, follow the instructions in the message(s).
6. Check for fault codes.
7. If a fault code is generated,
   – Carry out the service actions.
   – Reset the fault.
   – Repeat the reset procedure.
8. Start engine and make sure it operates normally throughout its full engine RPM range.

TPS Wear Test

1. With the engine turned off, slowly press on the accelerator pedal and pay attention for smooth operation without physical stops.
2. Activate the electrical system to wake up the ECM.
3. Connect vehicle to the applicable B.U.D.S. software version. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.
4. In B.U.D.S., select the following:
   – **Monitoring** tab
   – **ECM** tab.
5. Slowly and regularly move the accelerator pedal.
6. Observe the Throttle Opening indication movement in B.U.D.S.



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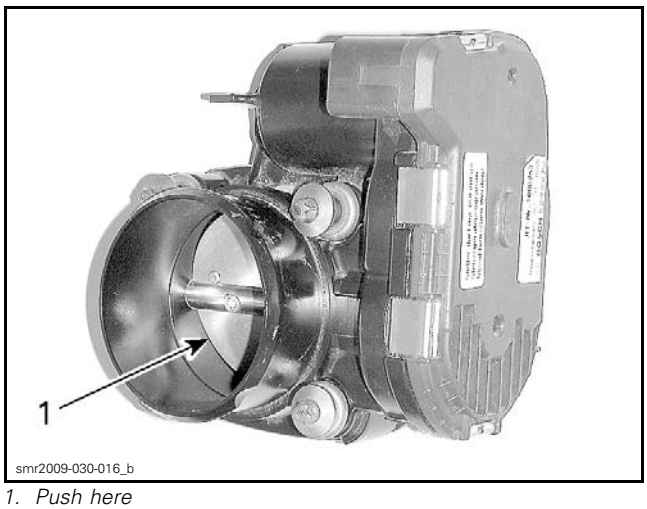
1. *Monitoring tab*
2. *TPS indication*

NOTE: The indication should move gradually and regularly as you move the accelerator pedal. If the TPS indication is erratic or suddenly drops off, it may indicate a worn TPS that needs to be replaced. An initial slight delay after the accelerator pedal is moved and before the indication starts to move is normal.

If the indication behavior is not as expected, proceed with the following steps.

7. Manually move the throttle plate in the throttle body using a blunt tool (without sharp tip).

⚠ CAUTION Do not move throttle plate with your fingers. Otherwise, if ECM should turn off, it would quickly close the throttle plate which could cause finger injury.



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1. *Push here*

8. Check the indication movement again.

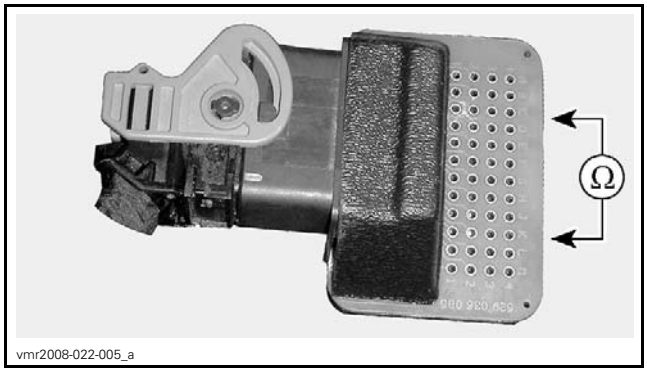
– If the indication moves as expected, check the throttle accelerator sensor (TAS). Refer to *THROTTLE ACCELERATOR SENSOR (TAS)* in this subsection.
– If the indication does not move as expected, perform the *TPS RESISTANCE TEST* in this subsection.

TPS Resistance Test

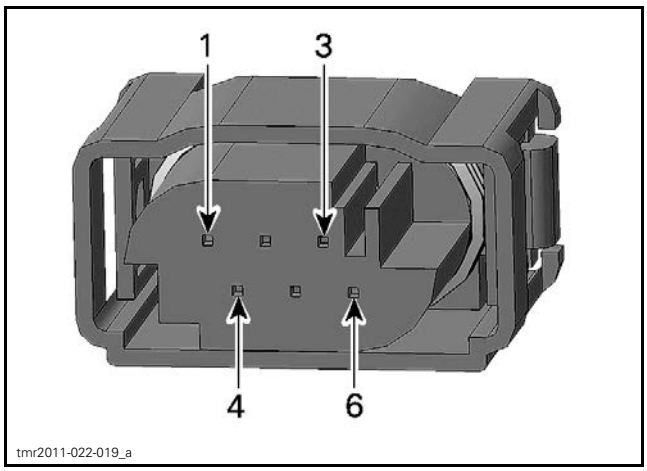
1. Ensure the throttle body connector is properly connected.
2. Disconnect ECM connector A from the ECM and install it on the ECM ADAPTER TOOL (P/N 529 036 166).
3. Use the FLUKE 115 MULTIMETER (P/N 529 035 868) and select Ω.
4. Probe circuit as per following table while using your hand to manually move throttle plate.

ECM ADAPTER		FULLY CLOSED THROTTLE PLATE (1)		FULLY OPEN THROTTLE PLATE	
		RESISTANCE (Ω)			
PIN		MIN.	MAX.	MIN.	MAX.
A-A2	A-K4	875	1625	875	1625
A-A2	A-K3	954	1934	228	585
A-A2	A-F3	254	634	980	1983
A-K3	A-K4	228	585	954	1934
A-K3	A-F3	1385	2315	1385	2315
A-K4	A-F3	980	1983	254	634

(1) To obtain the fully closed position, it is necessary to push against the throttle plate in the throttle body with your hand and hold it in this position for the measurement.



If any resistance value is incorrect, check wire continuity between ECM and throttle body before assuming the TPS is at fault. Refer to *WIRING DIAGRAM* subsection.

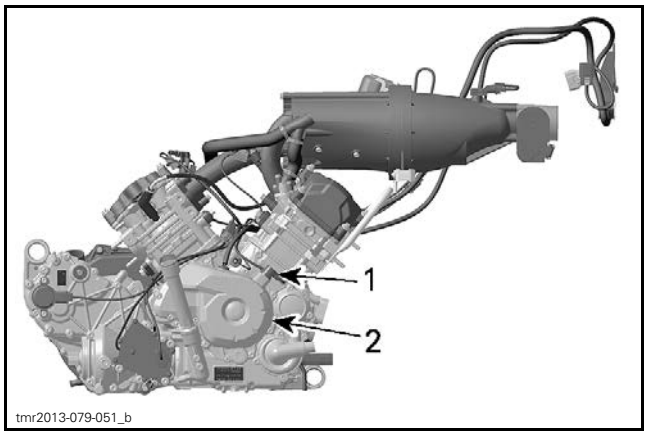


THROTTLE BODY CONNECTOR PIN-OUT

TPS Replacement

Carry out a *THROTTLE POSITION SENSOR INITIALIZATION* procedure as detailed in *THROTTLE BODY* of this subsection.

CRANKSHAFT POSITION SENSOR (CPS)

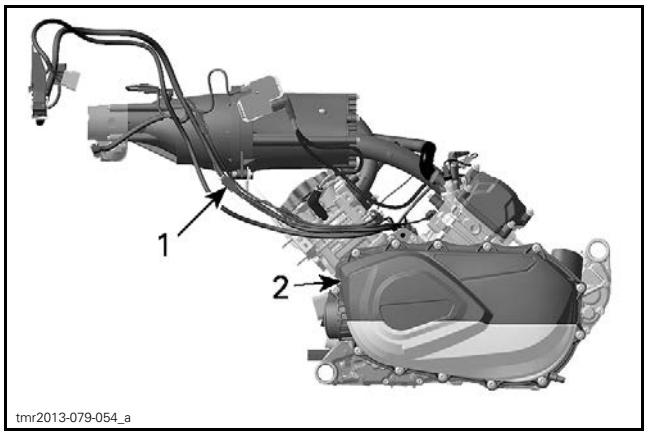


1. CPS
2. Magneto cover

NOTE: Take into account that a CPS fault can be triggered by bent or missing encoder wheel teeth. First check fault codes using B.U.D.S., then check the encoder wheel teeth condition if necessary (refer to *MAGNETO SYSTEM*).

CPS Resistance Test

Disconnect CPS wiring harness connector.



TYPICAL - LH SIDE OF VEHICLE
1. CPS connector location
2. CVT cover

Probe terminals as per following table.

CPS CONNECTOR		MEASUREMENT
PIN		RESISTANCE Ω @ 20°C (68°F)
1	2	700 - 900 Ω

If resistance is not within specifications, replace the CPS.

If resistance tests good, **reconnect** the CPS connector and disconnect the connector "A" on the ECM.

Install ECM-A connector on ECM ADAPTER TOOL (P/N 529 036 166).

Using a multimeter, recheck resistance as per table.

ECM CONNECTOR		MEASUREMENT
PIN		RESISTANCE Ω @ 20°C (68°F)
A-H1	A-K2	700 - 900 Ω

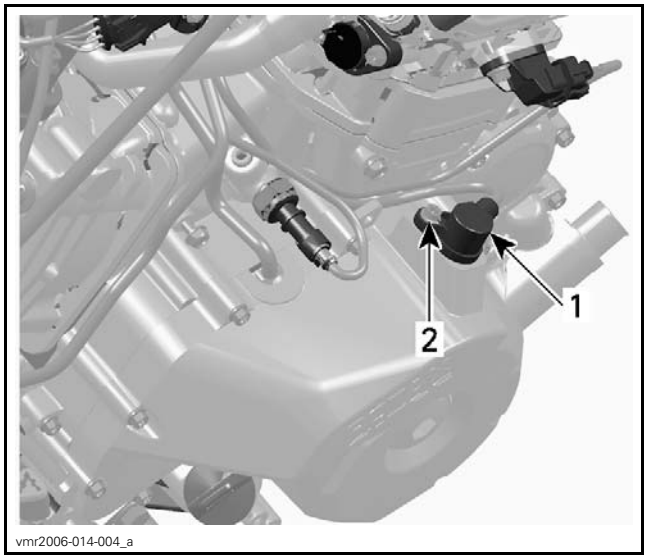
If resistance value is correct, refer to *ECM REPLACEMENT*.

If resistance value is incorrect, repair the connectors or replace the wiring harness between ECM connector and the CPS.

CPS Replacement

Disconnect CPS connector and cut harness locking tie.

Remove CPS retaining screw and pull up on CPS to remove it.

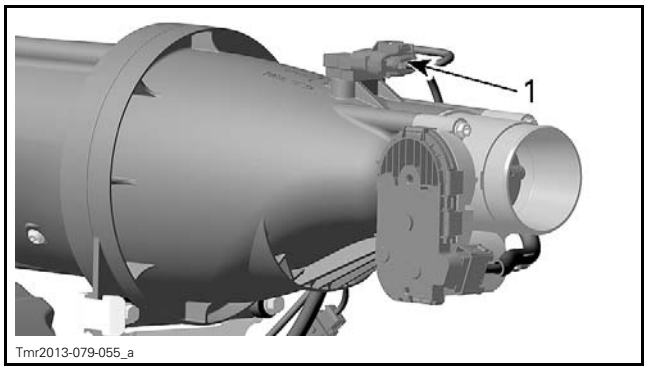


TYPICAL
1. CPS
2. Retaining screw

Install new CPS and secure harness with a new locking tie.

CPS INSTALLATION	
O-RING	PRODUCT
	XPS SYNTHETIC GREASE (P/N 293 550 010)
SENSOR SCREW	TORQUE
	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

MANIFOLD AIR PRESSURE AND TEMPERATURE SENSOR (MAPTS)



1. Manifold air pressure and temperature sensor (MAPTS)

NOTE: This sensor is a multifunction device.

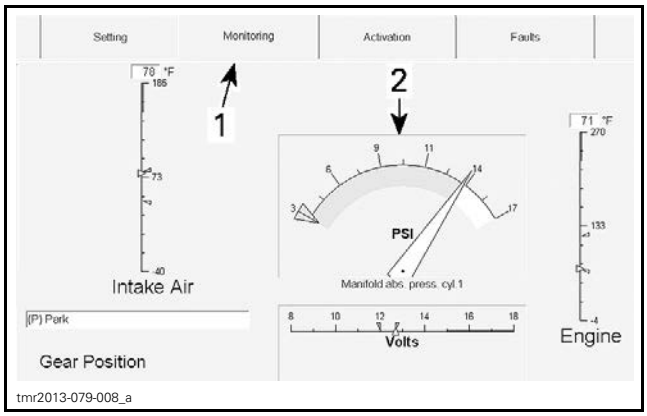
MAPTS Pressure Function

Before the engine is started, when power is applied to the system, the sensor measures the ambient air atmospheric pressure. The ambient pressure is, at that moment, stored in the ECM. Thereafter, once the engine is started, it measures the air pressure in the inlet end of the plenum at operating RPMs.

The sensor must be correctly installed on plenum. Otherwise, the MAPTS could generate a fault code for an unexpected sensor range at idle when it reads the atmospheric pressure. If this is the case, remove sensor and check for oil or dirt on its end and if problem persists, check throttle plate condition/position and the wiring harness. Perform the following tests.

MAPTS Pressure Function Quick Test

1. Connect vehicle to the applicable B.U.D.S. software version.
2. In B.U.D.S., select the following:
   - Read Data
   - Monitoring tab
   - ECM tab.



1. Monitoring tab
2. MAPTS pressure reading

3. Look for and take note of the MAPTS pressure reading while the engine is stopped.
4. Perform the same test with a new MAPTS and compare both readings.

Values have to be within ± 3.4 kPa (.5 PSI).

MAPTS PRESSURE FUNCTION QUICK TEST			
RESULT	SERVICE ACTION		
NO READING	Circuit Continuity Test of MAPTS Pressure Function	MAPTS Input Voltage Test	Repair or replace wiring
VALUE IS OUT OF RANGE	Replace MAPTS		

MAPTS Input Voltage Test

Check the voltage output from ECM to the pressure sensor.

1. Turn ignition key ON.
2. Remove electrical connector from MAPTS.
3. Using a FLUKE 115 MULTIMETER (P/N 529 035 868), measure for input voltage as per following table.

MAPTS CONNECTOR		MEASUREMENT
PIN		VOLTAGE
1	3	5 Vdc

If voltage test is good, replace the MAPTS.

If voltage test is not good, carry out the *MAPTS CIRCUIT CONTINUITY TEST (PRESSURE FUNCTION)*.

MAPTS Circuit Continuity Test (Pressure Function)

1. Disconnect the ECM "A" connector.
2. Install ECM-A connector on ECM ADAPTER TOOL (P/N 529 036 166).
3. Using a multimeter, check continuity of the following circuits.

MAPTS CIRCUIT CONTINUITY TEST (PRESSURE FUNCTION)		
ECM-A	MAPTS CONNECTOR	RESISTANCE VALUE
Pin B4	Pin 3	Close to 0 Ω
Pin G4	Pin 4	
Pin H2	Pin 1	

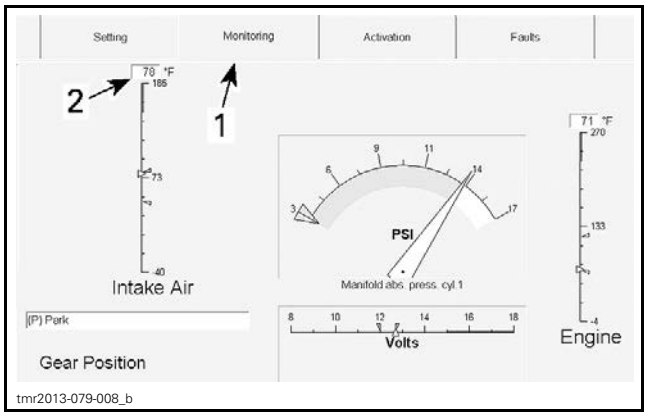
If resistance is not within specification, repair or replace the wiring harness between ECM connector and the MAPTS.

MAPTS Temperature Function

The sensor monitors the temperature in the inlet of the plenum.

MAPTS Quick Test (Temperature Function)

1. Connect vehicle to the applicable B.U.D.S. software version.
2. In B.U.D.S., select the following:
   - Read Data
   - Monitoring tab
   - ECM tab.
3. Look for the Intake Air temperature reading while the engine is stopped.



1. Monitoring tab
2. MAPTS temperature reading

4. Perform the same test with a new MAPTS and compare both readings.

If the engine's MAPTS temperature reading is significantly different than the new MAPTS, replace it.

NOTE: Both sensors must measure the same ambient air temperature.

If there is no reading, carry out a *MAPTS RESISTANCE TEST (TEMPERATURE FUNCTION)*.

MAPTS Resistance Test (Temperature Function)

Disconnect the connector from the MAPTS.

Using the FLUKE 115 MULTIMETER (P/N 529 035 868), check the resistance of the sensor itself as shown.

MAPTS		MEASUREMENT
PIN		RESISTANCE Ω @ 20°C (68°F)
1	2	2280 - 2740

If resistance is not within specification, replace the MAPTS.

If resistance tests good, **reconnect** the MAPTS and disconnect the connector "A" from the ECM.

Install ECM-A connector on ECM ADAPTER TOOL (P/N 529 036 166).

Using a multimeter, recheck resistance value as per following table.

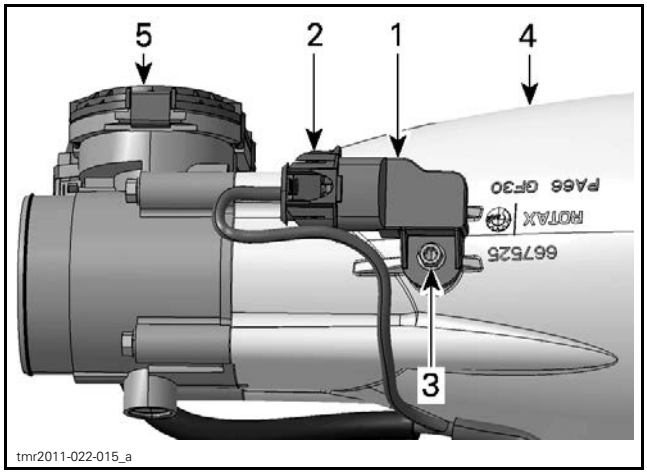
ECM CONNECTOR		MEASUREMENT
PIN		RESISTANCE Ω @ 20°C (68°F)
A-H2	A-H3	2280 - 2740

MAPTS TEMPERATURE SENSOR TEST RESULTS			
RESULT	SERVICE ACTION		
NO READING	Circuit Continuity Test of MAPTS Temperature Function	MAPTS Input Voltage Test	Repair or replace wiring
INCORRECT RESISTANCE VALUE	Replace MAPTS		

MAPTS Circuit Continuity Test (Temperature Function)

MAPTS CIRCUIT CONTINUITY TEST (TEMPERATURE FUNCTION)		
ECM-A	MAPTS CONNECTOR	RESISTANCE VALUE
Pin H2	Pin 1	Close to 0 Ω
Pin H3	Pin 2	

MAPTS Replacement



1. MAPTS
2. MAPTS connector
3. Retaining screw
4. Plenum
5. Throttle body

Disconnect MAPTS connector and remove the MAPTS from the plenum.

Install new MAPTS as per following table.

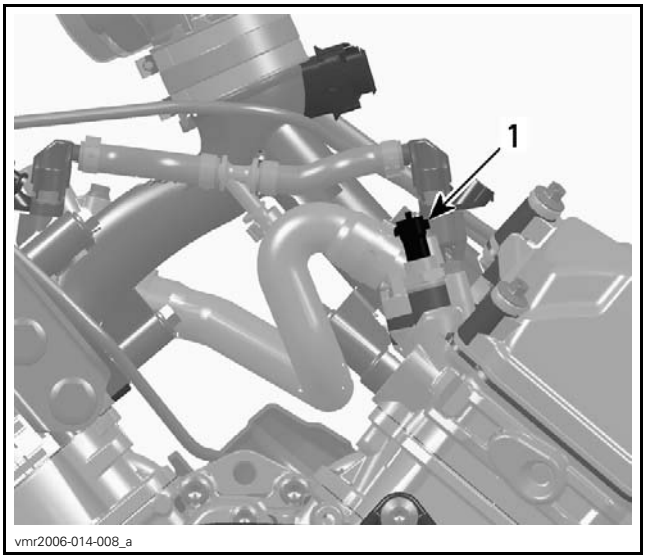
TORQUE	PRODUCT
6 N•m ± 0.7 N•m (53 lbf•**in** ± 6 lbf•**in**)	LOCTITE 243 (BLUE) (P/N 293 800 060)

CTS (COOLANT TEMPERATURE SENSOR)

CTS Access

The CTS is located on the LH of the engine, aft cylinder. To access it, remove the:

– Driver's seat
– LH lateral console panel.

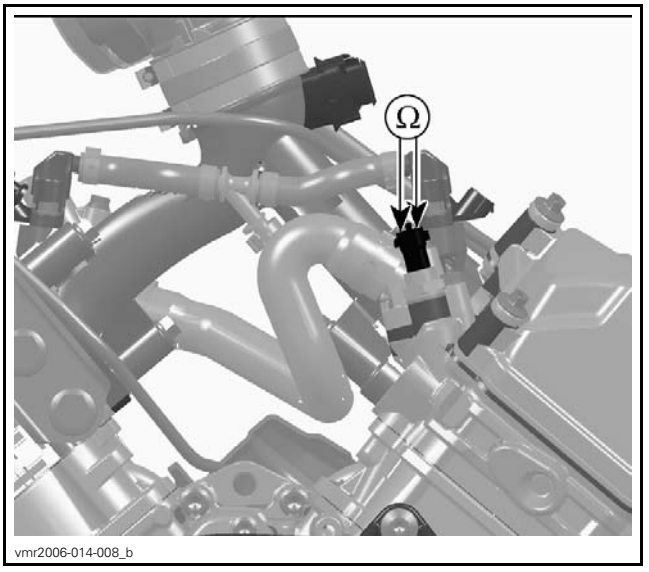


LH SIDE OF THE ENGINE, REAR CYLINDER
1. Coolant temperature sensor (CTS)

CTS Resistance Test

1. Disconnect the plug connector from the CTS and check the resistance of the sensor itself.

CTS SENSOR		MEASUREMENT
PIN		RESISTANCE Ω @ 20°C (68°F)
1	2	2280 - 2740



CHECK SENSOR RESISTANCE

If resistance is out of specification, replace the CTS.

If resistance test is good, **reconnect** the CTS and disconnect the ECM connector "A" from the ECM.

2. Install ECM-A connector on ECM ADAPTER TOOL (P/N 529 036 166).

3. Using a multimeter, recheck resistance from the ECM connector as per table.

ECM "A" CONNECTOR		MEASUREMENT
PIN		RESISTANCE Ω @ 20°C (68°F)
A1	J2	2280 - 2740

If resistance value is correct, refer to *ECM REPLACEMENT*.

If resistance value is incorrect, repair the connectors or replace the wiring harness between ECM connector and the CTS.

CTS Replacement

1. Disconnect CTS connector and remove CTS.
2. Install the new CTS and torque as specified.

CTS TORQUE
16 N•m ± 2 N•m (142 lbf•**in** ± 18 lbf•**in**)

3. Reinstall remaining removed parts.
4. Refill and bleed the cooling system, refer to *COOLING SYSTEM* subsection.

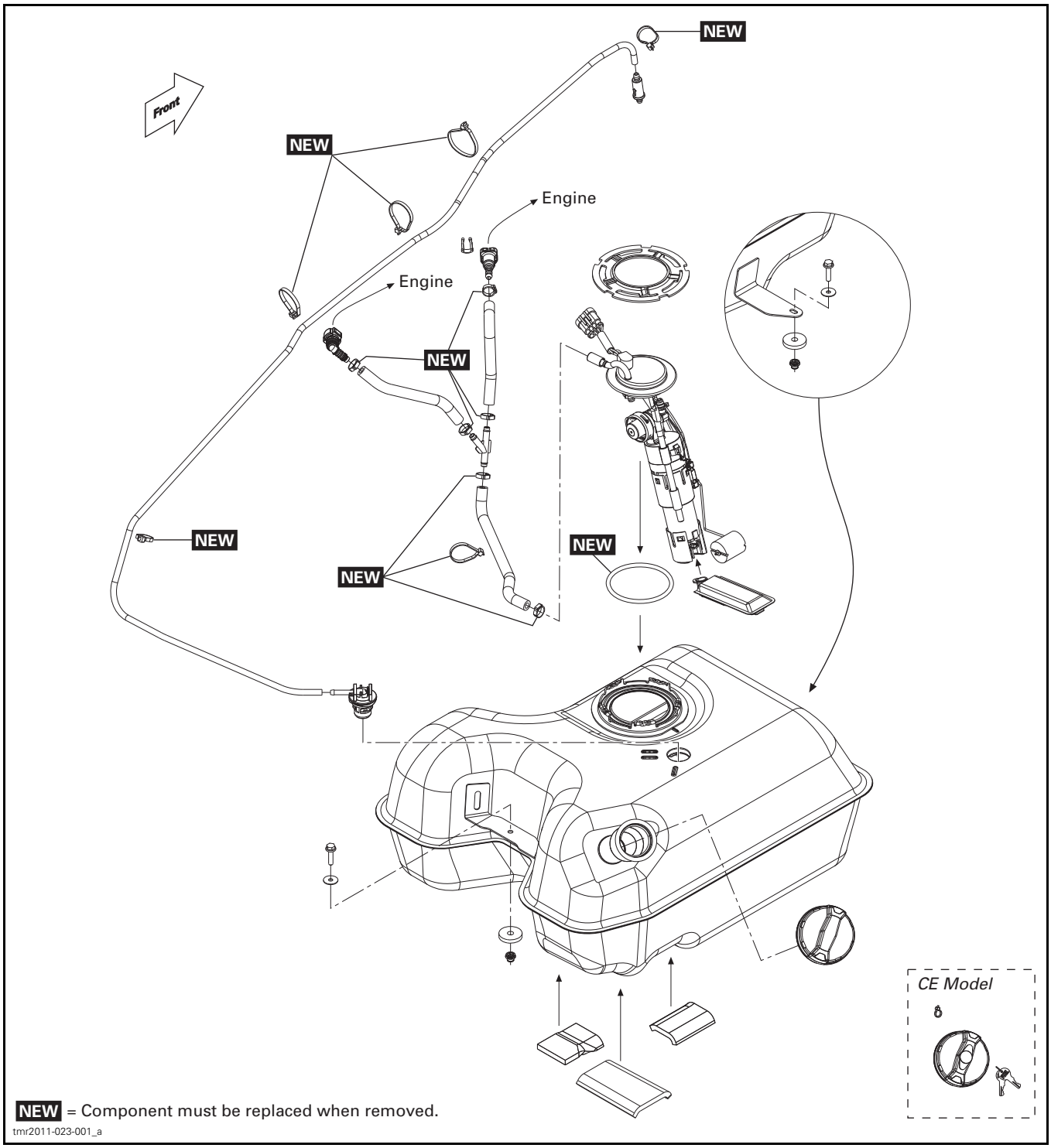
FUEL TANK AND FUEL PUMP

SERVICE TOOLS

Description	Part Number	Page
ECM ADAPTER TOOL	529 036 166	277
FLUKE 115 MULTIMETER	529 035 868	276
FUEL HOSE ADAPTER	529 036 023	271
OETIKER PLIERS	295 000 070	274
PRESSURE GAUGE	529 035 709	271
VACUUM/PRESSURE PUMP	529 021 800	270, 281

SERVICE TOOLS – OTHER SUPPLIER

Description	Part Number	Page
FLUKE RIGID BACK PROBE	TP88	276


NEW
Front
NEW
Engine
Engine
NEW
NEW
NEW
NEW
CE Model
NEW = Component must be replaced when removed.
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GENERAL

⚠ WARNING

Fuel is flammable and explosive under certain conditions. Ensure work area is well ventilated. Do not smoke or allow open flames or sparks in the vicinity.

⚠ WARNING

Always disconnect battery prior to working on the fuel system.

⚠ WARNING

Always proceed with care and use appropriate safety equipment when working on pressurized fuel system. Wear safety glasses.

⚠ WARNING

Do not allow fuel to spill on hot engine parts and/or on electrical connectors.

When the repair is completed, ensure that all hoses are connected and secured. Perform the *FUEL PRESSURE TEST* and the *FUEL TANK LEAK TEST* as explained in this subsection.

Fuel lines remain under pressure at all times. Proceed with care when removing/installing high pressure test equipment.

Use the B.U.D.S. software or disconnect the fuel pump electrical connector to disable fuel pump and crank engine to release fuel pressure prior to disconnecting any fuel hose.

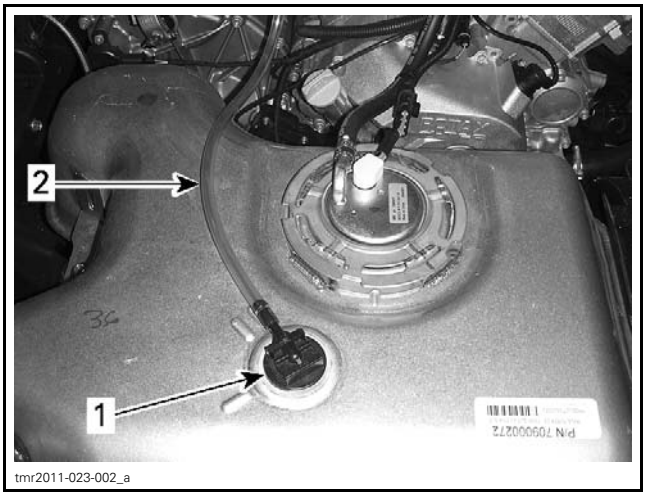
Cover the fuel hose connections with an absorbent shop rag and carefully disconnect them to minimize spilling.

SYSTEM DESCRIPTION

Fuel Tank Vent System

The fuel tank is equipped with a vent system that ensures the fuel tank remains at ambient pressure.

Air can enter the fuel tank at all times through the fuel tank vent valve. This prevents negative pressure within the fuel tank which could cause fuel starvation.



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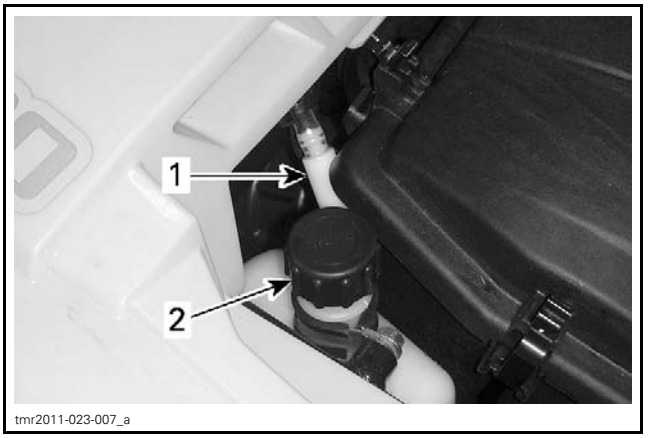
1. Vent valve
2. Air inlet hose

The vent valve also prevents fuel from flowing out through the inlet of the vent system should the vehicle be overturned.

Fuel Tank Vent Breather Filter

The air inlet hose of the vent system is equipped with an in-line breather filter that prevents entry of particles such as dust or small insects. It is located behind the air filter housing next to the coolant reservoir. To access the breather filter, remove the service cover.



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1. Fuel tank vent breather filter
2. Cooling system expansion tank

Fuel Pump Module

The fuel pump module is inserted in the fuel tank. It provides fuel delivery for the EFI system and encompasses the following components:

– Electric fuel pump
– Fuel pre-filter (replaceable)
– Fuel pressure regulator
– Fuel level sender.

Fuel Filters

The system comprises two levels of filtration.

A replaceable prefilter element attached to the bottom of the pump, and a non-replaceable fine filter element that is integral to the fuel pump module.

Fuel Pump Pressure Regulator

The fuel pressure regulator is integral to the fuel pump module. The pressure regulator maintains proper fuel pressure for the EFI system.

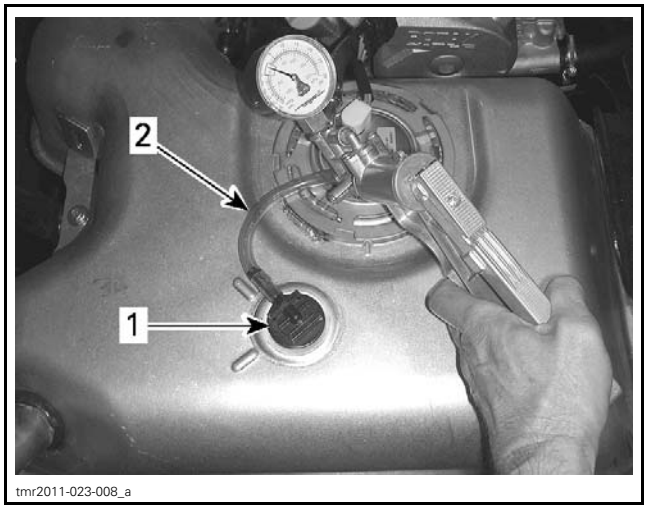
INSPECTION

FUEL TANK LEAK TEST

⚠ WARNING

Always carry out a fuel tank leak test whenever the fuel tank shows signs of wear or damage which may cause a leak, or when the fuel pump has been removed or replaced, or if you suspect a leak. If the fuel tank is damaged, the fuel tank should be replaced even if no leak is present. Do not attempt to repair the fuel tank.

1. Refill fuel tank and ensure fuel tank cap is in good condition and properly installed.
2. Refer to *BODY* subsection and remove the following:
   – RH passenger seat
   – RH lateral console panel
   – Fuel tank cover panel.
3. Remove the vent hose from the fuel tank vent valve.
4. Using the VACUUM/PRESSURE PUMP (P/N 529 021 800) and a short piece of hose, pressurize the fuel tank through the vent valve.



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1. Fuel tank vent valve
2. Vent hose to vacuum/pressure pump

PRESSURE	TIME WITHOUT PRESSURE DROP
14 kPa (2 PSI)	3 minutes

If pressure drops, locate fuel leak(s) and repair or replace leaking component(s).

NOTE: In case of fuel tank leak, do not attempt repair. Fuel tank must be replaced.

To locate a leak, check for a fuel smell or leaking fuel.

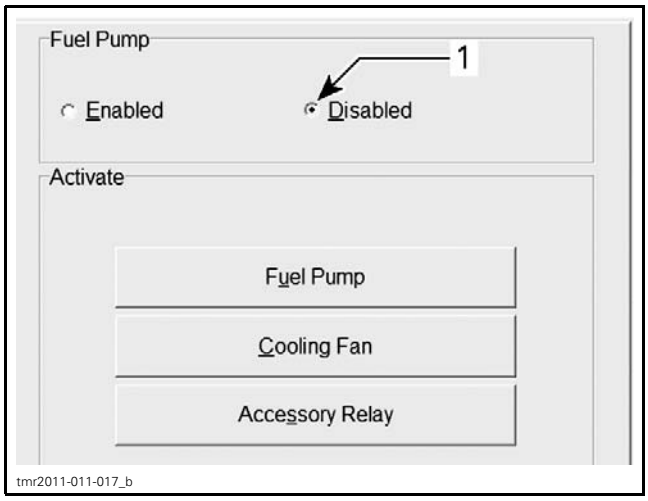
To ease locating leak(s), spray soapy water on all hose connections and components; bubbles will indicate the leak location(s).

FUEL PUMP PRESSURE TEST

The pressure test will show the available pressure at the fuel pump outlet. It validates the pressure regulator, the fuel pump and tests for leaks in the system.

NOTE: Refer to the *FUEL SYSTEM DIAGNOSTIC FLOW CHART* to help diagnose a fuel system related problem.

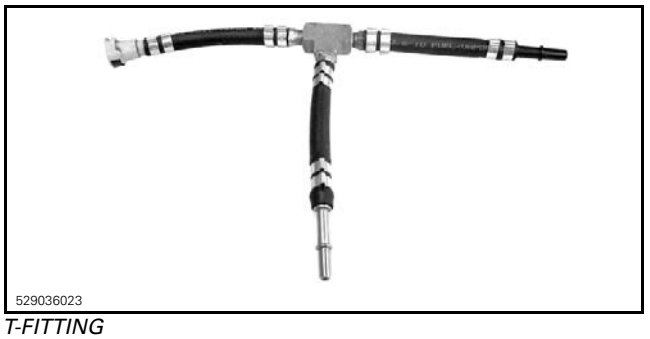
1. Ensure there are no leaks from hoses and fittings. Repair any leak.
2. Ensure the fuel level in the tank is sufficient.
3. Before proceeding with the pressure test ensure the battery is fully charged. Battery voltage must be over 12 volts.
4. Connect vehicle to the applicable B.U.D.S. software version and select the following:
   – **Read Data** button
   – **Activation** page tab
   – **ECM** page tab
   – Fuel pump **Disabled**.



1. Click here to disable the fuel pump

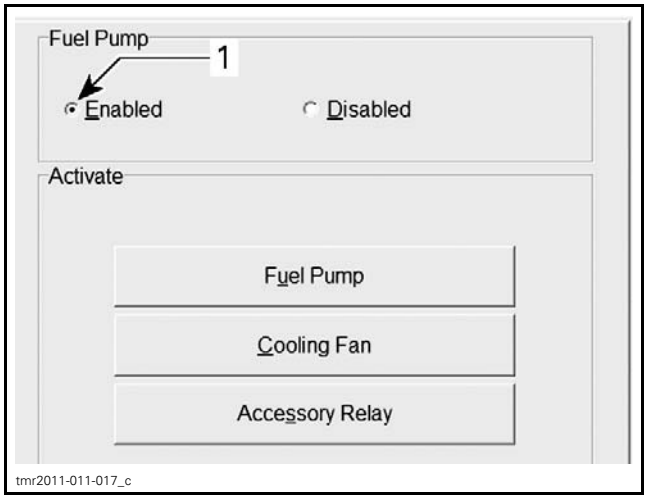
5. Release fuel pressure by running engine until it runs out of gas.
6. Remove the following items, refer to the *BODY* subsection.
   – Passenger seat
   – Fuel tank cover
   – RH lateral console panel.
7. Carefully disconnect the fuel pump outlet hose by pressing on the release tab of the quick disconnect fitting.
8. Install fuel PRESSURE GAUGE (P/N 529 035 709) and FUEL HOSE ADAPTER (P/N 529 036 023) between disconnected hose and fuel rail (in-line installation).

PRESSURE GAUGE



T-FITTING

9. Using B.U.D.S., reactivate fuel pump by selecting **Enabled**.



1. Click here to disable the fuel pump

10. Turn ignition key ON and observe fuel pressure.

FUEL PRESSURE	350 kPa ± 10 kPa (51 PSI ± 1 PSI)

NOTE: Valid at 12 V ± 0.1 V.

11. Start engine and observe fuel pressure.
12. Stop engine.
13. In B.U.D.S., select the fuel pump **Disabled** function.
14. Release fuel pressure by running engine until it runs out of gas.
15. Remove tool and connect hose on fuel rail.

Test Conclusion

The fuel pressure should be within specification in static or dynamic tests.

A rapid pressure drop after the engine is stopped indicates leakage either from a fuel hose, fuel rail, or from the fuel pump check valve.

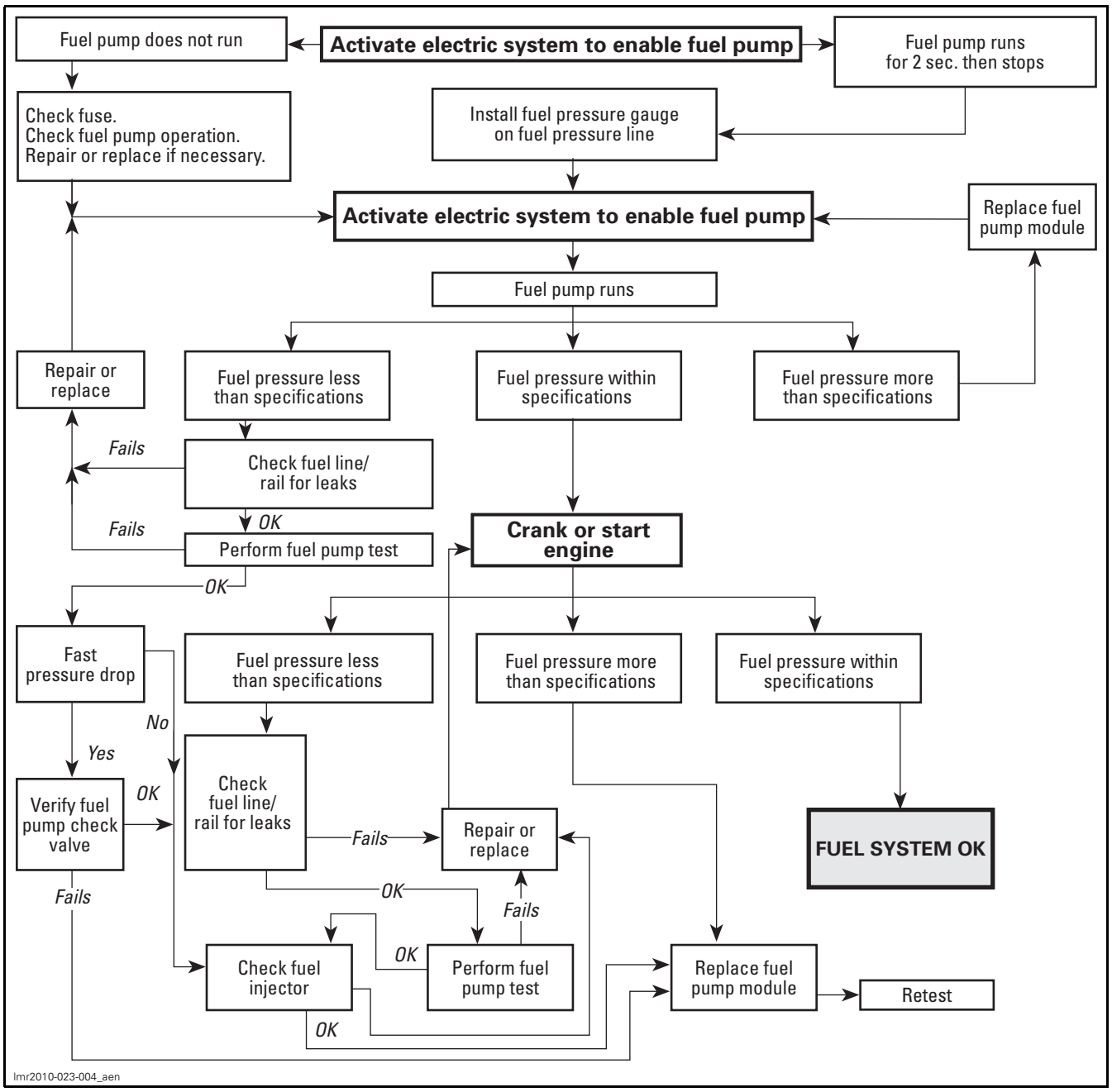
– Check fuel hoses, fuel rail and fittings for leaks. If not leaking, replace fuel pump.

A slow pressure drop after the engine is stopped indicates leakage either from a fuel injector or from the fuel pressure regulator.

– Check fuel injectors for leaks. If not leaking, replace fuel pump.

TROUBLESHOOTING

FUEL SYSTEM DIAGNOSTIC FLOW CHART



PROCEDURES

FUEL HOSE AND OETIKER CLAMPS

Fuel Hose Replacement

When replacing fuel hoses, be sure to use hoses and clamps as available from BRP parts department. This will ensure continued proper and safe operation.

⚠ WARNING

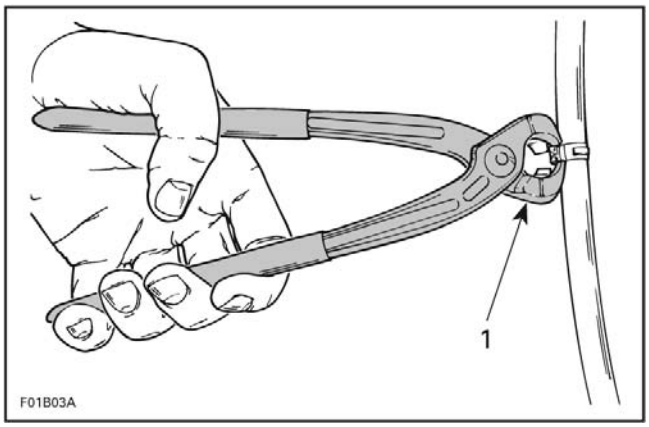
Use of fuel lines other than those recommended by BRP may compromise fuel system integrity.

⚠ WARNING

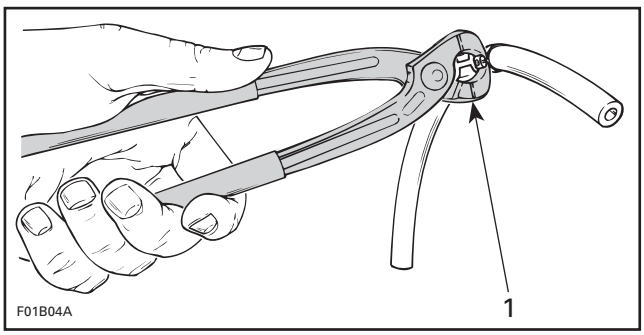
Whenever removing a hose in the fuel system, always use new Oetiker clamps at assembly. Then validate fuel system tightness by performing a fuel pressure test.

Oetiker Clamp Replacement

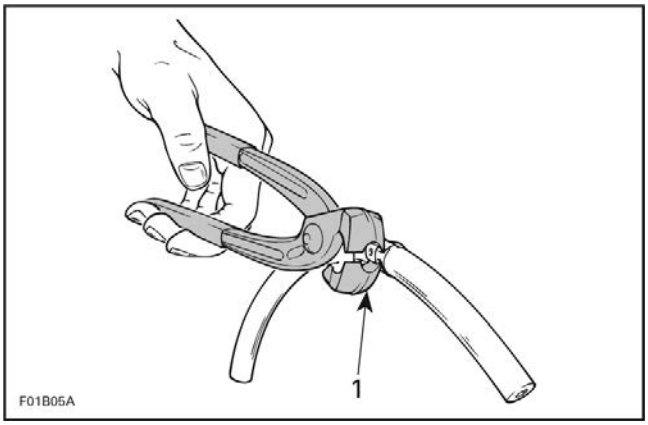
To secure or cut Oetiker clamps on fuel lines, use OETIKER PLIERS (P/N 295 000 070).



1. Cutting clamp



1. Securing clamp



1. Securing clamp in limited access

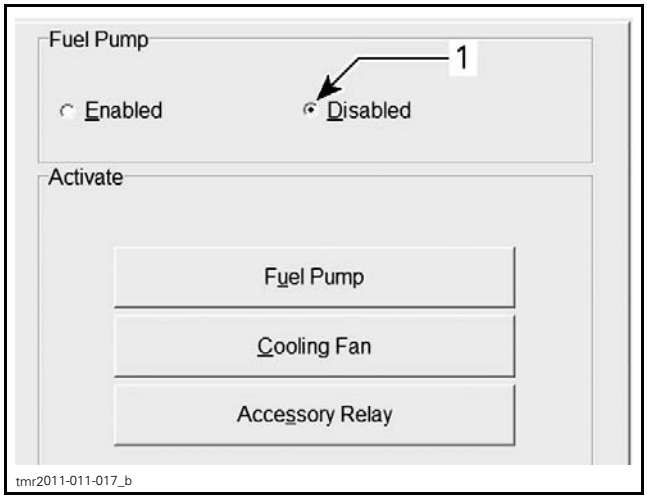
FUEL TANK

Fuel Tank Draining

Remove fuel tank cap and siphon gas into an approved fuel container.

Fuel Tank Removal

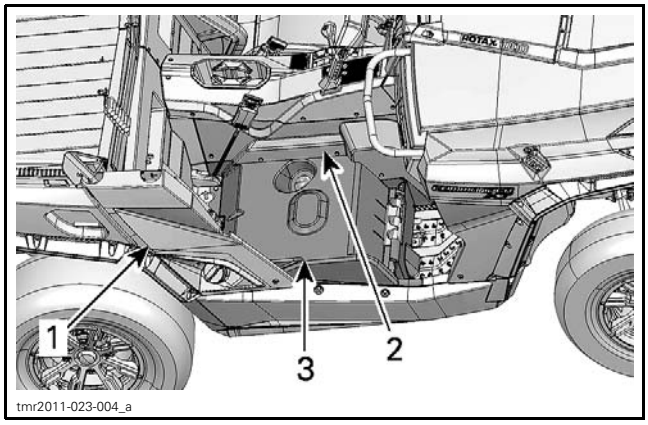
1. Drain fuel tank. Refer to *FUEL TANK DRAINING* above in this subsection.
2. Connect the vehicle to the applicable B.U.D.S. software version.
3. In B.U.D.S., select the following to disable the fuel pump:
   - **Read Data** button
   - **Activation** page tab
   - **ECM** page tab
   - Fuel pump **Disabled**.



1. Click here to disable the fuel pump

4. Release fuel pressure by running engine until it runs out of gas.
5. Disconnect battery, refer to *CHARGING SYSTEM* subsection.

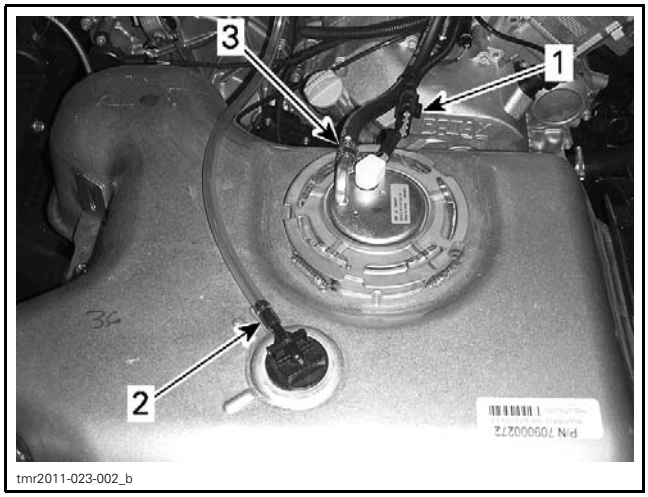
6. Remove RH passenger seat, refer to the *BODY* subsection.
7. Refer to *BODY* subsection and remove the body parts indicated in the following illustration.



tmr2011-023-004_a

TYPICAL
1. *RH Lateral body panel*
2. *RH side panel on the console*
3. *Fuel tank cover panel*

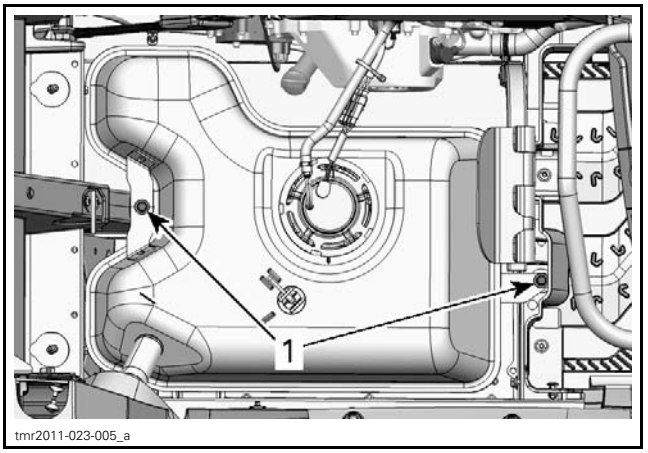
8. Disconnect the fuel pump connector.
9. Remove the vent hose from the fuel tank valve.
10. Disconnect the high pressure fuel hose at the fuel injectors.



tmr2011-023-002_b

1. *Fuel pump connector*
2. *Vent hose*
3. *High pressure fuel hose*

11. Remove fuel tank retaining screws (2).



tmr2011-023-005_a

1. *Fuel tank mounting screws (2)*

12. Pull fuel tank out from the RH side of vehicle.

Fuel Tank Inspection

Inspect fuel tank for any damages or cracks which may result in fuel leaks.

Inspect tank and protector attachment points for damages.

Inspect protector for damages.

If cracks, gouges or other damages which may lead to a fuel leak, or damages to attachment points that could prevent the tank from being secure are found, replace fuel tank.

Fuel Tank Installation

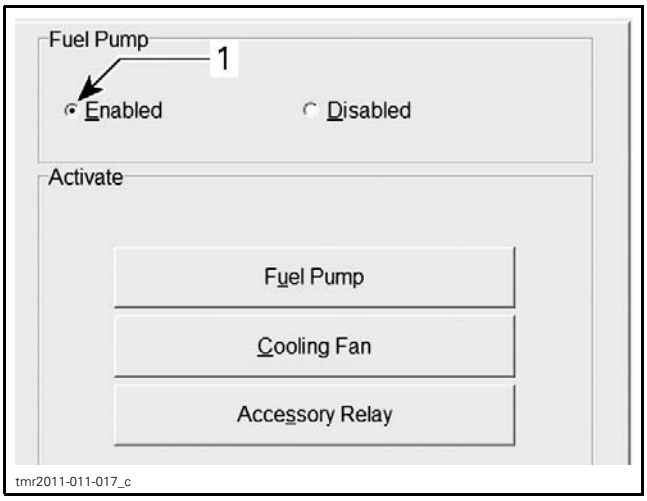
The installation is the reverse of the removal procedure. However, pay attention to the following.

Be sure to reinstall the 2 rubber washers between the fuel tank and the frame.

NOTE: Verify the 3 rubber pads located under the fuel tank are properly fixed to the fuel tank. If pad is missing, install a new one.

Be sure to properly connect and route:
- Fuel tank vent tube
- Fuel pump pressure hose
- Electrical connector.

Using B.U.D.S., reactivate fuel pump by selecting **Enabled**.



1. Click here to enable fuel pump

Refuel tank and ensure there are no leaks by performing a *FUEL TANK LEAK TEST* and a *FUEL PRESSURE TEST* as described in this subsection.

FUEL PUMP

Fuel Pump Pressure Test

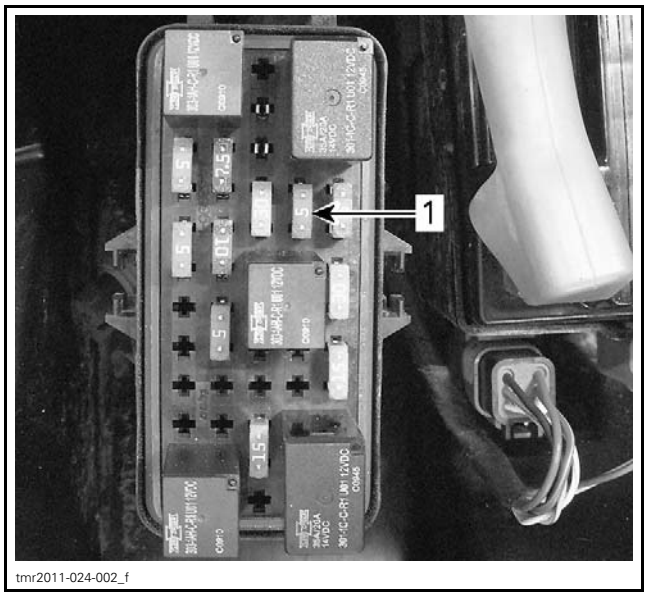
Refer to *INSPECTION* in this subsection.

Fuel Pump Quick Test

1. Turn ignition key to ON.
2. Listen for fuel pump operation.
3. Fuel pump should come ON for a few seconds, then stop.

If fuel pump does operate as in previous steps, carry out the following:

– Check fuel pump fuse.
– Check in B.U.D.S. for applicable fault codes. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.
– Carry out a fuel pump input voltage test.



1. Fuel pump fuse

Fuel Pump Input Voltage Test

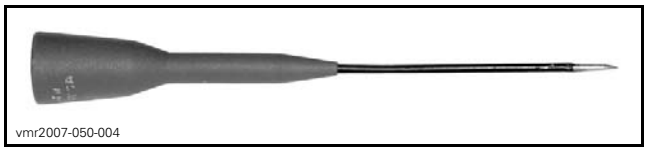
1. Remove RH passenger seat and fuel tank cover, refer to *BODY* subsection.

Disconnect the fuel pump connector.

2. Use the FLUKE 115 MULTIMETER (P/N 529 035 868) with the FLUKE RIGID BACK PROBE (P/N TP88).

Set multimeter to Vdc.

FLUKE 115 MULTIMETER



FLUKE RIGID BACK PROBE

3. Set multimeter to Vdc.
4. Turn ignition key ON.
5. Read voltage as follows.

FUEL PUMP INPUT VOLTAGE TEST		
TEST PROBES		VOLTAGE READING
Fuel pump connector Pin 3	Fuel pump connector Pin 4	Battery voltage

If battery voltage is read, carry out a fuel pump resistance test.

If battery voltage is not read, test fuel pump power input as follows.

FUEL PUMP POWER WIRE TEST		
TEST PROBES		VOLTAGE READING
Fuel pump connector Pin 3	Battery ground	Battery voltage

If battery voltage is now read, check fuel pump ground circuit between fuel pump connector 5-FP-4 and ECM connector 3-B-M1.

If battery voltage is still not read, check fuel pump:
- Fuse (F15)
- Power circuit
- Wiring and connectors.

Fuel Pump Resistance Test

1. Remove the fuel pump fuse.
2. Remove connector B from the ECM and connect it to the ECM ADAPTER TOOL (P/N 529 036 166).

3. Set multimeter to Ω.
4. Measure fuel pump resistance as follows.

FUEL PUMP RESISTANCE TEST (AT ECM AND FUSE)		
TEST PROBES		RESISTANCE Ω @ 20°C (68°F)
Fuse box contact 5D	ECM B-M1	Approximately 2 Ω

If resistance test failed, disconnect fuel pump connector and measure resistance at fuel pump connector.

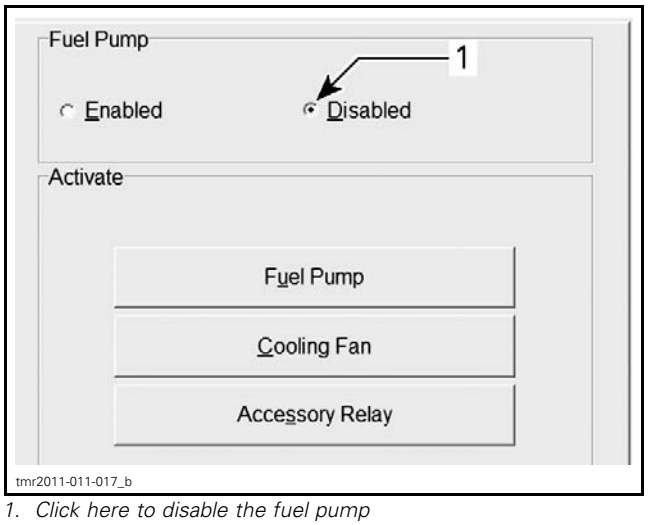
FUEL PUMP RESISTANCE TEST (AT FUEL PUMP CONNECTOR)	
Pins 1 and 2	Approximately 2 Ω

If test failed at pump connector, replace fuel pump.

If test succeeded at pump connector, check wiring and connectors from fuse box to ECM connector. Repair or replace as necessary.

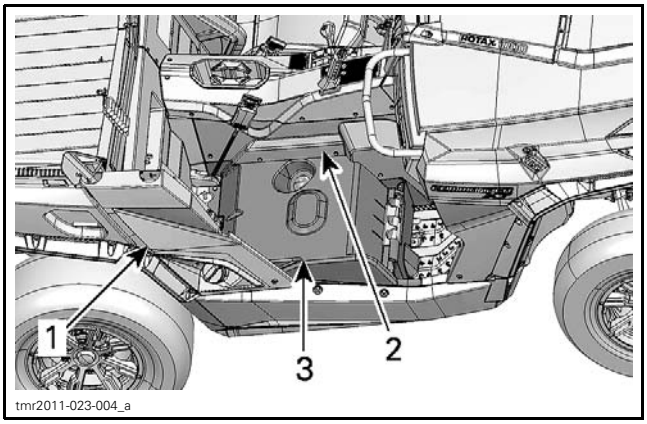
Fuel Pump Removal

1. Using B.U.D.S., select the following to disable the fuel pump:
   - **Read Data** button
   - **Activation** page tab
   - **ECM** page tab
   - Fuel pump **Disabled**.



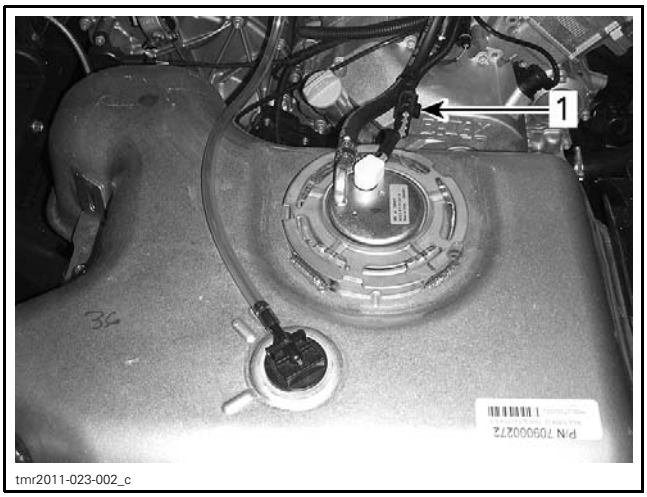
1. Click here to disable the fuel pump

2. Release fuel pressure by running engine until it runs out of gas.
3. Refer to *BODY* subsection and remove the body parts indicated in the following illustration.



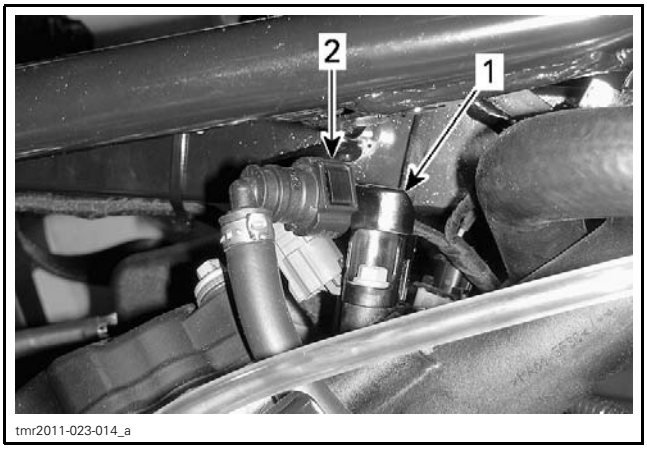
TYPICAL
1. *RH Lateral body panel*
2. *RH side panel on the console*
3. *Fuel tank cover panel*

4. Disconnect fuel pump electric connector.



1. *Fuel pump connector*

5. Disconnect high pressure fuel hose at fuel rails (2 disconnects).

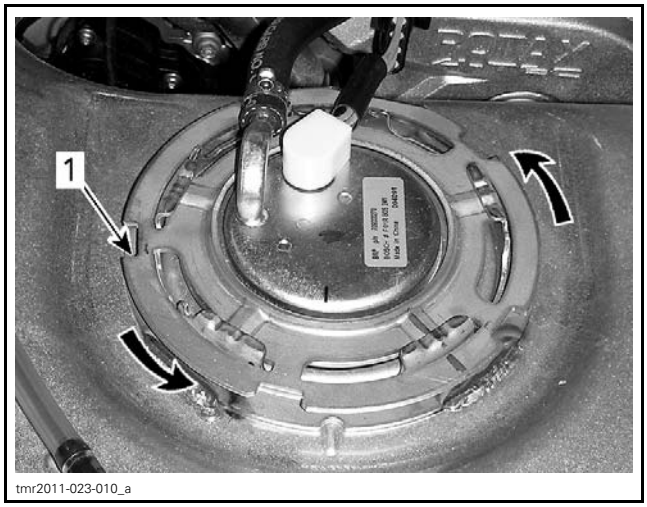


1. *Fuel rail (1 each cylinder)*
2. *High pressure fuel hose disconnect ((1 each cylinder)*

6. Using a soft face hammer and a brass drift in the notched portion of the locking ring, remove fuel pump locking ring.

⚠ WARNING

Fuel vapors are flammable and explosive under certain conditions. Use only non-sparking tools.



FUEL PUMP LOCKING RING REMOVAL
1. *Notch in fuel pump locking ring*

7. Carefully pull out fuel pump.

⚠ CAUTION **While pulling out the fuel pump, pay attention to fuel sender float arm. Float arm can get stuck and bend reducing fuel sender accuracy.**

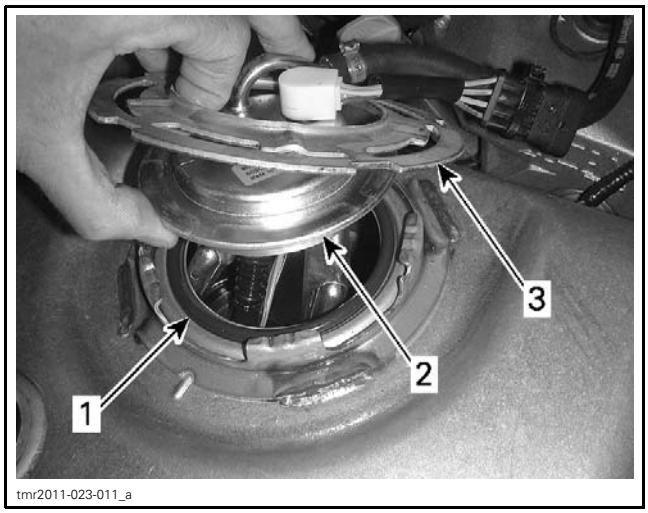
8. Discard gasket ring.

Fuel Pump Installation

For installation, reverse the removal procedure. However, pay attention to the following.

⚠ CAUTION **Manipulate fuel pump with care.**

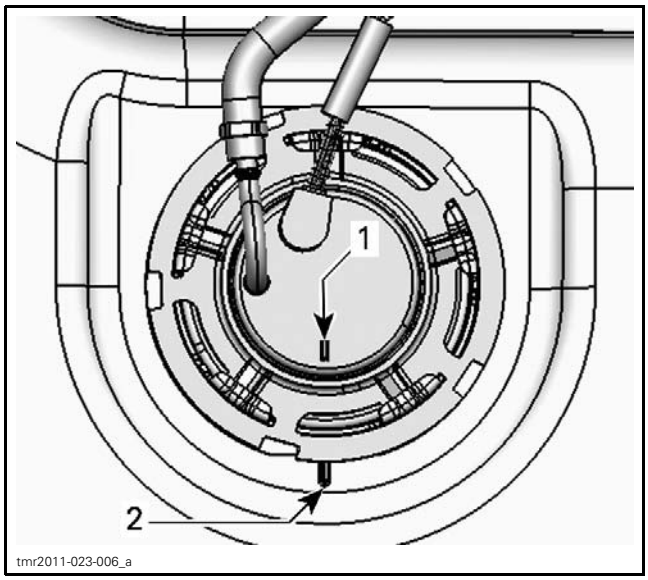
1. Install a NEW gasket ring.
2. Place gasket so that it is located between pump and tank mounting surface.



tmr2011-023-011_a

1. *Gasket ring here*
2. *Fuel pump flange*
3. *Pump locking ring*

3. Pay attention to pump orientation as in following illustration.



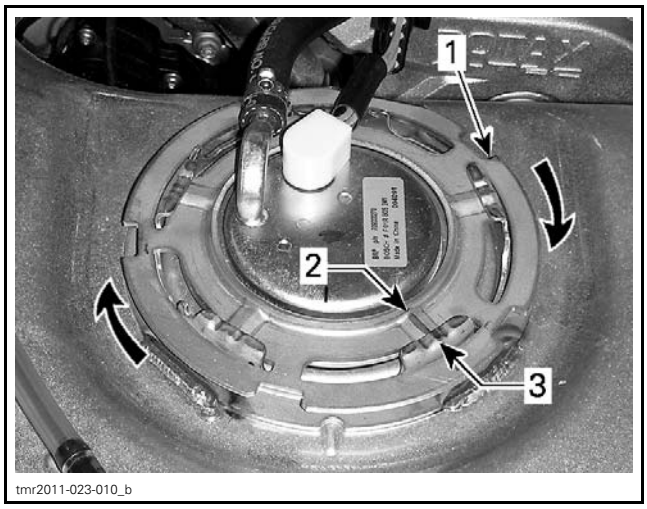
tmr2011-023-006_a

1. *Fuel pump index*
2. *Fuel tank pump index*

4. Insert fuel pump locking ring over the fuel pressure hose and electrical wiring connector.
5. While firmly holding pump against tank, engage fuel pump locking ring on fuel tank flange.
6. Using a soft face hammer and a brass drift in the notched portion of the locking ring, turn locking ring until it is fully engaged.

⚠ WARNING

Fuel vapors are flammable and explosive under certain conditions. Use only non-sparking tools. Ensure pump locking ring is fully engaged.

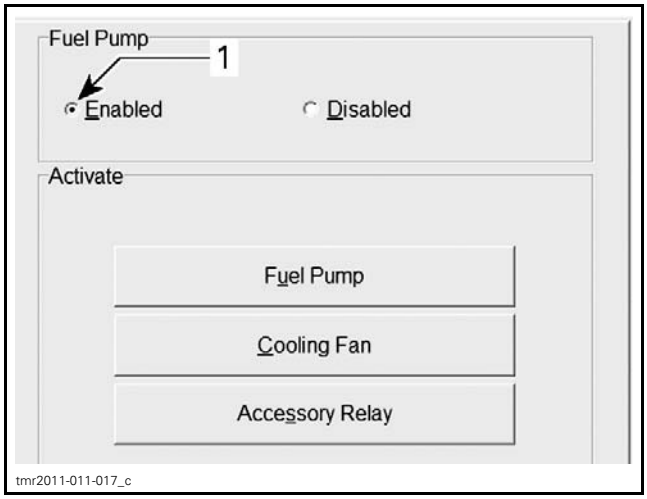


tmr2011-023-010_b

FUEL PUMP LOCKING RING INSTALLATION

1. *Notch in locking ring*
2. *Raised portion in locking ring (5 places)*
3. *Lock position on tank flange (5 places)*

7. Using B.U.D.S., enable the fuel pump.



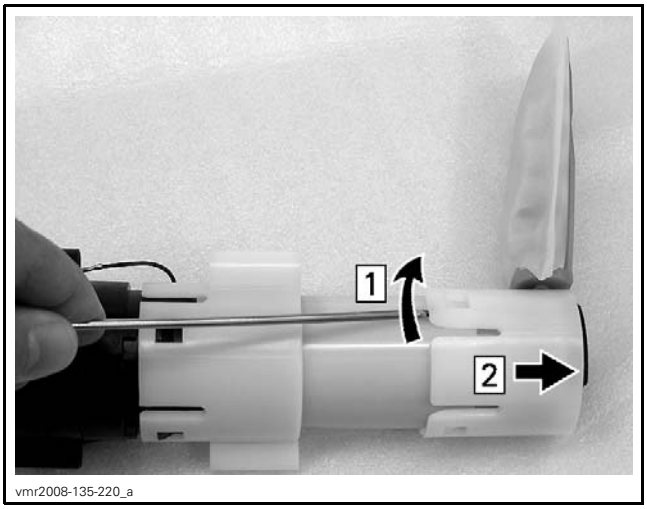
tmr2011-011-017_c

1. *Click here to enable the fuel pump*

8. Refuel tank and ensure there are no leaks by performing a *FUEL TANK LEAK TEST* and a *FUEL PRESSURE TEST* as described in this subsection.
9. Check fuel level sender operation.

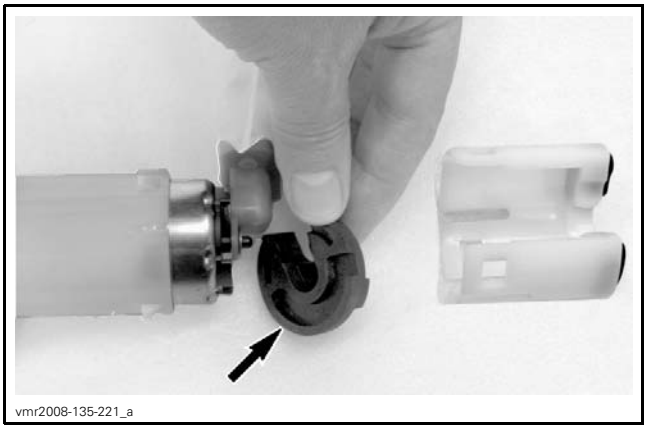
Fuel Pump Strainer Replacement

1. Remove *FUEL PUMP*, see *FUEL PUMP REMOVAL* procedure in this subsection.
2. Unlock 3 tabs on plastic ring.

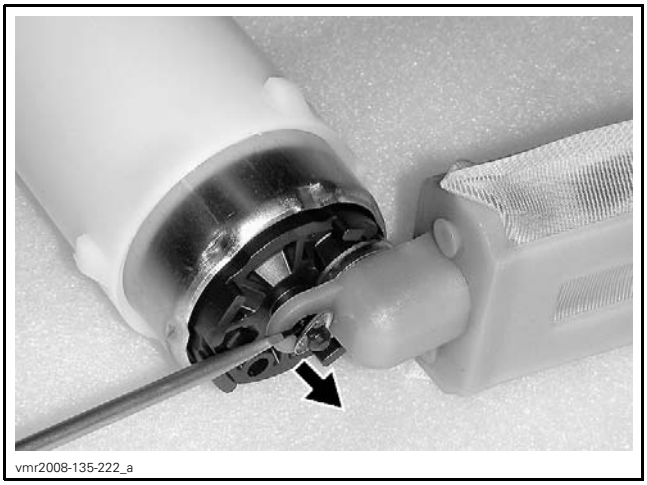


Step 1: Lift these tabs to unlock ring
Step 2: Pull ring off pump inlet

3. Remove rubber pad.



4. Remove push nut securing strainer to fuel pump. Be careful not to break the plastic pin.



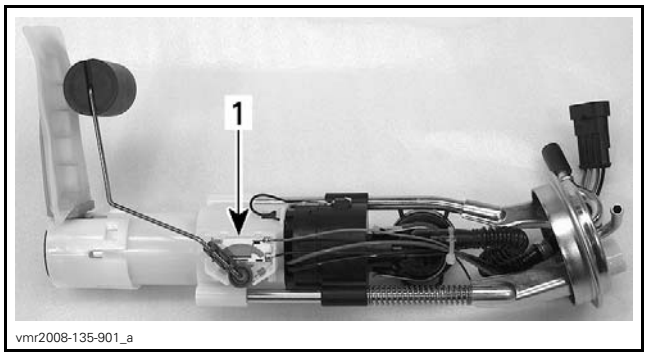
5. Pull strainer off fuel pump.

NOTE: A non serviceable filter is located in fuel pump. If it is clogged, replace fuel pump.

6. Insert the new strainer on fuel pump making sure to press it in tightly against pump face.
7. Press in a NEW push nut to secure strainer.
8. Reinstall remaining removed parts.

FUEL LEVEL SENDER

The fuel level sender is a float actuated variable resistance type that is part of the fuel pump.

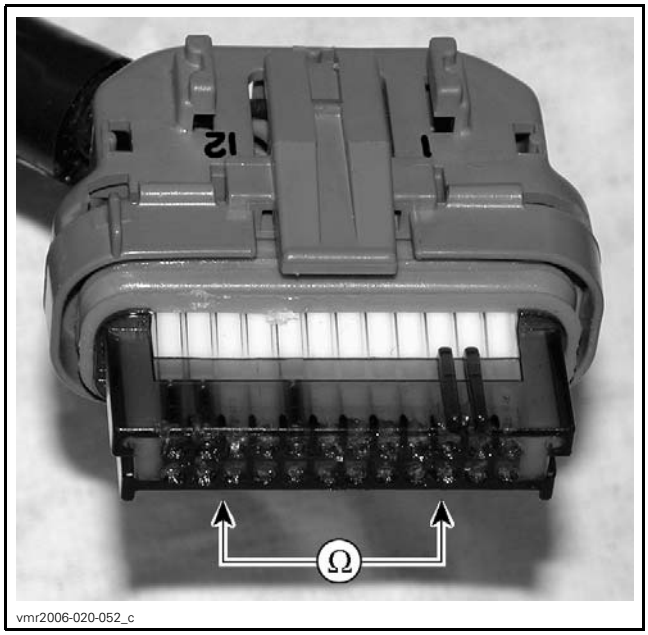


TYPICAL - FUEL PUMP
1. Fuel level sender

Fuel Level Sender Resistance Test

1. Remove and disconnect multifunction gauge, refer to the *LIGHTS/GAUGE/ACCESSORIES* subsection.
2. Use a multimeter and select Ω.
3. Measure the resistance of the sender as follows.

FUEL LEVEL SENDER RESISTANCE TEST		
FUEL LEVEL	GAUGE CONNECTOR	RESISTANCE Ω @ 20°C (68°F)
Full	Pins 4 and 21	5 Ω ± 1
Empty		100 Ω ± 5



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If readings are out of specification, repeat test at fuel pump connector. If resistance test at fuel pump connector is not good, replace fuel level sender.

If readings are as specified, carry out a *FUEL LEVEL SENDER INPUT VOLTAGE TEST*.

Fuel Level Sender Input Voltage Test

1. Set ignition switch to ON.
2. Disconnect fuel pump connector.
3. Use a multimeter and select Vdc.
4. Measure the input voltage as follows.

FUEL LEVEL SENDER INPUT VOLTAGE TEST		
FUEL PUMP CONNECTOR	BATTERY	VOLTAGE
Pin 1	Negative terminal	Battery voltage

If battery voltage is not read, test wiring continuity between sender and multifunction gauge.

If wiring continuity is good, replace multifunction gauge.

If continuity is not obtained, repair or replace wiring.

Fuel Level Sender Replacement

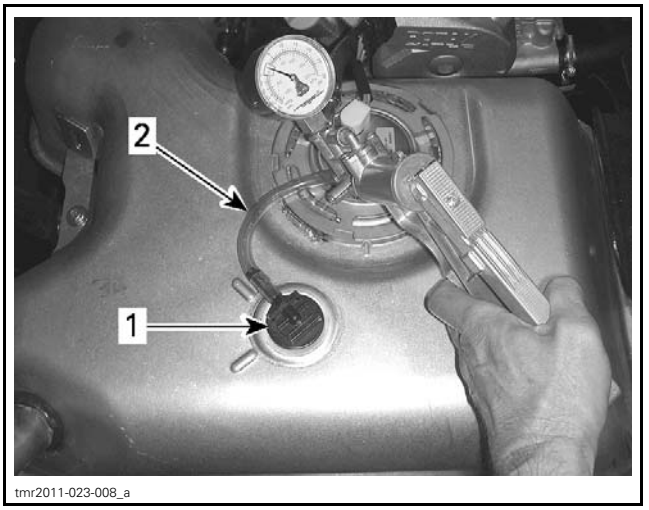
Replace fuel pump. See fuel pump removal and installation procedures in this subsection.

FUEL TANK VENT VALVE

Fuel Tank Vent Valve Test

Test for Normal Operation

1. Disconnect vent hose from fuel tank vent valve.
2. Connect the VACUUM/PRESSURE PUMP (P/N 529 021 800) and a short piece of hose to the fuel tank vent valve.



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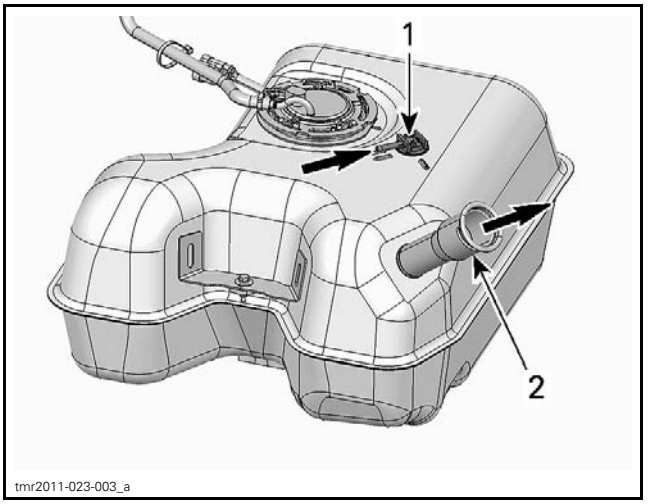
1. Fuel tank vent valve
2. Vent hose to vacuum/pressure pump

3. Remove fuel tank cap.
4. Set vacuum/pressure pump to **PRESSURE** and activate pump. The gauge on the pump **should not change in reading**; air should flow through the vent valve and fuel tank freely.



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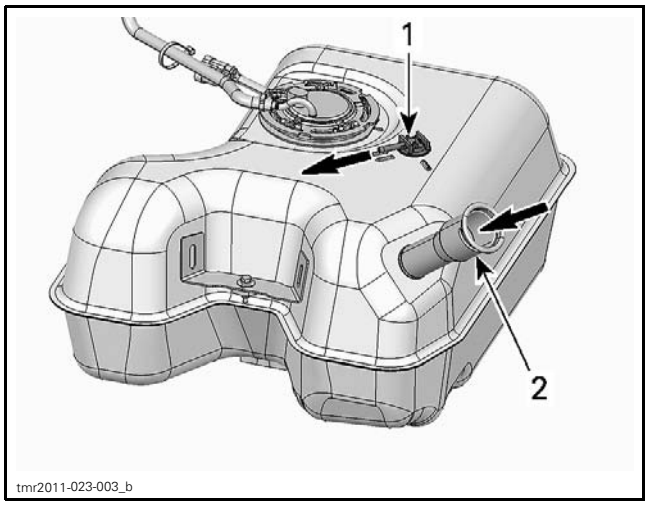
1. Air flows freely in through vent valve
2. Air flows out of fuel tank

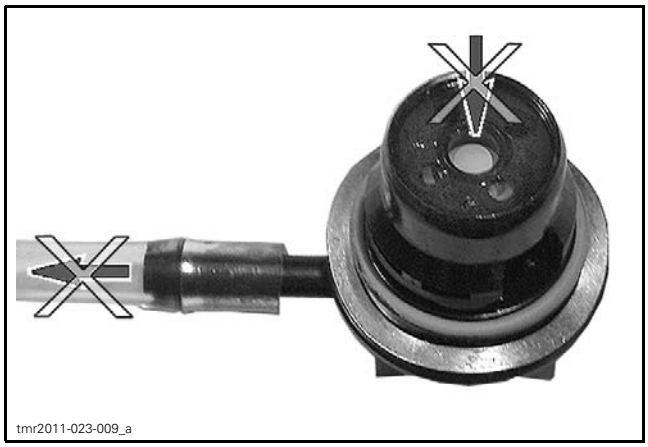
5. Set vacuum/pressure pump to VACUUM and activate pump. The **gauge should not change in reading**; air should flow through the vent valve and fuel tank freely.



1. Air is drawn out freely through vent valve
2. Air flows in fuel tank

Test for Rollover Protection

1. Remove the fuel tank valve, refer to *FUEL TANK VALVE REMOVAL AND INSTALLATION* in this subsection.
2. Turn the valve upside down.
3. Set vacuum/pressure pump to VACUUM and activate pump. The vacuum **gauge reading should increase**; air should **not flow through** the valve.

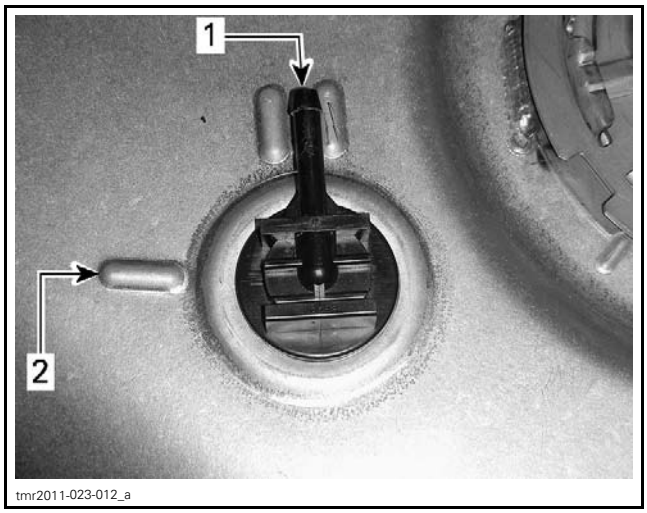


VALVE DOES NOT LET AIR PASS OUT UPSIDE DOWN

The fuel tank vent valve is defective if air flows freely through the valve when upside down and the vacuum indication does not increase on the pump gauge.

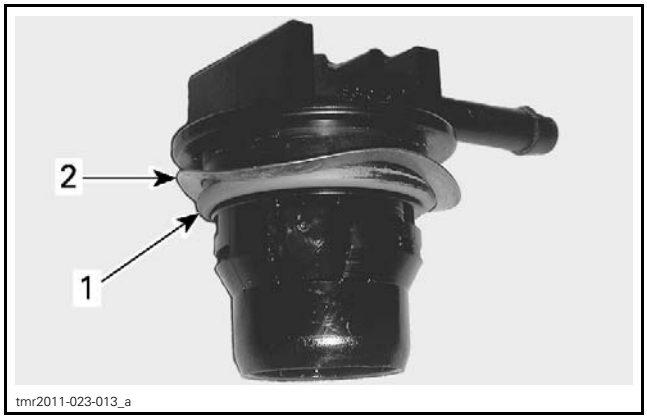
Fuel Tank Vent Valve Removal and Installation

1. When removing or installing the fuel tank vent valve, pay attention to the following:
   – Valve lock position index (dual)
   – Valve unlock position index.



1. Lock position index (dual)
2. Unlock position index

2. Remove the vent hose from the valve.
3. Use an open end wrench of the appropriate size on the rectangular portion of the valve to rotate it to the unlock position for removal.
4. Ensure the wave spring and O-ring seal on the valve to be installed are in good condition.



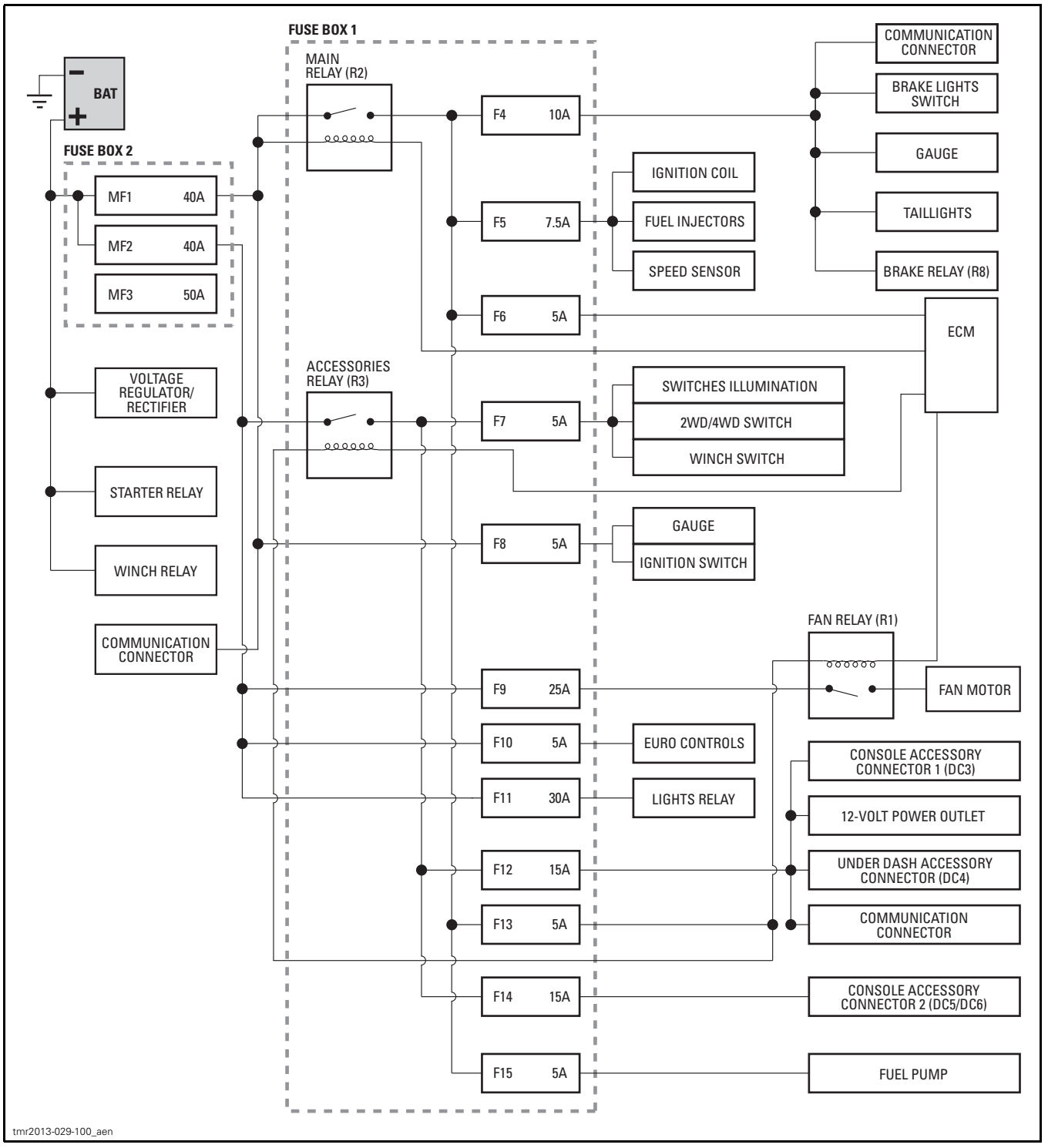
1. O-ring seal
2. Wave spring

5. Insert the valve in the tank.
6. Press down on the valve and rotate it so that its stem rests between the dual valve locking position index (see first illustration).
7. Reconnect the vent hose to the valve stem.

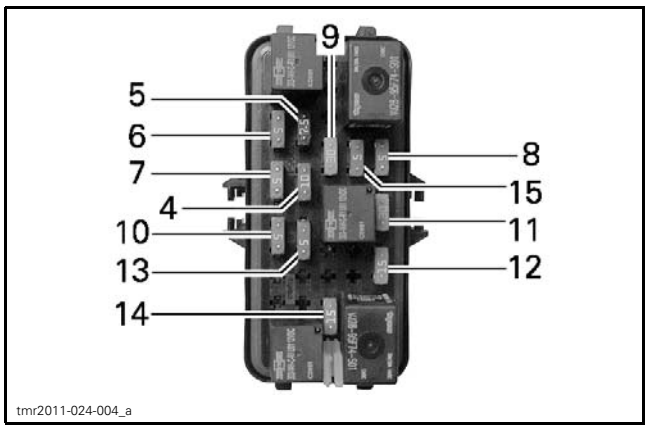
POWER DISTRIBUTION AND GROUNDS

GENERAL

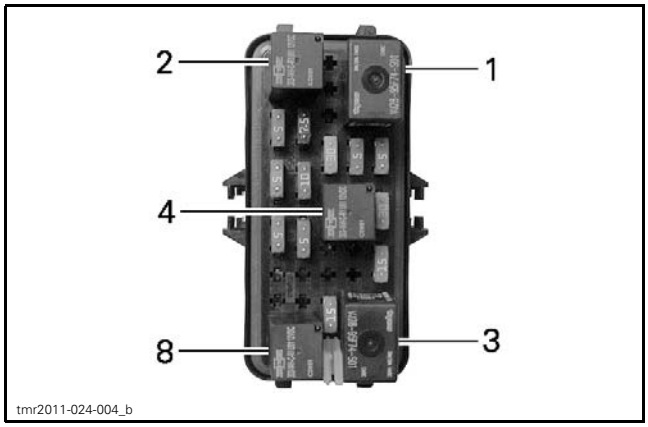
POWER DISTRIBUTION DIAGRAM



FUSE BOX 1

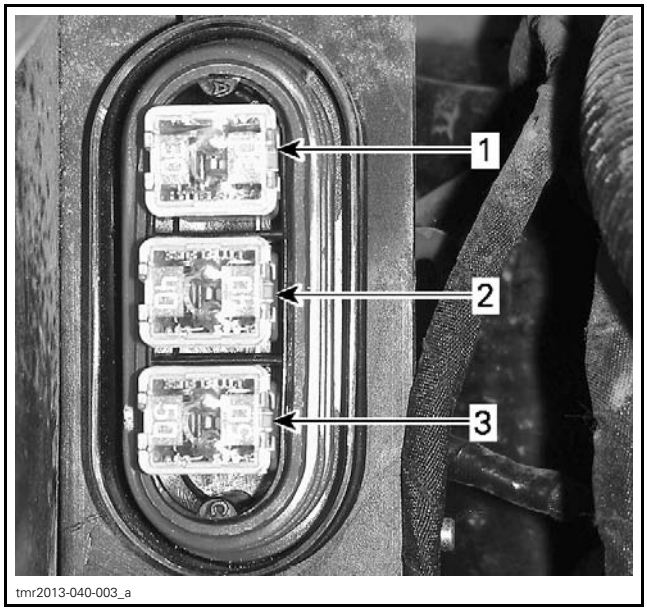


FUSE IDENTIFICATION		
Fuse	4	10 A
	5	7.5 A
	6	5 A
	7	5 A
	8	5 A
	9	25 A
	10	5 A
	11	30 A
	12	15 A
	13	5 A
	14	15 A
	15	5 A



RELAY IDENTIFICATION		
Relays	1	Cooling fan
	2	Main
	3	Accessories
	4	Headlights
	8	Brake lights

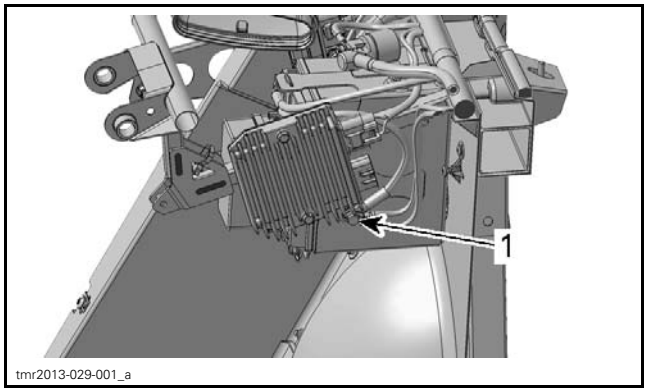
FUSE BOX 2



TYPICAL

FUSE IDENTIFICATION			
Fuse	1	Main	40 A
	2	Fan/accessories	40 A
	3	ACS/DPS	50 A

GROUND



GROUND LOCATION
1. Vehicle ground

WIRING HARNESSES AND CONNECTORS

SERVICE TOOLS

Description	Part Number	Page
CRIMPING TOOL (HEAVY GAUGE WIRE)	529 035 730	293
ECM ADAPTER TOOL	529 036 166	291
ECM TERMINAL REMOVER 2.25	529 036 175	291
ECM TERMINAL REMOVER 3.36	529 036 174	291

SERVICE TOOLS – OTHER SUPPLIER

Description	Part Number	Page
GM TERMINAL EXTRACTOR	12094430	292
SNAP-ON TERMINAL REMOVER TOOL	TT600-4	288

GENERAL

WIRING HARNESS AND SPLICE LOCATION

The wiring harnesses and splice location illustrations are typical. Several variants of the connector types, such as different number of pin cavities, are used on the vehicle. The wiring harnesses and splice location illustrations are stored in the back cover pocket.

PROCEDURES

DEUTSCH CONNECTORS

Deutsch Connector Application

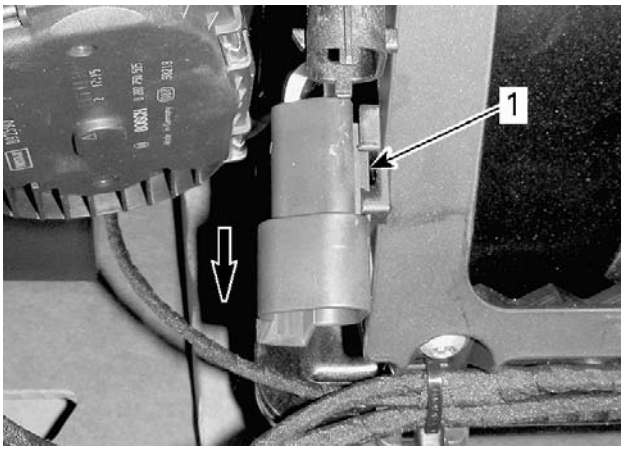
A variety of Deutsch connectors are used on various systems:

– Engine connector
– Magneto connector.

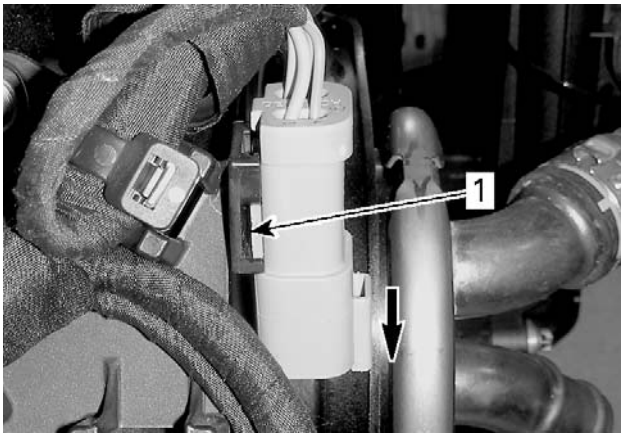
The following procedures may be used on each as they are similar in construction.

Deutsch Connector Removal from its Support

1. Insert a small flat screwdriver between the support and the Deutsch connector.
2. Pry the connector away from the support slightly while sliding it out in the direction shown.



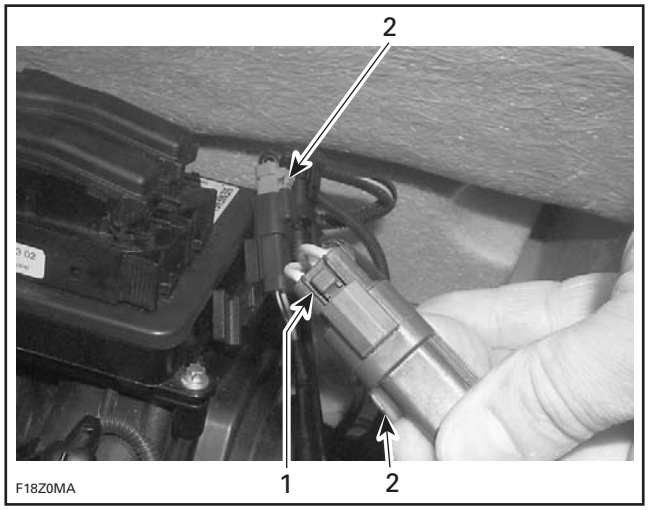
TYPICAL - MALE CONNECTOR REMOVED FOR CLARITY
1. Insert screwdriver here



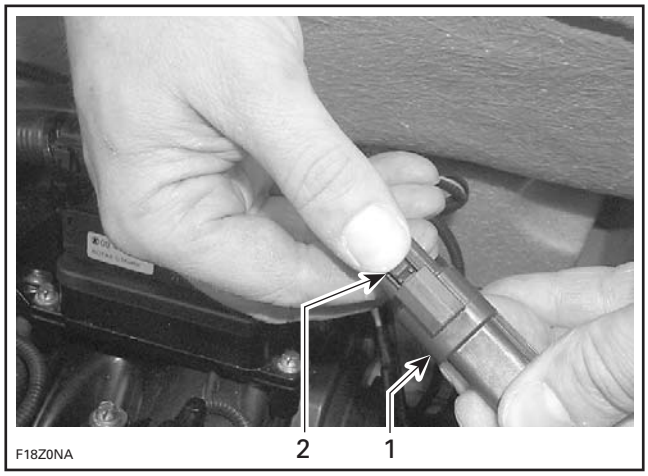
TYPICAL - MALE CONNECTOR REMOVED FOR CLARITY
1. Insert screwdriver here

Deutsch Connector Disconnect

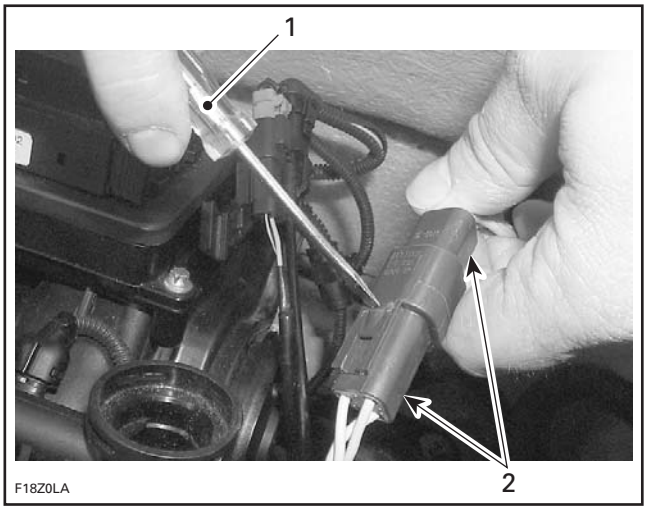
1. To disconnect a Deutsch connector, press the release tab and twist a small flat screwdriver between the male and female housing to disengage and disconnect them.



TYPICAL
1. Release tab
2. Deutsch connector

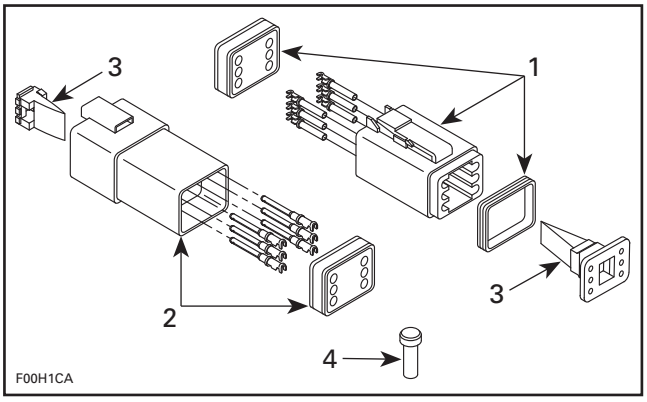


TYPICAL
1. Deutsch connector
2. Press release button



TYPICAL
1. Flat screwdriver
2. Deutsch connector

Deutsch Connector Disassembly and Reassembly



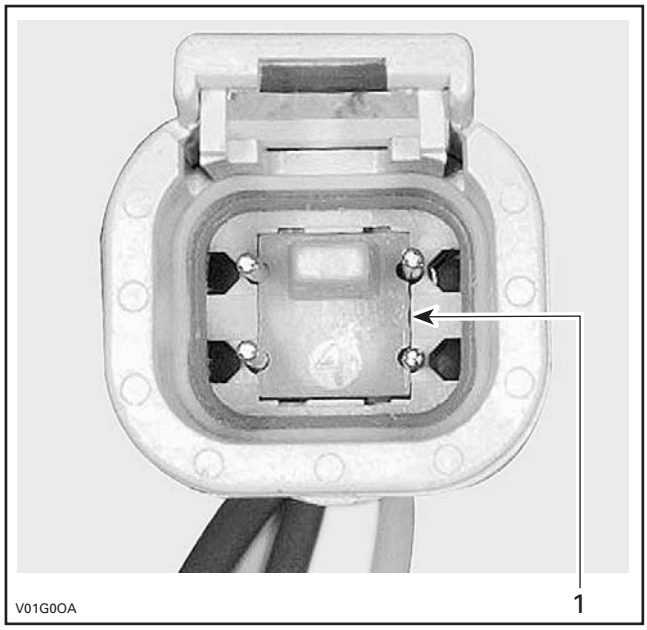
TYPICAL - DEUTSCH CONNECTOR
1. Male connector
2. Female connector
3. Secondary lock
4. Sealing cap

NOTICE Do not apply dielectric grease on terminal inside connector.

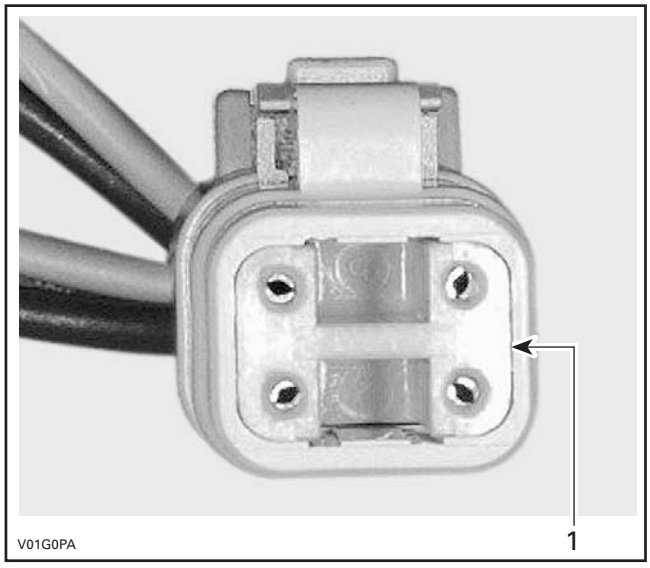
Terminal Removal

To remove terminals from connector, proceed as follows:

1. Using long nose pliers, pull out the secondary plastic lock from between the terminals.



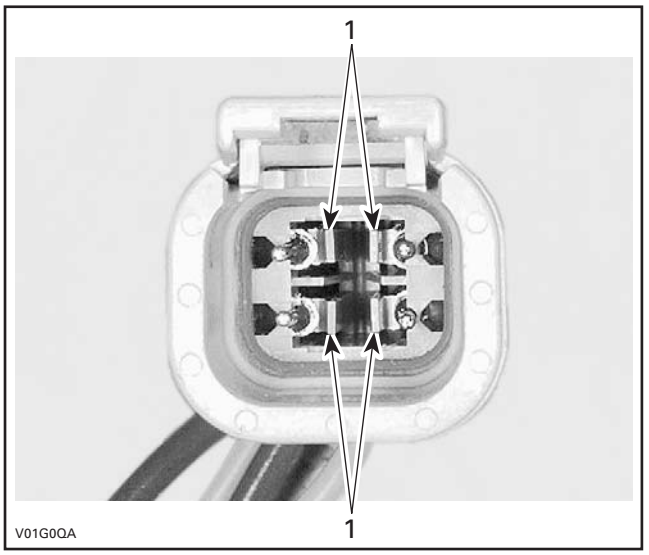
FEMALE CONNECTOR
1. Female lock



MALE CONNECTOR
1. Male lock

NOTE: Before pin extraction, push wire forward to relieve pressure on retaining tab.

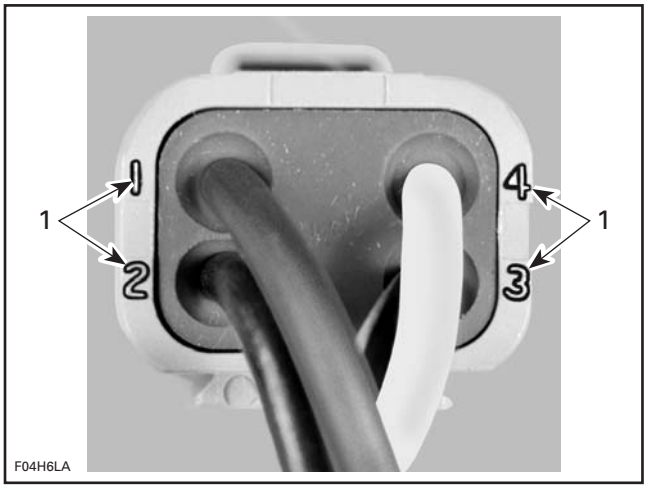
2. Insert a 4.8 mm (.189 in) wide screwdriver blade inside the front of the terminal cavity.
3. Pry the retaining tab away from the terminal while gently pulling the wire and terminal out of the back of the connector.



FEMALE CONNECTOR
1. Retaining tab

Terminal Insertion

1. For insertion of a terminal, ensure the secondary plastic lock is removed.
2. Insert terminal through the back of the connector in the appropriate position, and push it in as far as it will go. You should feel or hear the terminal lock engage.
3. Pull back on the terminal wire to be sure the retention fingers are holding the terminal.
4. After all required terminals have been inserted, the lock must be installed.



CONNECTOR PIN-OUT
1. Terminal position identification numbers

PACKARD CONNECTORS

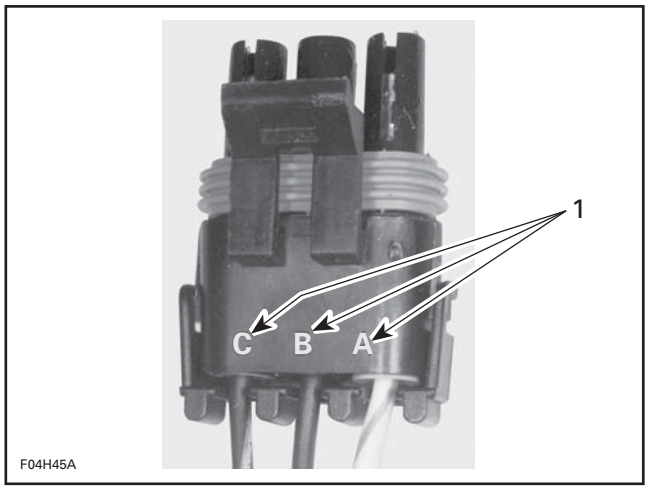
Packard Connector Application

Packard connectors are used to connect:

– Electrical harnesses

– Gauges
– VCM
– EFB.

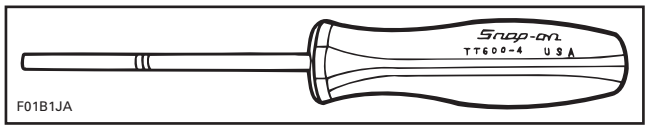
3-Pin Packard Connector



VIEW OF A 3-PIN PACKARD CONNECTOR
1. Identification letters

NOTE: This type of connector also comes in other pin configurations.

To remove a terminal from a 3-pin Packard connector, use the SNAP-ON TERMINAL REMOVER TOOL (P/N TT600-4).

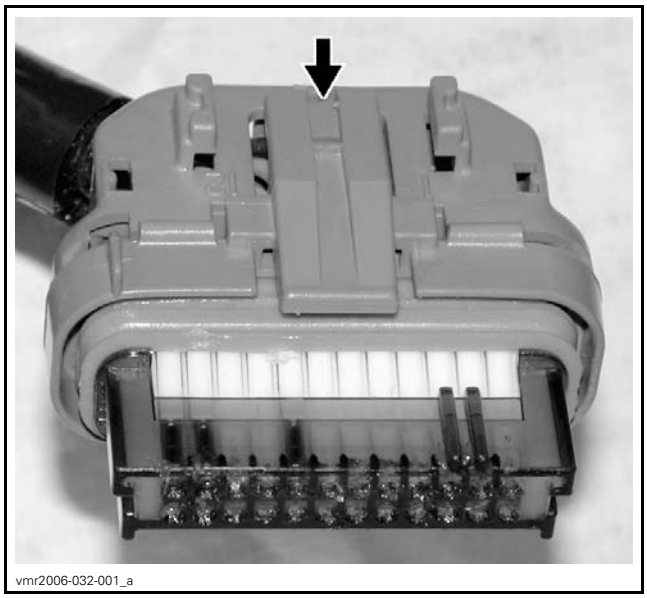


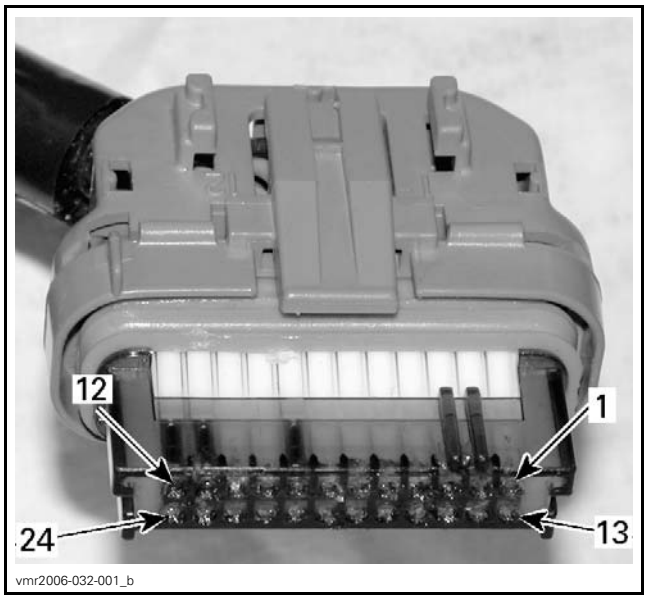
⚠ WARNING

Ensure all terminals are properly crimped on wires and connectors are properly fastened.

PACKARD CONNECTOR (MULTIFUNCTION GAUGE)

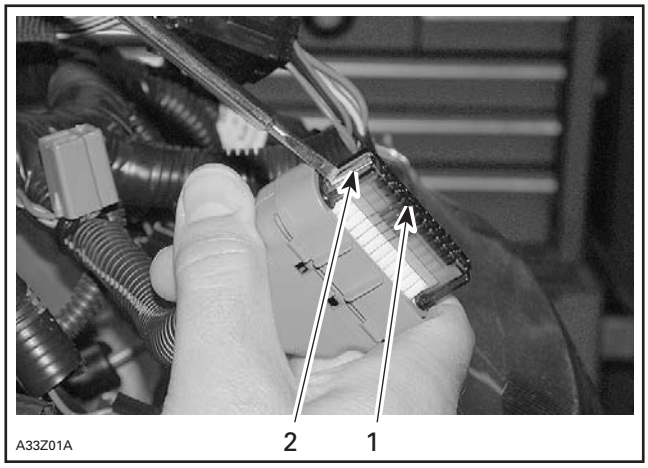
Firmly push down tab and hold to unlock connector while pulling it out.





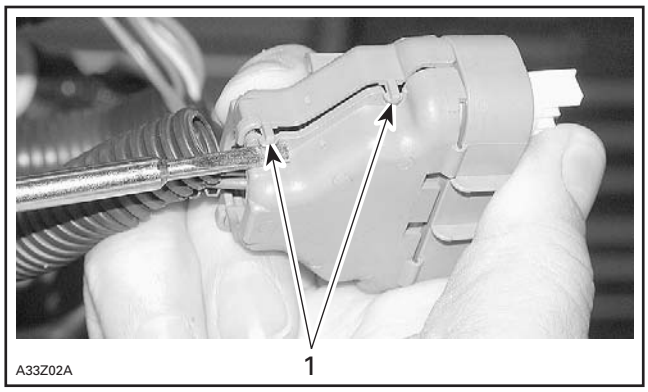
CONNECTOR PINOUT

Push on both tabs to remove retainer.



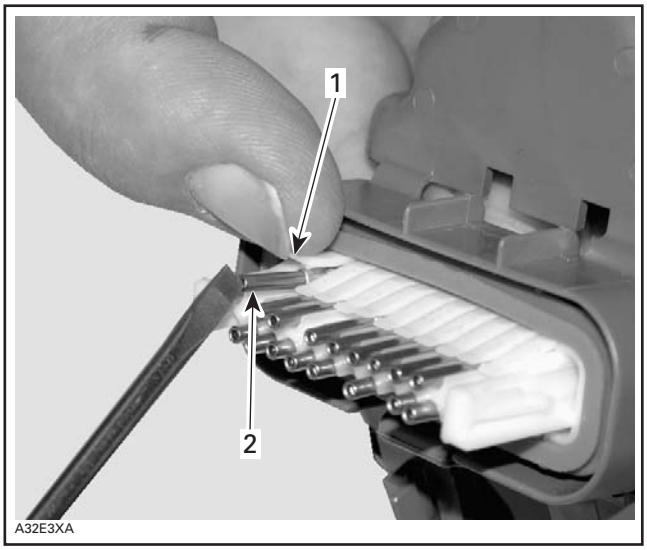
TYPICAL
1. Retainer
2. Tab (one on each side)

Open housing by lifting 4 tabs.



TYPICAL
1. Tabs (2 on each side)

Lift the top plastic lock of the female terminal to be removed and hold in position. Lift the female terminal to unlock from the housing and push out of housing.



TYPICAL
1. Lift and hold plastic lock
2. Lift to unlock and push out

MOLEX CONNECTOR

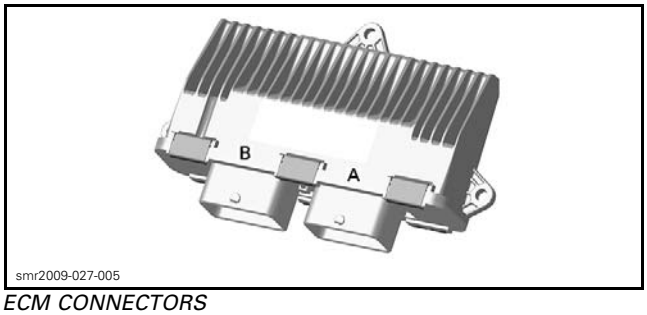
Molex Connector Application

The Molex connector is used on the ECM.

There are 2 MOLEX connectors on the ECM.

The engine wiring harness connector is connected to ECM connector "A". The vehicle wiring harness connector is connected to ECM connector "B".

Each ECM connector has 48 pins.

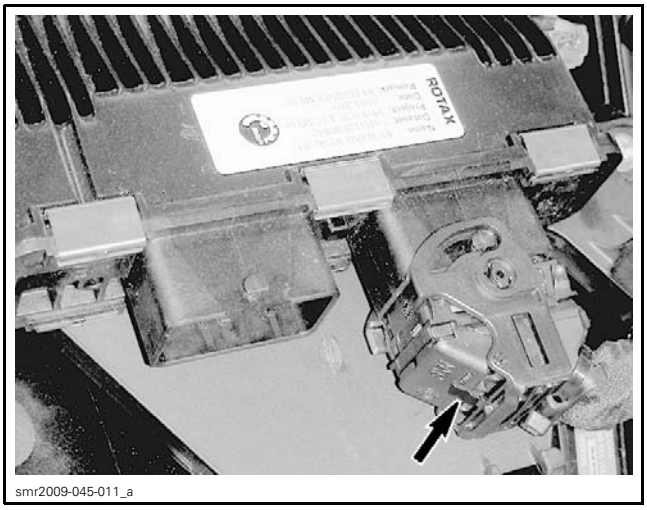


ECM CONNECTORS

Do not apply any product to the pins in the ECM connector.

Connector Removal

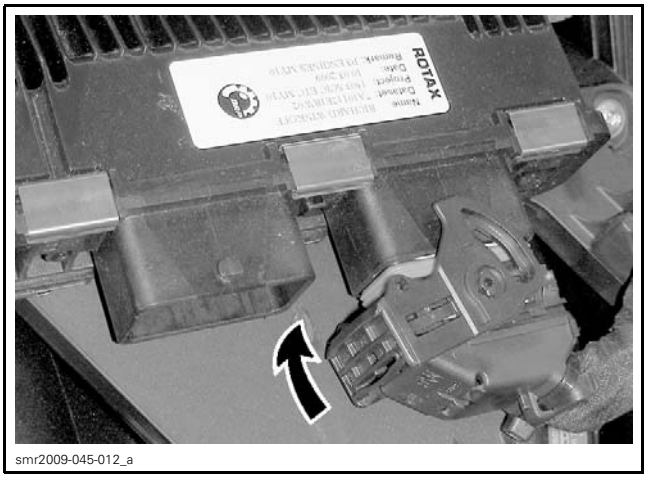
1. To access the ECM, refer to *ELECTRONIC FUEL INJECTION* subsection.
2. Press and hold the locking tab on the connector to be disconnected.



smr2009-045-011_a

LOCKING TAB TO PRESS AND HOLD

3. As you hold the locking tab, rotate the connector locking cam until it stops.



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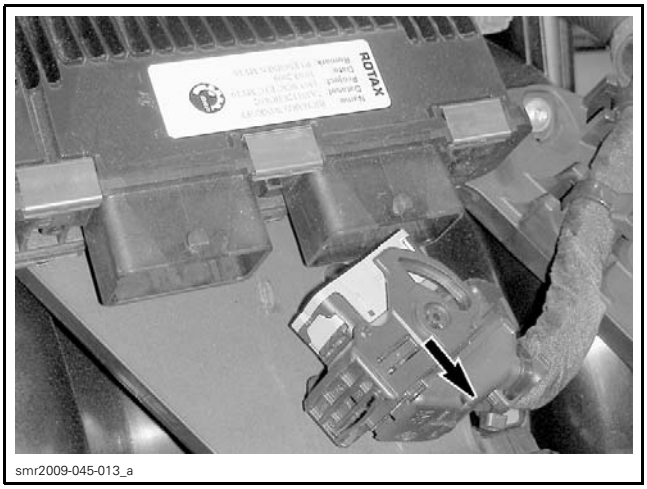
CONNECTOR LOCKING CAM ROTATION TO RELEASE

4. Pull connector off ECM.



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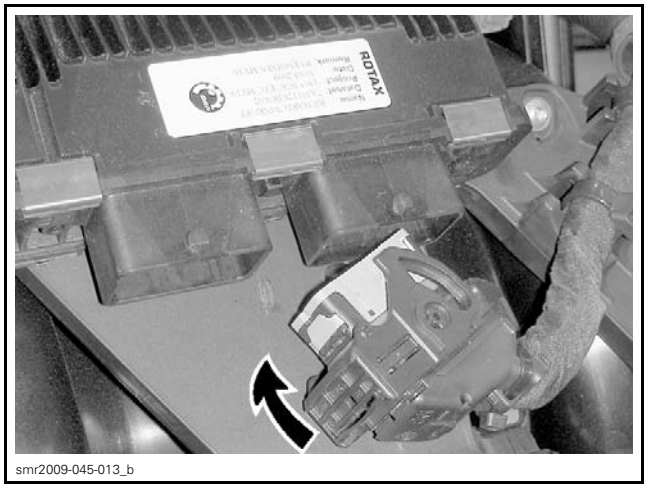
Connector Installation

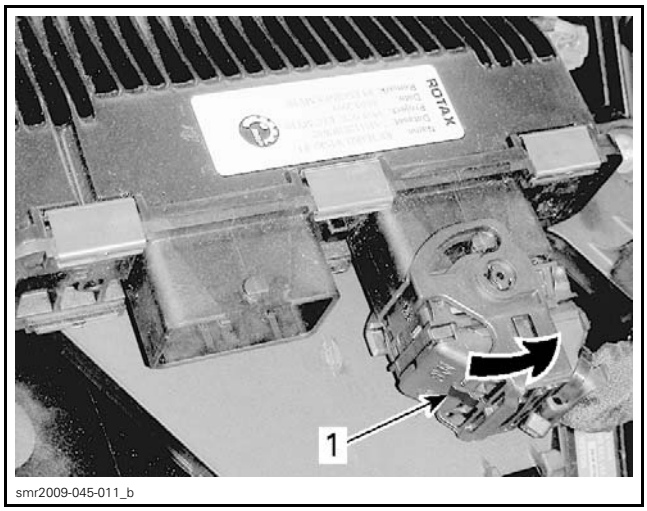
1. Fully open connector locking cam.



smr2009-045-013_b

CONNECTOR LOCKING CAM IN RELEASE POSITION

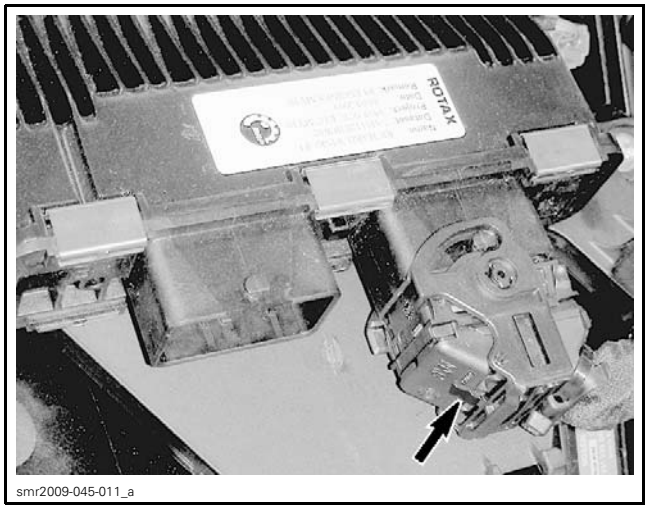
2. Insert connector on ECM.
3. As you push the connector onto the ECM, rotate the connector locking cam until it snaps locked.



smr2009-045-011_b

1. Locked here

4. Ensure the locking tab is fully out.



LOCKING TAB FULLY OUT

Connector Inspection

Before replacing an ECM, always check electrical connections.

1. Ensure connector locking mechanism is functioning properly.
2. Ensure all wire terminals (pins) are properly locked in the connector.
3. Ensure they are very tight, make good contact with the pins in the ECM.
4. Ensure the pins in the harness connector and the ECM connector are clean, shiny and corrosion-free.
5. Check wiring harness for signs of scoring.

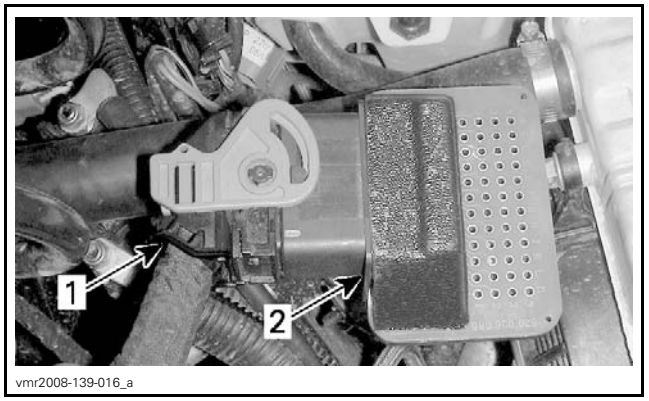
NOTE: A "defective ECM module" could possibly be repaired simply by disconnecting and reconnecting it.

NOTICE Do not apply any lubricant product to the pins of the ECM connector.

Connector Probing

The most recommended and safest method to probe the MOLEX (ECM) connector terminals is to use the ECM ADAPTER TOOL (P/N 529 036 166). This tool will prevent deforming or enlarging of the terminals, which would lead to bad ECM terminal contact creating intermittent or permanent problems.

1. Disconnect the ECM connector to be probed, and reconnect it on the ECM adapter.
2. Probe wire terminals of the circuit to be tested directly in the adapter holes.



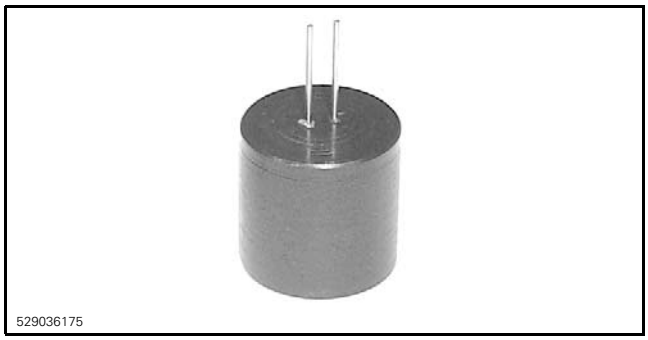
TYPICAL
1. ECM connector
2. ECM adapter

NOTICE Never probe directly on the ECM harness connector. This could change the shape or enlarge the terminals and create intermittent or permanent contact problems.

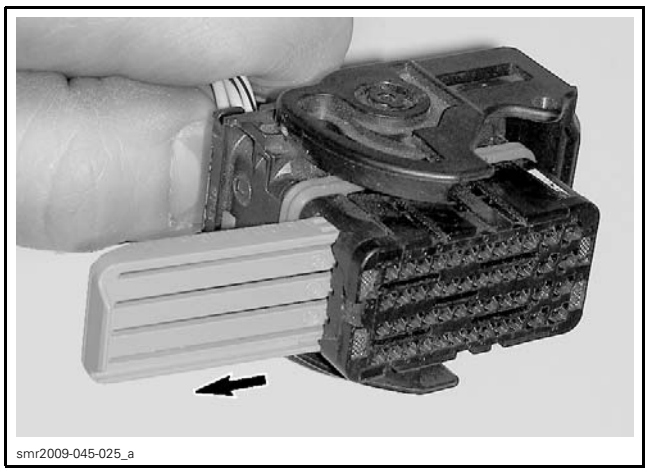
Connector Terminal Removal (Harness Connector)

To remove a signal terminal from the ECM harness connector, use the ECM TERMINAL REMOVER 2.25 (P/N 529 036 175).

To remove a power terminal, use the ECM TERMINAL REMOVER 3.36 (P/N 529 036 174).


529036175

1. Remove rear protector from connector.
2. Pull out the connector lock.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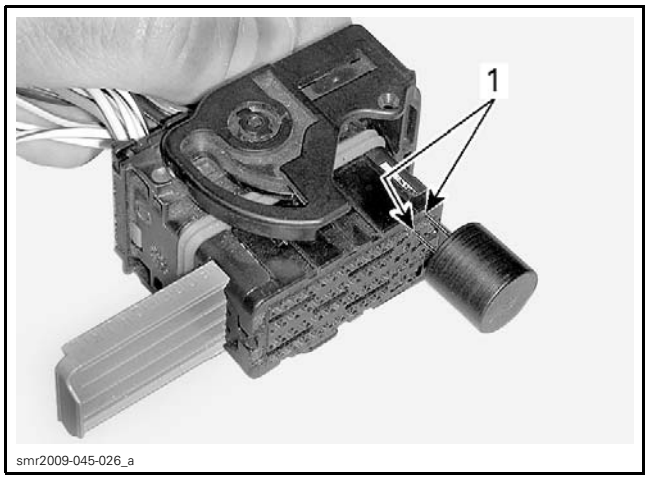
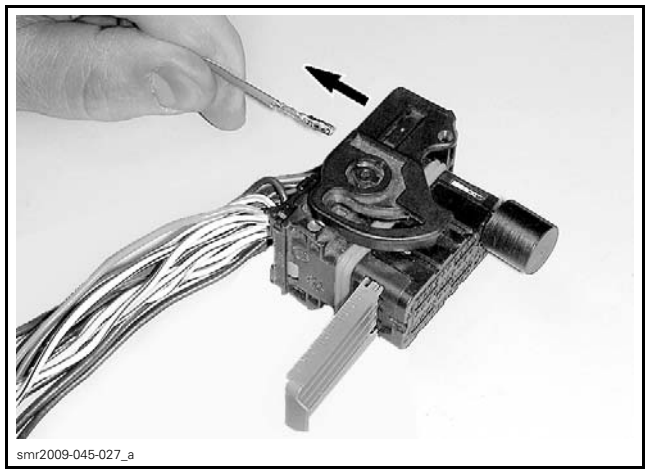
3. Insert tool to unlock terminal.



smr2009-045-026_a

1. Unlock here

4. Gently pull on the wire to extract the terminal out the back of the connector.


smr2009-045-027_a

NOTICE Before installing wire terminals in the connector, ensure all terminals are properly crimped on wires. After installation of wire terminals in the connectors, ensure they are properly locked by gently pulling on them as if to extract them.

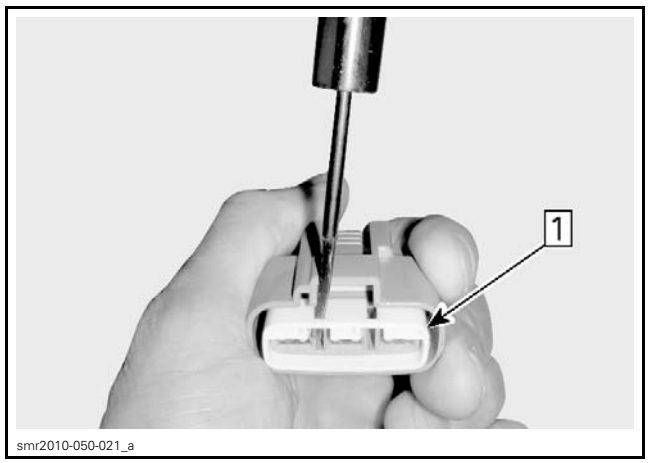
FURUKAWA CONNECTOR

Furukawa Connector Application

Voltage regulator/rectifier.

Terminal Removal

1. Remove the secondary lock (plastic insert).



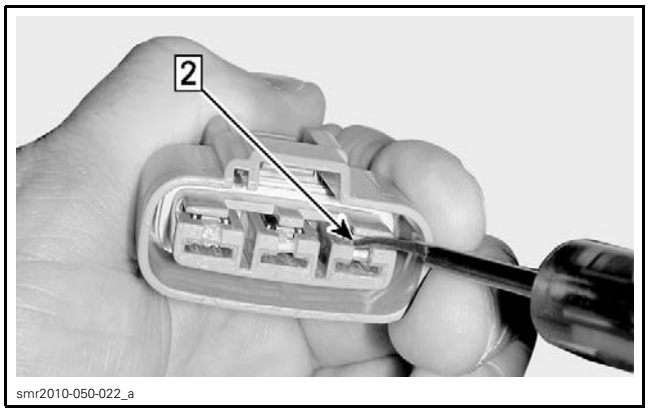
smr2010-050-021_a

Step 1: Remove the secondary lock

2. Carefully insert the GM TERMINAL EXTRACTOR (P/N 12094430) between the lock and the pin to release the pin.

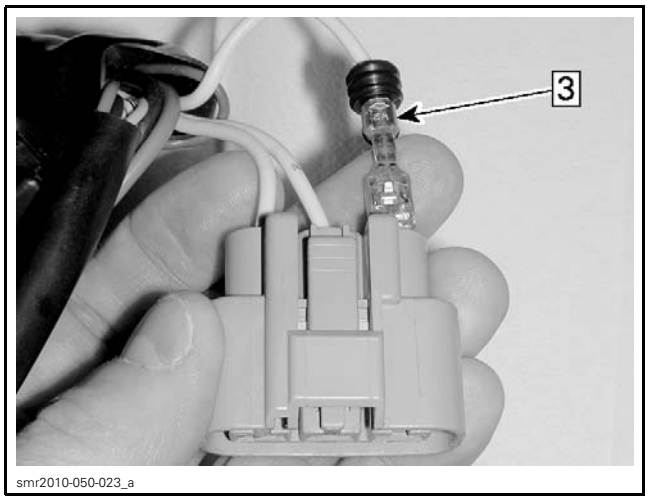
smr2010-052-003

GM TERMINAL EXTRACTOR (P/N 12094430)



Step 2: Insert GM extractor tool (P/N 12094430)

3. Gently pull on the wire to extract the pin out the back of the connector.



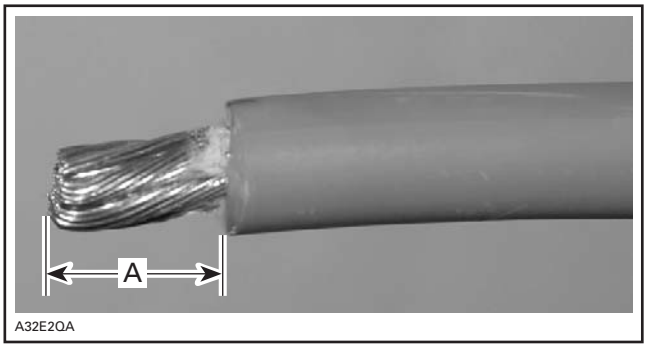
Step 3: Pull wire to extract pin

NOTICE **Before installing terminals in the connectors, ensure all terminals are properly crimped on the wires. After installation of the wire terminals in the connectors, ensure they are properly locked by gently pushing on them as if to extract them.**

BATTERY AND STARTER CABLE TERMINALS

Cable Crimping

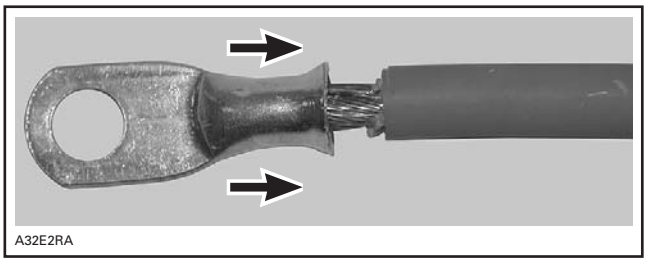
Carefully strip the wire approximately to 10 mm (3/8 in) in length, using a wire stripping tool or sharp blade/knife.



A. 10 mm (3/8 in)

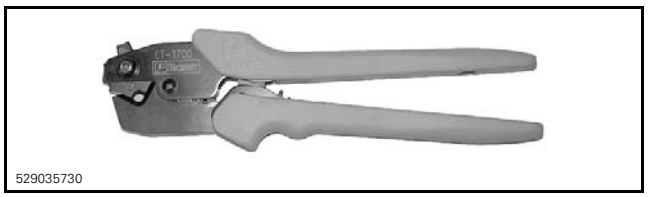
NOTE: Make sure not to cut wire strands while stripping the wire.

Install the appropriate terminal on the wire according to the requirement. Refer to appropriate *PARTS CATALOG*.

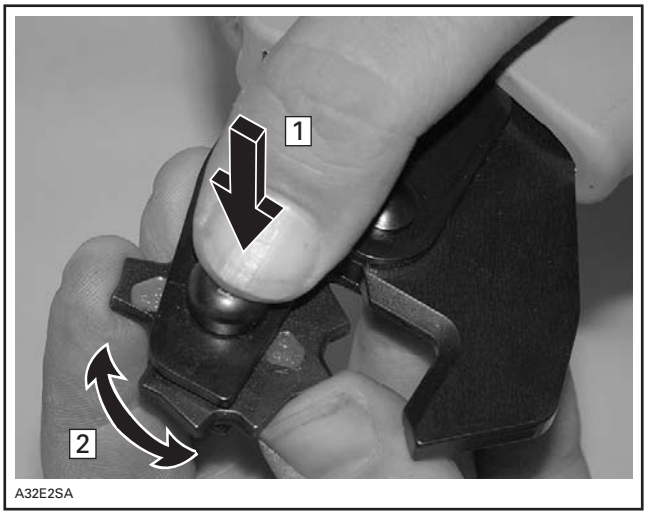


INSTALLATION OF TERMINAL

Follow the instructions provided with the CRIMPING TOOL (HEAVY GAUGE WIRE) (P/N 529 035 730) to select the proper position of the tool.



NOTE: Different wires require different crimping pliers settings.



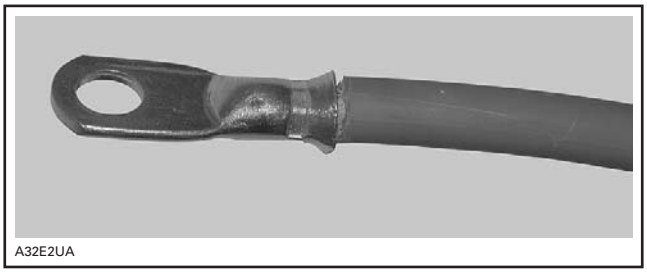
A32E2SA

POSITIONING THE CRIMPING PLIERS
Step 1: Press
Step 2: Rotate

After positioning the crimping pliers, crimp the terminal already installed on wire.

A32E2TA

CRIMPING OF WIRE


A32E2UA

PROPERLY CRIMPED WIRE

To verify, if the wire is properly crimped, apply some pulling force on wire and the terminal at the same time from both directions.

NOTICE Never weld the wire to the terminal. Welding can change the property of the wire and it can become brittle and break.

Install the protective heat shrink rubber tube on the terminal. Heat the heat shrink rubber tube using the heat gun so that it grasps the wire and the terminal.

NOTICE Make sure that the protective heat shrink rubber tube has been properly installed and no part of wire is exposed.

IGNITION SYSTEM

SERVICE TOOLS

Description	Part Number	Page
ECM ADAPTER TOOL	529 036 166	297
FLUKE 115 MULTIMETER	529 035 868	296

GENERAL

SYSTEM DESCRIPTION

The battery supplies the primary side of ignition coil through the main relay (R2) while the ECM completes the circuit for each cylinder by switching it to the ground at the right moment. The ECM can detect open and short circuit in the primary winding but it does not check the secondary winding.

The EMS controls the ignition system. For more information, refer to *ENGINE MANAGEMENT* section.

Ignition Timing

Ignition timing is not adjustable.

TROUBLESHOOTING

It is good practice to check for fault codes using the B.U.D.S. software as a first troubleshooting step. Refer to *DIAGNOSTIC SYSTEM AND FAULT CODES* subsection.

Always refer to the *WIRING DIAGRAM* when troubleshooting an electrical circuit.

Refer to *POWER DISTRIBUTION* for fuse and relay information.

DIAGNOSTIC GUIDELINES

The following is provided to help in diagnosing the probable cause of a problem. It is a guideline and should not be assumed to list all possible causes.

ENGINE WILL NOT START (ENGINE TURNS OVER)

1. Fouled or defective spark plug
   - *Replace.*
2. Defective CPS
   - *Check operation of CPS and replace if necessary. Refer to ELECTRONIC FUEL INJECTION section.*
3. Defective trigger wheel
   - *Check. Refer to PTO HOUSING/MAGNETO.*
4. Defective ignition circuit
   - *Check fuse 5 of fuse box 1, ignition coil and wiring condition.*
5. Defective fuel pump
   - *Check fuel pump, refer to FUEL SYSTEM.*
6. Defective fuel injectors or circuit
   - *Check fuel injectors, refer to ENGINE MANAGEMENT.*

ENGINE HARD TO START

1. Spark plug faulty, fouled or worn out
   - *Check spark plug condition. Replace if necessary.*
2. Low fuel pressure
   - *Test fuel pressure, refer to FUEL SYSTEM.*

ENGINE MISFIRES, RUNS IRREGULARLY

1. Fouled, defective, worn spark plugs
   - *Check/verify heat range/gap/replace.*
2. Damaged trigger wheel/loose CPS
   - *Check. Refer to PTO HOUSING/MAGNETO.*
3. Defective ignition circuit
   - *Check ignition coil, fuse 5, and wiring condition.*
4. Poor engine grounds
   - *Check/clean/repair.*

ENGINE CONTINUALLY BACKFIRES

1. Fouled, defective spark plugs
   - *Clean/replace.*
2. Damaged trigger wheel/defective or loose CPS
   - *Check, refer to ELECTRONIC FUEL INJECTION.*

PROCEDURES

IGNITION SWITCH

Ignition Switch Quick Test

Turn ignition switch to ON position.

If multifunction gauge turns on (assuming it works), the ignition switch is good.

If multifunction gauge does not turn on, check the following in this order:
- Battery
- Fuses 1 and 2 of fuse box 2
- Fuse 4 and 8 of fuse box 1
- ECM is properly powered (refer to *ENGINE MANAGEMENT*)
- Ignition switch.

Ignition Switch Access

Refer to *BODY* and remove upper console.

Ignition Switch Wire Identification

FUNCTION	PIN	WIRE COLOR
12 Vdc output (lights)	A	YELLOW/BLUE
12 Vdc input	B	BEIGE/WHITE
Ground (through ECM)	C	ORANGE/VIOLET
Ground signal to ECM in OFF position	D	YELLOW/ORANGE
D.E.S.S. signal	E	ORANGE/RED
12 Vdc output (ECM, starter solenoid and start switch)	F	BLACK/YELLOW

IGNITION COIL

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Ignition Coil Access

Refer to *BODY* and remove upper console.

Ignition Coil Installation

Install a new elastic nut and tighten to the specified torque.

IGNITION COIL RETAINING BOLT TIGHTENING TORQUE
8 N•m ± 1 N•m (71 lbf•**in** ± 9 lbf•**in**)

Quick Test with B.U.D.S.

Connect to the latest applicable B.U.D.S. software. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* section.

In B.U.D.S., select the **Activation** tab and the **ECM** tab.

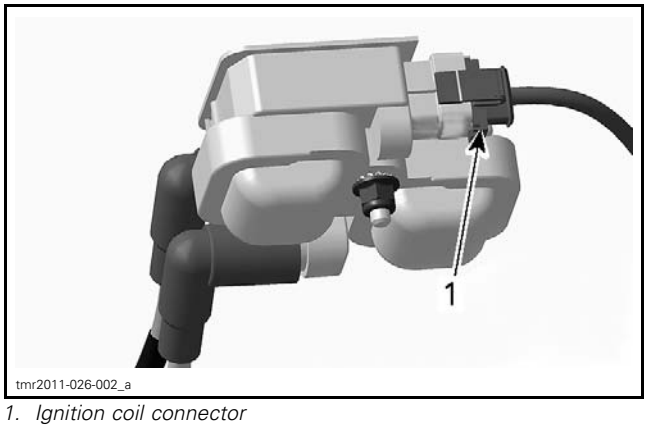
You should hear the spark occurring. In doubt, use an inductive spark tester. If there is no spark, perform the following checks.

NOTE: Keep in mind that even if there is a spark during this static test, voltage requirement is higher to produce a spark in the combustion chamber when engine is running. Ignition coil could be not working in real operation. Replacing ignition coil may be necessary as a test.

NOTE: Ensure spark plug cable is on the appropriate cylinder.

Ignition Coil Input Voltage Test

Disconnect the 3-pin connector from the ignition coil.



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1. Ignition coil connector

Turn ignition switch to ON.

Using a the FLUKE 115 MULTIMETER (P/N 529 035 868), read voltage.

IGNITION COIL CONNECTOR	VOLTAGE
Pin 2 with battery ground	Battery voltage

Battery voltage should be read.

If Battery voltage is NOT read, check continuity of ignition coil supply circuit.

Ignition Coil Ground Circuit Continuity Test

Disconnect the ECM connector "A" and connect it to the ECM ADAPTER TOOL (P/N 529 036 166).

Check wiring continuity as per following table.

COMPONENT	PIN (IGNITION COIL CONNECTOR)	PIN (ECM CONNECTOR)
Cylinder 1 (front)	1	A-M1
Cylinder 2 (rear)	3	A-M2

Ignition Coil Resistance Test

An ignition coil with good resistance measurement can still be faulty. Voltage leak can occur at high voltage level which is not detectable with an ohmmeter. Replacing the ignition coil may be necessary as a test.

Disconnect ignition cables from spark plugs.

Primary Windings

Disconnect ECM "A" connector and connect it to the ECM ADAPTER TOOL (P/N 529 036 166).

Using a multimeter, check resistance in primary windings as follows.

PRIMARY CIRCUIT	ENGINE CONNECTOR (HIC)	ECM CONNECTOR "A"	RESISTANCE @ 20°C (68°F)
Cylinder 1 (front)	Pin E	A-M1	.3 - .6 Ω
Cylinder 2 (rear)		A-M2	

If any resistance is not good, measure resistance directly on coil. If second test is ok, check wiring.

Secondary Windings

Due to the integrated diode, it is not possible to take any resistance measurement of the secondary winding.

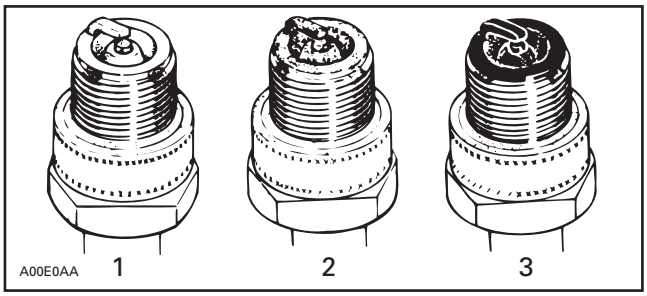
SPARK PLUG

For spark plug replacement procedure, refer to *PERIODIC MAINTENANCE PROCEDURE* subsection.

Troubleshooting Fouled Spark Plug

Fouling of the spark plug is indicated by irregular running of the engine, decreased engine speed due to misfiring, reduced performance, and increased fuel consumption. This is due to a loss of compression. Other possible causes are: prolonged idling or low-speed riding, a clogged air filter, incorrect fuel, defective ignition system, incorrect spark plug gap, lubricating oil entering the combustion chamber, or too cold spark plug. The plug face of a fouled spark plug has either a wet black deposit or a black carbon fouling. Such coatings form a conductive connection between the center electrode and ground.

Spark Plug Analysis



TYPICAL
1. Overheated (light grey, white)
2. Normal (light brown, brown)
3. Fouled (black, wet or dry, dark deposits, grey, melted coating)

The plug face reveals the condition of the engine, operating condition, method of driving and fuel mixture. For this reason it is advisable to inspect the spark plug at regular intervals, examining the plug face (i.e. the part of the plug projecting into the combustion chamber).

CHARGING SYSTEM

SERVICE TOOLS – OTHER SUPPLIER

Description	Part Number	Page
NAPA ULTRA PRO BATTERY LOAD TESTER	95260	301

SERVICE PRODUCTS

Description	Part Number	Page
DIELECTRIC GREASE	293 550 004	301

GENERAL

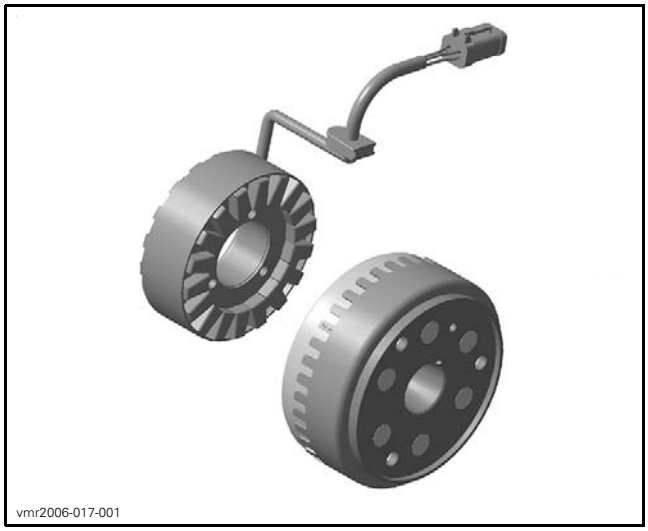
SYSTEM DESCRIPTION

The purpose of the charging system is to keep the battery at a full state of charge and to provide the electrical system with the required electrical power for normal vehicle operation.

Magneto

The magneto is the primary source of electrical energy. It transforms magnetic field into electric current (AC).

The magneto has a 3 phase series stator.

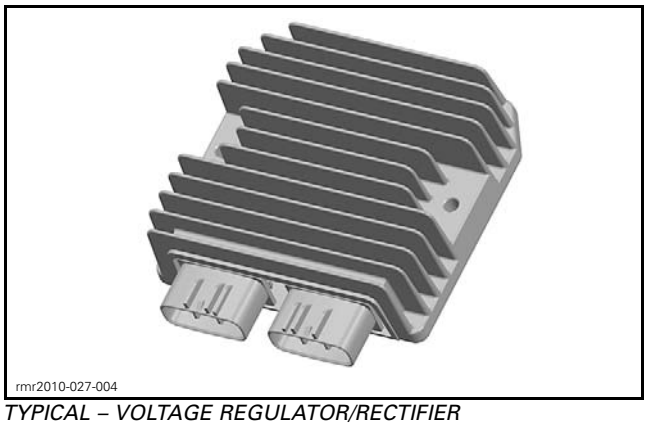


TYPICAL

Voltage Regulator/Rectifier

The rectifier receives AC current from the magneto and transforms it into direct current (DC).

The voltage regulator, included in the same unit, limits voltage to prevent any damage to electrical components.



TYPICAL – VOLTAGE REGULATOR/RECTIFIER

Battery

The battery supplies DC power to the electric starter for cranking the engine. During engine starting, it also supplies DC power to the entire electrical system.

At low engine RPM operation and high current load conditions, it supplements the magneto output and helps to maintain a steady system voltage.

INSPECTION

CHARGING SYSTEM OUTPUT

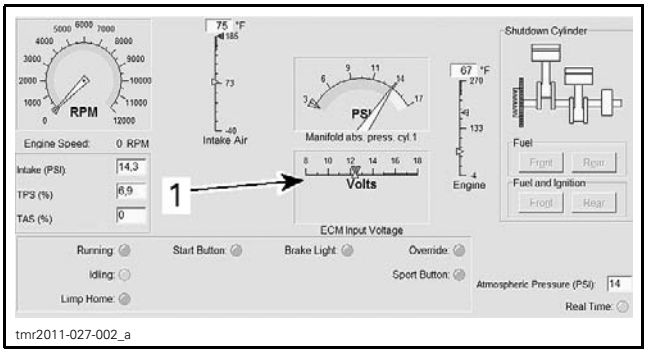
First ensure that battery is in good condition prior to performing the following tests.

Output Voltage Test Using B.U.D.S.

1. Connect to the latest applicable B.U.D.S. software. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.
2. In B.U.D.S., select the **Monitoring** tab then the **ECM** tab.
3. Start engine.

4. Increase engine RPM as specified in the following table and read voltage in the **ECM Input Voltage** box.

OUTPUT VOLTAGE TEST USING B.U.D.S.	
ENGINE SPEED	VOLTAGE (DC)
4000 RPM	14.8 ± .4 Vdc



1. ECM Input Voltage box

If voltage is above specification, replace voltage regulator/rectifier.

If voltage is below specification, check stator output and wiring harness prior to concluding that voltage regulator/rectifier is defective. Refer to *MAGNETO SYSTEM* subsection.

Output Voltage Test Using a Multimeter

1. Set multimeter to Vdc.
2. Connect multimeter to battery posts.
3. Start engine.
4. Increase engine RPM as specified in the following table and read voltage with the multimeter.

OUTPUT VOLTAGE TEST USING A MULTIMETER	
TEST ENGINE SPEED	VOLTAGE (DC)
4000 RPM	14.8 ± .4 Vdc

If voltage is above specification, replace voltage regulator/rectifier.

If voltage is below specification, check stator and wiring harness prior to concluding that voltage regulator/rectifier is defective. Refer to *MAGNETO SYSTEM* subsection.

TROUBLESHOOTING

It is good practice to check for fault codes using the B.U.D.S. software as a first troubleshooting step. Refer to *DIAGNOSTIC SYSTEM AND FAULT CODES* subsection.

BATTERY REGULARLY DISCHARGED OR WEAK

1. Loose or corroded battery cables connections.
   - Tighten or repair battery cables connections.
2. Worn or defective battery.
   - Charge and test battery.
3. Defective magneto stator.
   - Test stator.
4. Defective regulator/rectifier.
   - Test system voltage.
5. Damaged magneto rotor or Woodruff key.
   - Replace magneto rotor or Woodruff key.

PROCEDURES

VOLTAGE REGULATOR/ RECTIFIER

Voltage Regulator/Rectifier Static Test

Due to internal circuitry, there is no static test available.

Voltage Regulator/Rectifier Access

The voltage regulator/rectifier is located on the LH side, underneath dashboard, on the RH side of the battery rack.

Voltage Regulator/Rectifier Wire Identification

FUNCTION	PIN	COLOR
12 Vdc output	RD1-1	RED
12 Vdc ground	RD1-3	BLACK
12 Vac input	RD2-1	YELLOW
12 Vac input	RD2-2	YELLOW
12 Vac input	RD2-3	YELLOW

BATTERY

Battery Information

These vehicles are equipped with a VRLA battery (Valve Regulated Lead Acid). **It is a maintenance-free type battery.**

Refer to battery manufacturer's instructions for proper filling, activation and routine charging procedures.

Battery Voltage Test (No Load Applied)

NOTE: A voltage test is carried out on a battery without discharging current. It is the simplest and most commonly used. However, be aware that the voltage test can be good, while the battery does not have enough power to crank the engine. A load test gives a more accurate condition of the battery.

A voltage reading provides an instant indication of the state of charge of the battery, not of it's current output capacity. A load test gives a more accurate indication of the battery's condition.

If the battery has just received a charge, allow it to rest for 1 - 2 hours before taking a voltage reading.

Set multimeter to Vdc and connect to battery terminals. Always respect polarity.

FULLY CHARGED BATTERY VOLTAGE
12.6 Vdc minimum

NOTE: A battery that shows a voltage of 12.0 Vdc is considered completely discharged and need to be recharged.

Battery Load Test

This is the best test to indicate a battery condition. Use a load testing device such as the NAPA ULTRA PRO BATTERY LOAD TESTER (P/N 95260). It has a 500 Amp adjustable load.

Apply a load of 3 times the ampere-hour rating of the battery. At 14 seconds into the test, check battery voltage.

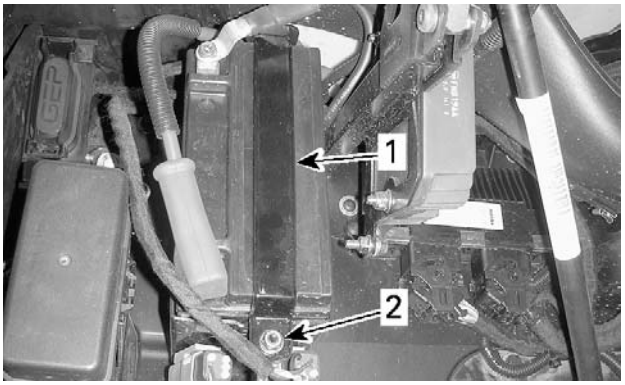
TIME TO MEASURE INTO TEST	VOLTAGE
14 seconds	Min. 10.5 Vdc @ 20°C (68°F)

Battery Removal

1. Disconnect BLACK (-) cable first, then the RED (+) cable.

NOTICE **Always respect this order for removal; disconnect BLACK (-) cable first.**

2. Remove battery strap retaining nut.



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1. Battery strap
2. Battery strap retaining nut

3. Unhook the top of battery strap.
4. Remove battery.

Battery Cleaning

Clean the battery rack, cables and battery posts using a solution of baking soda and water.

Remove corrosion (if so) from battery cable terminals and battery posts using a firm wire brush. Rinse with clear water and dry well.

Battery Storage

If the battery is in storage or used infrequently, disconnect the battery cables to eliminate drain from electrical equipment.

For extended storage, remove the battery from vehicle.

Clean battery terminals and cable connections using a wire brush. Apply a light coat of DIELECTRIC GREASE (P/N 293 550 004) on terminals.

Clean battery casing using a solution of baking soda and water. Rinse battery with clear water and dry well using a clean cloth.

Regularly charge battery as per manufacturer's recommendations.

For other recommendations during storage, refer to battery manufacturer's instructions.

⚠ WARNING

Ensure to store battery in a safe place, out of reach for children.

Battery Installation

NOTICE **Always connect RED (+) cable first then BLACK (-) cable.**

Installation is the reverse of removal procedure, however pay attention to the following:

– Install the battery with the positive post down.
– Tighten battery strap retaining nut to the specified torque.

BATTERY STRAP RETAINING NUT TIGHTENING TORQUE
3.4 N•m ± 0.3 N•m (30 lbf•**in** ± 3 lbf•**in**)

STARTING SYSTEM

SERVICE TOOLS

Description	Part Number	Page
ECM ADAPTER TOOL	529 036 166	304
FLUKE 115 MULTIMETER	529 035 868	305

SERVICE PRODUCTS

Description	Part Number	Page
DIELECTRIC GREASE	293 550 004	307

GENERAL

SYSTEM DESCRIPTION

The starting system is composed of an electric starter supplied in current by the battery through a solenoid.

The starter solenoid receives a 12 volt input from the ignition switch and the ground signal is provided by the ECM when the following engine cranking conditions are met.

– Ignition switch ON.
– Transmission in Park or Neutral position and/or brake pedal held.
– Start button held.

NOTE: If the ignition switch is left ON for more than 15 minutes, engine will not start unless ignition switch is turned OFF, then ON again.

TROUBLESHOOTING

It is good practice to check for fault codes using the B.U.D.S. software as a first troubleshooting step. Refer to *DIAGNOSTIC SYSTEM AND FAULT CODES* subsection.

NOTE: Clear any fault code after solving a problem.

Always refer to the *WIRING DIAGRAM* when troubleshooting an electrical circuit.

Refer to *POWER DISTRIBUTION* for fuse and relay information.

Check all connections, cables and wires. Tighten any loose connections. Replace any chafed or corroded wires/cables.

DIAGNOSTIC GUIDELINES

FUSE 8 INFUSE BOX 1 BURNS WHILE ATTEMPTING TO CRANK ENGINE

1. Defective D2 Diode
   - *Test diode, see procedure in this subsection.*
2. Defective starter solenoid
   - *Test starter solenoid, see procedure in this subsection.*
3. Wiring short to ground
   - *Check wiring.*

ENGINE DOES NOT CRANK AND GAUGE DOES NOT TURN ON

1. Burnt main fuse (F1) in fuse box 2
   - *Check fuse.*
2. Burnt fuse F8 in fuse box 1
   - *Check fuse.*
3. Defective or discharged battery
   - *Test battery, refer to CHARGING SYSTEM.*
4. Defective ignition switch or circuit
   - *Check ignition switch, refer to IGNITION SYSTEM.*

ENGINE DOES NOT CRANK BUT GAUGE TURNS ON

1. Defective brake switch
   - *Check brake switch, refer to BRAKES section.*
2. Defective gearbox position sensor (GPBS)
   - *Check GPBS, refer to GEARBOX AND 4X4 COUPLING UNIT subsection.*
3. Defective start button or circuit
   - *Test start button, see procedure in this subsection.*

4. Defective starter solenoid or circuit
   - *Test starter solenoid, see procedure in this subsection.*
5. Defective starter motor
   - *Check starter motor, see procedure in this subsection.*

PROCEDURES

D2 DIODE (STARTER SOLENOID)

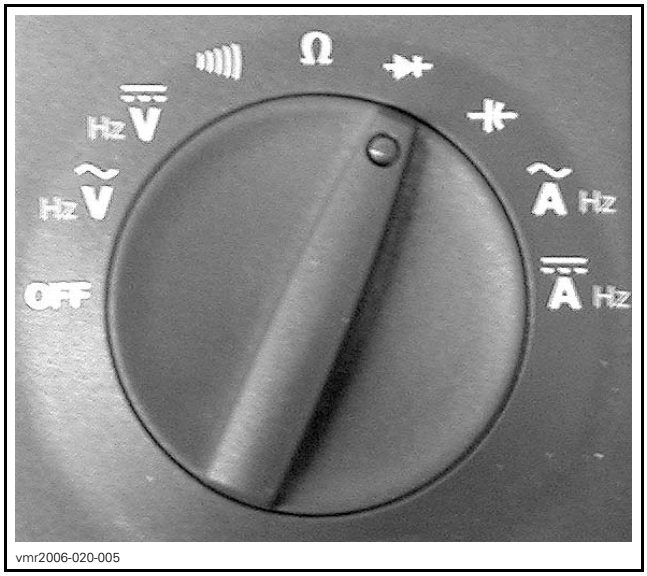
Diode Location

The diode is located in the main harness, near starter solenoid.

Diode Test

1. Make sure ignition switch is OFF.
2. Disconnect pins SS1 and SS2 from starter solenoid.
3. Disconnect ECM connector B.
4. Connect ECM ADAPTER TOOL (P/N 529 036 166) to the ECM connector B.

5. Set multimeter to "diode check".



6. Test diode as per following table.

D2 DIODE TEST		
MULTIMETER POSITIVE PROBE	MULTIMETER NEGATIVE PROBE	RESULT
ECM-B pin A2	ECM-B pin L4	Overload (open)
ECM-B pin L4	ECM-B pin A2	Approximately 0.5 volts

If diode fail any test, replace it.

START BUTTON

Start Button Access

Remove upper console.

Start Button Wire Identification

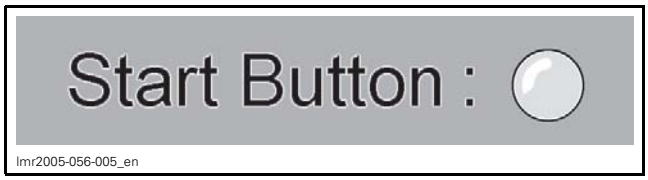
FUNCTION	PIN	COLOR
12 volt input from ignition switch	1	BLACK/YELLOW
12 volt output to ECM-B pin D1	2	YELLOW/RED

Start Button Test with B.U.D.S.

Connect to the latest applicable B.U.D.S. software. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* section.

In B.U.D.S., select the **Monitoring** and **ECM** tabs.

Press the vehicle's start button and look at the **Start Button** LED.



It should turn on, indicating the start signal reaches the ECM.

If it does not turn on, check the start button and wiring.

Start Button Resistance Test

Disconnect start button connector.

Using the FLUKE 115 MULTIMETER (P/N 529 035 868), measure resistance as per the following table.

POSITION	START BUTTON CONNECTOR PIN		RESISTANCE
Switch released	1	2	Infinite (OL)
Switch depressed and held			0.6 Ω max.

Replace start button if defective.

STARTER SOLENOID

Starter Solenoid Access

The starter solenoid is located on the LH side, underneath dashboard, on top of battery rack.

To access starter solenoid, remove the CVT vent inlet tube.

Starter Solenoid Wire Identification

FUNCTION	PIN	WIRE COLOR
12 volt input from ignition switch	SS1	BLACK/ YELLOW
Ground from ECM-B pin L4	SS2	ORANGE/ BROWN

Starter Solenoid Operational Test

1. Disconnect both terminals (SS1 and SS2) from the starter solenoid.
2. Connect SS1 to the positive battery terminal.
3. Momentarily connect SS2 to the chassis ground.

If starter runs, carry out the *STARTER SOLENOID INPUT VOLTAGE TEST*.

If starter does not run, carry out the *STARTER SOLENOID WINDING RESISTANCE TEST*.

Starter Solenoid Input Voltage Test

1. Disconnect connector with BLACK/YELLOW wire.
2. Turn ignition switch ON.
3. Measure voltage as per following table.

STARTER SOLENOID INPUT VOLTAGE TEST		
TEST PROBES		RESULT (START BUTTON RELEASED)
BLACK/ YELLOW wire	Battery ground	Battery voltage

Starter Solenoid Ground Signal Test

1. Disconnect SS2 (ORANGE/BROWN) from solenoid.
2. Turn ignition switch ON.
3. Measure voltage as per following table.

STARTER SOLENOID GROUND SIGNAL TEST		
TEST PROBES		RESULT (START BUTTON DEPRESSED)
ORANGE/ BROWN wire	Battery positive post	Battery voltage

Starter Solenoid Winding Resistance Test

Disconnect terminals from solenoid.

With a multimeter, check primary winding resistance as follows.

STARTER SOLENOID WINDING RESISTANCE TEST		
TEST PROBES		RESULT @ 20°C (68°F)
Starter solenoid SS1 pin	Starter solenoid SS2 pin	Approximately 5 Ω

If measurement is out of specification, replace solenoid.

Starter Solenoid Voltage Drop Test

Turn ignition key ON.

Measure voltage as per following table while cranking engine in **drowned mode** (to prevent engine starting).

NOTE: For drowned mode, refer to *ENGINE MANAGEMENT* subsection.

STARTER SOLENOID VOLTAGE DROP TEST		
TEST PROBES		RESULT (WHILE CRANKING)
Post coming from battery	Post going to starter	0.2 Vdc max.

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If voltage is out of specification, replace solenoid.

ELECTRIC STARTER

Starter Access

To access starter electrical terminal, refer to *BODY* and remove LH seat and LH lateral console panel.

1000 Models

To access starter for removal, remove drive pulley, driven pulley and CVT back cover, refer to *CONTINUOUSLY VARIABLE TRANSMISSION (CVT)* subsection.

Starter Operation Test

Using booster cables, carefully supply current from a 12 volt battery directly to the starter. Connect the BLACK (-) cable first. Then connect the remaining jumper cable from the battery then to the starter.

If starter turns, test other starting system components.

Starter Removal

Turn OFF ignition switch.

Disconnect BLACK (-) cable from battery.

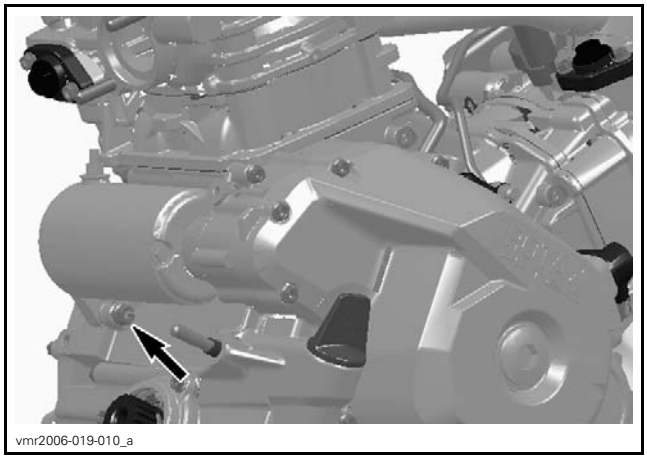
⚠ WARNING

Always disconnect BLACK (-) cable first and reconnect last.

Disconnect RED (+) cable from starter.

Clean starter area.

Remove starter retaining screw.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TYPICAL - SOME PARTS REMOVED FOR CLARITY PURPOSE ONLY

Carefully pry starter out of the engine crankcase.

Starter Installation

Installation is the reverse of removal procedure. However, pay particular attention to the following.

Make sure that starter and engine mating surfaces are free of debris. Serious problem may arise if the starter is not properly aligned.

Bring starter close to its location. Rotate it so that its mounting ear allows installation in engine crankcase.

Push starter in place and align mounting ear to install screw. Tighten to the specified torque.

STARTER MOUNTING SCREW TIGHTENING TORQUE	
Starter mounting screw	25 N•m (18 lbf•ft)

Connect the RED (+) cable to the starter and tighten nut and apply specified product.

⚠ CAUTION When connecting the RED (+) cable to the starter motor, make sure the battery cables are disconnected.

STARTER CABLE NUT	
TIGHTENING TORQUE	PRODUCT
6 N•m (53 lbf•**in**)	DIELECTRIC GREASE (P/N 293 550 004)

First connect RED (+) cable to battery then connect the BLACK (-) cable.

Connect battery cables.

⚠ WARNING

Always connect RED (+) cable first then BLACK (-) cable last.

Test starter operation.

DIGITALLY ENCODED SECURITY SYSTEM (D.E.S.S.)

GENERAL

SYSTEM DESCRIPTION

The ignition key contains a ROM chip with a unique digital code that is the equivalent of a unique teeth pattern on a conventional key.

When the ignition key is turned ON, the ECM reads the ignition key and, if it is not recognized, no engine starting will be possible.

NOTE: When a key is not recognized by the ECM, INVALID KEY will be displayed in the multifunction speedometer.

NOTE: All ignition keys have the same teeth pattern. Therefore, they can be used and turned in the switch of any D.E.S.S.-equipped vehicle. However, unless the D.E.S.S. system recognizes (in the ECM) a valid programmed key, the engine starting will not be allowed.

NOTE: Actually, it is the memory of the ECM that is programmed to recognize the digital code of the ignition key.

Up to 10 ignition keys may be programmed in the memory of the ECM. They can also be erased individually or all at once.

Note that the D.E.S.S. circuitry is already activated on all new ECM.

TROUBLESHOOTING

DIAGNOSTIC TIPS

NOTE: It is a good practice to check for fault codes using B.U.D.S. software as a first troubleshooting step.

If D.E.S.S. key is not recognized by the ECM, key is defective or there is a wiring problem, CHECK ENGINE light will turn on and a message will be displayed in the multifunction speedometer.

PROCEDURES

KEY PROGRAMMING

Use the appropriate B.U.D.S. software version available from BOSSWeb. Refer to *COMMUNICATION TOOLS AND B.U.D.S. SOFTWARE* subsection for proper connection instructions.

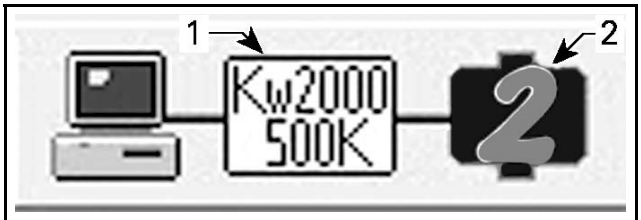
The B.U.D.S. software is designed to allow, among other things, the programming of ignition key(s) and entering customer information.

For more information pertaining to the use of the software B.U.D.S., use its help which contains detailed information on its functions.

⚠ WARNING

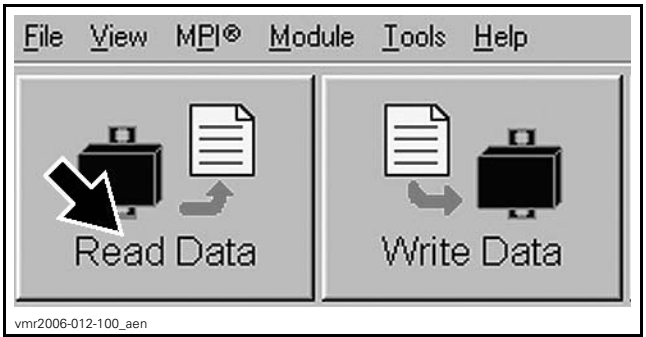
If the computer you are using is connected to the 110 Vac power outlet, there is a potential risk of electrocution when working in contact with water. Be careful not to touch water while working with the VCK.

1. Turn ignition switch to ON using any of the key provided with the vehicle. DO NOT start the engine.
2. Start B.U.D.S. and logon.
3. Wait during detection setup.
4. Ensure the status bar shows the Kw2000 protocol and the appropriate number of modules to its right according to the vehicle model.

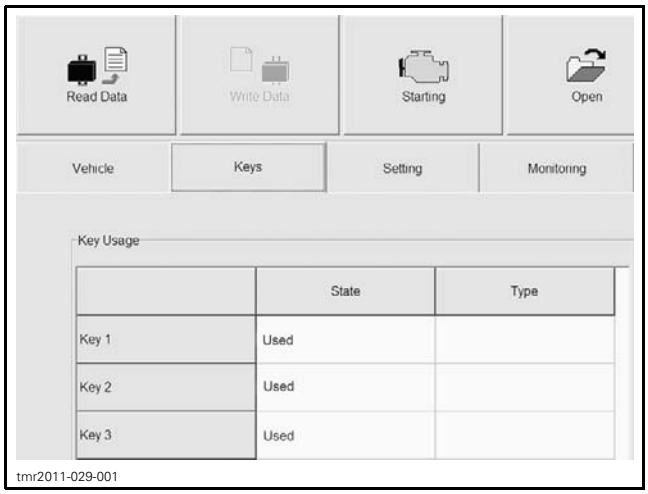


TYPICAL - SUCCESSFUL CONNECTION
1. Connection protocol
2. Number of modules

5. Click the **Read Data** button.

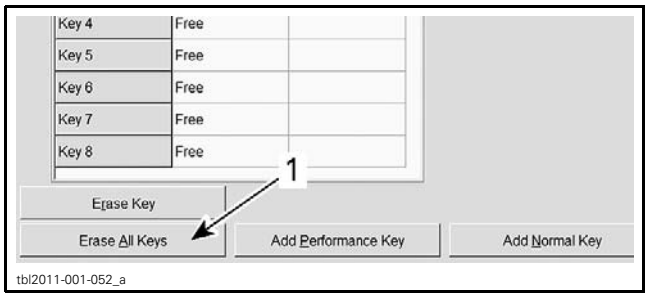


6. Click on **Keys** tab.



KEYS TAB

7. Click on **Erase All Keys** button.

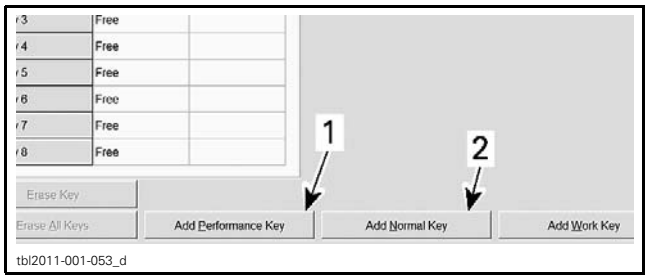


1. Click here to erase all keys

8. Click "YES" to confirm the action.
9. Confirm key color in ignition switch.
10. Program the key by selecting the right type according to chart.

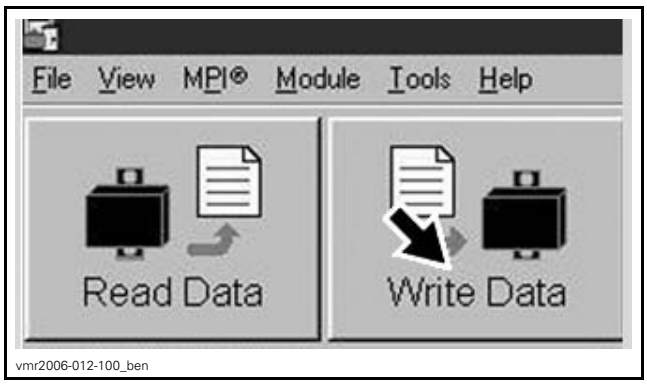
KEY	KEY TYPE
BLACK key	Performance key
GRAY key	Normal key

NOTE: The work key (ORANGE key) is optional.



1. Add Performance Key button
2. Add Normal Key button

11. Turn ignition switch to OFF. Remove the key.
12. Install the other key.
13. Turn ignition key to ON position.
14. Program the other key by selecting the right type according to above chart.
15. Repeat previous steps to program other keys.
16. Click on **Write Data** button to transfer new settings and information to the ECM.



WRITE DATA BUTTON

17. Click on EXIT button to end session.
18. Disconnect all cables and hardware from vehicle.
19. Ensure to reinstall the connector into its housing.

LIGHTS, GAUGE AND ACCESSORIES

SERVICE PRODUCTS

Description	Part Number	Page
DIELECTRIC GREASE	293 550 004	1

GENERAL

NOTICE It is recommended to always disconnect the battery when replacing any electric or electronic parts. Always disconnect battery exactly in the specified order, BLACK (-) cable first.

TROUBLESHOOTING

DIAGNOSTIC TIPS

NOTE: It is a good practice to check for fault codes using B.U.D.S. software as a first troubleshooting step. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.

IMPORTANT: When troubleshooting an electrical system fault, check battery condition, cables and connections first.

Circuit Testing

Check the related-circuit fuse condition with a fuse tester or test lamp (a visual inspection could lead to a wrong conclusion).

NOTE: If the ignition switch is left ON for more than 30 minutes, the accessory relay will shut down.

Electrical Connection Inspection

When replacing an electric or electronic component, always check electrical connections. Make sure they are tight, make good contact, and are corrosion-free. Dirty, loose or corroded contacts are poor conductors and are often the source of a system or component malfunction.

Pay particular attention to ensure that pins are not bent or pushed out of their connectors.

Ensure all wire terminals are properly crimped on wires, and connector housings are properly fastened.

Check for signs of moisture, corrosion or dullness. Clean pins properly and coat them with DIELECTRIC GREASE (P/N 293 550 004) or other appropriate lubricant when reassembling them, except if otherwise specified such as for the ECM connectors.

Pay attention to ground wires.

PROCEDURES

CONSOLE SWITCHES

Switches Access

Refer to *BODY* and remove upper console.

Switches Removal and Installation

Disconnect electrical connector.

Release retaining clips, then push switch out of the console.

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1. Retaining clips

For installation, reverse removal procedure.

Switches Illumination Wire Identification

FUNCTION	PIN	COLOR
12 volt input from fuse F7	See note	RED/BLACK

NOTE: The illumination circuit of all console switches is supplied by the RED/BLACK wire (except hazard switch if equipped) but the pin location differ from one to another.

Switches Illumination Circuit Protection

CONDITION	CIRCUIT PROTECTION
Supplied with accessories relay activated	Fuse 7 of fuse block 1 (from accessories relay R3)

MULTIFUNCTION GAUGE (LCD AND ANALOG/DIGITAL)

Multifunction Gauge Wire Identification

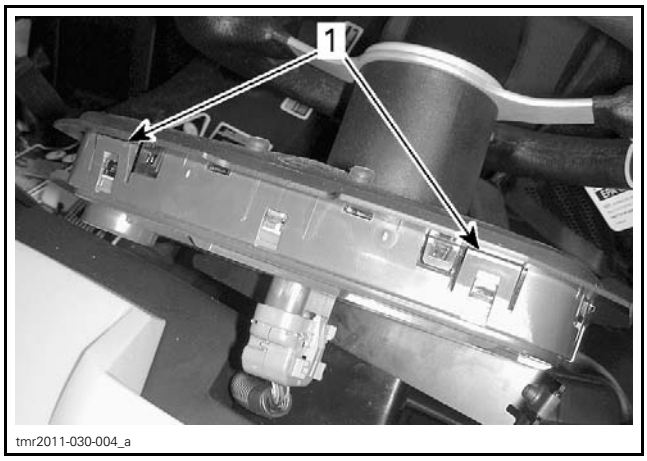
FUNCTION	PIN	COLOR
12 volt input from fuse F4	17	ORANGE/GREEN
12 volt input from fuse F8	16	BEIGE/WHITE
Ground	20	BLACK
CAN LO	18	WHITE/BLACK
CAN HI	19	WHITE/BEIGE
Fuel level gauge supply	4	BROWN/PINK
Fuel level gauge ground	21	VIOLET/PINK
2WD/4WD switch signal (-)	7	BLACK/BEIGE
HI beam signal (+)	5	BLUE
Vehicle speed sensor signal (VSS)	9	PINK

Multifunction Gauge Circuit Protection

CONDITION	CIRCUIT PROTECTION
Supplied at all times	Fuse 8 of fuse block 1 (from fuse 1 of fuse block 2)
Supplied with main relay activated	Fuse 4 of fuse block 1 (from main relay R2)

Multifunction Gauge Removal

1. Remove gauge cover.
2. Disconnect gauge connector.
3. Release retaining clips at the top of gauge.



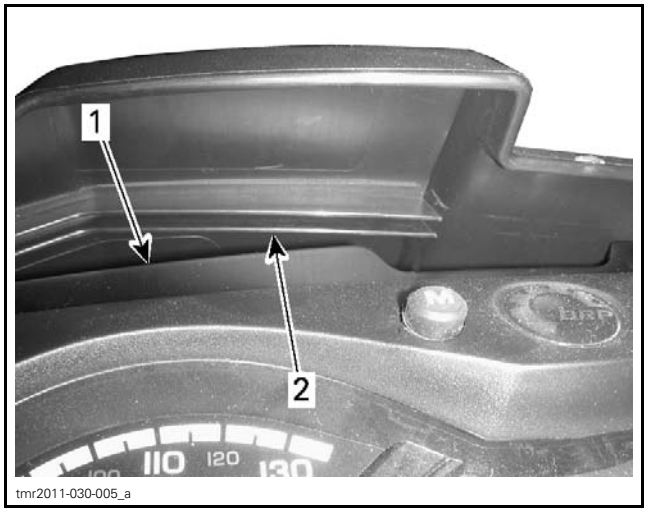
ANALOG/DIGITAL GAUGE SHOWN
1. Retaining clips

4. Tilt top of gauge rearward, then pull it up to remove it from its support.

Multifunction Gauge Installation

For the installation, reverse the removal procedure, however pay attention to the following.

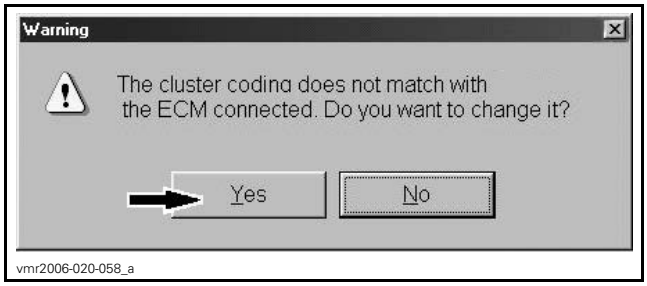
Align gauge support top in the gauge cover slots on each side.



ANALOG/DIGITAL GAUGE SHOWN
1. Gauge support top
2. Gauge cover slot

New Multifunction Gauge Registration (coding)

Whenever multifunction gauge is replaced, it is required to use B.U.D.S. to register it in ECM. Simply click **Yes** when the following message appears.



IMPORTANT: If a multifunction gauge from another vehicle model is installed and is not registered in ECM through B.U.D.S., **engine starting will not be allowed until gauge is registered with proper coding**.

Maintenance Soon Message

Maintenance Soon Message Manual Reset

1. Select PARK.
2. Turn ignition switch to ON. Do NOT start engine.

NOTE: The steps 3 through 9 must be completed within **5 seconds**.

3. Press override switch and HOLD.
4. Press and release brake pedal.
5. Release override switch.
6. Press and release brake pedal.
7. Press override switch and HOLD.
8. Press and release brake pedal.
9. Release override switch.
10. Turn ignition switch to OFF.

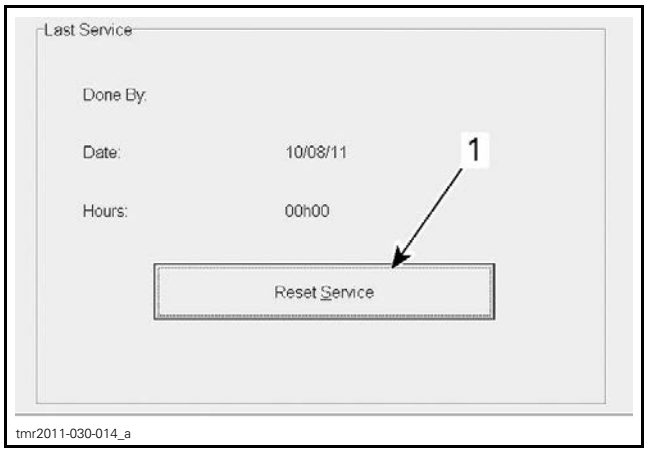
NOTE: Do not turn ignition switch to ON before the multifunction gauge turns off.

Maintenance Soon Message Reset Using B.U.D.S.

Connect to the applicable B.U.D.S. software. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.

Select **Vehicle** tab.

Click on the **Reset Service** button.



1. Reset Service button

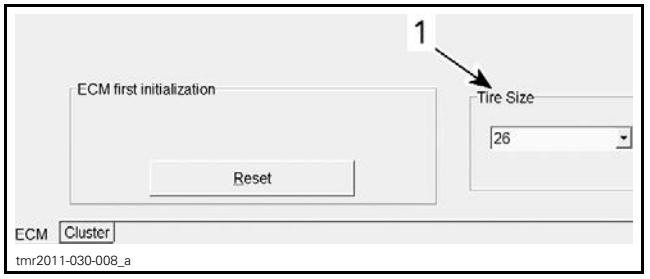
Multifunction Gauge Set-Up Using B.U.D.S.

Connect to the applicable B.U.D.S. software. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.

Tire Size Selection

Select **Setting** and **ECM** tabs.

Scroll and select the appropriate tire diameter (see inscriptions on the tires) in the **Tire Size** box.

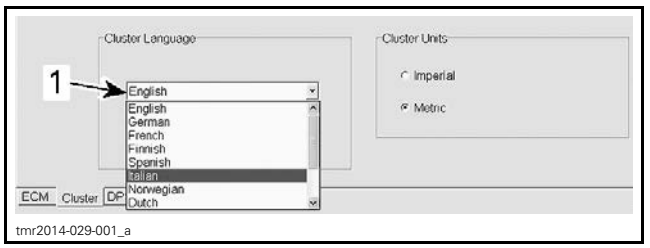


1. Tire Size box

Language Selection

Select **Setting** and **Cluster** tabs.

Scroll and select the desired display language in the **Cluster Language** box.

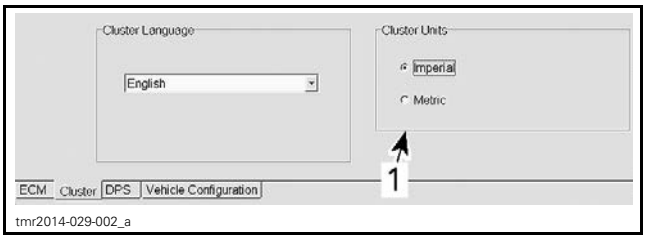


1. Cluster Language box

Units Selection

Select **Setting** and **Cluster** tabs.

Select **Imperial** or **Metric** in the **Cluster Units** box.



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1. Cluster Units box

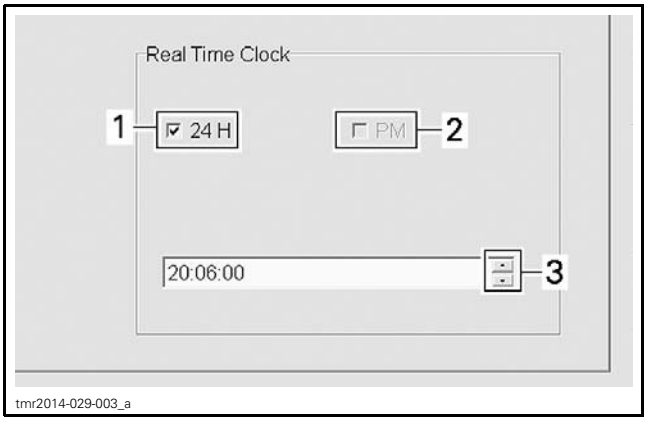
Clock Setting

Select **Setting** and **Cluster** tabs.

To set clock to the 24-hour format, check the **24 H** box. To set it to the 12-hour format, leave the box empty.

If 12-hour format was selected, check the **PM** box if required.

Set hour and minutes using the up or down arrows.



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1. 24 H box
2. PM box
3. Arrows

Vehicle Configuration and Vehicle Option

NOTE: Options and proper configuration have been activated at factory. It could be necessary to modify them manually after ECM replacement.

Select **Setting** and **Vehicle Configuration** tabs.

tmr2014-029-004

Multifunction Gauge Test with B.U.D.S.

Connect to the applicable B.U.D.S. software. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.

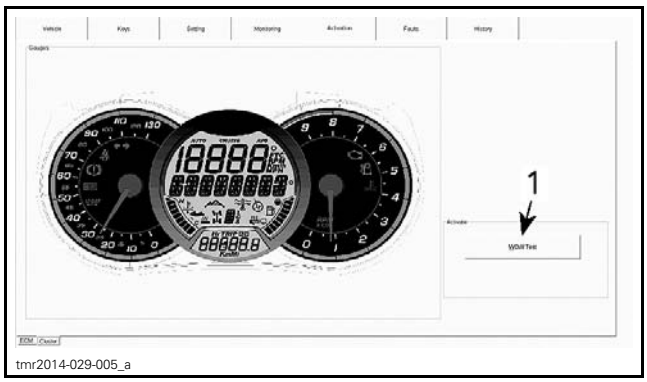
Wow Test

This function is used to check if the indicator lights, display and analog indicators (if applicable) are functional.

NOTE: This function does not test the signals or external circuits.

Select the **Activation** and **Cluster** tabs.

Click on the **WOW Test** button.



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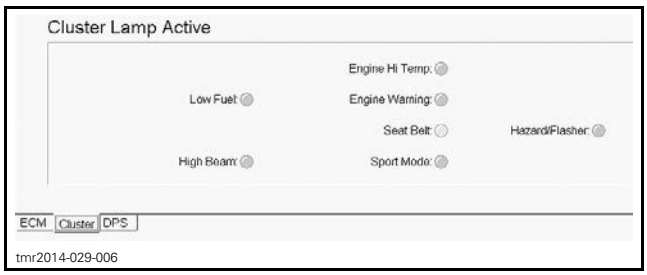
TYPICAL
1. WOW Test button

Indicator Lights Monitoring

Select **Monitoring** and **Cluster** tabs.

Use the **Cluster Lamp Active** box to monitor different indicator lights outputs.



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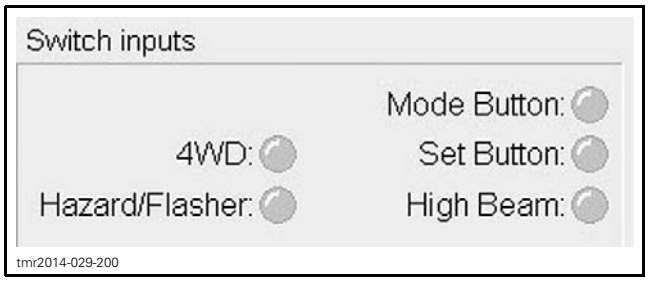
CLUSTER LAMP ACTIVE BOX

This function confirms that the signals are broadcasting and the indicator lights should be ON in the multifunction gauge.

Switches Input Monitoring

Select **Monitoring** and **Cluster** tabs.

Use the **Switch Inputs** box to monitor different switch inputs as you activates the switches.



SWITCH INPUTS BOX

This function confirms that the ECM receives the inputs.

Vehicle Parameters Monitoring

Select **Monitoring** and **Cluster** tabs.

In the upper area, the fuel level, engine speed (RPM), vehicle speed and engine coolant temperature are displayed.

This function confirms that the signals are broadcasting and the information should be displayed on the multifunction gauge.

12 VOLT POWER OUTLET

12 Volt Power Outlet Removal and Installation

Refer to *BODY* and remove upper console.

Unplug the connectors of the power outlet.

Unscrew the retaining nut.

Reverse procedure for installation.

12 Volt Power Outlet Wire Identification

FUNCTION	PIN	COLOR
12 volt input from fuse F12	2	RED/BROWN
Ground (to ground terminal BK3)	1	BLACK

12 Volt Power Outlet Circuit Protection

CONDITION	CIRCUIT PROTECTION
Supplied with accessories relay activated	Fuse 12 of fuse block 1 (from accessories relay R3)

HEADLIGHTS

Headlight Wire Identification

HEADLIGHTS RELAY (R4)		
FUNCTION	PIN	COLOR
12 volt input from fuse F11 (headlights power)	7D	YELLOW/BLACK
12 volt input from ignition switch pin A (relay winding input)	6D	YELLOW/BLUE
12 volt output to headlights low beam and low/high beam switch	6C	GREEN
Relay winding ground (from ECM-B G1)	7C	ORANGE/BLACK

HEADLIGHT LOW/HIGH BEAM SWITCH (EXCEPT EUROPE)		
FUNCTION	PIN	COLOR
12 volt input from headlights relay	2	GREEN
12 volt output to high beam headlights	3	BLUE

HEADLIGHT LOW/HIGH BEAM SWITCH (EUROPE - IN MULTIFUNCTION SWITCH)		
FUNCTION	PIN	COLOR
12 volt input from headlights relay	MGC-4	GREEN
12 volt output to high beam headlights (HI position)	MGC-5	BLUE
12 volt output to high beam headlights (PASS position)	MGC-2	BLUE

Headlights Circuit Protection

CONDITION	CIRCUIT PROTECTION
Supplied at all times	Fuse 11 of fuse block 1 (from fuse 2 of fuse block 2)

Headlight Test

Disconnect headlight connector. Refer to *HEADLIGHT BULB REPLACEMENT*.

Using a multimeter, measure the voltage on headlight connector as follows.

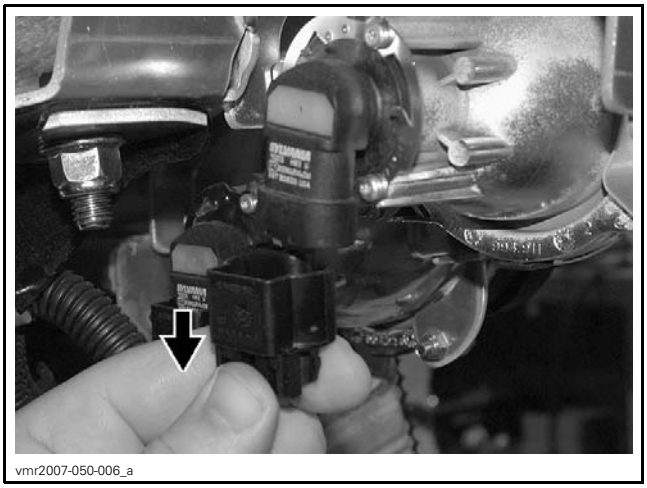
SWITCH POSITION	WIRE COLOR		VOLTAGE
LO beam/ HI beam	GREEN (Low beam bulb)	BLACK	Battery voltage
HI beam	BLUE (Hi beam bulb)	BLACK	

Headlight Bulb Replacement

NOTICE **Never touch glass portion of an halogen bulb with bare fingers, it shortens its operating life. If glass is touched, clean it with isopropyl alcohol which will not leave a film on the bulb.**

NOTE: The same bulb type is used for LO and HI beams on both sides of vehicle.

Unplug connector from bulb.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Rotate bulb.

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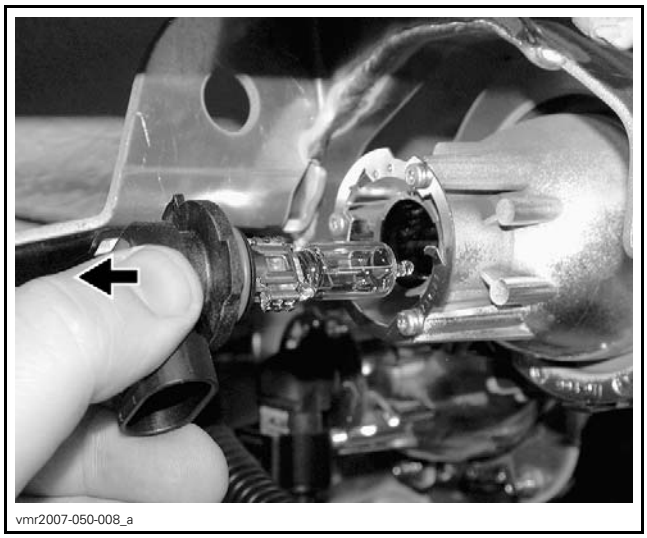
Pull bulb out.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Properly reinstall removed parts in the reverse order of their removal.

Validate headlight operation.

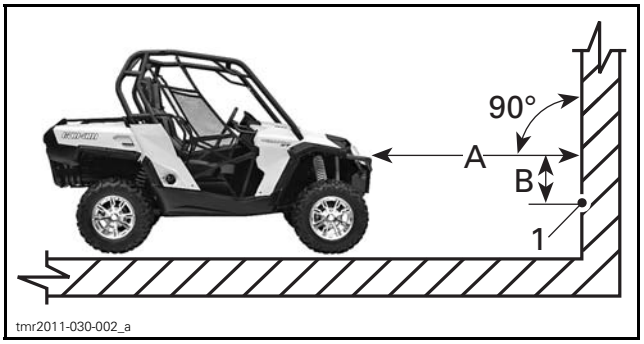
Headlamp Beam Aiming

Select high beam.

Beam aiming is correct when center of high beam is 130 mm (5 in) below the headlight horizontal center line, scribed on a test surface, 5 m (16 ft) away.

NOTE: Load vehicle as per normal use.

Measure headlight center distance from the ground. Scribe a line at this height on test surface (wall or screen). Light beam center should be 130 mm (5 in) below scribed line.



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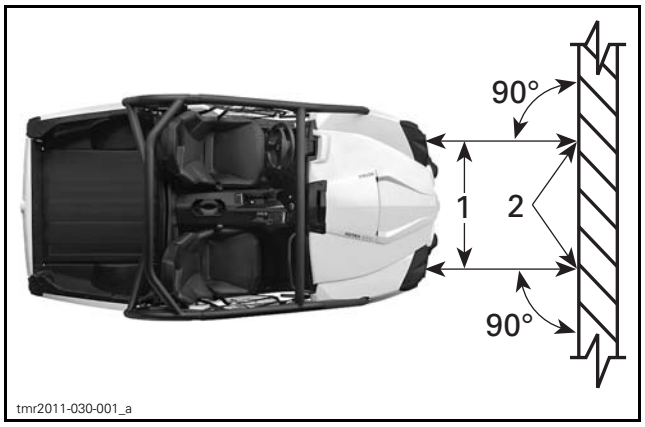
1. Light beam center

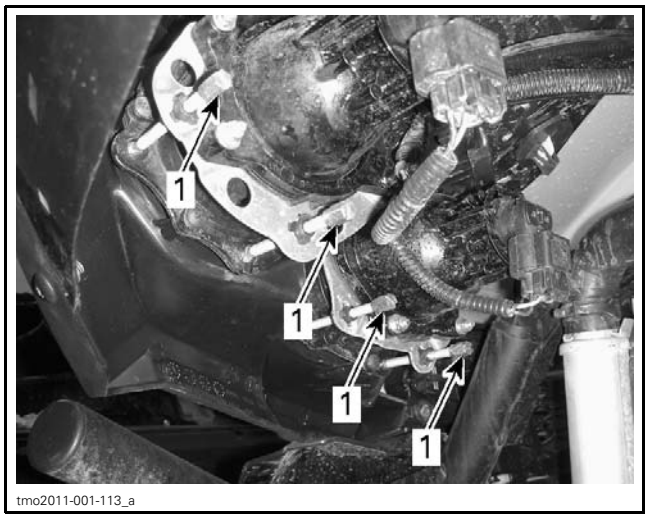
A. 5 m (16 ft)
B. 130 mm (5 in)



1. Headlight center lines
2. Light beam center

Beam Aiming Adjustment

Turn adjustment screws to adjust beam height and side orientation as described below. Adjust both headlight evenly.



1. Adjustment screws

TAILLIGHTS/BRAKE LIGHTS

Taillight/Brake Light Wire Identification

BRAKE LIGHT RELAY (R8)		
FUNCTION	PIN	COLOR
12 volt input from fuse F4 (LH brake light power)	12B	ORANGE/GREEN
12 volt input from brake light switch (relay winding input)	11B	RED/ORANGE
12 volt output to LH brake light	11A	WHITE/ORANGE
Relay winding ground (to ground terminal BK2)	12A	BLACK

BRAKE LIGHT SWITCH		
FUNCTION	PIN	COLOR
12 volt input from fuse F4	2	ORANGE/GREEN
12 volt output to RH brake light and R8 relay winding	1	RED/ORANGE

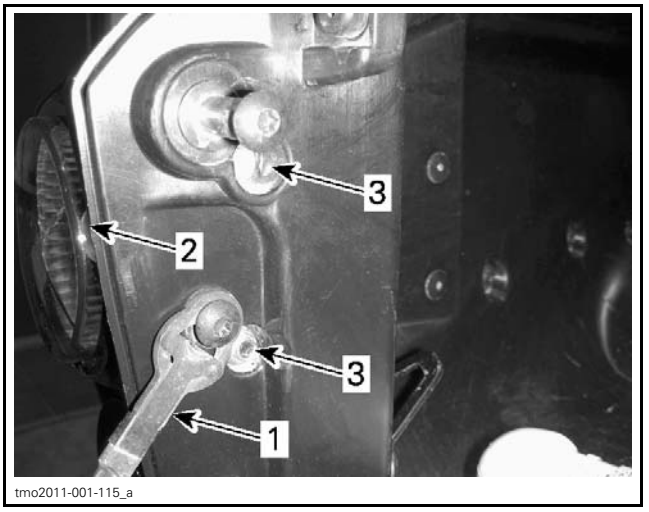
Taillight/Brake Light Circuit Protection

CONDITION	CIRCUIT PROTECTION
Supplied with main relay activated	Fuse 4 of fuse block 1 (from main relay R2)

Taillight/Brake Light Bulb Replacement

Open upper tail gate.

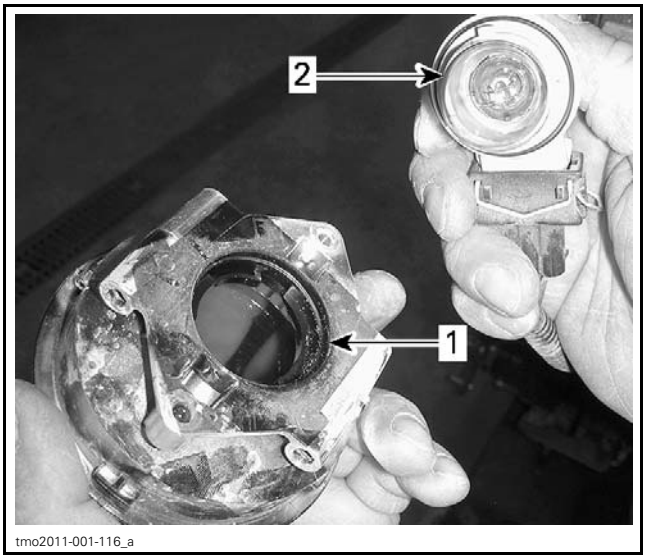
Remove both taillight retaining screws.



1. Tail gate cable
2. Taillight
3. Retaining screws

Pull taillight out of its location.

Remove bulb socket from taillight.



1. Taillight
2. Light bulb and socket

Push the bulb in and hold while turning counterclockwise to release.

Installation is the reverse of the removal procedure.

WINCH

XT and LTD Models Only

Winch Wire Identification

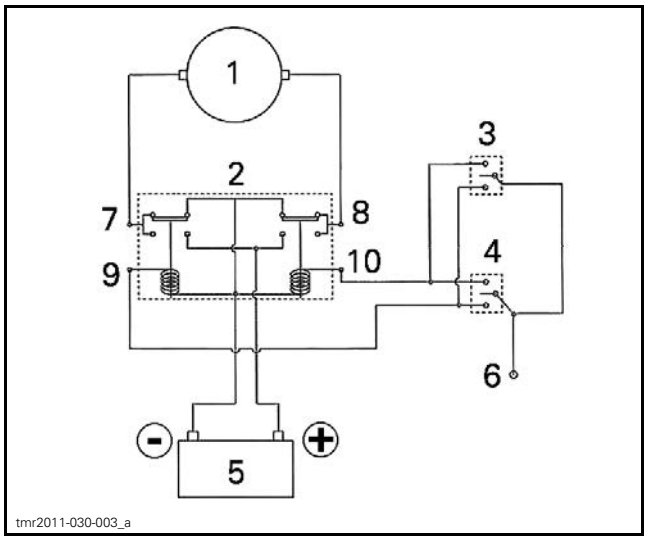
WINCH RELAY		
FUNCTION	PIN	COLOR
12 volt input from battery (winch power)	BP4	RED
Ground	BN4	BLACK
12 volt input from switch ("IN")	SW1	GREEN/BLUE
12 volt input from switch ("OUT")	SW2	LIGHT BLUE
Motor power (switches polarity depending on rotation direction)	SW3	RED (with Blue sleeve)
Motor power (switches polarity depending on rotation direction)	SW5	RED (with Yellow sleeve)

NOTE: The small black wire at terminal BN4 is connected to the diodes used to prevent electric arcs in the switch.

WINCH SWITCH		
FUNCTION	PIN	COLOR
12 volt input from fuse 7	2	RED/BLACK
12 volt output to relay winding ("IN")	1	GREEN/BLUE
12 volt output to relay winding ("OUT")	3	LIGHT BLUE

⚠ WARNING

Before testing, make sure the winch is in FREESPOOL mode (Freespool clutch disengaged).



SIMPLIFIED WINCH WIRING DIAGRAM
1. Winch motor
2. Winch relay
3. Winch remote control
4. Winch switch
5. Battery
6. 12 volt input to switch (switch pin 2 - from fuse 7)
7. Winch motor power (SW3)
8. Winch motor power (SW5)
9. 12 volt input to relay winding ("IN" - SW1)
10. 12 volt input to relay winding ("OUT" - SW2)

Winch Switch Circuit Protection

CONDITION	CIRCUIT PROTECTION
Supplied with accessories relay activated	Fuse 7 of fuse block 1 (from accessories relay R3)

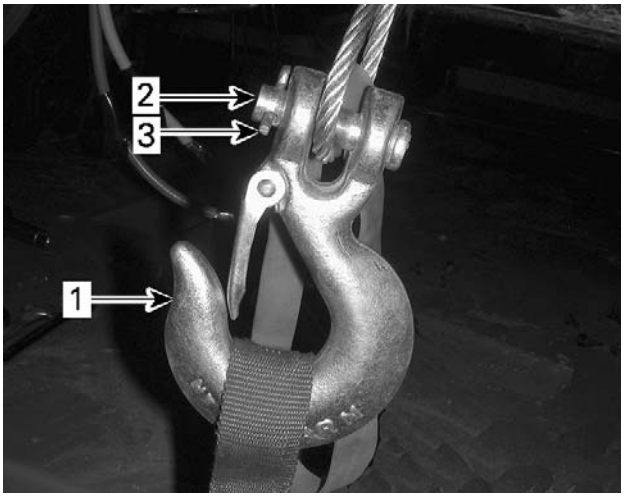
Winch Removal

1. Disconnect, the battery BLACK (-) cable first, then the RED (+) cable.

⚠ WARNING

Always respect this order for disassembly; disconnect BLACK (-) cable first. Electrolyte or fuel vapors can be present and a spark may ignite them and possibly cause personal injuries.

2. Remove the hook.
   2.1 Remove and discard the cotter pin.
   2.2 Remove the hook pin.



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1. Hook
2. Hook pin
3. Cotter pin

3. Remove the four retaining screws from underneath the winch motor.
4. Disconnect both winch power cables.

NOTE: Note the position of the power cables for reinstallation.

5. Protect radiator using strong cardboard.
6. Pass the cable through the roller fairlead.
7. Remove winch.

NOTICE **Be careful not to lean on the radiator while removing winch.**

Winch Installation

For the installation, reverse the removal procedure, however pay attention to the following.

Tighten winch retaining screws.

TIGHTENING TORQUE	
Winch retaining screws	24.5 N•m ± 3.5 N•m (18 lbf•ft ± 3 lbf•ft)

Connect wires the Yellow wire at rear and the Blue one at front.

Install a **new** cotter pin on the hook pin.

TURN SIGNALS/HAZARD (EC MODELS ONLY)

Turn Signal Wire Identification

FLASHER MODULE		
FUNCTION	PIN	COLOR
12 volt input from fuse F10	MC2-1	RED/WHITE
12 volt input from fuse F4	MC1-5	ORANGE/GREEN
RH turn 12 volt input from turn signal switch	MC1-1	BEIGE/ORANGE
LH turn 12 volt input from turn signal switch	MC1-2	BEIGE/GREY
Output to RH turn signal lights	MC2-2	BROWN
Output to LH turn signal lights	MC2-3	GREY
Output to multifunction gauge (turn signal indicator)	MC2-4	ORANGE
Ground	MC1-4	BLACK
Hazard 12 volt input from hazard switch	MC1-6	GREEN/ORANGE

TURN SIGNAL SWITCH (IN MULTIFUNCTION SWITCH)		
FUNCTION	PIN	COLOR
12 volt input from fuse F4	MGB-3	ORANGE/GREEN
RH turn 12 volt output to flasher module	MGB-4	BEIGE/ORANGE
LH turn 12 volt output to flasher module	MGB-2	BEIGE/GREY

HAZARD SWITCH		
FUNCTION	PIN	COLOR
12 volt input from fuse F10	2	RED/WHITE

HAZARD SWITCH		
FUNCTION	PIN	COLOR
12 volt output to flasher module	3	GREEN/ORANGE
Hazard indicator 12 volt input from fuse F4	8	ORANGE/BROWN
Hazard indicator ground (through bulbs)	7	BLACK/ORANGE

Turn Signal/Hazard Circuit Protection

CONDITION	CIRCUIT PROTECTION
Supplied with main relay (R2) activated	Fuse 4 of fuse block 1 (from main relay R2)
Supplied at all times	Fuse 10 of fuse block 1 (from fuse 2 of fuse box 2)

HORN (EC MODELS ONLY)

Horn Wire Identification

HORN SWITCH (IN MULTIFUNCTION SWITCH)		
FUNCTION	PIN	COLOR
12 volt input from fuse F10	MGB-1	ORANGE/GREEN
12 volt output to horn	MGB-6	BEIGE/BLUE

HORN		
FUNCTION	PIN	COLOR
12 volt input from horn switch	2	BEIGE/BLUE
Ground	1	BLACK

Horn Circuit Protection

CONDITION	CIRCUIT PROTECTION
Supplied with main relay (R2) activated	Fuse 4 of fuse block 1 (from main relay R2)

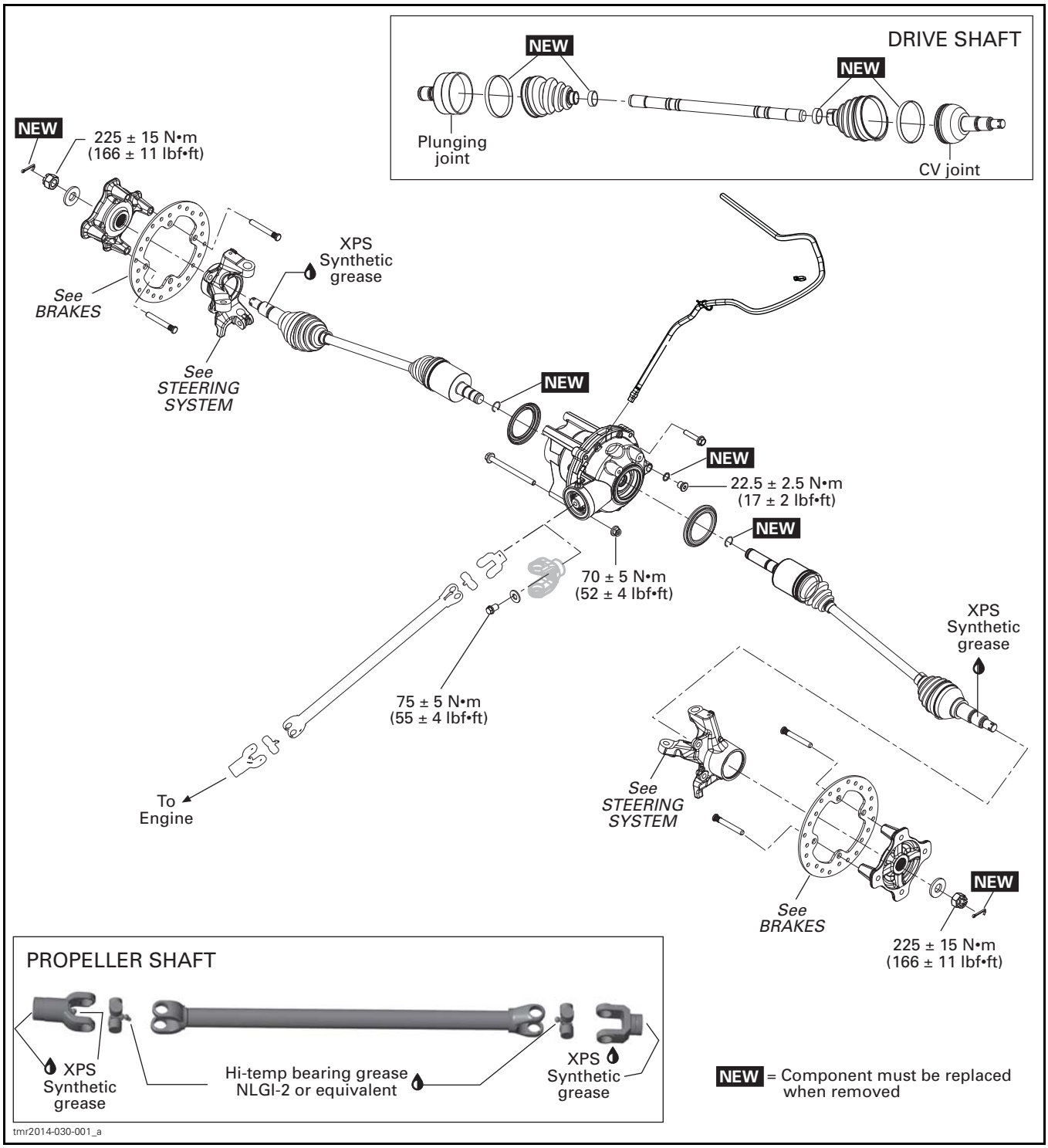
FRONT DRIVE

SERVICE TOOLS

Description	Part Number	Page
BACKLASH MEASUREMENT TOOL	529 035 665	6
CV BOOT CLAMP PLIER	529 036 120	5
CV JOINT EXTRACTOR	529 036 005	5
SPANNER SOCKET	529 035 649	8

SERVICE PRODUCTS

Description	Part Number	Page
LOCTITE 277	293 800 073	9
XPS SYNTHETIC GREASE	293 550 010	5, 10



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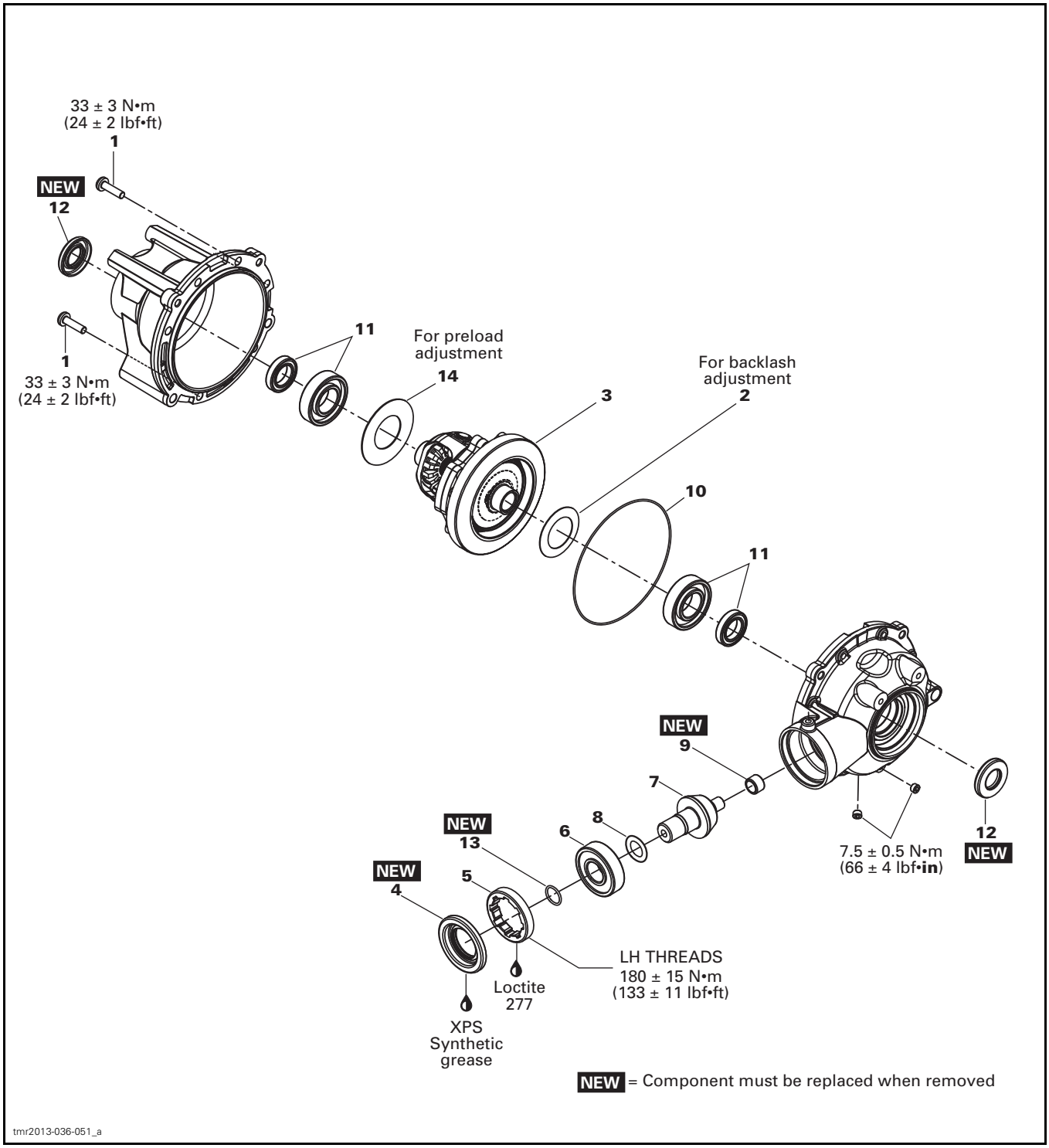
33 ± 3 N•m
(24 ± 2 lbf•ft)
1
NEW
12
1
33 ± 3 N•m
(24 ± 2 lbf•ft)
11
For preload
adjustment
14
3
For backlash
adjustment
2
10
11
NEW
9
7
8
6
NEW
13
NEW
4
5
12
NEW
7.5 ± 0.5 N•m
(66 ± 4 lbf•in)
LH THREADS
180 ± 15 N•m
(133 ± 11 lbf•ft)
Loctite
277
XPS
Synthetic
grease
NEW = Component must be replaced when removed
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GENERAL

The procedure explained below is the same for the RH and LH sides unless otherwise instructed.

SYSTEM DESCRIPTION

When one wheel is spinning above a certain rate faster than the other wheel, the Visco-Lok® system progressively locks the wheels through its multi-plate clutch.

In the event of a failure, the entire Visco-Lok pump and its carrier will have to be replaced. The Visco-Lok pump itself is a non-serviceable item.

NOTE: If the pump was disassembled, its viscous fluid would be lost and it could not be replaced.

PROCEDURES

WHEEL HUB

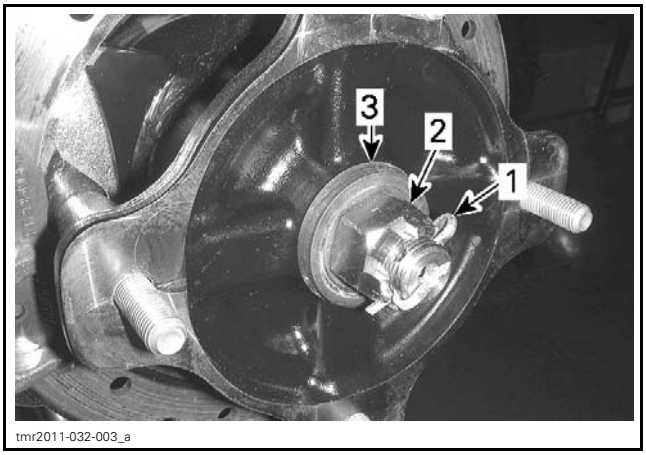
Wheel Hub Removal

Lift and support vehicle. Refer to *INTRODUCTION* section for proper procedure.

Select the 4WD position and place the transmission lever on "P".

Remove caliper from knuckle. Refer to *BRAKES* subsection.

Remove the following parts:
- Wheel
- Cotter pin
- Castellated nut
- Belleville washer.



TYPICAL
1. *Cotter pin*
2. *Castellated nut*
3. *Belleville washer*

Remove wheel hub.

Wheel Hub Inspection

Check wheel hub for cracks or other damages.

Check inner splines for wear or other damages.

If any damage is detected on wheel hub, replace it with a new one.

Wheel Hub Installation

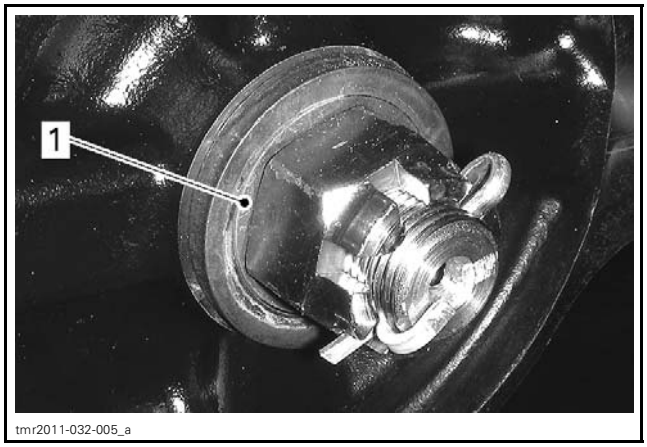
The installation is the reverse of removal procedure. However, pay attention to the following.

Install Belleville washer with its domed side outwards.

PART	TORQUE
Castellated nut	225 N•m ± 15 N•m (166 lbf•ft ± 11 lbf•ft)

NOTE: Tighten further castellated nut if required to align grooves with drive shaft hole.

Install a NEW cotter pin.



1. *Domed side here*

FRONT DRIVE SHAFT

Front Drive Shaft Removal

Lift and support vehicle. Refer to *INTRODUCTION* section for proper procedure.

Remove the wheel hub, see procedure in this subsection.

Remove the knuckle. Refer to *STEERING SYSTEM* subsection.

Strongly pull drive shaft out of differential.

Discard the stop ring at the end of the shaft.

Front Drive Shaft Inspection

Inspect the condition of boots. If there is any damage or evidence of leaking lubricant, replace them. Refer to *DRIVE SHAFT BOOT*.

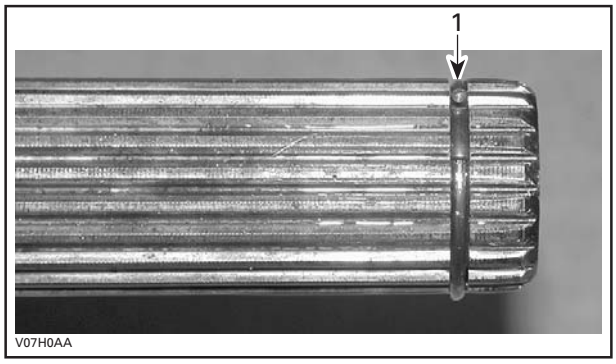
Check splines for excessive wear. Replace if necessary.

NOTE: If the splines on plunging joint are worn, a check of differential inner splines should be done.

Front Drive Shaft Installation

The installation is the reverse of the removal procedure. However, pay attention to the following.

Install a NEW stop ring.



1. Stop ring

Apply XPS SYNTHETIC GREASE (P/N 293 550 010) to the splines.

The wear ring should be closed to the differential.

Reinstall all removed parts.

DRIVE SHAFT BOOT

Drive Shaft Boot Removal

Remove the drive shaft from the vehicle.

Remove drive shaft boot clamps using the following tools:

TOOL	
CV BOOT CLAMP PLIER (P/N 529 036 120)	

Dislodge the large boot end.

Separate the joint from the shaft. Two procedures can be done.

Without the Special Tool

Clamp joint housing in a vise.

Align shaft with joint.

Pull hard on shaft to remove from joint.

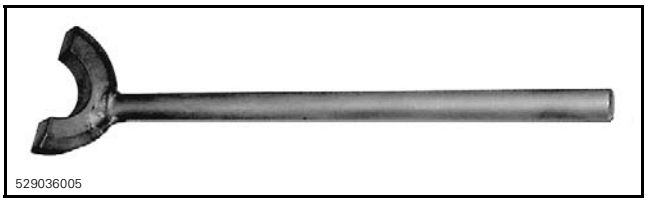
Remove boot from drive shaft.

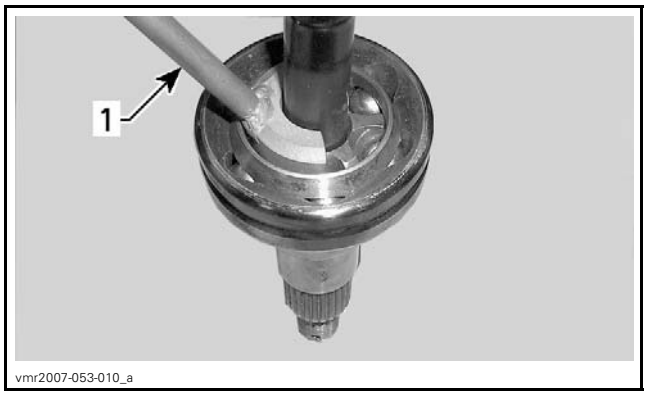
Remove and discard the circlip. A new one is included in the boot kit.

With the Special Tool

Place drive shaft in vice with the joint downward.

Install the CV JOINT EXTRACTOR (P/N 529 036 005) on bearing.





TYPICAL — CV JOINT SHOWN
1. Joint extractor tool

With an hammer, hit on the tool to separate joint from shaft.

When joint and shaft are separated, remove boot from drive shaft.

Remove and discard the circlip. A new one is included in the boot kit.

Drive Shaft Boot Installation

For installation, reverse the removal procedure. Pay attention to the following details.

Install the NEW circlip.

Pack bearing area with grease (included with the new boot kit).

NOTE: Do not use or add other grease.

FRONT DIFFERENTIAL

Front Differential Removal

Drain the differential. Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.

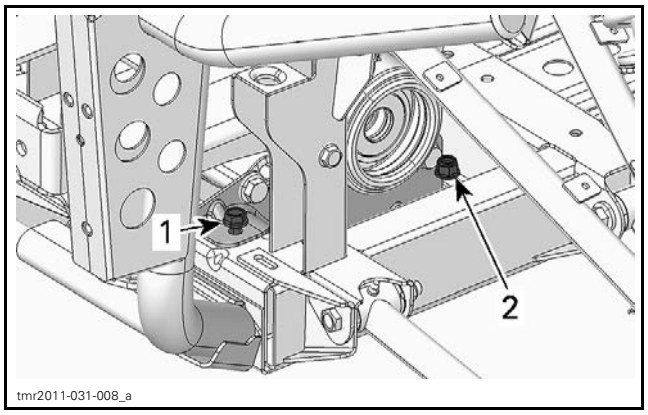
Remove both drive shafts. See procedure in this subsection.

Remove heavy duty front bumper (**XT-P, XT and Limited models**) with front fascia.

Remove the radiator. Refer to *COOLING SYSTEM* subsection.

Remove bolts that attach winch bracket to the frame (**XT models**).

Remove front screw and rear nut securing the LH lower differential support.



FROM THE LEFT SIDE OF VEHICLE
1. *Front retaining screw*
2. *Rear retaining nuts*

Remove the upper differential bolts.

Remove nuts securing the lower bolts. Pull bolts to free the left support.

NOTE: Differential removal is required to remove lower bolts and LH lower differential support.

Remove the large clamp from the propeller shaft rubber boot.

Remove the differential from the front of vehicle.

Remove yoke if required.

Front Differential Inspection (Assembled)

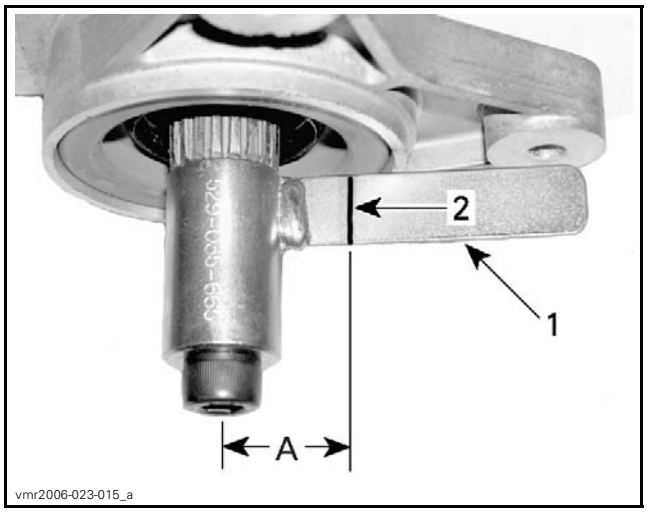
Check if oil seals are brittle, hard or damaged. Replace if necessary.

Backlash Inspection

Using a dial indicator and the BACKLASH MEASUREMENT TOOL (P/N 529 035 665), measure the backlash.

Place the backlash measurement tool at the end of pinion gear.

From center of bolt, measure 25.4 mm (1 in) and scribe a mark on the tab.

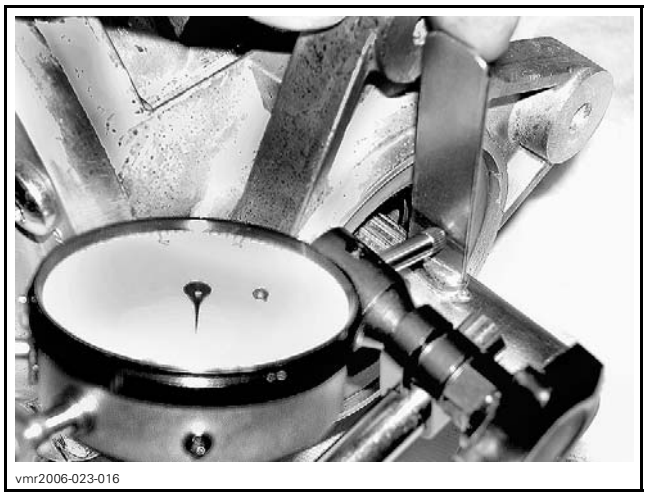


1. *Tab of backlash measurement tool*
2. *Mark on tab*

A. 25.4 mm (1 in)

Position the dial indicator tip against the tab at a 90° angle and right on the previously scribed mark.

Gently, move the tab back and forth. Note the result.



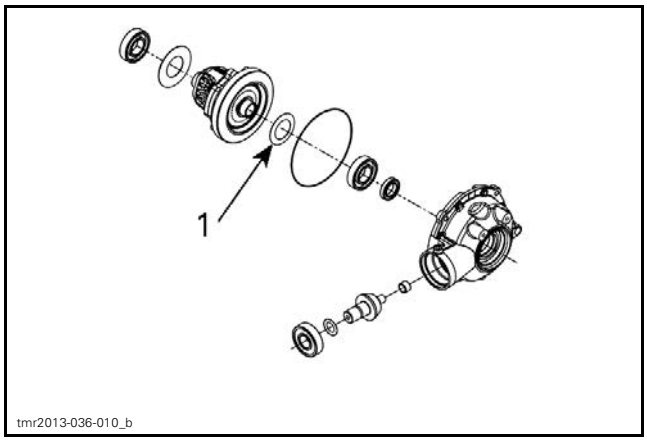
Rotate pinion gear 1/2 turn and check backlash again. Note the result.

Rotate pinion gear 1 turn and check backlash again.

BACKLASH SPECIFICATION
0.05 mm (.002 in) to 0.36 mm (.014 in)

If backlash is out of specification, split front differential housing and adjust shim thickness as per following guideline.

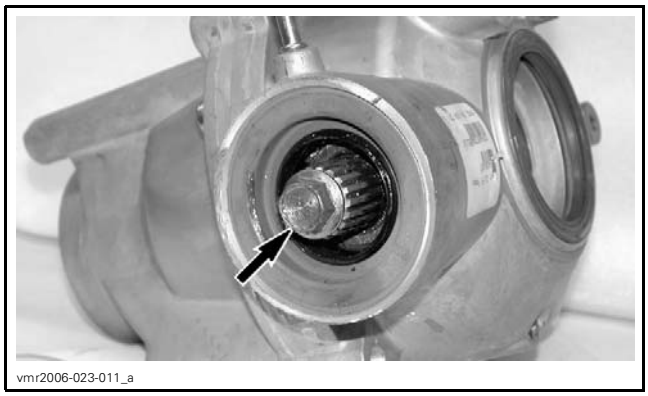
BACKLASH ADJUSTMENT GUIDELINE	
BACKLASH MEASUREMENT	WHAT TO DO
Below 0.05 mm (.002 in)	Add shim(s) and recheck backlash
Above 0.36 mm (.014 in)	Remove shim(s) and recheck backlash



1. Backlash shim

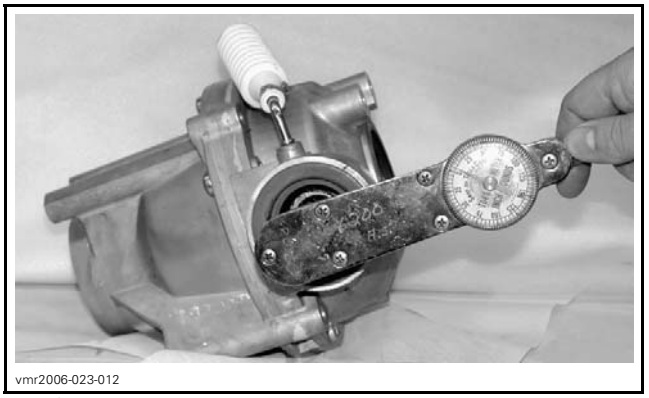
Preload Inspection

Screw the propeller shaft adaptor bolt in pinion gear.



TYPICAL

Using a needle torque wrench, measure the drag torque.

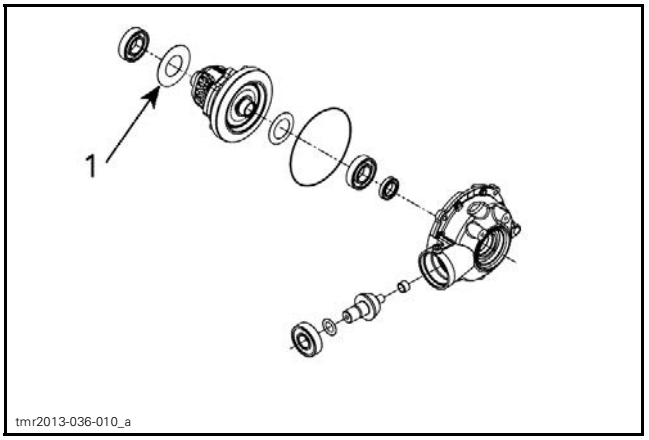


TYPICAL

PRELOAD SPECIFICATION
0.06 N•m (.5 lbf•**in**) to 0.50 N•m (4 lbf•**in**)

If preload is out of specification, split front differential housing and adjust shim thickness as per following guideline.

PRELOAD GUIDELINE	
PRELOAD MEASUREMENT	WHAT TO DO
Below 0.06 N•m (.5 lbf•**in**)	Add shim(s) and recheck preload
Above 0.50 N•m (4 lbf•**in**)	Remove shim(s) and recheck preload

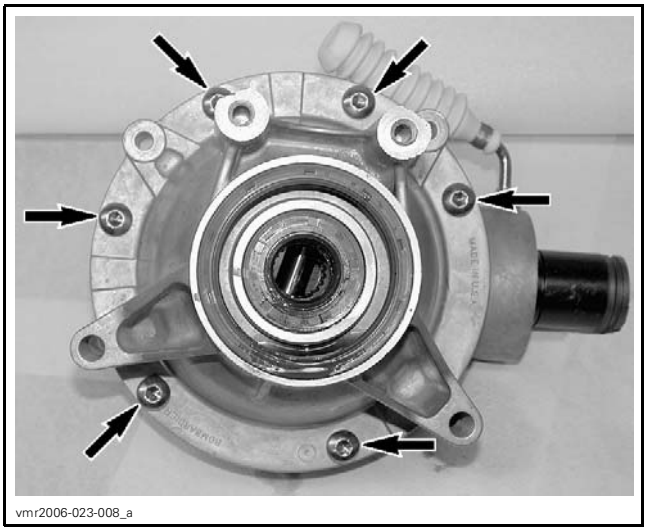


1. Preload shim

Front Differential Disassembly

Visco-Lok Carrier/Ring Gear

Unscrew the differential housing screws **no. 1**, then separate half housings.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TYPICAL

NOTE: Be careful to keep track of shims **no. 2** on each end of the Visco-Lok carrier **no. 3**.

Extract Visco-Lok carrier out of half housing.

Pinion Gear

Remove and discard oil seal **no. 4**.

Unscrew the pinion nut **no. 5**. Use the SPANNER SOCKET (P/N 529 035 649).

529035649

NOTE: The pinion nut is LH threaded. Unscrew by turning clockwise.

Remove the bearing **no. 6** at the same time as the pinion gear **no. 7**. Be careful to keep track of shims **no. 8**. Discard bearing.

The pinion gear and bearing can be easily removed using the following suggested tool:

PART	QTY
Pipe: 89 mm (3-1/2 in) dia. x 127 mm (5 in)	1
Threaded rod: M12 x 1.25 x 178 mm (7 in)	1
M12 x 1.25 nut	3
Flat bar	1

Remove and discard the needle bearing **no. 9**.

Front Differential Assembly

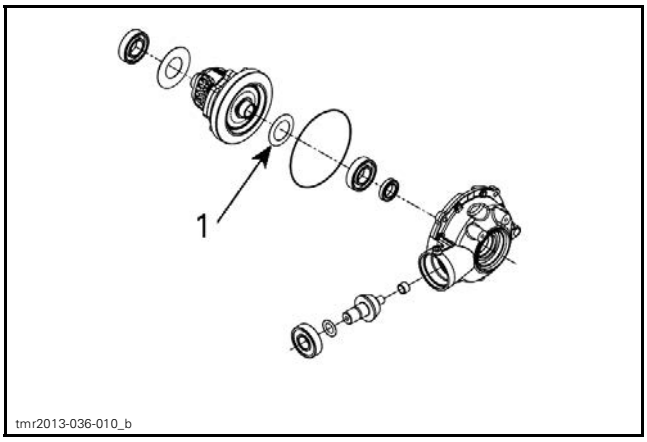
Adjustment is required when any of the following part is changed.

– Pinion gear
– Visco-Lok carrier
– Housing.

As a preliminary setup, install shims according to the following table.

RECOMMENDED SHIM THICKNESS	
PINION GEAR (1)	1.67 mm ± 0.04 mm (.066 in ± .002 in)
BACKLASH	0.5 mm (.02 in) (as a preliminary adjustment)
PRELOAD	

(1) The pinion gear shim thickness (**no. 8**) should never be altered. Any adjustment should be done on preload and/or backlash shims (**no. 2** and **no. 14**).



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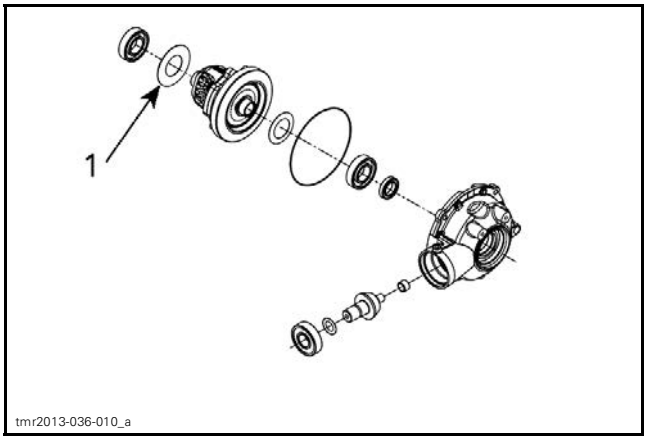
1. Backlash shim



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1. Preload shim

Prior to finalizing assembly, proceed in this order:

– Temporarily assemble front differential using recommended torques.
– Do not apply thread locker product.
– Do not install a new pinion nut.
– Check backlash.
– Check preload.

Visco-Lok Carrier/Ring Gear

To assemble, reverse the removal procedure. Pay attention to the following.

Check condition of seal **no. 10**. Replace if damage.

Install new bearings **no. 11**.

Tighten differential housing screws **no. 1**.

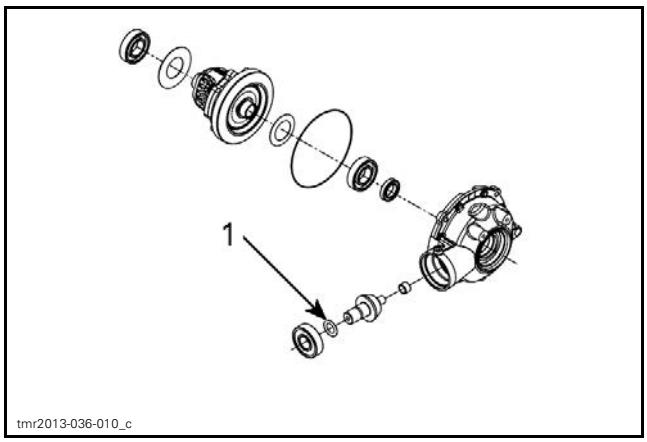
PART	TORQUE
Differential housing screws	33 N•m ± 3 N•m (24 lbf•ft ± 2 lbf•ft)

Pinion Gear

To install, reverse the removal procedure. Pay attention to the following details.

Replace the O-ring **no. 13**.

Install the shim(s) **no. 8** then the ball bearing **no. 6**.



1. Shim **no. 8**

Install a new needle bearing **no. 9**.

Apply LOCTITE 277 (P/N 293 800 073) to pinion nut **no. 5**.

NOTE: If a new pinion nut is used, a self-locking product is already applied, do not use Loctite 277.

Install and tighten the pinion nut.

PART	TORQUE
Pinion nut (LH THREADS)	180 N•m ± 15 N•m (133 lbf•ft ± 11 lbf•ft)

Lubricate oil seal **no. 4**.

Finalize assembly:

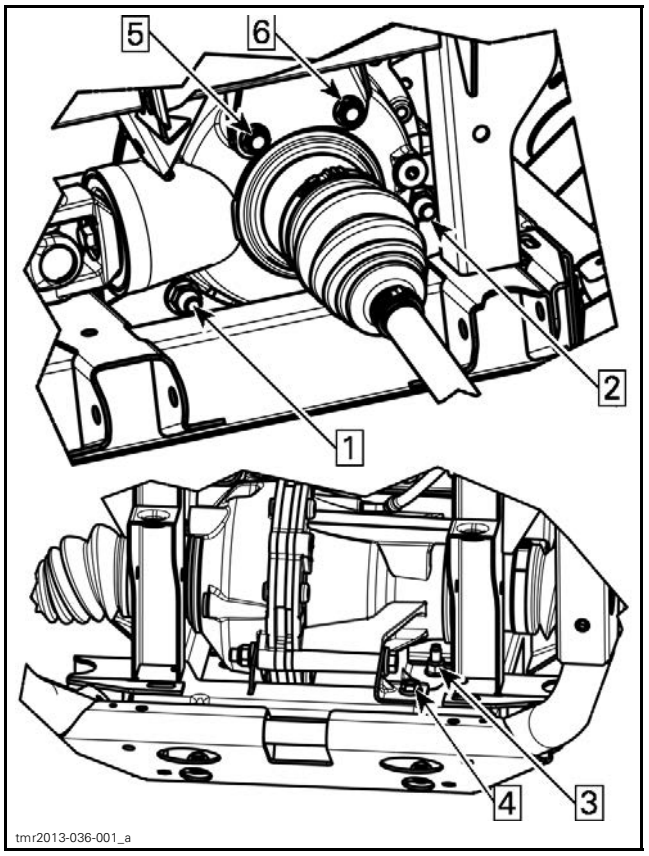
– Apply thread locker products where applicable.
– Torque fasteners as per tables.

Front Differential Installation

The installation is the reverse of the removal procedure. However, pay attention to the following.

When inserting the small portion of propeller shaft into propeller shaft boot, make sure both parts of propeller shaft are well indexed.

Tighten front differential nuts as per following sequence.



TOP ILLUSTRATION: RH SIDE VIEW
BOTTOM ILLUSTRATION: FRONT VIEW

PARTS	TORQUE
Differential retaining nuts	70 N•m ± 5 N•m (52 lbf•ft ± 4 lbf•ft)
Differential upper bolts	24.5 N•m ± 3.5 N•m (18 lbf•ft ± 3 lbf•ft)
Differential support nut	24.5 N•m ± 3.5 N•m (18 lbf•ft ± 3 lbf•ft)
Differential support bolt	24.5 N•m ± 3.5 N•m (18 lbf•ft ± 3 lbf•ft)

Refill the front differential with recommended oil. Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.

FRONT PROPELLER SHAFT

Front Propeller Shaft Removal

Remove the RH lateral console panel.

Remove propeller shaft screws on differential.

Remove lower and upper differential bolts.

Move the differential forwards.

Dislodge the propeller shaft from the engine and differential.

Remove front propeller shaft.

Front Propeller Shaft Inspection

Inspect if propeller shaft is not bent or twisted.

Check propeller shaft splines for wear or damage.

Check if propeller shaft bellows is pierced or brittle.

Front Propeller Shaft Installation

Installation is the reverse of removal procedure. However, pay attention to the following.

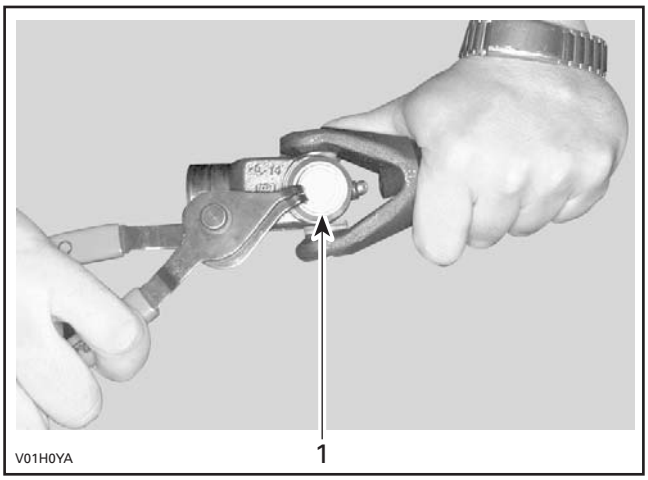
Apply XPS SYNTHETIC GREASE (P/N 293 550 010) to splines on engine side.

PARTS	TORQUE
Propeller shaft screw (differential side)	75 N•m ± 15 N•m (55 lbf•ft ± 11 lbf•ft)

PROPELLER SHAFT U-JOINTS

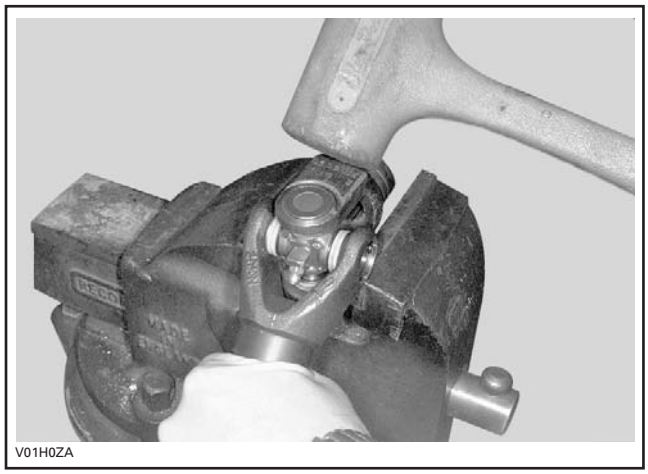
Propeller Shaft U-Joint Removal

Remove internal snap ring from bearing caps.



1. Snap ring

Support inner yoke in vice and drive other yoke down with a soft hammer.



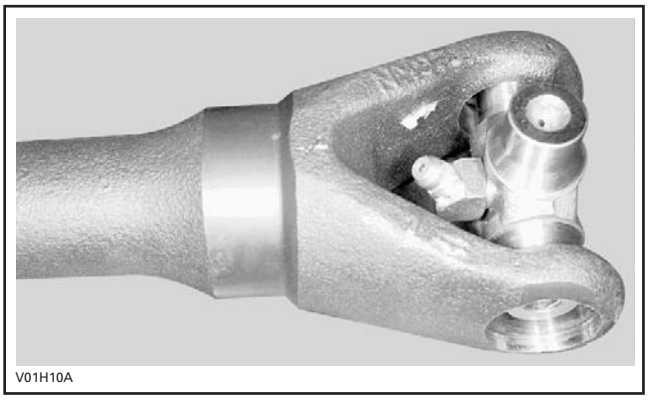
Support U-joint in vice and drive inner yoke down to remove remaining bearing caps.

Remove U-joint cross.

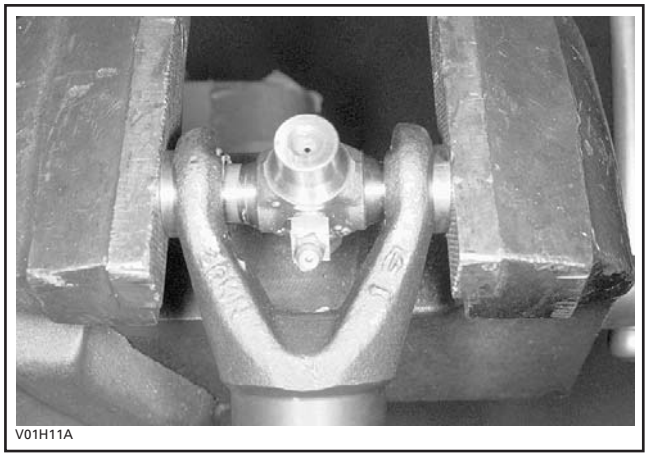
Propeller Shaft U-Joint Installation

Install new U-joint in inner yoke.

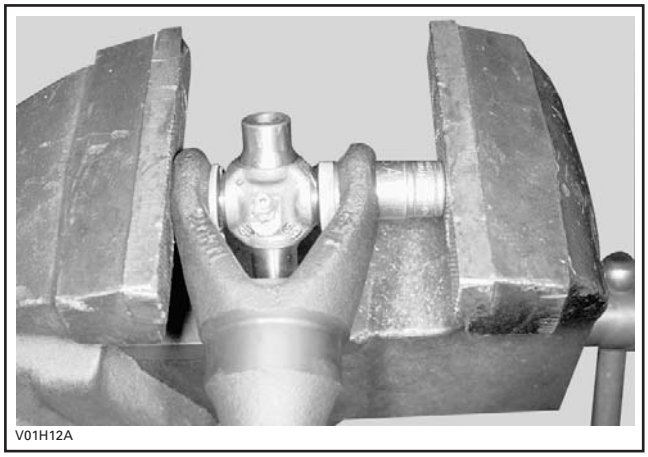
NOTE: Position propeller shaft U-joint as shown for proper grease fitting location.



Install bearing caps. Use a vise to insert bearing caps.



Using a suitable pusher, fully seat bearing cap on one side.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Install snap ring.

Grease U-joints. Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.

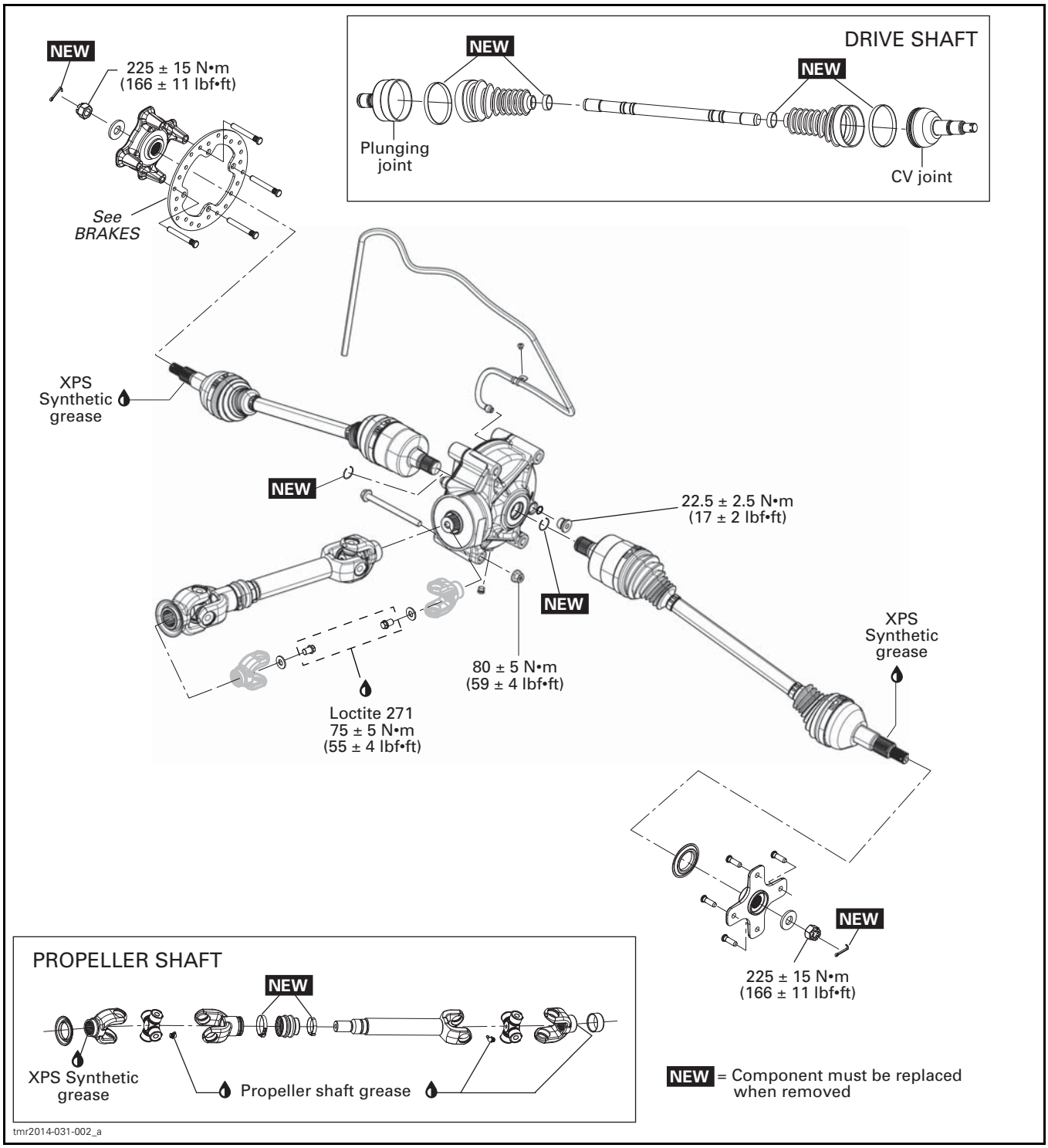
REAR DRIVE

SERVICE TOOLS

Description	Part Number	Page
BACKLASH MEASUREMENT TOOL	529 035 665	8
CV BOOT CLAMP PLIER	529 036 120	5
CV JOINT EXTRACTOR	529 036 005	5
PINION NUT SOCKET	529 036 274	10

SERVICE PRODUCTS

Description	Part Number	Page
LOCTITE 271 (RED)	293 800 005	6
LOCTITE 277	293 800 073	11
PROPELLER SHAFT GREASE	293 550 063	6–7
XPS SYNTHETIC GREASE	293 550 010	4, 6


NEW
225 ± 15 N•m
(166 ± 11 lbf•ft)
See
BRAKES
DRIVE SHAFT
NEW
NEW
Plunging
joint
CV joint
XPS
Synthetic
grease
NEW
22.5 ± 2.5 N•m
(17 ± 2 lbf•ft)
NEW
80 ± 5 N•m
(59 ± 4 lbf•ft)
Loctite 271
75 ± 5 N•m
(55 ± 4 lbf•ft)
XPS
Synthetic
grease
NEW
225 ± 15 N•m
(166 ± 11 lbf•ft)
PROPELLER SHAFT
NEW
XPS Synthetic
grease
Propeller shaft grease
NEW = Component must be replaced
when removed
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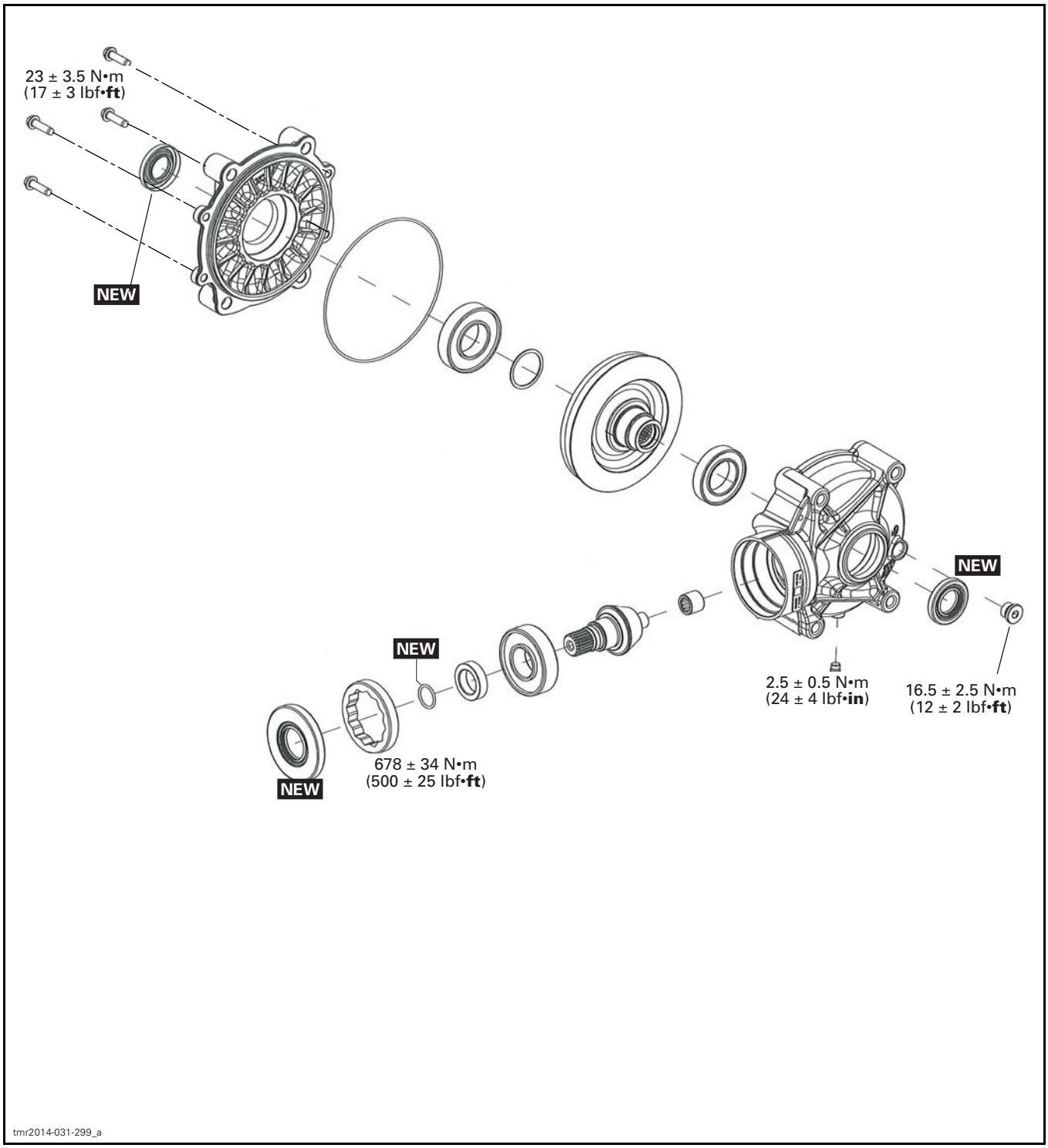
REAR DRIVE ASSEMBLY



PROCEDURES

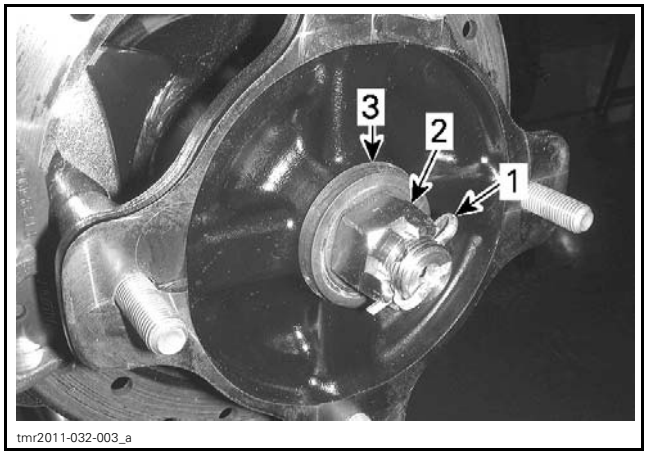
WHEEL HUB

Wheel Hub Removal

Lift and support vehicle. Refer to *INTRODUCTION* section for proper procedure.

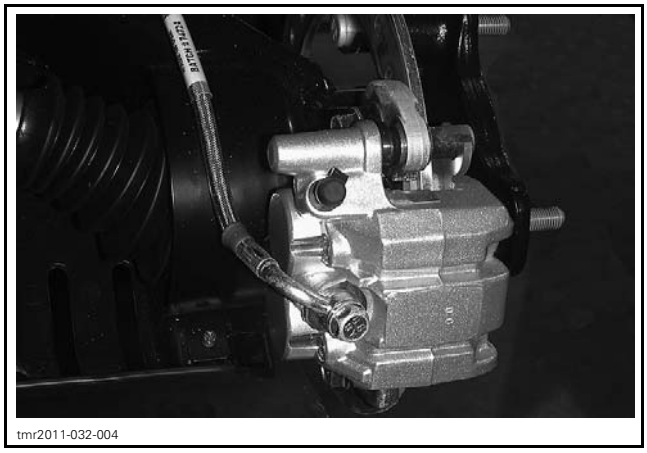
Remove the wheel.

Remove the following parts:
– Cotter pin
– Wheel hub nut
– Belleville washer.



1. Cotter pin
2. Wheel hub nut
3. Belleville washer

NOTE: On RH side, remove also the brake caliper.



Remove wheel hub.

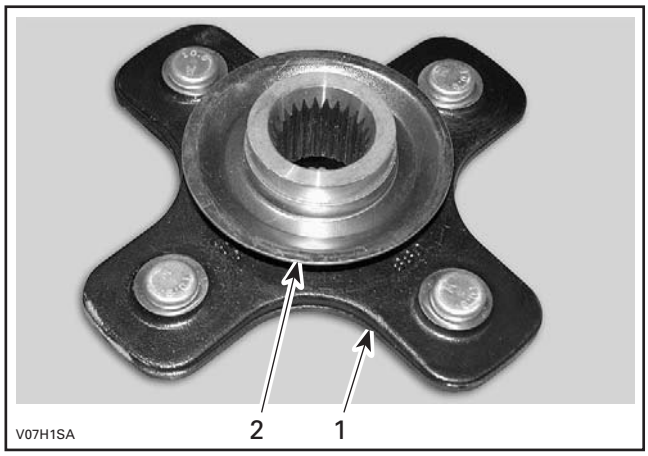
Wheel Hub Inspection

Check wheel hub for cracks or other damages.

Check inner splines for wear or other damages.

If any damage is detected on wheel hub, replace it with a new one.

Check wear ring. If it is loose on hub or deformed, replace the wear ring.



TYPICAL – LH WHEEL HUB SHOWN
1. Wheel hub
2. Wear ring

Wheel Hub Installation

The installation is the reverse of removal procedure. Pay attention to the following.

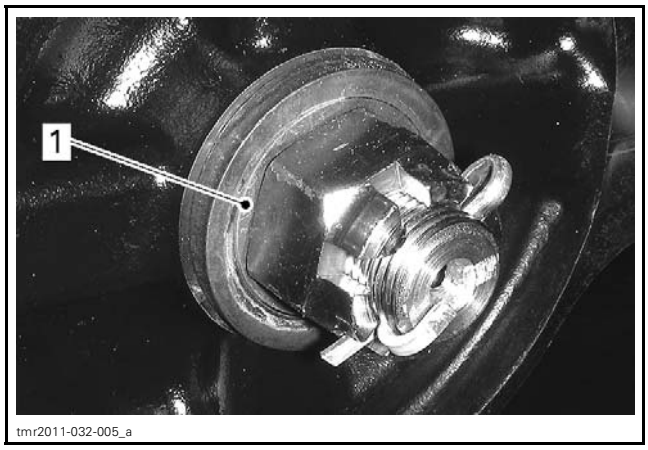
Apply XPS SYNTHETIC GREASE (P/N 293 550 010) on drive shaft splines.

Install Belleville washer with its domed side outwards.

PART	TORQUE
Wheel hub nut	225 N•m ± 15 N•m (166 lbf•ft ± 11 lbf•ft)

NOTE: Tighten further castellated nut if required to align grooves with drive shaft hole.

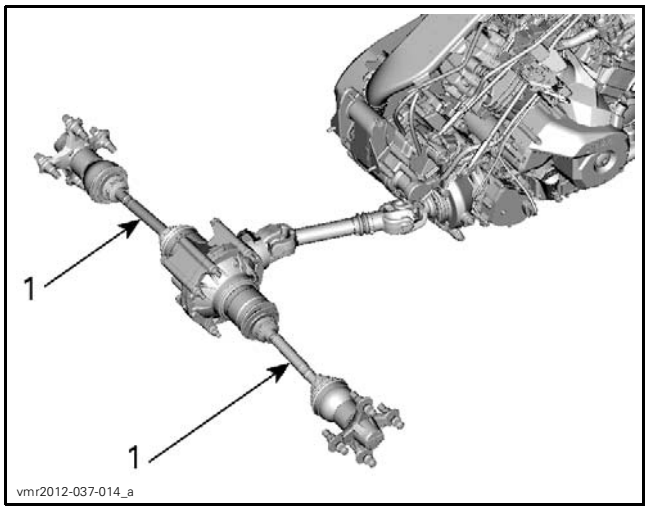
Install a NEW cotter pin.



1. Domed side here

DRIVE SHAFT

Drive Shaft Removal



TYPICAL
1. Drive shafts

Lift and support vehicle. Refer to *INTRODUCTION* section for proper procedure.

Remove the wheel hub. See procedure in this subsection.

Remove trailing arm. Refer to *REAR SUSPENSION*.

Strongly pull drive shaft out of final drive.

Drive Shaft Inspection

Inspect the condition of boots. If there is any damage or evidence of leaking lubricant, replace them. Refer to *DRIVE SHAFT BOOT*.

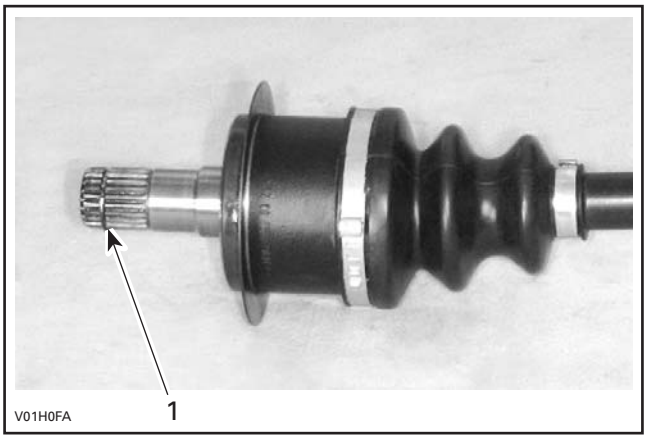
Check shaft splines. Replace drive shaft if necessary.

Check dust shield on drive shaft end. Replace if necessary.

Drive Shaft Installation

The installation is the reverse of the removal procedure. However, pay attention to the following.

Install a NEW stop ring.



1. Stop ring

After drive shaft insertion in rear final drive, validate if properly locked.

DRIVE SHAFT BOOT

Drive Shaft Boot Removal

Remove the drive shaft from vehicle. See procedure in this subsection.

Remove drive shaft boot clamps using the following tools:

TOOL	
CV BOOT CLAMP PLIER (P/N 529 036 120)	

Dislodge the large boot end.

Separate the joint from the shaft. Two procedures can be done.

Without the Special Tool

Clamp joint housing in a vise.

Align shaft with joint.

Pull hard on shaft to remove from joint.

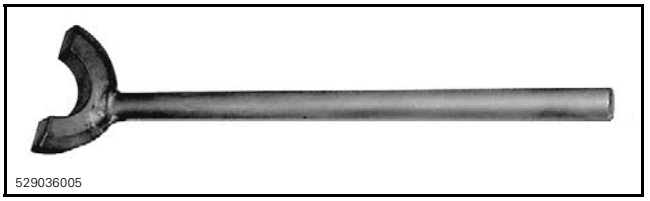
Remove boot from drive shaft.

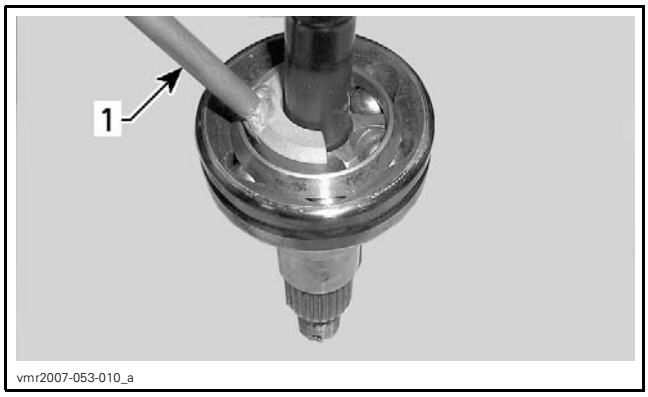
Remove and discard the circlip. A new one is included in the boot kit.

With the Special Tool

Place drive shaft in vice with the joint downward.

Install the CV JOINT EXTRACTOR (P/N 529 036 005) on bearing.





TYPICAL — CV JOINT SHOWN
1. Joint extractor tool

With an hammer, hit on the tool to separate joint from shaft.

When joint and shaft are separated, remove boot from drive shaft.

Remove and discard the circlip. A new one is included in the boot kit.

Remove drive shaft boot.

Drive Shaft Boot Installation

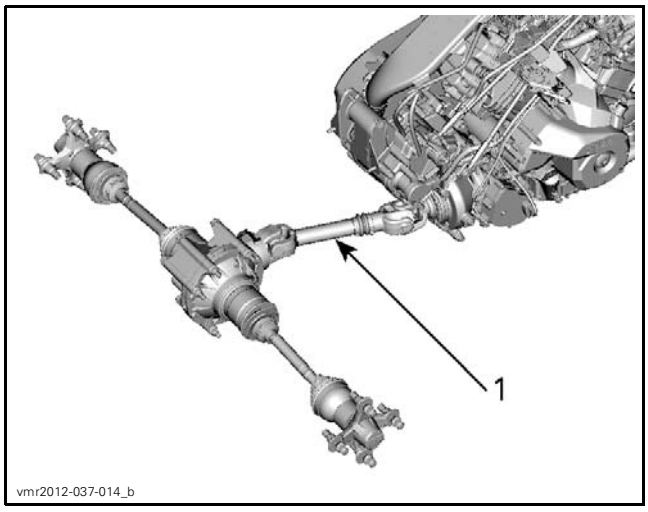
For installation, reverse the removal procedure. Pay attention to the following.

Pack bearing area with grease (included with the new boot kit).

NOTE: Do not use any other grease.

PROPELLER SHAFT

Propeller Shaft Removal



TYPICAL
1. Propeller shaft

1. Remove the fuel tank. Refer to *FUEL TANK* subsection.
2. Remove propeller shaft screw from gearbox output shaft.
3. Lift and support vehicle. Refer to *INTRODUCTION* section for proper procedure.
4. Remove propeller shaft screw from rear final drive yoke.
5. Remove rear final drive bolts. Refer to *REAR FINAL DRIVE* in this subsection.
6. Move the rear final drive rearward to dislodge the propeller shaft.
7. Dislodge the propeller shaft from the engine.
8. Remove the propeller shaft.

Propeller Shaft Inspection

Inspect if propeller shaft is not bent or twisted.

Check propeller shaft splines for wear or damage.

Check if propeller shaft bellows is pierced or brittle.

Propeller Shaft Installation

Installation is essentially the reverse of removal procedure. Pay attention to the following details.

Engine side: apply XPS SYNTHETIC GREASE (P/N 293 550 010) to splines.

Drive side: apply PROPELLER SHAFT GREASE (P/N 293 550 063) to splines.

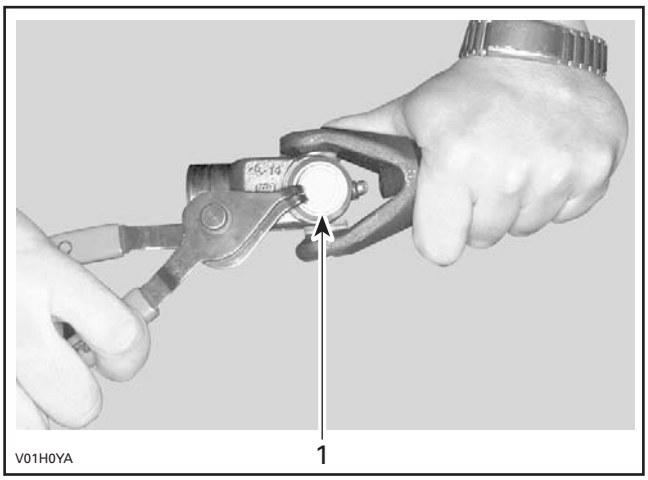
If new bolts are used, scotch grip is already applied to threads. When re-using bolts, apply LOCTITE 271 (RED) (P/N 293 800 005).

PARTS	TORQUE
Propeller shaft screw (final drive side)	75 N•m ± 5 N•m (55 lbf•ft ± 4 lbf•ft)
Propeller shaft screw (engine side)	75 N•m ± 5 N•m (55 lbf•ft ± 4 lbf•ft)

PROPELLER SHAFT U-JOINTS

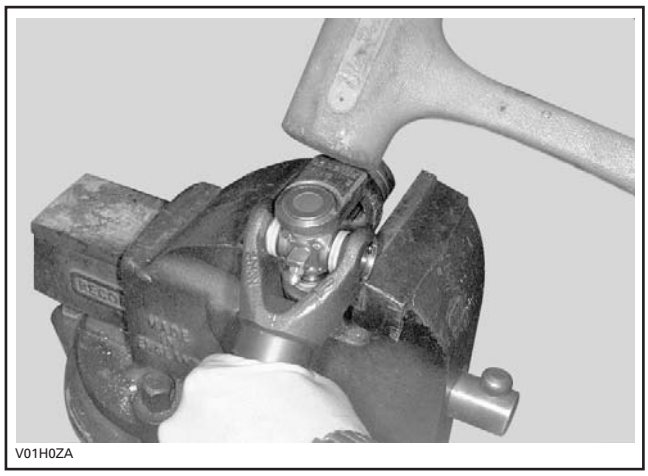
Propeller Shaft U-Joint Removal

Remove internal snap ring from bearing caps.



1. Snap ring

Support inner yoke in vice and drive other yoke down with a soft hammer.



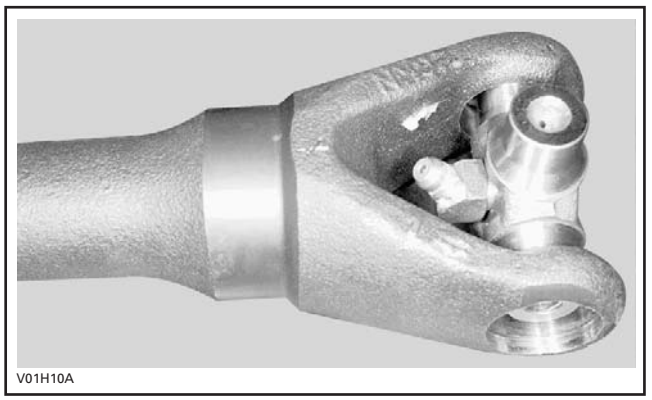
Support U-joint in vice and drive inner yoke down to remove remaining bearing caps.

Remove U-joint cross.

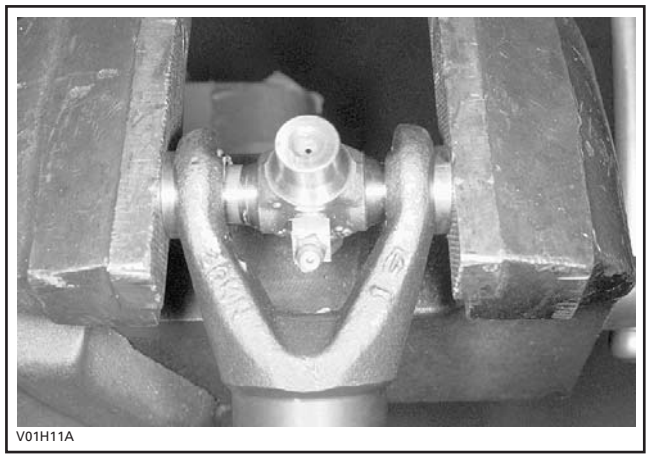
Propeller Shaft U-Joint Installation

Install new U-joint in inner yoke.

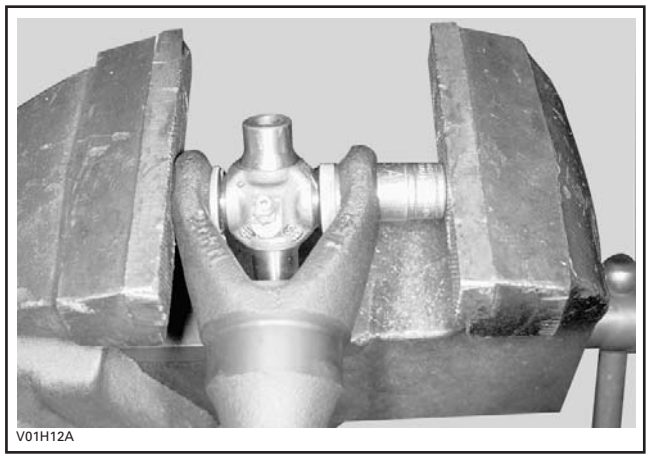
NOTE: Position propeller shaft U-joint as shown for proper grease fitting location.



Install bearing caps. Use a vise to push bearing caps.



Using a suitable pusher, fully seat bearing cap on one side.



Install snap ring.

Complete installation for the other bearing caps.

Grease U-joint. PROPELLER SHAFT GREASE (P/N 293 550 063).

REAR FINAL DRIVE

Rear Final Drive Removal

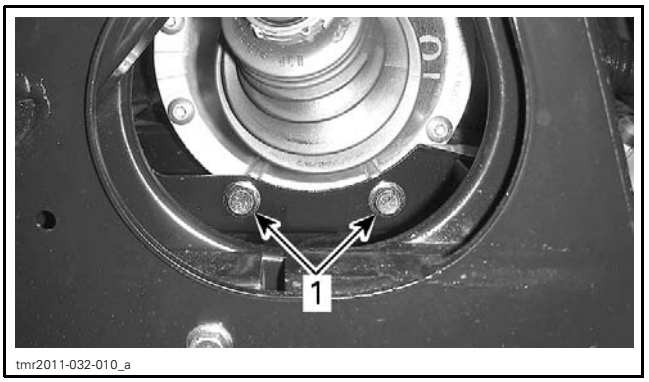
Drain oil. Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.

Remove drive shafts. See procedure in this subsection.

Remove the rear skid plate.

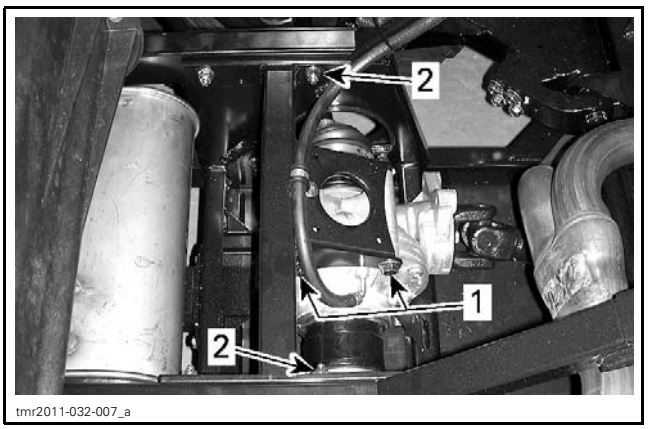
Remove the propeller shaft screw from the rear final drive yoke.

Remove final drive lower bolts.



1. Lower final drive bolts

Remove final drive upper bolts and the front bolts of the final drive support.



1. Upper final drive bolts
2. Final drive support front bolts

Unplug the vent hose from final drive.

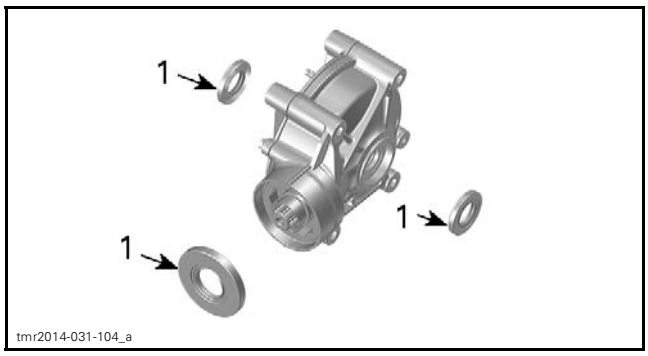
Loosen rear bolts of the final drive support and tilt the support rearward to make room.

Remove the final drive.

Rear Final Drive Inspection (Assembled)

Turn rear final drive gear with a finger; it should turn smoothly. Replace if necessary.

Check if oil seals are brittle, hard or damaged. Replace if necessary.



FINAL DRIVE
1. Oil seals

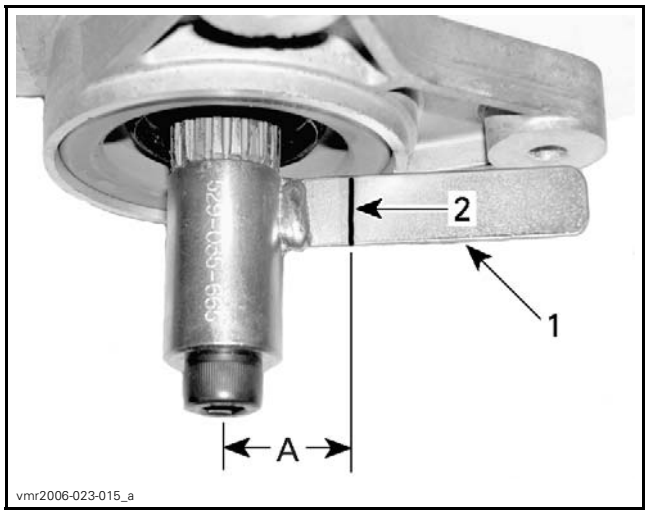
Backlash Inspection

Using a dial indicator and the BACKLASH MEASUREMENT TOOL (P/N 529 035 665), measure the backlash.

Place the backlash measurement tool at the end of pinion gear.

Tighten a M10 X 1.25 bolt so that tool does not move on pinion.

From center of bolt, measure 23 mm (.9 in) and scribe a mark on the tab.

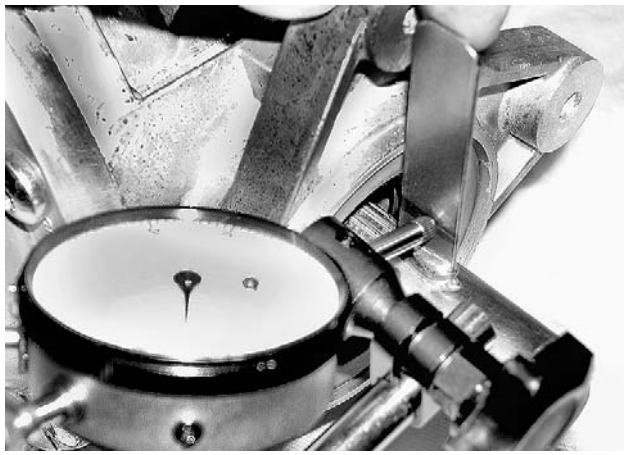


1. Tab of backlash measurement tool
2. Mark on tab
A. 23 mm (.9 in)

Position the dial indicator tip against the tab at a 90° angle and right on the previously scribed mark.

NOTICE **During backlash readings, the ring gear should be pushed out of mesh (into cover) and the pinion shall be pushed out of mesh (towards nut) to remove any endplay.**

Gently, move the tab back and forth. Note the result.


vmr2006-023-016

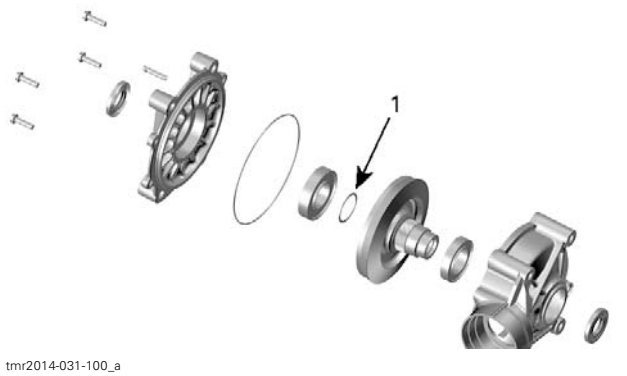
Rotate pinion gear 1/2 turn and check backlash again. Note the result.

Rotate pinion gear 1 turn and check backlash again.

BACKLASH SPECIFICATION
0.2035 mm ± 0.1015 mm (.008 in ± .004 in)

If backlash is out of specification, split final drive housing and adjust shim thickness as per following guideline.

BACKLASH ADJUSTMENT GUIDELINE	
BACKLASH MEASUREMENT	WHAT TO DO
Below 0.102 mm (.004 in)	Remove shim(s) and recheck backlash
Above 0.305 mm (.012 in)	Add shim(s) and recheck backlash



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1. Backlash shim

Verify that there is no "tight mesh" conditions as the ring gear rotates through 360 degrees of travel.

Preload Inspection

Screw the propeller shaft adaptor bolt in pinion gear.

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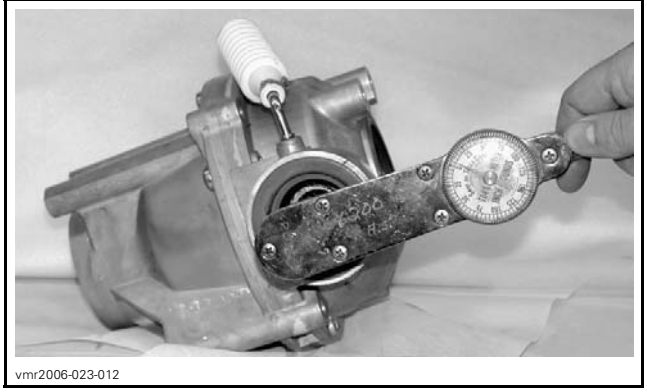
TYPICAL — FRONT DIFFERENTIAL SHOWN

Using a needle torque wrench, measure the drag torque.


vmr2006-023-012

TYPICAL — FRONT DIFFERENTIAL SHOWN

PRELOAD SPECIFICATION
0 N•m - 1.5 N•m (0 lbf•**in** - 13 lbf•**in**)

There is no preload adjustment on this differential.

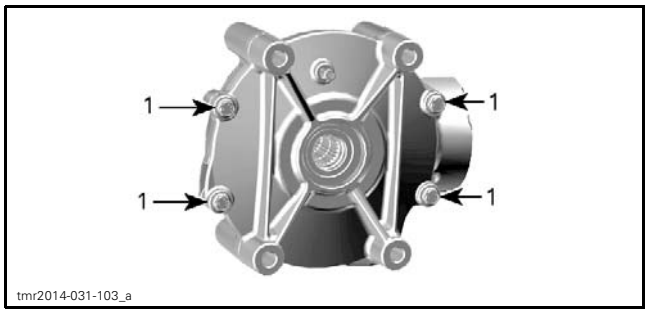
If the preload is out of specification:

1. Check if all bearings are in their proper places and well inserted.
2. Check if all bearings can rotate easily on 360 degrees of travel.

Rear Final Drive Disassembly

Ring Gear

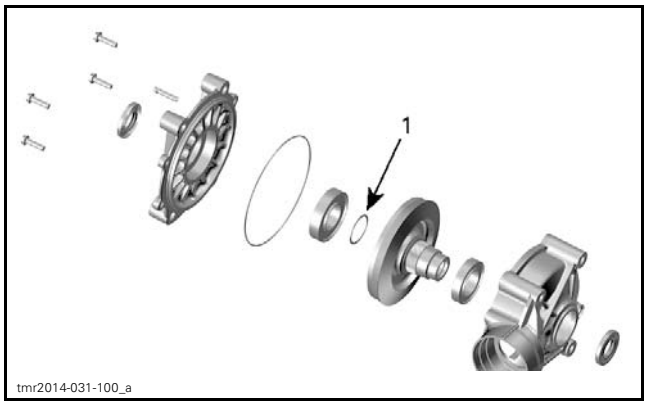
Unscrew the final drive housing screws.



1. Housing screws

Split final drive housings.

NOTE: Be careful to keep track of backlash shim on ring gear.

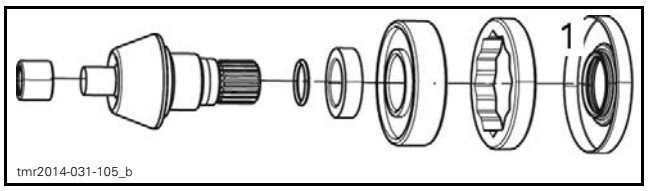


1. Backlash shim

Extract ring gear out of half housing.

Pinion Gear

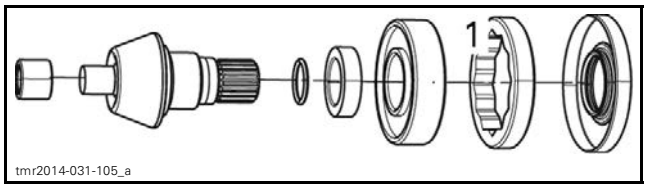
Remove and discard pinion oil seal.



1. Pinion seal

Unscrew the pinion nut. Use the PINION NUT SOCKET (P/N 529 036 274).

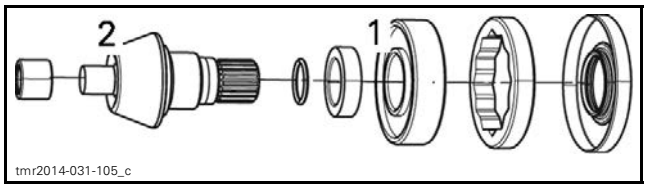
NOTE: The pinion nut is LH threaded. Unscrew by turning clockwise.



1. Pinion nut

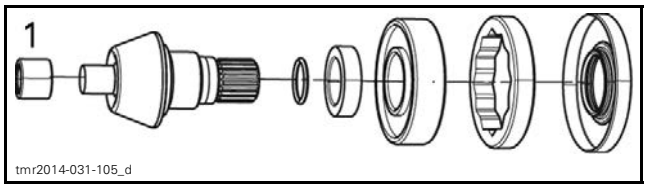
Remove the pinion bearing at the same time as the pinion gear. Discard bearing.

Use a press and bearing clamp to separate pinion and bearing.



1. Pinion bearing
2. Pinion gear

Remove and discard the needle bearing.



1. Needle bearing

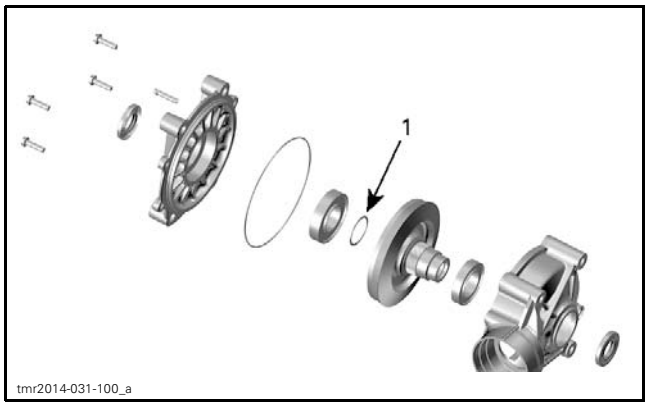
Rear Final Drive Assembly

Adjustment is required when any of the following part is changed.

– Pinion gear
– Ring gear
– Housing.

As a preliminary setup, install shims according to the following table.

RECOMMENDED SHIM THICKNESS	
BACKLASH	1.27 mm (.05 in) (as a preliminary adjustment)



1. Backlash shim

Prior to finalizing assembly, proceed in this order:
- Temporarily assemble final drive using recommended torques.
- Do not apply thread locker product.
- Do not install a new pinion nut.
- Check backlash.
- Check preload.

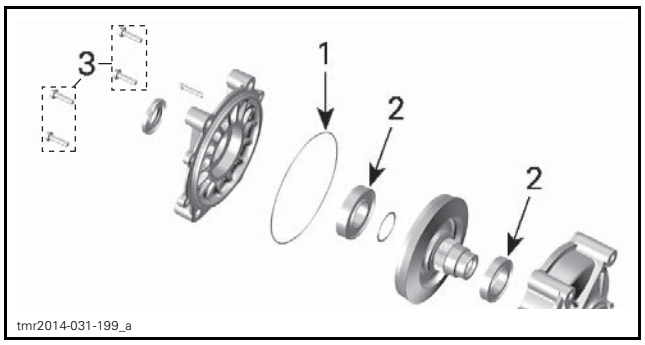
Ring Gear

To assemble, reverse the removal procedure. Pay attention to the following.

Check condition of seal **no. 1**. Replace if damaged.

Install new bearings . **no. 2**

Tighten final drive housing screws **no. 3**.



PART	TORQUE
Final drive housing screws	23.5 N•m ± 3.5 N•m (17 lbf•ft ± 3 lbf•ft)

Pinion Gear

To install, reverse the removal procedure. Pay attention to the following.

Replace the O-ring **no. 1**.

Install the ball bearing **no. 2**.

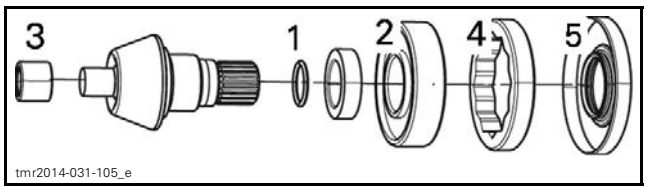
Install a new needle bearing **no. 3**.

NOTE: If a new pinion nut is used, a self-locking product is already applied, do not use Loctite 277.

Apply LOCTITE 277 (P/N 293 800 073) to pinion nut **no. 4**.

Install and tighten the pinion nut.

Lubricate oil seal **no. 5**.



PART	TORQUE
Pinion nut (LH THREADS)	678 N•m ± 34 N•m (500 lbf•ft ± 25 lbf•ft)

Rear Final Drive Installation

The installation is the reverse of the removal procedure.

PART	TORQUE
Final drive retaining nuts	80 N•m ± 5 N•m (59 lbf•ft ± 4 lbf•ft)

Refill the final drive with recommended oil. Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.

WHEELS AND TIRES

SERVICE PRODUCTS

Description	Part Number	Page
LOCTITE 767 (ANTISEIZE LUBRICANT)	293 800 070	346

PROCEDURES

TIRES

⚠ WARNING

Do not rotate tires. The front and rear tires have a different size. Respect direction of rotation when applicable.

Tire Pressure

⚠ WARNING

Tire pressure greatly affects vehicle handling and stability. Insufficient pressure may cause tire to deflate and rotate on wheel. Excessive pressure may burst the tire. Always follow recommended pressure.

Check pressure when tires are **cold** before using the vehicle. Tire pressure changes with temperature and altitude. Recheck pressure if one of these conditions has changed.

TIRE PRESSURE	FRONT	REAR
MIN.	69 kPa (10 PSI)	83 kPa (12 PSI)
MAX. (USE WHEN TOTAL LOAD IS GREATER THAN 180 KG (400 LB))	83 kPa (12 PSI)	152 kPa (22 PSI)

Tire Inspection

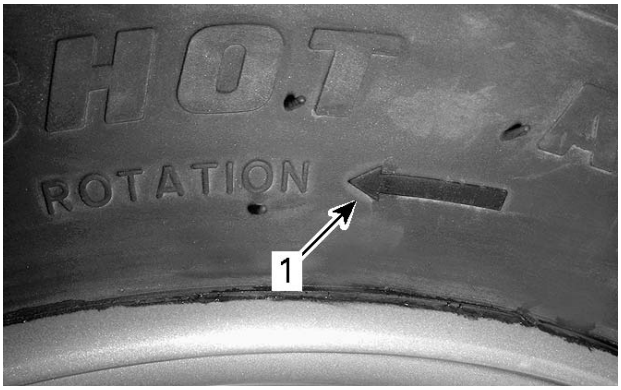
Check tire for presence of slits, bulges, wear or other damage. Replace if necessary.

Tire Replacement

Use an automotive tire changer to replace tires.

⚠ WARNING

- Replace tires only with the same type and size as original tires.
- For unidirectional tread pattern, ensure that the tires are installed in the correct direction of rotation.



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TYPICAL
1. Direction of rotation

Tire Mounting on Beadlock Wheels

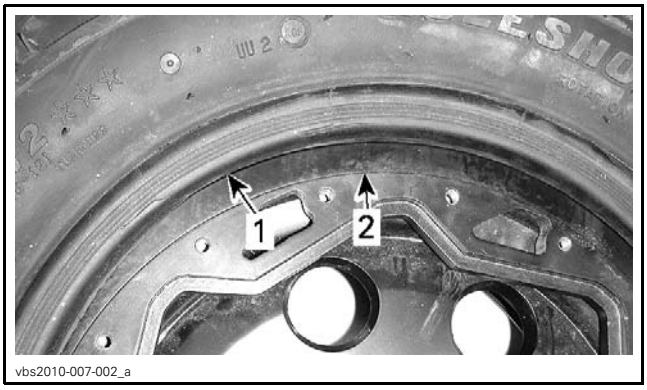
X Models

NOTE: Tires should be mounted, by an experienced person, in accordance to good tire mounting practices using acceptable tire mounting equipment designed for the tire industry.

1. Mount the tire on wheel.
   1.1 On the opposite side of beadlock, apply the tire mounting lube on inner bead of tire and wheel to ensure proper seating when inflating.
   1.2 Mount the inner bead over the wheel.

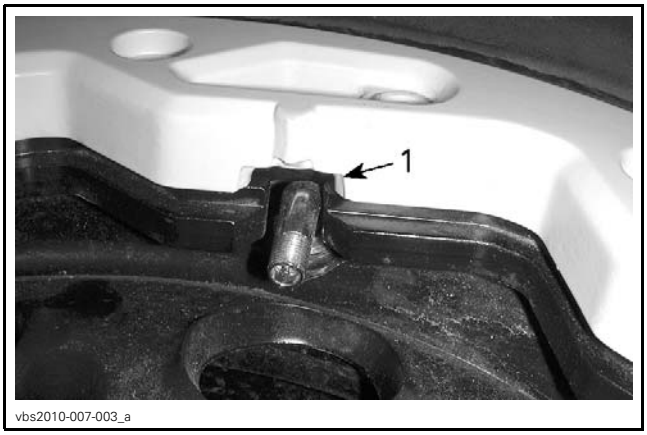
   NOTICE Mount tire from beadlock side only.

   1.3 Seat the tire outer bead in the shoulder of the beadlock inner ring and center the tire.



1. Tire outer bead
2. Beadlock inner ring shoulder

2. Place the beadlock clamp ring on the tire. Align the valve opening with valve.



1. Clamp ring valve opening

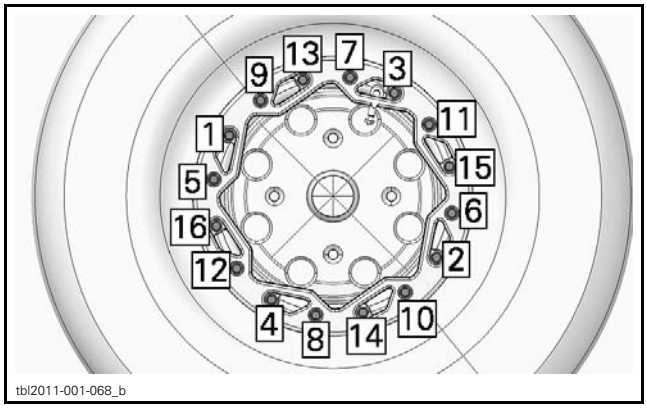
3. Lubricate all beadlock screws with LOCTITE 767 (ANTISEIZE LUBRICANT) (P/N 293 800 070) or an equivalent product to prevent screw sticking.
4. Install all beadlock screws. To avoid cross threading, start all screws by hand.

NOTICE **Do not use an impact wrench for installing beadlock screws. The risk of screw breaking or screw stripping is high when using an impact wrench.**

5. Tighten beadlock screws as per following specification and sequence.

NOTE: To ensure even pressure on the beadlock clamp ring, tighten screws **a few turns at a time**.

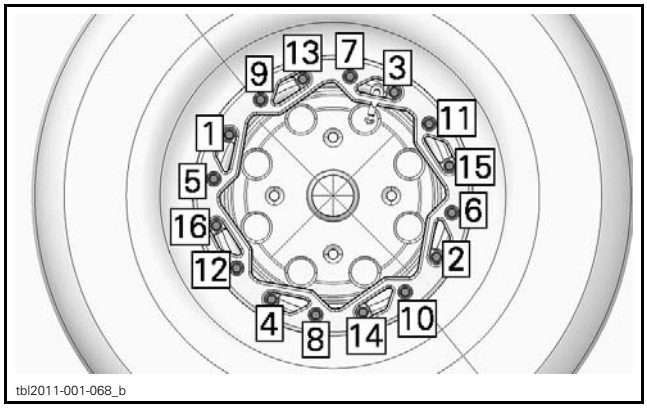
TIGHTENING TORQUE	
Beadlock screws (FIRST TORQUE)	3 N•m ± 1 N•m (27 lbf•**in** ± 9 lbf•**in**)



FIRST AND SECOND TIGHTENING SEQUENCE

6. At this time check if the tire is still centered on wheel. Reposition it if necessary.
7. Tighten beadlock screws as per the **second** torque using the same sequence.

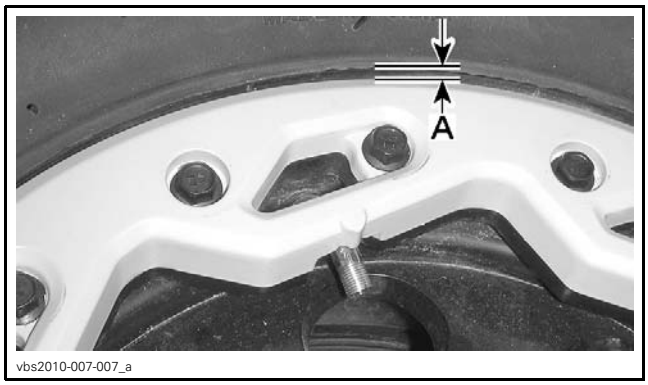
TIGHTENING TORQUE	
Beadlock screws (SECOND TORQUE)	8 N•m ± 1 N•m (71 lbf•**in** ± 9 lbf•**in**)



TIGHTENING SEQUENCE

NOTE: The beadlock clamp ring should be in contact with the beadlock inner ring. The beadlock clamp ring can flex slightly to match the tire bead. IT IS NORMAL.

8. Verify the gap between tire and beadlock clamp ring, it should be practically equal all around the ring.

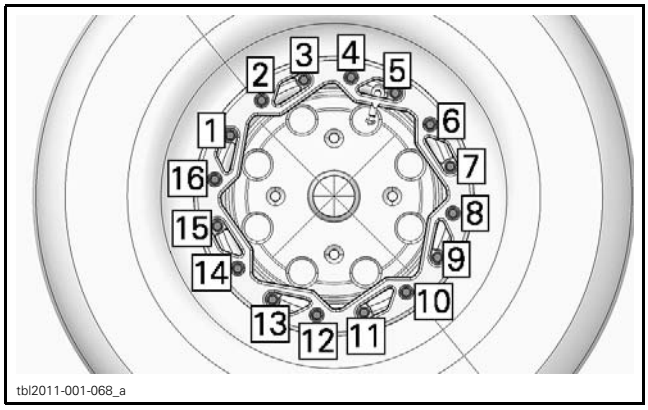


A. Gap equal all around beadlock clamp ring

If the gap is not acceptable:
- Loosen all screws.
- Check tire position on wheel and reposition it if necessary.
- Restart the tightening sequence as detailed.

9. Torque beadlock screws a **final** time as per following specification and sequence.

TIGHTENING TORQUE	
Beadlock screws (FINAL TORQUE)	8 N•m ± 1 N•m (71 lbf•**in** ± 9 lbf•**in**)



FINAL TIGHTENING SEQUENCE

10. Inflate tire to seat the inner bead on wheel. Always use safe practices, such as a tire safety cage.

⚠ WARNING

Never exceed tire recommended maximum pressure for seating beads.

WHEELS

Wheel Removal

Loosen nuts just enough to be able to unscrew them once the vehicle will be off the ground.

Lift and support the vehicle. Refer to *INTRODUCTION* subsection.

Remove nuts, then remove wheel.

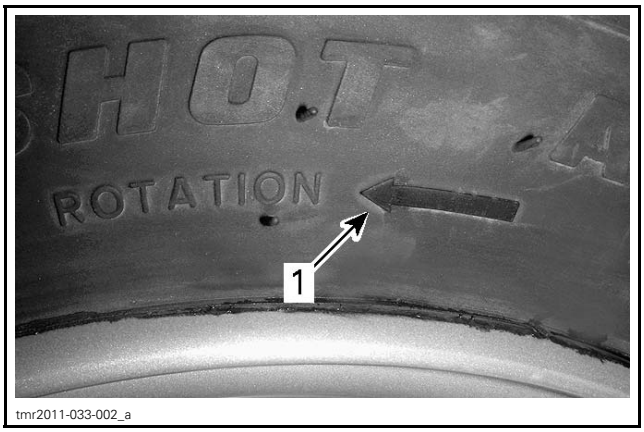
Wheel Inspection

Inspect wheel for wear or damage especially at the mounting holes.

Wheel Installation

At installation, it is recommended to apply anti-seize lubricant on threads.

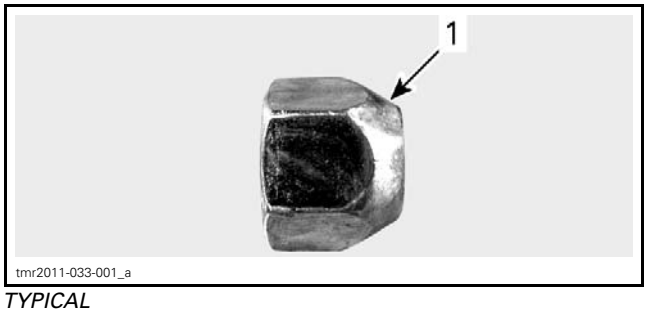
Check if tires are unidirectional.



TYPICAL
1. Direction of rotation

Install in the right direction of rotation.

Install lug nuts with the taper towards the wheel.



TYPICAL
1. Taper (towards the wheel)

Tighten wheel lug nuts to the specified torque using the illustrated sequence.

WHEEL LUG NUTS	
TORQUE	100 N•m ± 10 N•m (74 lbf•ft ± 7 lbf•ft)

TIGHTENING SEQUENCE

NOTICE Always use the recommended wheel nuts for the type of wheel. Using a different nut could cause damages to the rim or studs.

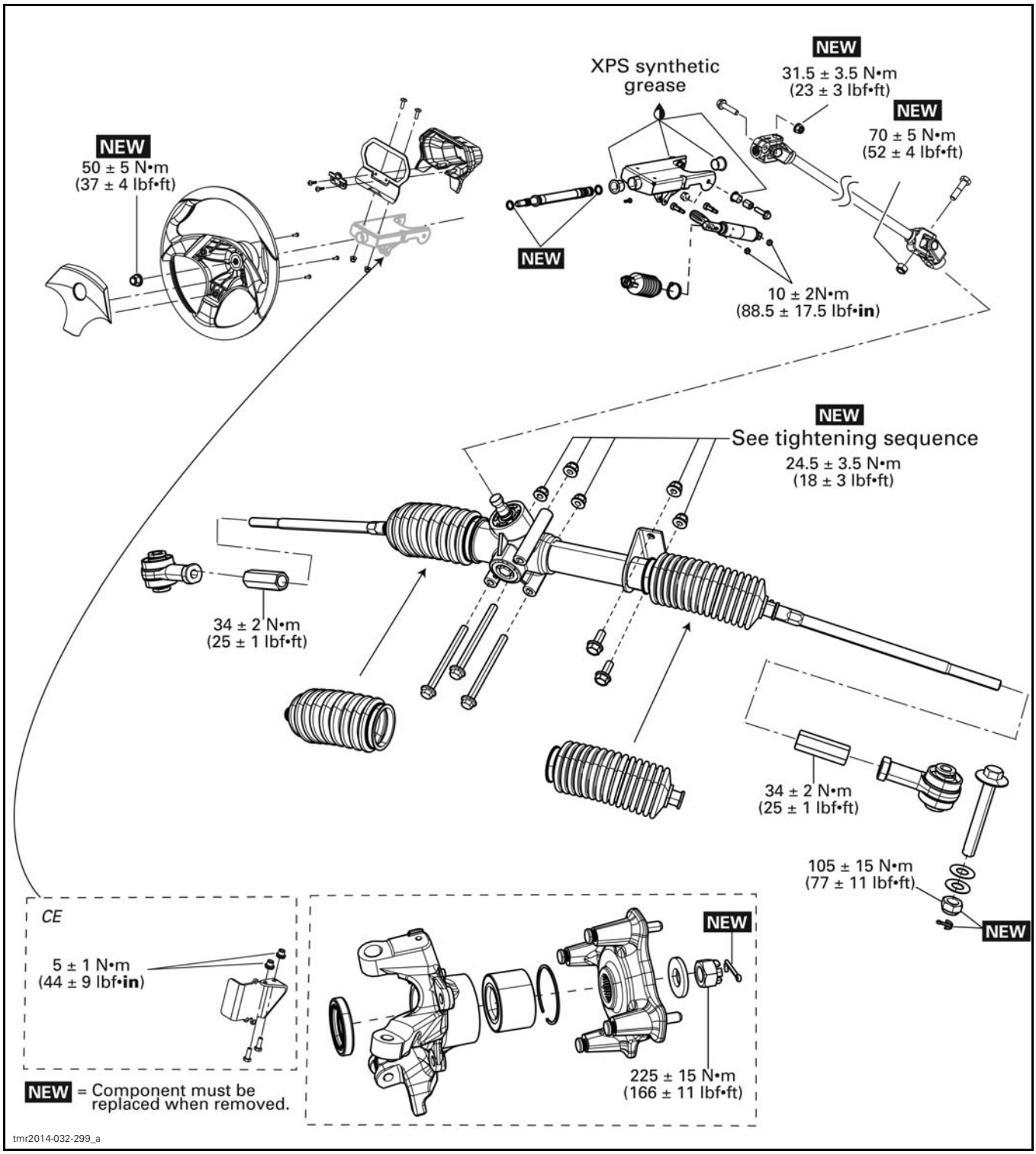
STEERING SYSTEM (WITHOUT DPS)

SERVICE TOOLS

Description	Part Number	Page
STEERING ALIGNMENT TOOL	529 036 059	3

SERVICE PRODUCTS

Description	Part Number	Page
XPS SYNTHETIC GREASE	293 550 010	6


NEW
50 ± 5 N•m
(37 ± 4 lbf•ft)
XPS synthetic grease
NEW
31.5 ± 3.5 N•m
(23 ± 3 lbf•ft)
NEW
70 ± 5 N•m
(52 ± 4 lbf•ft)
NEW
10 ± 2N•m
(88.5 ± 17.5 lbf•in)
NEW
See tightening sequence
24.5 ± 3.5 N•m
(18 ± 3 lbf•ft)
34 ± 2 N•m
(25 ± 1 lbf•ft)
34 ± 2 N•m
(25 ± 1 lbf•ft)
105 ± 15 N•m
(77 ± 11 lbf•ft)
NEW
CE
5 ± 1 N•m
(44 ± 9 lbf•in)
NEW
225 ± 15 N•m
(166 ± 11 lbf•ft)
NEW = Component must be replaced when removed.
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GENERAL

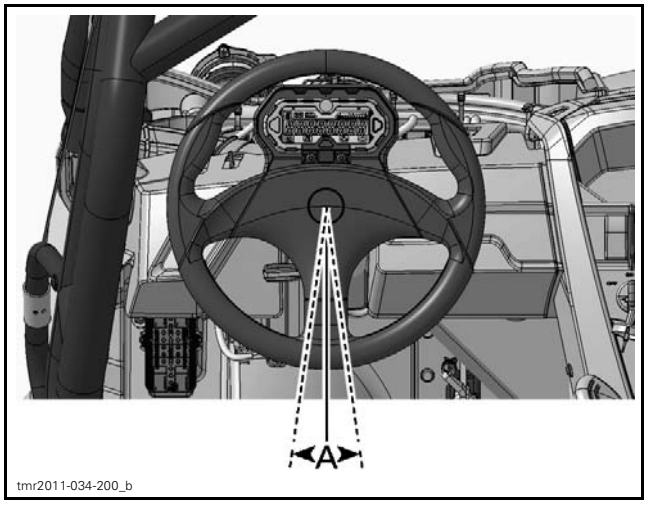
The procedures described below are the same for the RH and LH sides, unless otherwise instructed.

If the vehicle has dynamic power steering (DPS) refer to *STEERING SYSTEM (WITH DPS)* section of this supplement.

ADJUSTMENT

STEERING ALIGNMENT

1. Place vehicle on a level surface.
2. Inflate tires to recommended pressure.
3. Find rack and pinion center to center as follows:
   - 3.1 Calculate the total steering wheel rotations from side to side.
   - 3.2 Position the steering wheel at **half** the total rotations.
4. Check steering wheel position:
   - 4.1 If steering angle is within ± 3°, go to **step 6**.
   - 4.2 If steering angle is outside of ± 3°, go to **step 5**.

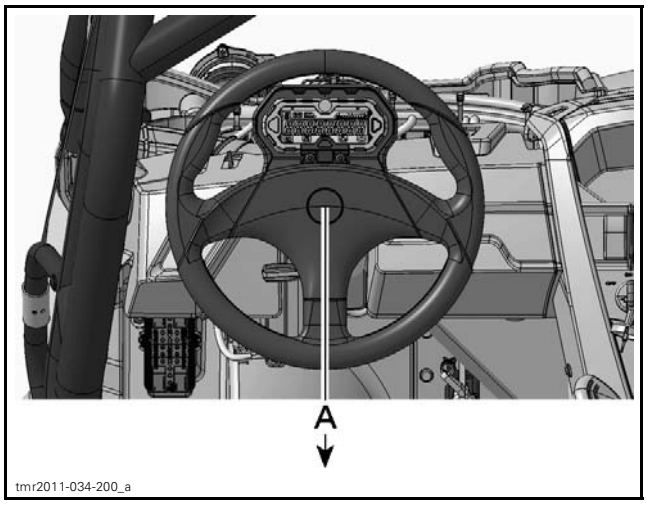


A. Steering wheel angle ± 3°

5. Reposition steering wheel onto steering shaft as follows:

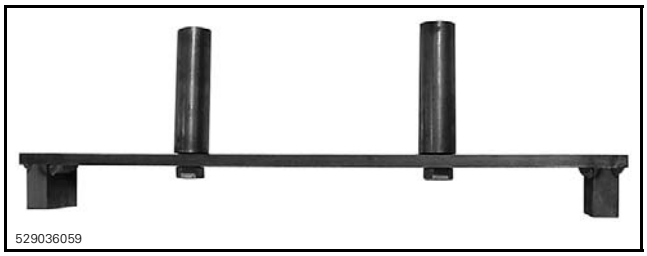
   NOTICE **Make sure rack and pinion does not move during steering wheel repositioning.**

   - 5.1 Remove steering wheel, refer to *STEERING WHEEL REMOVAL*.
   - 5.2 Reinstall steering wheel to the closest centered position (nearest spline).
6. Center steering wheel.

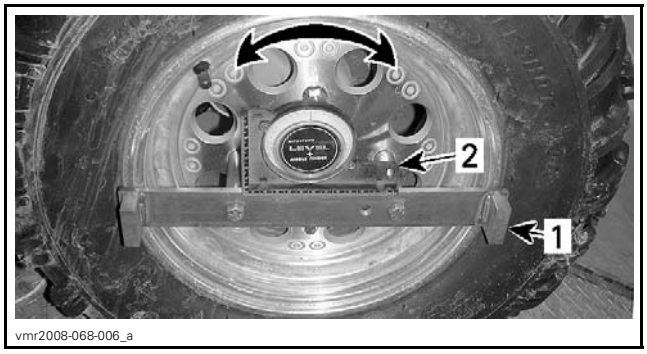


A. Steering wheel centered

7. Remove two wheel lug nuts from a rear wheel.
8. Install STEERING ALIGNMENT TOOL (P/N 529 036 059) using proper spacers.

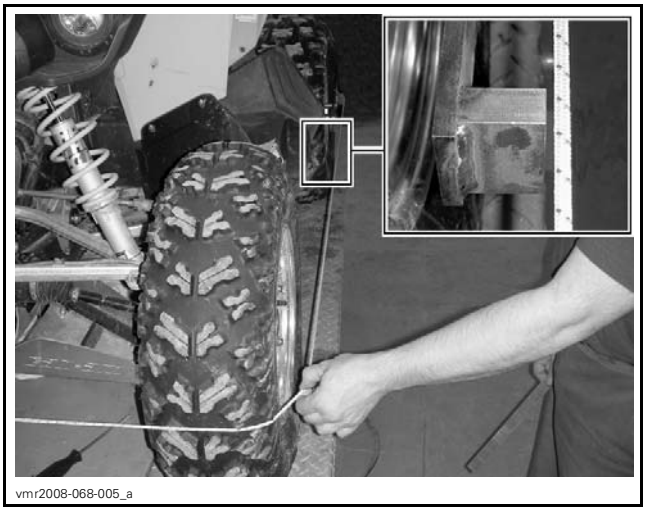


9. Move vehicle to place the tool level with the ground.



REAR WHEEL
1. Steering adjustment tool
2. Angle gauge or level

10. Place a rope around vehicle tires.
11. Using an elastic, link both ends together.
12. Adjust rope at the center of the wheels.
13. From the front of vehicle, near the front of rim, move rope so that it does not touch the first spacer of tool.


vmr2008-068-005_a

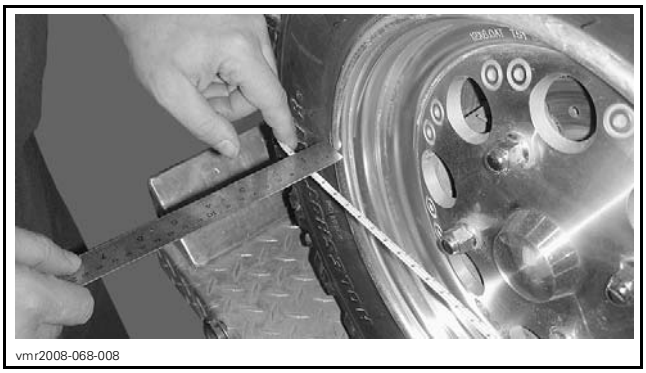
TYPICAL

14. Slowly move rope back until it makes contact with spacer.

vmr2008-068-007

TYPICAL

15. Keep rope in this position.
16. Measure distance of the front wheel between rope and rim as follows:
    - At the front of rim
    - At the rear of rim.


vmr2008-068-008

TYPICAL — AT THE FRONT OF RIM

vmr2008-068-009

TYPICAL — AT THE REAR OF RIM

17. Calculate the difference between the rear and the front measurement.
18. The difference must be as per the following specification:

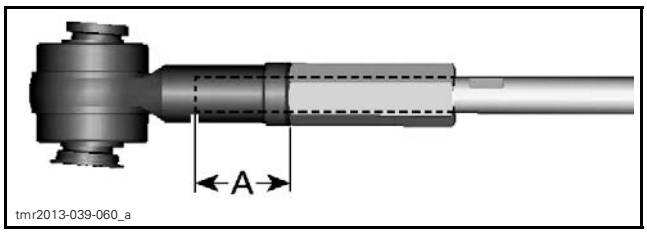
WHEEL TOE
0 mm ± 4 mm (0 in ± .157 in)

19. If the wheel toe measurement is out of specification:

    19.1 Adjust tie-rod end.

⚠ WARNING

The minimum tie-rod end length engagement in the tie rod must be 25 mm (1 in).



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A. Minimum tie-rod end length engagement

    19.2 Tighten tie-rod end locking nut to specification.

TIE-ROD END LOCKING NUT TORQUE
34 N•m ± 2 N•m (25 lbf•ft ± 1 lbf•ft)

20. Repeat procedure for the other wheel.

TROUBLESHOOTING

DIAGNOSTIC TIPS

Turning Radius Unequal

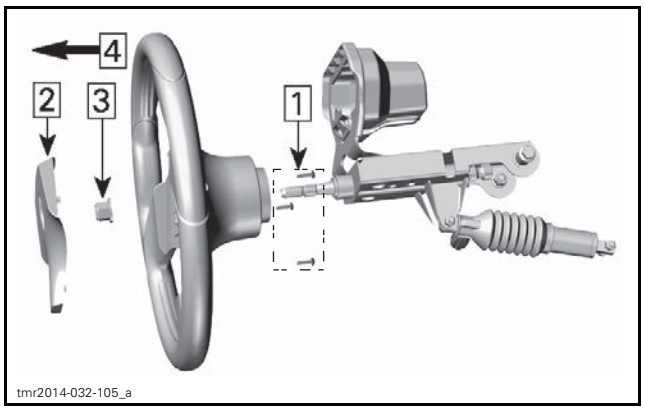
If vehicle turns more on one side than the other, check rack and pinion center to center. Refer to *STEERING ALIGNMENT* in this subsection.

PROCEDURES

STEERING WHEEL

Steering Wheel Removal

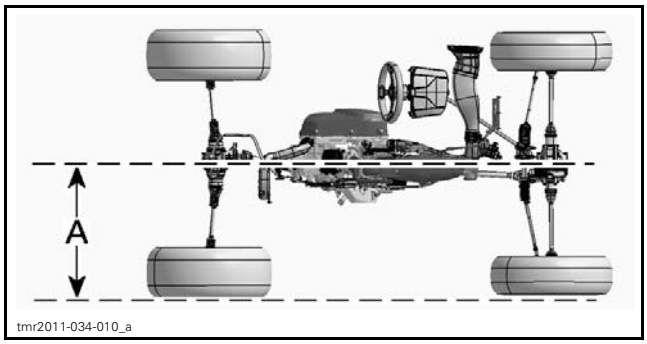
Follow order in illustration below.



Steering Wheel Installation

The installation is the reverse of the removal procedure. However, pay attention to the following.

Prior to installing the steering wheel, place front wheels parallel with longitudinal plane of vehicle.



A. Front wheels parallel

Tighten steering wheel retaining nut to specification.

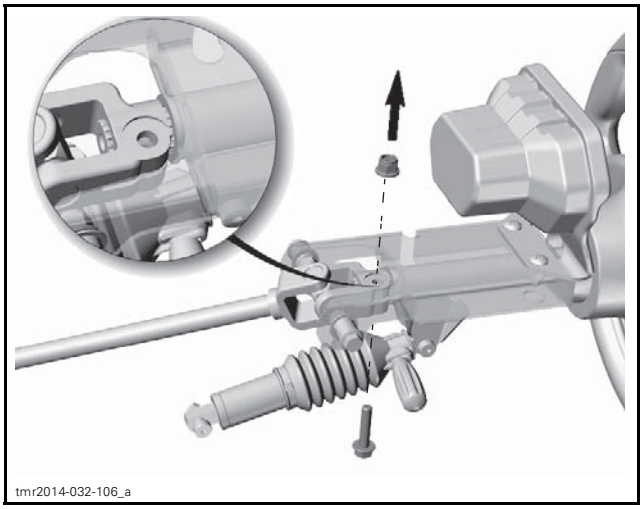
STEERING WHEEL RETAINING NUT TORQUE
50 N•m ± 5 N•m (37 lbf•ft ± 4 lbf•ft)

Check front wheel alignment. Refer to *STEERING ALIGNMENT* in this subsection.

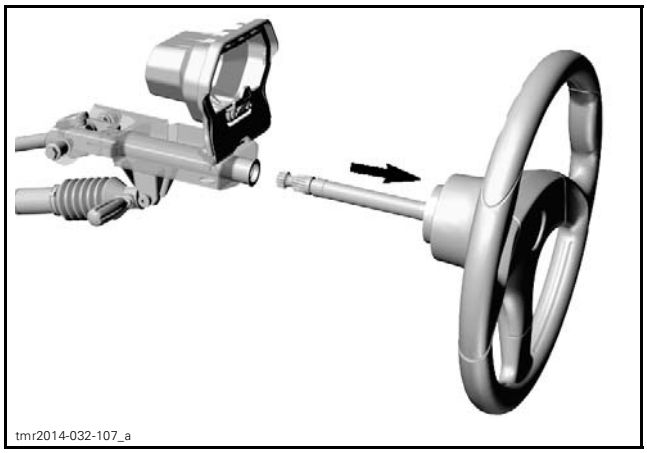
STEERING COLUMN

Steering Column Removal

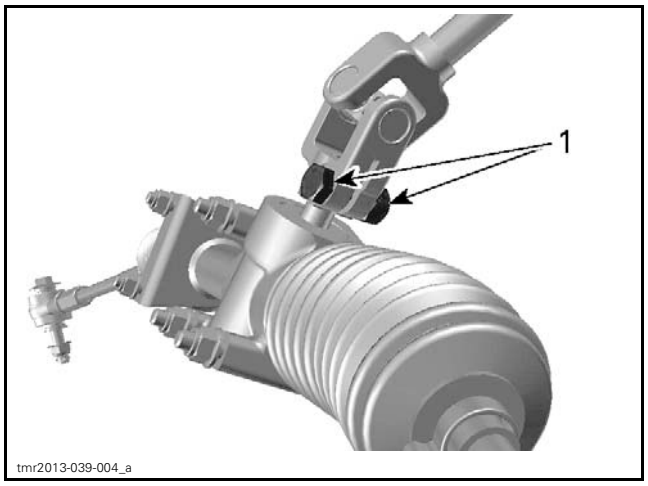
1. Center steering wheel.
2. Remove bolt and nut securing upper universal joint to steering shaft. Discard the nut.



3. Remove steering wheel and steering shaft as an assembly.

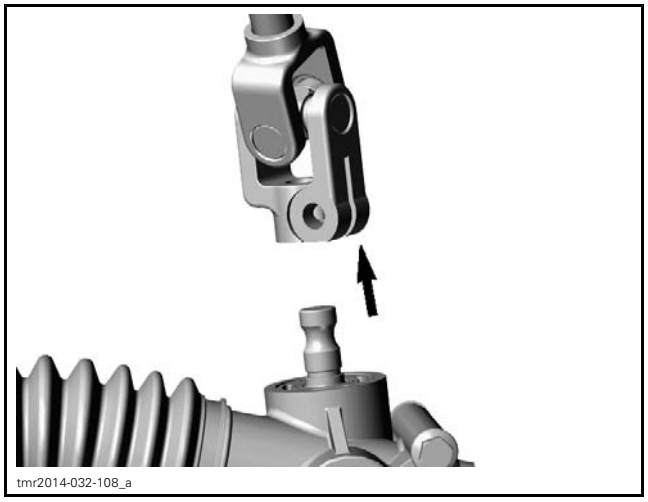


4. Remove bolt and nut securing lower universal joint to rack and pinion. Discard the nut.

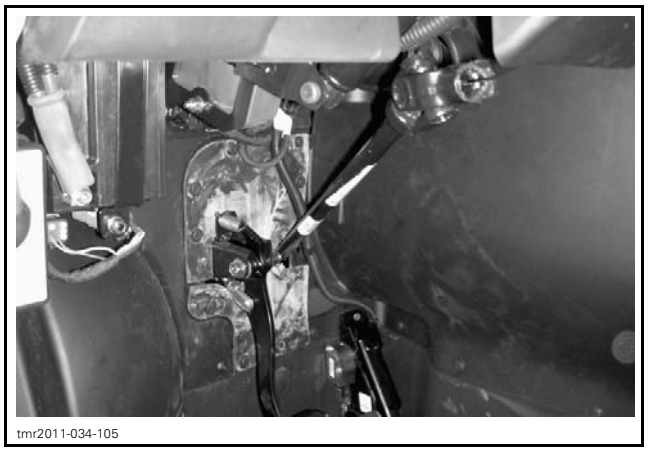


1. Bolt and nut

5. Pull steering column upwards to detach it from rack and pinion.



6. Carefully push steering column downwards to release it from steering support.



7. Remove steering column from vehicle.

Steering Column Inspection

Check steering column for wear, cracks or bending.

Check steering shaft for wear, cracks or bending.

Check if universal joints move freely.

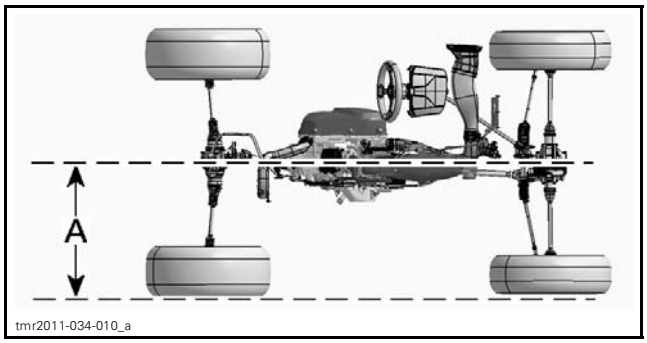
Check if steering shaft O-rings are brittle, hard or otherwise damaged.

Replace if necessary.

Steering Column Installation

The installation is the reverse of the removal procedure. However, pay attention to the following.

Prior to installing the steering column, place front wheels parallel with longitudinal plane of vehicle.

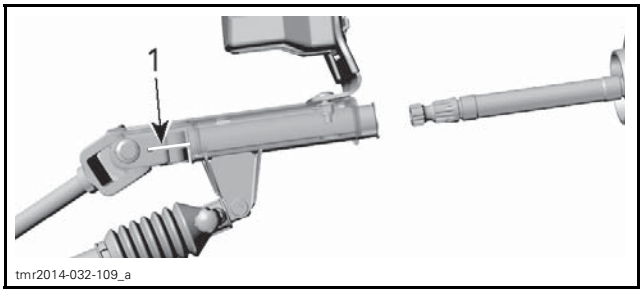


A. Front wheels parallel

Lubricate steering shaft.

STEERING SHAFT LUBRICATION
XPS SYNTHETIC GREASE (P/N 293 550 010)

NOTE: If upper yoke opening is not horizontal when the steering shaft is installed, the steering wheel will appear crooked if the height is adjusted.



1. Horizontal yoke opening

Install steering wheel and steering shaft. Make sure steering wheel is properly centered.

Fully engage the yoke onto pinion shaft.

Tighten steering column U-joints to specification. Use NEW nuts.

UPPER U-JOINT NUT TORQUE
31 N•m ± 3 N•m (23 lbf•ft ± 2 lbf•ft)

LOWER U-JOINT NUT TORQUE
70 N•m ± 5 N•m (52 lbf•ft ± 4 lbf•ft)

Check front wheels alignment. Refer to *STEERING ALIGNMENT* in this subsection.

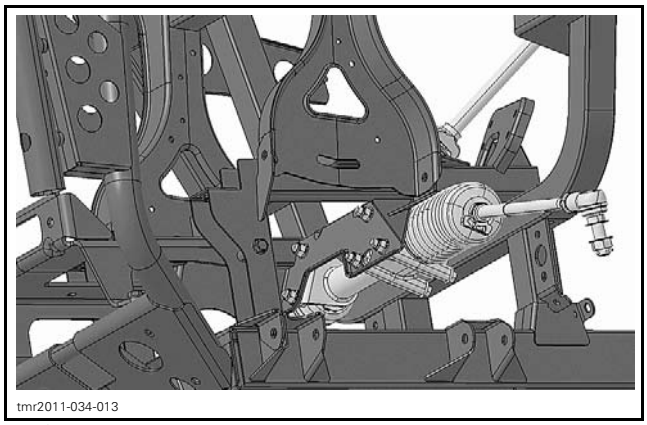
RACK AND PINION

Rack and Pinion Servicing

Rack and pinion is not serviceable except for boots and tie rod ends replacement.

Rack and Pinion Removal

1. Safely lift and support the front of vehicle. Refer to *INTRODUCTION* subsection.
2. Remove both front wheels.
3. Remove steering column. Refer to *STEERING COLUMN REMOVAL* in this subsection.
4. Detach tie-rod ends from knuckles. Refer to *TIE ROD END REPLACEMENT* in this subsection.
5. Remove bolts and nuts securing rack and pinion to frame.



LH SIDE VIEW

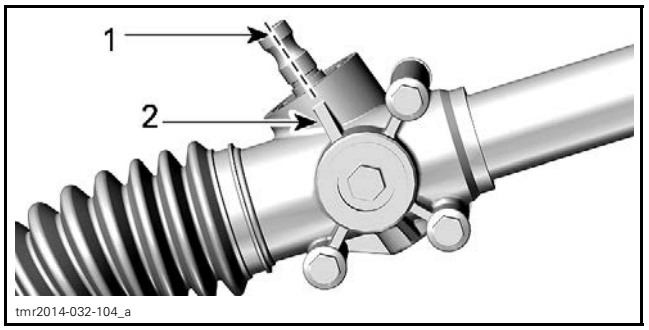
6. From the LH side, remove rack and pinion from vehicle.

Rack and Pinion Installation

The installation is the reverse of the removal procedure. However, pay attention to the following.

Find rack and pinion center as follows:

– Calculate the total pinion shaft rotations from side to side.
– Position the pinion shaft at **half** the total rotations.

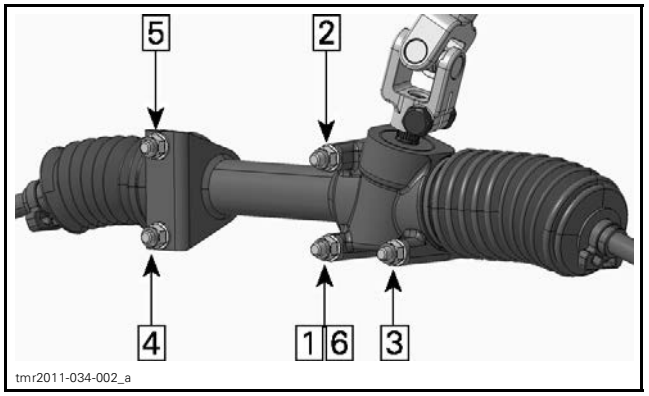


1. Mark center
2. Rack and pinion casing

Loosely install retaining bolts and nuts of rack and pinion.

Torque retaining nuts of rack and pinion according to specification using the following sequence.

RACK AND PINION RETAINING NUTS TORQUE
24.5 N•m ± 3.5 N•m (18 lbf•ft ± 3 lbf•ft)



TIGHTENING SEQUENCE

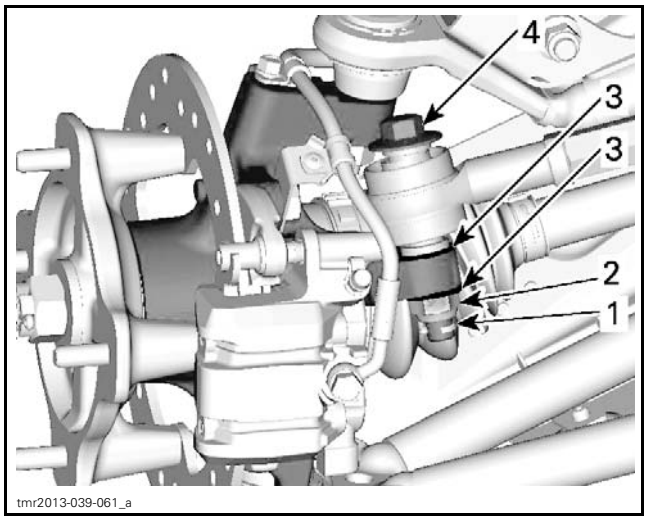
Install steering column.

Check the steering alignment. Refer to *STEERING ALIGNMENT* in this subsection.

TIE-ROD ENDS

Tie-Rod End Replacement

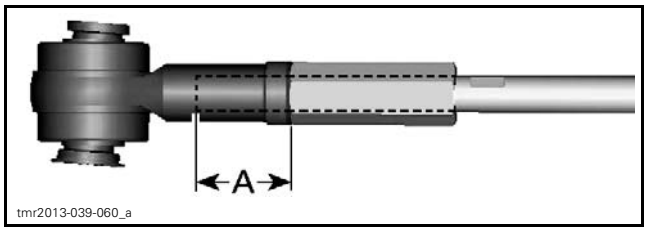
1. Safely lift and support the front of vehicle. Refer to *INTRODUCTION* subsection.
2. Remove front wheel.
3. Detach tie-rod end by removing:
   – Cotter pin
   – Tie-rod end retaining nut
   – Hardened washers
   – Tie-rod end bolt.



1. Cotter pin
2. Tie-rod end retaining nut
3. Hardened washers
4. Tie-rod end bolt

4. Discard cotter pin and nut.
5. Replace tie-rod end.
6. Adjust tie-rod end to the nominal engagement length.

TIE-ROD END NOMINAL ENGAGEMENT LENGTH
25 turns or 31 mm (1.22 in)



A. Nominal length

⚠ WARNING

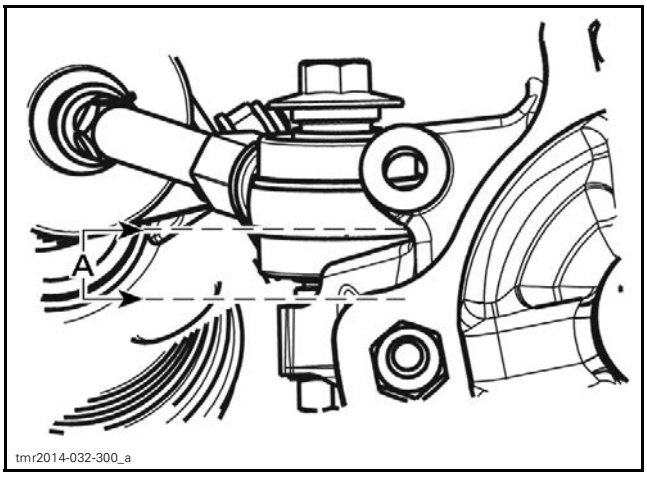
The minimum tie-rod end length engagement in the tie rod must be 25 mm (1 in).

7. Torque tie-rod end **locking** nut to specification.

TIE-ROD END **LOCKING** NUT TORQUE
34 N•m ± 2 N•m (25 lbf•ft ± 1 lbf•ft)

8. Attach tie-rod end on knuckle as the reverse of removal.

NOTE: When tightening, make sure tie-rod end casing is parallel with knuckle mounting face to avoid damaging the casing.



TIE ROD END ASSEMBLY
A. Parallel planes

9. Install a NEW tie-rod end **retaining** nut and torque to specification.

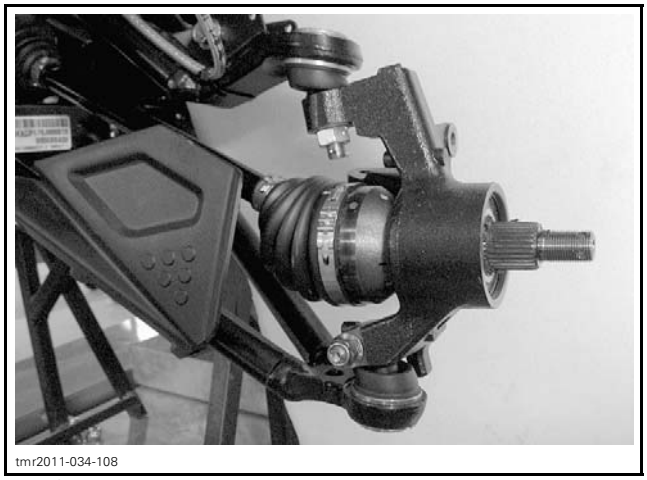
TIE-ROD END **RETAINING** NUT TORQUE
105 N•m ± 15 N•m (77 lbf•ft ± 11 lbf•ft)

10. Install a NEW cotter pin. Both ends of cotter pins must be folded.
11. Install front wheel.
12. Check the steering alignment, refer to *STEERING ALIGNMENT* in this subsection.

KNUCKLES

Knuckle Removal

1. Safely lift and support the front of vehicle. Refer to *INTRODUCTION* subsection.
2. Remove front wheel.
3. Detach tie-rod end from knuckle, refer to *TIE-ROD END* in this subsection.
4. Remove caliper, refer to *BRAKES* subsection.



TYPICAL

5. Remove wheel hub, refer to *FRONT DRIVE* subsection.
6. Detach upper suspension arm from knuckle, refer to *FRONT SUSPENSION*.
7. Detach lower suspension arm from knuckle, refer to *FRONT SUSPENSION*.
8. Remove knuckle from vehicle.

Knuckle Inspection

Check knuckle for cracks or other damages.

Replace if necessary.

Knuckle Installation

The installation is the reverse of the removal procedure.

WHEEL BEARINGS

Wheel Bearing Inspection (Maintenance)

Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.

Wheel Bearing Inspection (During Component Removal)

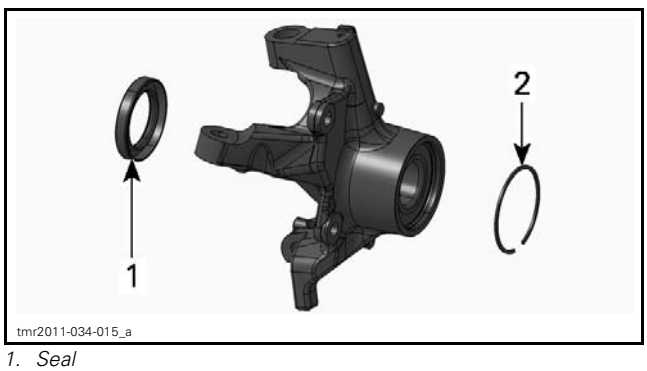
Whenever the drive axle or knuckle is removed, check wheel bearing as follows:

– Check if wheel bearing turns freely and smoothly.
– Check seal condition.

Replace if necessary.

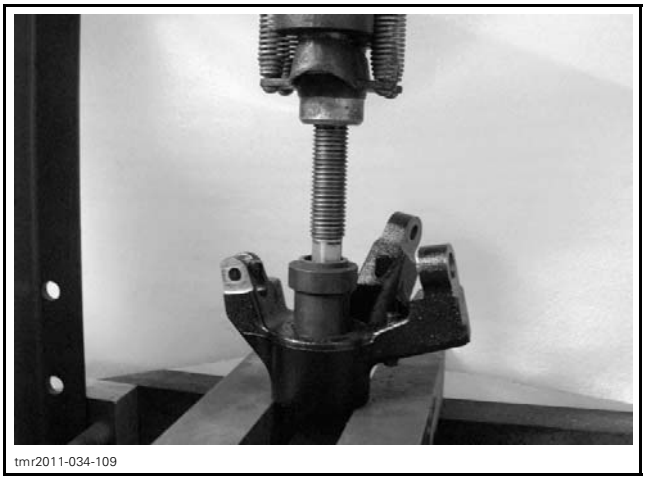
Wheel Bearing Removal

1. Remove knuckle from vehicle, refer to *KNUCKLE REMOVAL* in this subsection.
2. Remove and discard knuckle seal.
3. Remove circlip.



1. Seal
2. Circlip

4. Install knuckle on a press.
5. Use an appropriate bearing remover.
6. Remove bearing from knuckle.



NOTE: It may be necessary to heat the knuckle to remove bearing.

⚠ WARNING

Clean all grease, outside and inside, from knuckle before heating it.

Wheel Bearing Installation

The installation is the reverse of the removal procedure. However, pay attention to the following.

To ease wheel bearing installation:

– Place bearing in a freezer for 10 minutes.
– Place knuckle in oven to 100°C (212°F) for 30 minutes maximum.

When knuckle is cooled down, install NEW circlip and NEW seal.

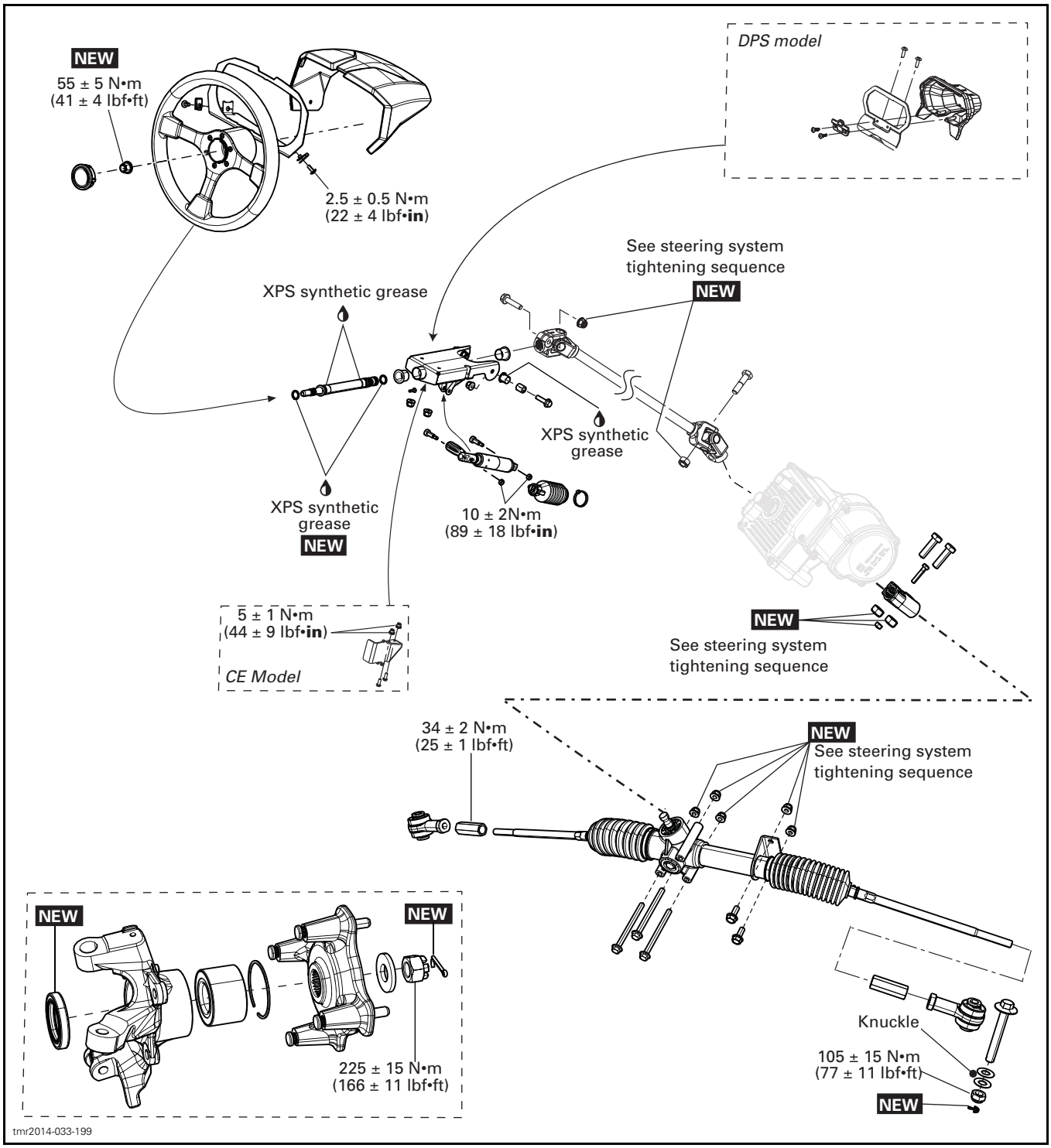
STEERING SYSTEM (WITH DPS)

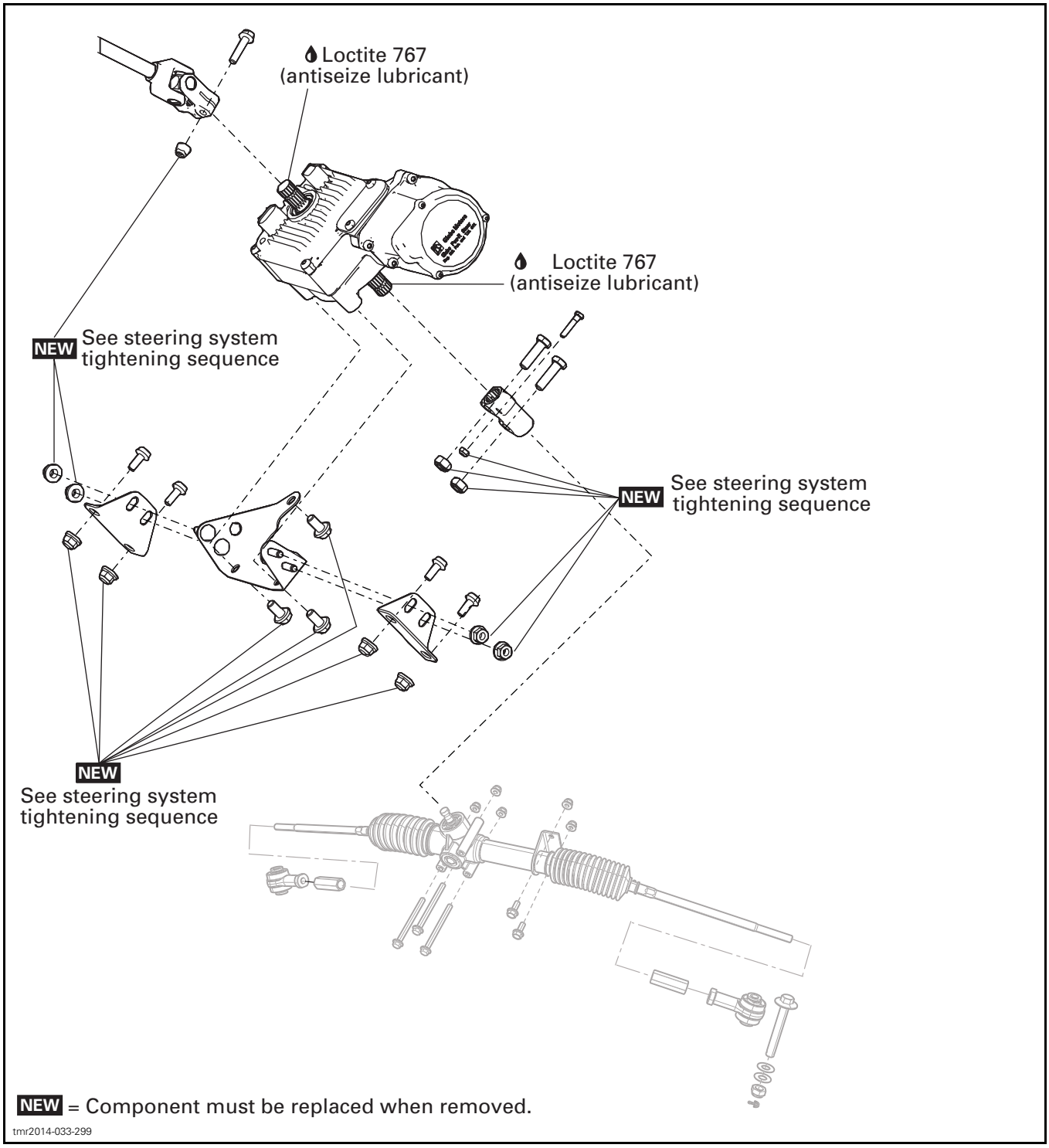
SERVICE TOOLS

Description	Part Number	Page
FLUKE 115 MULTIMETER	529 035 868	15, 18
STEERING ALIGNMENT TOOL	529 036 059	7

SERVICE PRODUCTS

Description	Part Number	Page
DIELECTRIC GREASE	293 550 004	23
LOCTITE 767 (ANTISEIZE LUBRICANT)	293 800 070	14, 21–22
XPS SYNTHETIC GREASE	293 550 010	14


NEW
55 ± 5 N•m
(41 ± 4 lbf•ft)
2.5 ± 0.5 N•m
(22 ± 4 lbf•in)
DPS model
See steering system
tightening sequence
NEW
XPS synthetic grease
XPS synthetic
grease
XPS synthetic
grease
NEW
10 ± 2N•m
(89 ± 18 lbf•in)
5 ± 1 N•m
(44 ± 9 lbf•in)
CE Model
NEW
See steering system
tightening sequence
34 ± 2 N•m
(25 ± 1 lbf•ft)
NEW
See steering system
tightening sequence
NEW
NEW
225 ± 15 N•m
(166 ± 11 lbf•ft)
Knuckle
105 ± 15 N•m
(77 ± 11 lbf•ft)
NEW
tmr2014-033-199

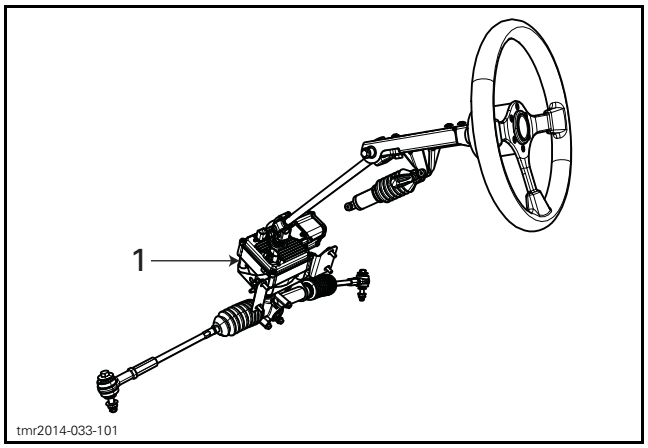

Loctite 767
(antiseize lubricant)
Loctite 767
(antiseize lubricant)
NEW
See steering system
tightening sequence
NEW
See steering system
tightening sequence
NEW
See steering system
tightening sequence
NEW = Component must be replaced when removed.
tmr2014-033-299

GENERAL

NOTICE Never perform arc welding in the DPS area. Otherwise, poor DPS operation might occur.

DPS SYSTEM DESCRIPTION (FEATURES)

The Dynamic Power Steering (DPS) provides a computer controlled, variable power assist, achieved by an electric motor to optimize the amount of steering input required by the rider.



1. Dynamic power steering unit (DPS)

The DPS system uses the following parameters to determine how much steering assist it provides:

– DPS mode
– Engine RPM
– Battery/electrical system voltage
– Vehicle speed
– DPS shaft torque sensor input.

The amount of steering assist provided is dependent on the steering wheel effort (steering torque), electrical power available, vehicle speed and the DPS assist mode selected.

The greater the steering wheel effort (torque), the greater the assist will be.

The slower the vehicle speed, the greater the assist will be.

If the electrical system is activated but the engine is **not** running, DPS assist will be provided for approximately 30 seconds. DPS assist will resume once the engine is started.

Steering torque may also come from the wheels due to rough terrain. This will produce steering kickback that is reduced by the DPS module, while providing feedback to the driver.

The greater the power steering assist, the greater the load on the electrical system.

When the electrical system is under high load (battery not at full charge, operating the vehicle for prolonged periods of time at slow speed and low RPM which, requires higher power steering assist), the battery power reserve will gradually decrease. This further increases the load on the charging system and the electrical system voltage will drop. As system voltage drops, so does power steering assist.

NOTE: It is important to maintain the battery at a full state of charge to ensure proper DPS operation.

DPS Assist Mode

The DPS system provides three rider selectable modes of operation.

DPS MAX provides maximum steering assist for technical low speed riding in rough or muddy terrain, or for touring.

DPS MED provides normal (medium) steering assist for general all purpose riding.

DPS MIN provides less steering assist for increased feedback and aggressive trail riding.

A fourth mode of operation is available as an accessory to adjust the steering assist level for operation with an approved BRP track kit.

DPS Derating Explanation

Derating is an internal protection system integrated in the DPS electronic module.

This system protects the electronic components when the DPS works too hard and the internal temperature reaches a critical level, or when the battery voltage becomes too low.

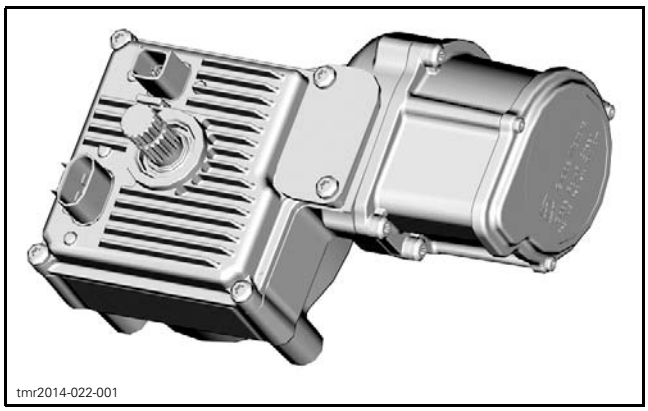
The internal protection system decreases the assistance level available to protect its electronic board. The normal assistance level will return when riding conditions are back to normal and the internal temperature decreases, and/or when the battery voltage increases above a threshold voltage.

NOTE: This reaction is a normal protective behavior of the unit and does not necessarily raise a fault in the cluster. However, under extreme conditions, a scrolling DPS OVERHEAT message may appear in the cluster. When the DPS is allowed to cool down below the threshold recovery temperature, the DPS OVERHEAT message will cease.

DPS SYSTEM DESCRIPTION (COMPONENTS)

DPS Unit

The DPS unit is a self contained unit that includes the steering gear, the DPS module, the DPS motor, and the torque sensor.



DPS UNIT

The DPS module provides DC power to the motor. The amount and duration of that DC power is determined by the inputs to the DPS module. The direction in which the motor turns is changed by reversing the polarity of the circuit current.

The DPS motor does not "spin", but rather turns in very small increments based on the amount, duration, and direction of DC power delivered by the DPS module.

NOTE: Should the DPS unit fail, vehicle steering is still available with increased steering effort.

DPS Unit Protection

To protect the DPS electronic components, the steering assist behavior will change as follows.

CONDITION	DPS BEHAVIOR
DPS internal board temperature is above 105°C (221°F)	Steering assist will gradually decrease.
DPS internal board temperature is above 120°C (248°F)	Steering assist is stopped.

When the DPS unit temperature is back within normal operating range, steering assist should resume to normal operation.

Steering Torque Sensor

The DPS shaft is composed of two shafts and a torsion rod.

The steering column is connected to the DPS input shaft. The DPS output shaft is connected to the rack and pinion via the DPS coupler. The torsion rod is inserted inside the input and output shafts.

When the steering wheel is turned, torque is applied to the input shaft which tends to twist the torsion rod slightly. The sensor detects the torque by measuring the angular torsion in the rod.

The torsion rod is designed so that it can twist inside the two DPS shafts sufficiently to provide a reading of up to 10 N•m (89 lbf•**in**) of torque either side, after which it will simply turn with the two shafts as if they were a single unit. When the torsion rod has attained its maximum twist point, the DPS will provide maximum steering assist.

Steering assist is applied to the DPS output shaft. This will tend to untwist the torsion rod and null out the input torque applied by the steering effort.

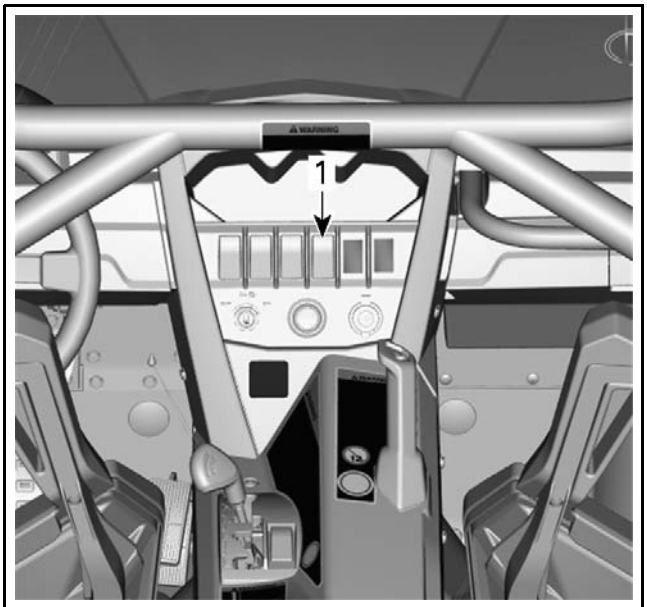
When the torque comes from the wheels due to the rough terrain, the same twisting action will occur. But in this case, the DPS will serve to dampen steering kickback to the driver by countering the torque from the output shaft, while allowing some feedback.

The torque sensor is very sensitive and can detect very small amounts of twist in the torsion rod. The harder the steering wheel is turned, the greater the torsion, the greater the power steering assist.

NOTICE **The internal torque sensor is very sensitive to radial and axial loading on the DPS input and output shafts. All steering system components must be correctly aligned and torqued using the specified installation, alignment and tightening sequence for the entire steering system. Not following these procedures correctly will result in poor DPS unit operation.**

DPS Switch

The DPS switch is used to change the DPS mode.



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1. DPS switch

It provides a ground to the multifunction gauge that tells the gauge the operator wants to change DPS operating mode.

When the switch is held for 2 seconds, the gauge signals the DPS (through CAN bus) to switch to the following DPS mode.

Repeatedly pressing the DPS switch toggles the DPS through its operating modes. The DPS mode selection message will be seen scrolling in the multifunction gauge.

tmr2014-022-013

NOTE: The DPS mode cannot be changed if the vehicle transmission is set to REVERSE.

ADJUSTMENT

STEERING COMPONENTS ALIGNMENT

IMPORTANT: This procedure may solve most of the DPS steering issues and must be carried out before a torque offset reset procedure.

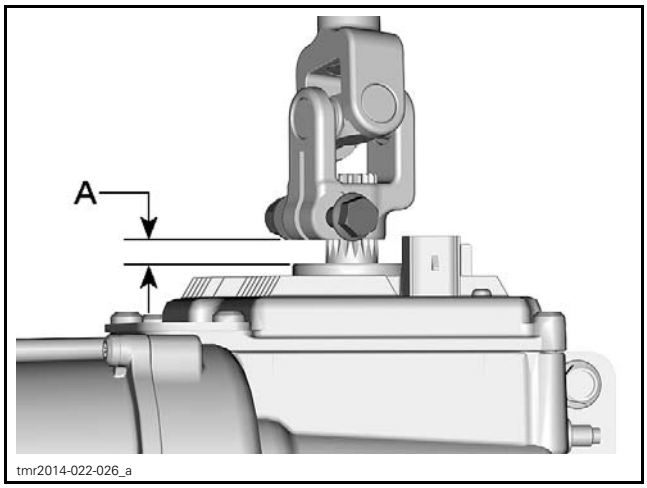
NOTE: The steering components alignment procedure will ensure that no axial or radial loads are applied to the DPS shaft which would result in poor DPS operation. All steering components must be aligned with the rack and pinion, and torqued starting from the rack and pinion, then upwards sequentially to each component from there.

1. Ensure the rack and pinion is centered. Refer to *STEERING ALIGNMENT*.
2. Ensure steering wheel is within 8° of horizontal position.
3. Loosen the fasteners retaining the following steering components sufficiently to provide free movement of the component:
   - Pinch bolts on upper and lower steering column U-joints
   - All fasteners on the DPS side brackets
   - The 3 bolts on the DPS **coupler**
4. Re-torque the fasteners according to the *STEERING SYSTEM TIGHTENING SEQUENCE* illustration at the beginning of *PROCEDURES*.

NOTICE **The steering system tightening sequence must be strictly followed. Failure to do so may result in a steering component misalignment, poor DPS operation due to an induced erroneous torque on DPS shaft, or the impossibility to perform a torque sensor reset.**

NOTICE **When tightening all screws on the DPS side brackets, be sure to hold the brackets snugly against the frame and DPS unit to remove any gap. The side brackets must NOT apply any force on the DPS unit in any direction. This would create an induced erroneous torque to the DPS shaft.**

IMPORTANT: Before tightening lower U-joint bolt on steering column, ensure the following measurements for the steering column engagement depth.



STEERING COLUMN ENGAGEMENT DEPTH

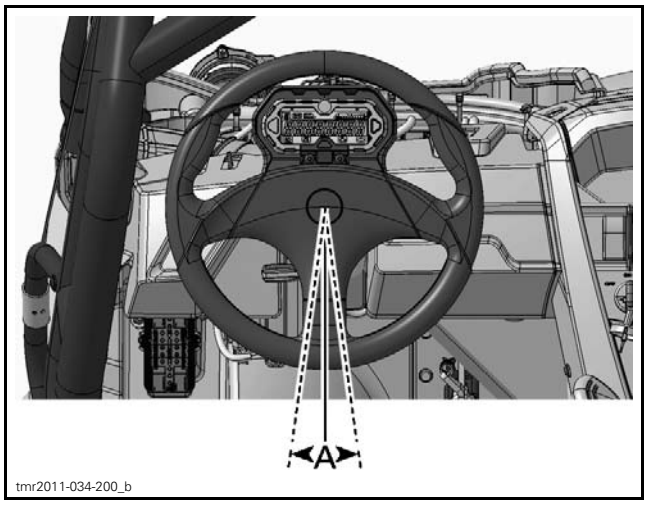
STEERING COLUMN ENGAGEMENT DEPTH (DISTANCE "A")	
Minimum distance	8.5 mm (.335 in)
Maximum distance	15 mm (.591 in)

5. Carry out a *STEERING ALIGNMENT* if needed.

STEERING ALIGNMENT

Front Toe Adjustment

1. Place vehicle on a level surface.
2. Inflate tires to recommended pressure.
3. Find rack and pinion center to center as follows:
   - 3.1 Calculate the total steering wheel rotations from side to side.
   - 3.2 Position the steering wheel at **half** the total rotations.
4. Check steering wheel position:
   - 4.1 If steering angle is within ± 3°, go to **step 6**.
   - 4.2 If steering angle is outside of ± 3°, go to **step 5**.

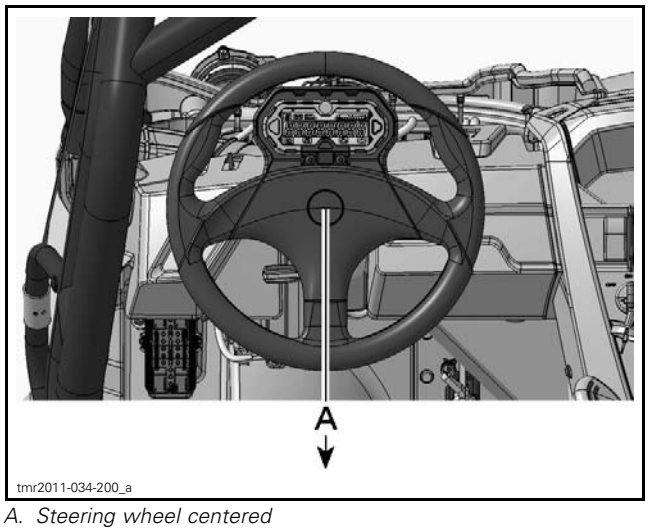


A. Steering wheel angle ± 3°

5. Reposition steering wheel onto steering shaft as follows:

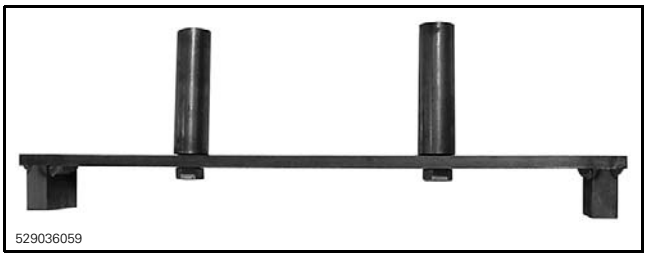
   NOTICE **Make sure rack and pinion does not move during steering wheel repositioning.**

   - 5.1 Remove steering wheel, refer to *STEERING WHEEL REMOVAL*.
   - 5.2 Reinstall steering wheel to the closest centered position (nearest spline).
6. Center steering wheel.



A. Steering wheel centered

7. Remove two wheel lug nuts from a rear wheel.
8. Install STEERING ALIGNMENT TOOL (P/N 529 036 059) using proper spacers.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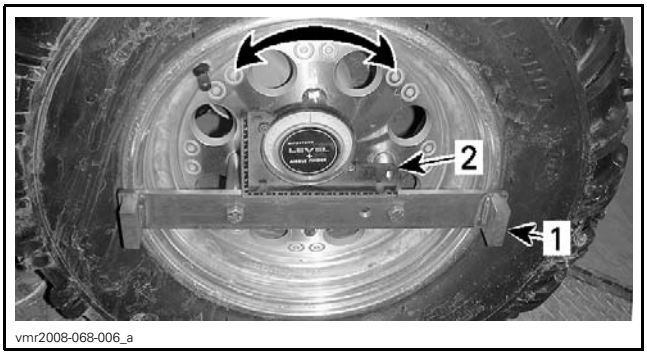
9. Move vehicle to place the tool level with the ground.



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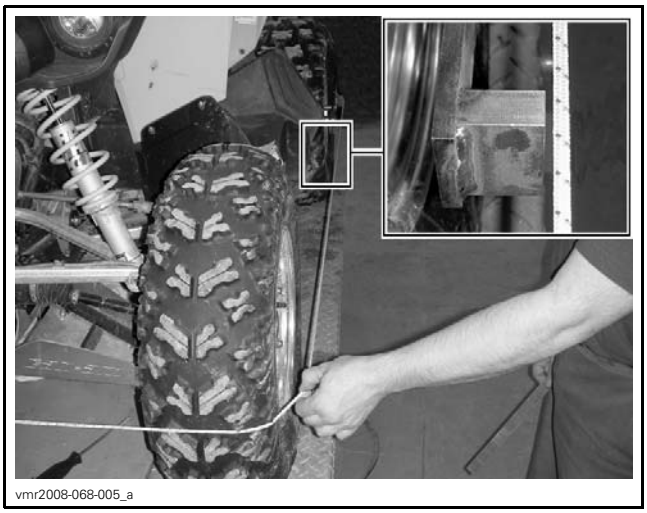
REAR WHEEL
1. Steering adjustment tool
2. Angle gauge or level

10. Place a rope around vehicle tires.
11. Using an elastic, link both ends together.
12. Adjust rope at the center of the wheels.
13. From the front of vehicle, near the front of rim, move rope so that it does not touch the first spacer of tool.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TYPICAL

14. Slowly move rope back until it makes contact with spacer.

vmr2008-068-007

TYPICAL

15. Keep rope in this position.
16. Measure distance of the front wheel between rope and rim as follows:
    – At the front of rim
    – At the rear of rim.

vmr2008-068-008

TYPICAL — AT THE FRONT OF RIM

vmr2008-068-009

TYPICAL — AT THE REAR OF RIM

17. Calculate the difference between the rear and the front measurement.
18. The difference must be as per the following specification:

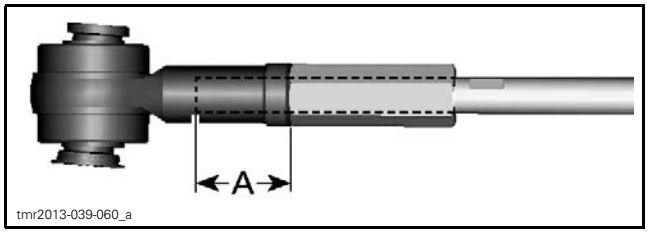
WHEEL TOE
0 mm ± 4 mm (0 in ± .157 in)

19. If the wheel toe measurement is out of specification:

    19.1 Adjust tie-rod end.

⚠ WARNING

The minimum tie-rod end length engagement in the tie rod must be 25 mm (1 in).



A. Minimum tie-rod end length engagement

19.2 Tighten tie-rod end locking nut to specification.

TIE-ROD END LOCKING NUT TORQUE
34 N•m ± 2 N•m (25 lbf•ft ± 1 lbf•ft)

20. Repeat procedure for the other wheel.

TORQUE OFFSET RESET

NOTE: Before carrying out a torque offset reset procedure:

– A *STEERING COMPONENTS ALIGNMENT* must be carried out.
– The vehicle must be properly aligned and the steering centered.

The torque offset reset procedure must then be carried out (last) if one of the following conditions exist:

– Left and right steering imbalance (steering effort)
– Unequal self centering
– The torque offset is within ±1Nm.

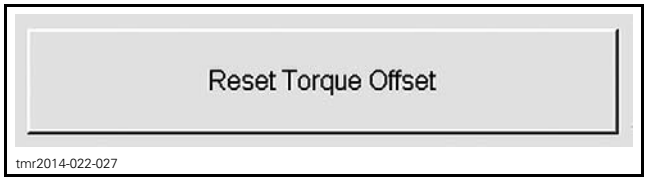
.

1. Position the steering wheel is at the center position.
2. Connect vehicle to the latest B.U.D.S. software.
3. In B.U.D.S., select **Read Data**.
4. Check if a software update is available and warranted for the DPS. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* If so, install it prior to performing the reset.
5. Choose the **Setting** tab.
6. At the bottom LH corner of the **Setting** page, choose the **DPS** tab.

REQUIRED CONDITIONS TO ALLOW THE TORQUE OFFSET RESET
Steering wheel should be free and centered. There MUST NOT be any effort applied to the steering column.
Torque sensor value must be within offset threshold value of ± 1Nm.
Engine not running.

7. Press **Reset Torque Offset** button.

NOTE: Torque sensor reset may not be possible if the torque value is over the 1Nm threshold.



With the steering wheel centered and no effort is applied, if the indicated **Torque Sensor** value in B.U.D.S. is over the threshold value of 1Nm, a steering imbalance may be noticeable.

If all steering components are undamaged, in good working order, and a proper *STEERING COMPONENTS ALIGNMENT* was carried out, repeated torque offset reset procedures will not solve the problem if the torque offset is greater than ±1Nm. DPS unit replacement may be required.

TROUBLESHOOTING

UNEQUAL TURNING RADIUS

1. **Rack and pinion not centered during steering system parts installation.**
   - *Refer to STEERING ALIGNMENT in this subsection.*

NO POWER STEERING ASSIST

1. **DPS malfunction.**
   - *If the CHECK ENGINE light is on and a CHECK DPS message is visible in the multifunction gauge, check for fault codes using B.U.D.S. and carry out service action.*
2. **No power to DPS unit.**
   - *Carry out a DPS FUSE TEST as detailed in this subsection. Replace as required.*
   - *Carry out a DPS INPUT VOLTAGE TEST as detailed in this subsection. Repair or replace wiring/connectors as required.*
   - *Carry out a DPS IGNITION SIGNAL VOLTAGE TEST as detailed in this subsection. Repair or replace wiring/connectors as required.*

3. No ground to DPS unit.
   - *Carry out a DPS GROUND CIRCUIT TEST as detailed in this subsection. Repair or replace wiring/connectors as required.*
4. No engine RPM signal from ECM.
   - *If engine RPM can be displayed in the multifunction gauge when the engine is running, carry out a DPS UNIT COMMUNICATION LINK (CAN) CONTINUITY TEST as detailed in this subsection. Repair or replace wiring/connector as required.*
   - *If engine RPM cannot be displayed in the multifunction gauge, use B.U.D.S. to check for applicable fault codes. Carry out service actions.*
5. No DPS mode signal from multifunction gauge
   - *Ensure DPS switch circuit is functioning correctly (continuity to ground).*
   - *Check for multifunction gauge (CLUSTER) or communication fault codes using B.U.D.S.*
   - *Ensure continuity of CAN bus from multifunction gauge to DPS unit as detailed in this subsection. Repair or replace wiring/connector as required.*
   - *Replace multifunction gauge.*

LOW POWER STEERING ASSIST

1. DPS mode selection
   - *If DPS is selected to DPS MIN mode, switch to a higher assist mode and ensure DPS assist has increased.*
2. Low battery voltage.
   - *Check battery terminals. Clean, repair, replace or tighten as required.*
   - *Test battery. Recharge or replace battery as required.*
   - *Carry out a DPS SYSTEM LOAD TEST as detailed in this subsection.*
3. Low input voltage to DPS unit.
   - *Carry out a DPS INPUT VOLTAGE TEST as detailed in this subsection. Ensure power connector pin (DPS2-A) is clean, corrosion free, tight, and make good contact. Repair or replace wiring/connectors as required.*
4. Faulty DPS ground circuit.
   - *Carry out a DPS GROUND CIRCUIT TEST. Ensure DPS ground connector pin (DPS2-B) and frame ground post are clean, corrosion free, tight, and make good contact. Repair or replace wiring/connector as required.*

ASYMMETRICAL POWER STEERING ASSIST (SIDE TO SIDE)

1. Vehicle alignment.
   - *Ensure all steering components are undamaged and in good working order. Repair or replace as required.*
   - *In B.U.D.S., check for a torque offset. If so, refer to STEERING COMPONENTS ALIGNMENT procedure as detailed in this subsection*
   - *Carry out the STEERING ALIGNMENT procedure as detailed in this subsection.*
2. Steering system components misaligned.
   - *Carry out the STEERING COMPONENTS ALIGNMENT procedure as detailed in this subsection.*
3. DPS malfunction.
   - *Carry out a DPS CURRENT TEST as detailed in this subsection.*
4. Torque sensor not reset to zero.
   - *When all other possibilities have been eliminated, carry out the TORQUE OFFSET RESET procedure detailed in this subsection.*

DPS ASSIST MODE CANNOT BE CHANGED

1. Communication problem, faulty gauge, faulty DPS, faulty wiring or connections.
   - *Connect vehicle to B.U.D.S and check for applicable fault codes.*
   - *Carry out service actions.*
2. No DPS switch signal to multifunction gauge.
   - *Disconnect multifunction gauge and check continuity of DPS switch circuit to ground.*
3. No DPS mode signal from multifunction gauge to DPS unit.
   - *Check continuity of CAN bus from multifunction gauge to DPS unit.*
   - *If the CAN bus circuit and mode switch circuit test good, replace gauge.*
4. DPS unit not responding to mode change signal from multifunction gauge.
   - *Ensure DPS unit is properly connected and that connector contacts are clean and in good condition.*
   - *Ensure DPS unit has a good ground.*
   - *Ensure DPS unit receives proper input voltages.*

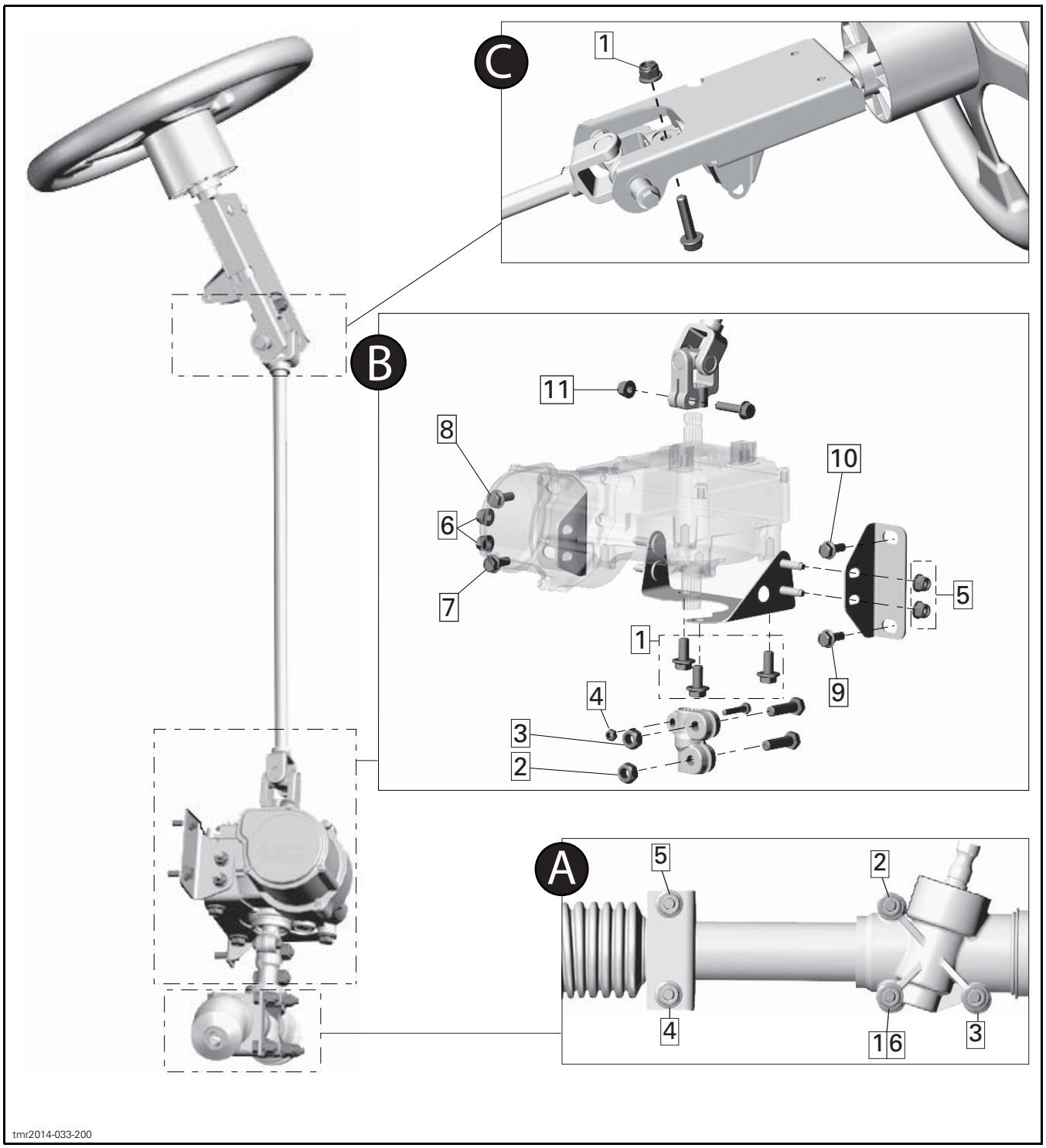
TORQUE SENSOR CANNOT BE RESET

1. Mechanical problem or DPS parts.
   - *Refer to TORQUE OFFSET RESET procedure detailed in this subsection.*

2. Torque offset too great.
   - *Refer to TORQUE OFFSET RESET procedure detailed in this subsection.*

PROCEDURES

STEERING SYSTEM TIGHTENING SEQUENCE

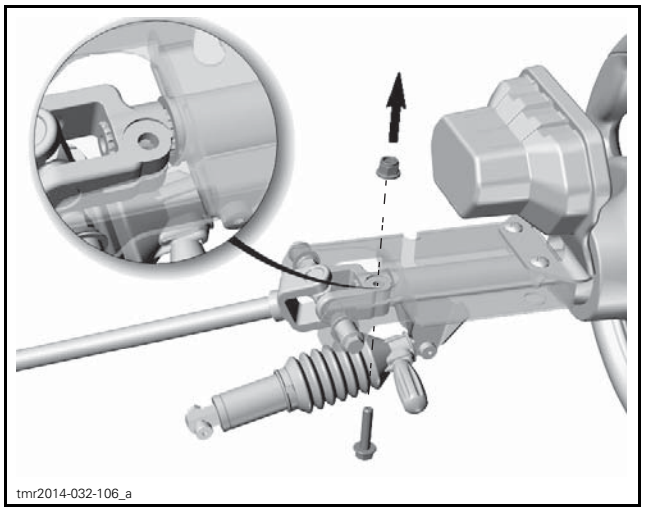


STEERING SYSTEM TORQUE SPECIFICATIONS		
Level A	no. 1 - 6	24.5 N•m ± 3.5 N•m (18 lbf•ft ± 3 lbf•ft)
Level B	no. 1	48 N•m ± 6 N•m (35 lbf•ft ± 4 lbf•ft)
	no. 2 -3	70 N•m ± 5 N•m (52 lbf•ft ± 4 lbf•ft)
	no. 4	10 N•m ± 2 N•m (89 lbf•**in** ± 18 lbf•**in**)
	no. 5 - 10	24.5 N•m ± 3.5 N•m (18 lbf•ft ± 3 lbf•ft)
	no. 11	31.5 N•m ± 3.5 N•m (23 lbf•ft ± 3 lbf•ft)
Level C	no. 1	31.5 N•m ± 3.5 N•m (23 lbf•ft ± 3 lbf•ft)

STEERING COLUMN

Steering Column Removal

1. Center steering wheel.
2. Remove bolt and nut securing upper universal joint to steering shaft. Discard the nut.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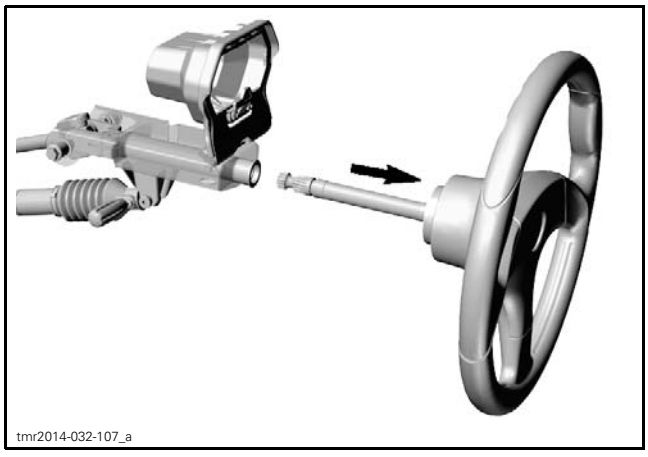
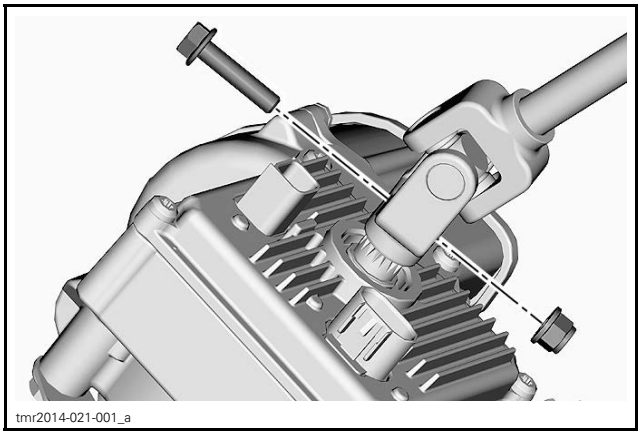
3. Remove steering wheel and steering shaft as an assembly.


tmr2014-032-107_a

4. Remove bolt and nut securing lower universal joint to DPS. Discard the nut.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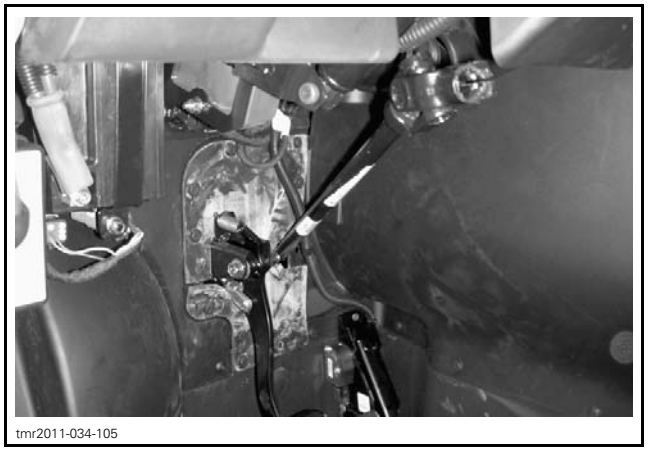
5. Pull steering column upwards to detach it from DPS.
6. Carefully push steering column downwards to release it from steering support.


tmr2011-034-105

7. Remove steering column from vehicle.

Steering Column Inspection

Check steering column for wear, cracks or bending.

Check steering shaft for wear, cracks or bending.

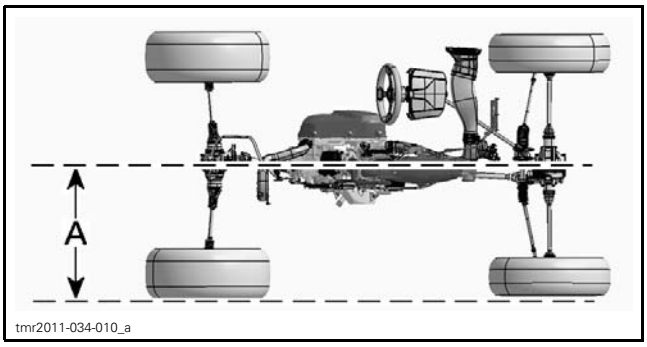
Ensure universal joints are not worn and move freely.

Ensure steering shaft O-rings are not worn, brittle, hard or otherwise damaged.

Replace if necessary.

Steering Column Installation

Prior to installing the steering column, place front wheels parallel with longitudinal plane of vehicle.

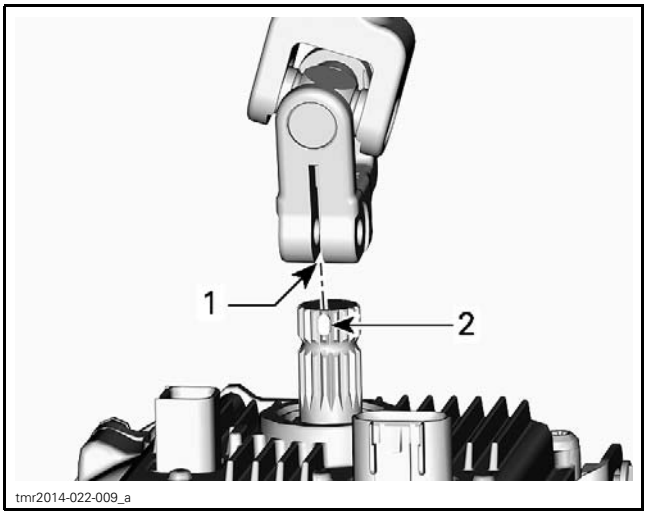


A. Front wheels parallel

Apply LOCTITE 767 (ANTISEIZE LUBRICANT) (P/N 293 800 070) to DPS shaft.

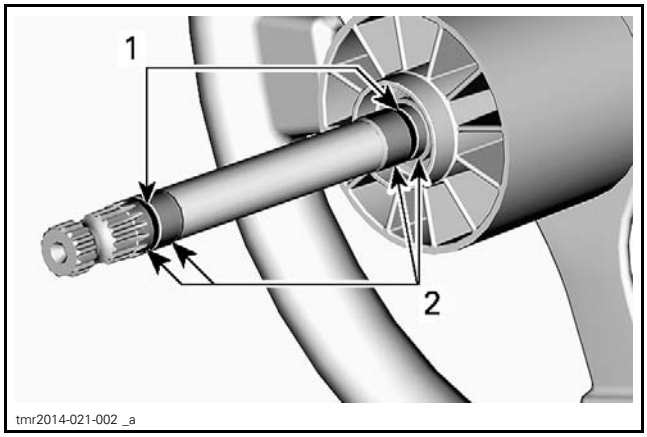
Position steering column in vehicle and insert lower U-joint on DPS input shaft.

NOTE: Be sure to align the opening in the steering column U-joint with the staked tooth on the DPS shaft.



STEERING COLUMN INDEXED TO DPS SHAFT
1. *Opening in steering column U-joint*
2. *Stake tooth on DPS input shaft*

Lubricate O-rings on steering shaft, and all around steering shaft on both sides of O-rings.

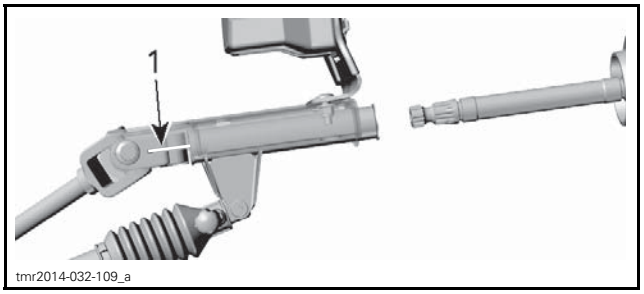


1. *O-rings to lubricate*
2. *Shaft areas to lubricate*

Lubricate steering shaft.

STEERING SHAFT LUBRICATION
XPS SYNTHETIC GREASE (P/N 293 550 010)

NOTE: If upper yoke opening is not horizontal when the steering shaft is installed, the steering wheel will appear crooked if the height is adjusted.



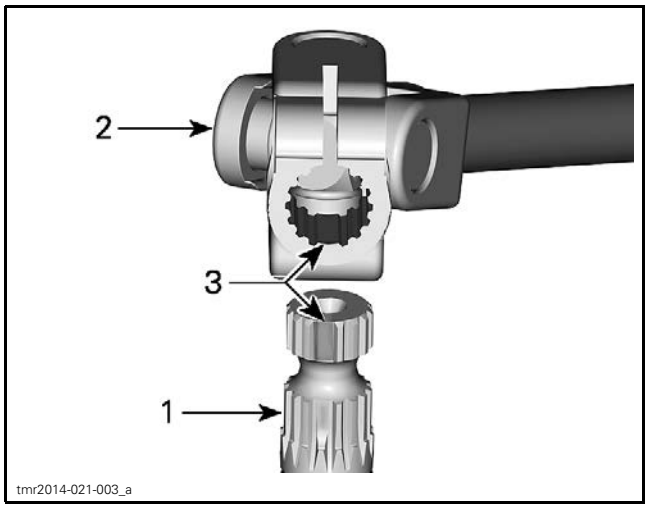
1. *Horizontal yoke opening*

Install steering wheel and steering shaft. Make sure steering wheel is properly centered.

NOTE: Be sure to align the opening in the steering column U-joint with the staked tooth on the DPS shaft.

Install steering wheel and steering shaft.

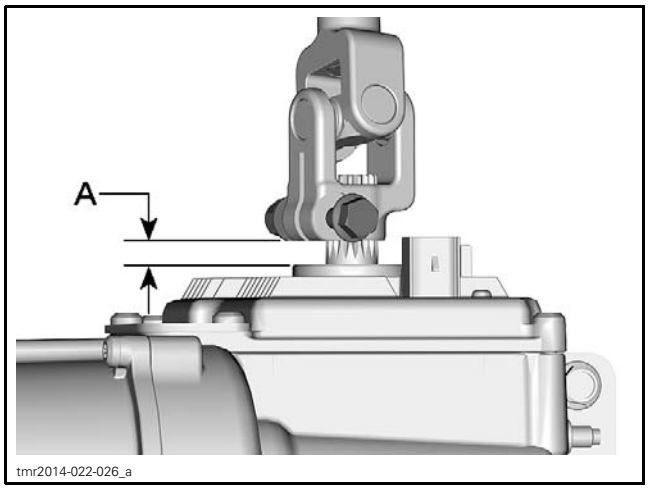
NOTE: Make sure the blind spline on the steering shaft inserts over the blind spline in the steering column upper U-joint.



1. Steering shaft
2. Upper steering column U-joint
3. Blind splines (alignment keys)

IMPORTANT: Before tightening lower U-joint bolt on steering column, ensure the following measurements for the steering column engagement depth.

Tighten steering column U-joints to specification (lower U-joint first). Use NEW nuts.



STEERING COLUMN ENGAGEMENT DEPTH

STEERING COLUMN ENGAGEMENT DEPTH (DISTANCE "A")	
Minimum distance	8.5 mm (.335 in)
Maximum distance	15 mm (.591 in)

Tighten steering column U-joints to specification (lower U-joint first). Use NEW nuts.

NOTE: If the steering shaft or steering column were replaced, loosen the 8 bolts on the DPS side brackets, then retighten all fasteners as specified in *STEERING SYSTEM TIGHTENING SEQUENCE* and *STEERING SYSTEM TORQUE SPECIFICATIONS* table. Start from level "B".

NOTICE The steering system tightening sequence **must be strictly followed**. Failure to do so may result in a steering component misalignment, poor DPS operation due to an induced erroneous torque on DPS shaft, or the impossibility to perform a torque sensor reset.

NOTICE When tightening all screws on the DPS side brackets, be sure to hold the brackets snugly against the frame and DPS unit to remove any gap. The side brackets must NOT apply any force on the DPS unit in any direction. This would create an induced erroneous torque to the DPS shaft.

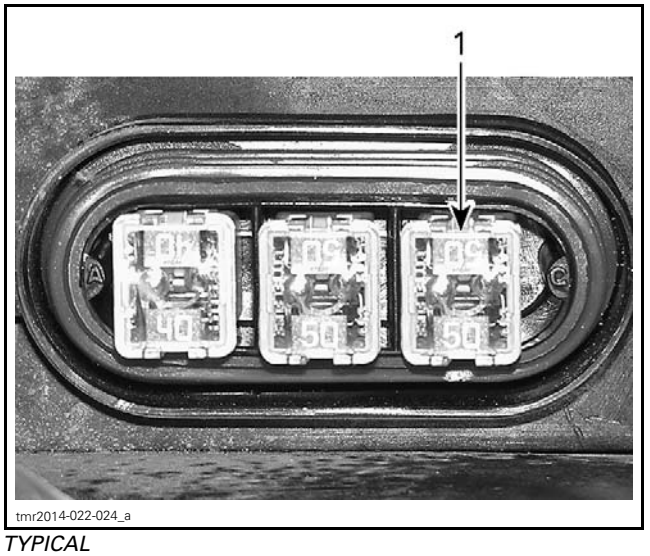
Check front wheel alignment. Refer to *STEERING ALIGNMENT* in this subsection.

DPS UNIT

NOTICE Never perform arc welding in the DPS area. Otherwise, poor DPS operation might occur.

DPS Fuse Test

A 50 A DPS fuse located in fuse box **no. 2** (PF2-F3), provides power for the DPS motor.



TYPICAL
1. DPS fuse

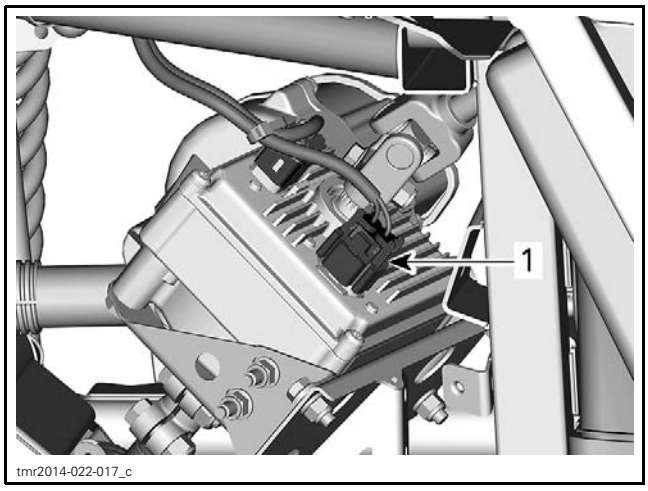
1. Remove the DPS fuse cap to expose the fuse contacts.
2. Using a FLUKE 115 MULTIMETER (P/N 529 035 868) set to VDC, test for a voltage drop across the DPS fuse while the DPS is in operation.

529035868

3. If a voltage is measured, turn power off and remove fuse.
4. Check fuse continuity, fuse contacts and fuse box contact condition. Replace fuse as required.

DPS Input Voltage Test

1. Disconnect the DPS PWR (power) connector.



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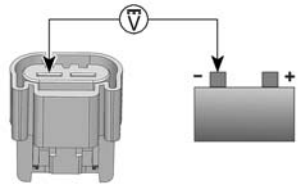
1. DPS PWR connector

2. Test for 12 Vdc DPS motor power at DPS2-A harness connector as per following table.

MULTIMETER PROBE POSITIONS		VOLTAGE
DPS power connector pin A	Battery ground	Battery voltage
 rmr2008-028-091_a		

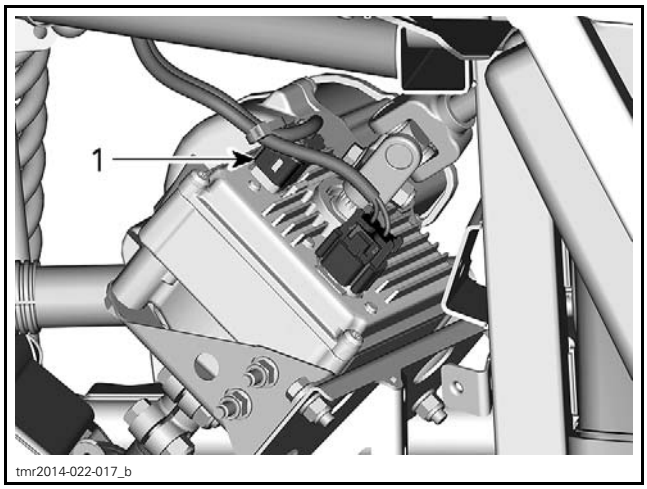
If NO voltage is measured, test the 50 A DPS fuse in fuse box **no. 2** (PF2-F3). If good, check wires and connector pins. Replace or repair defective parts and reset fault codes.

If battery voltage is measured, carry out the following *DPS IGNITION SIGNAL VOLTAGE TEST*.

NOTE: This test may also be carried out by connecting a 12 Vdc test light between the DPS PWR harness connector (pin A), and the battery (-) negative terminal. The test light must come on bright.

DPS Ignition Signal Voltage Test

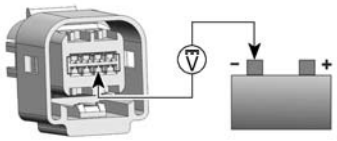
1. Disconnect DPS SENSOR connector.



tmr2014-022-017_b

1. Sensor connector

2. Set the ignition switch to ON.
3. Test for 12 Vdc power to the DPS module at DPS1-3 harness connector as per following table.

MULTIMETER PROBE POSITIONS	VOLTAGE
DPS sensor connector (pin 3) and battery ground	Battery voltage
 rmr2008-028-093_a	

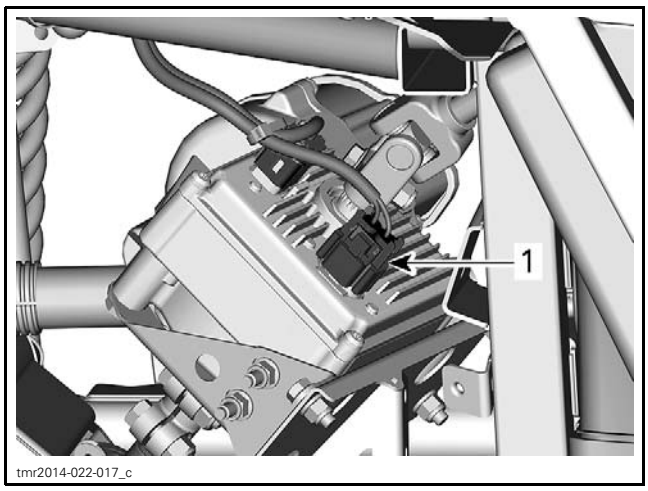
If NO voltage is measured, check wires and connector pin from DPS unit to main relay 2 in fuse box **no. 1** (PF1-2B). Replace or repair defective parts and reset fault codes.

If battery voltage is measured, carry out the following *DPS GROUND CIRCUIT TEST*.

NOTE: This test may also be carried out by connecting a 12 Vdc test light between the DPS sensor harness connector (pin 3), and the battery (-) negative terminal. The test light must come on bright.

DPS Ground Circuit Test

1. Disconnect the DPS POWER connector (DPS2).



1. DPS POWER connector

2. Test for continuity between DPS2-B to battery ground.

MULTIMETER PROBE POSITIONS		READING
DPS POWER connector pin B	Battery ground	Continuity (close to 0 Ω)

If there is NO continuity or a high resistance is measured, check wires and connector pins from DPS unit to chassis ground post. Replace or repair defective parts and reset fault codes.

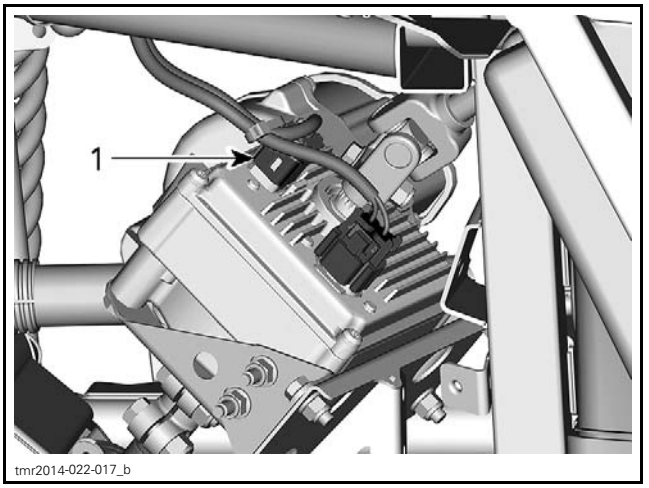
If there is good continuity, carry out the following *DPS UNIT COMMUNICATION LINK (CAN) CONTINUITY TEST*.

NOTE: This test may also be carried out by connecting a 12 Vdc test light between the POWER connector pin B and the battery (+) positive terminal. The test light must come on bright.

DPS Unit Communication Link (CAN) Continuity Test

NOTE: DPS unit must receive a "MODE" signal from the multifunction gauge and an RPM signal to provide power steering assist. If the DPS mode changes when the DPS mode switch is activated for 2 seconds, then the system is functioning correctly. If the DPS does not respond, check for applicable faults using B.U.D.S. before carrying out this test.

Disconnect the DPS SENSOR connector and the multifunction gauge connector.



1. SENSOR connector

Test continuity of CAN Bus Wires as per following table.

MULTIMETER PROBE POSITIONS		RESISTANCE @ 20°C (68°F)
DPS SENSOR CONNECTOR	MULTIFUNCTION GAUGE CONNECTOR	
Pin 4	Pin 18	Less than 1 Ω
Pin 8	Pin 19	

If resistance measured is out of specification, check wires and connector pins. Carry out repairs as required and reset fault codes using B.U.D.S. software.

If resistance measured is good, replace the DPS unit and reset fault codes using B.U.D.S. software.

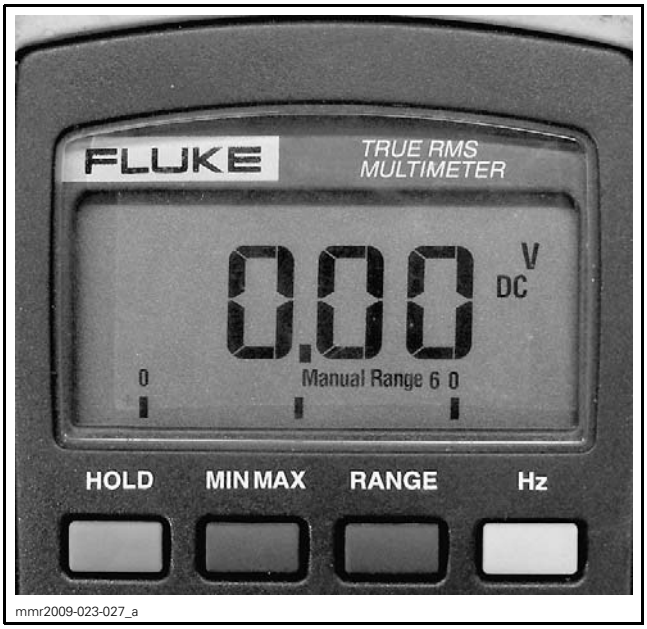
DPS System Load Test

If the charging system cannot sustain normal voltage when the DPS is operating, DPS ASSIST may be reduced or nonexistent. Carry out the following steps.

1. Use the FLUKE 115 MULTIMETER (P/N 529 035 868) and select Vdc.
2. Connect the RED multimeter lead to the positive battery terminal.
3. Connect the BLACK multimeter lead to the battery ground.
4. Measure the battery voltage.

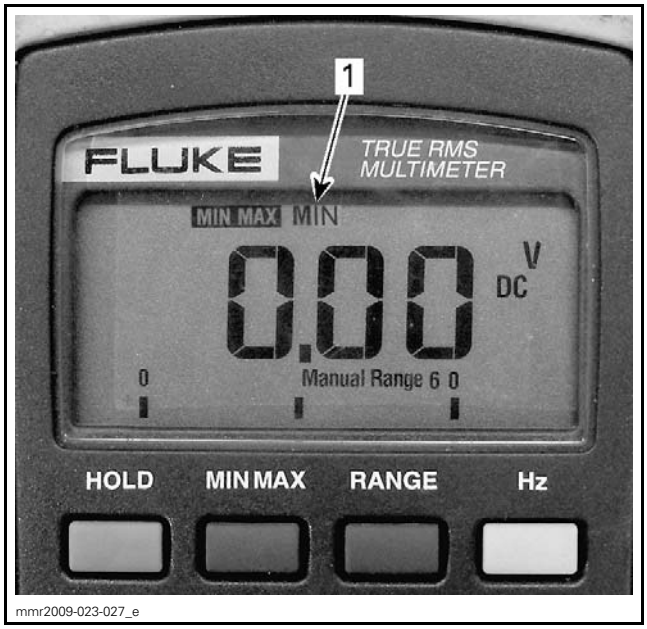
NOTE: If battery voltage is low, recharge battery.

5. Ensure the vehicle transmission is set to PARK.
6. Start the engine.
7. Note the voltage on the multimeter with the engine running (charging system voltage).
8. Press the **RANGE** button repeatedly to select **Manual Range 6 0**.



VDC SELECTED TO MANUAL RANGE 6 0

9. Press the **MIN MAX** button on the multimeter to engage the MIN function.



1. MIN function selected

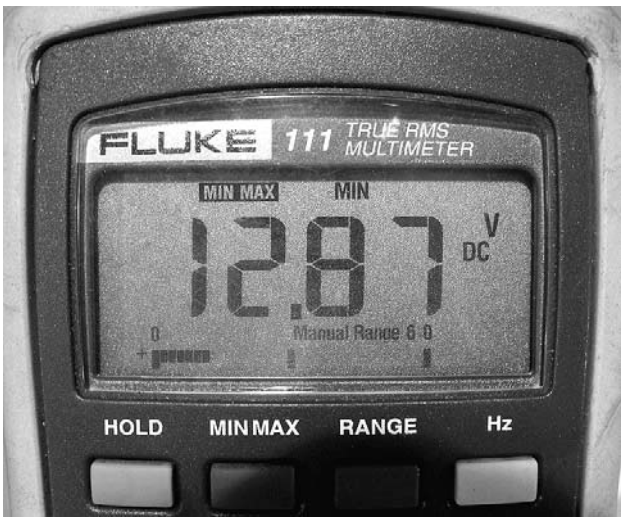
10. Turn the steering wheel **momentarily** against the steering hard stops to each side.

NOTE: Do not hold steering against steering hard stops for and extended period of time.

11. Read the MIN charging system voltage recorded while the steering wheel was turned against each stop.

DPS SYSTEM LOAD TEST			
PROBE POSITIONS		STEERING POSITION	VOLTAGE READING
Battery (-) terminal	Battery (+) terminal	LH stop	At least 12 Vdc
		RH stop	

NOTE: Turning the steering wheel momentarily against the steering hard stops generates maximum DPS load (maximum current draw on electrical system). Electrical system must sustain at least 12 Vdc for proper DPS operation.



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If the electrical system cannot sustain at least 12 Vdc, check the following:

– Battery
– Battery connections
– DPS unit power and ground connections
– Charging system
– Frame and engine ground studs.

If the previously listed items, carry out the following *DPS UNIT CURRENT TEST*.

DPS Unit Current Test

1. Connect vehicle to the latest B.U.D.S. software.
2. Click on the **Read Data** button.
3. Choose the **Monitoring** tab.
4. At the bottom of the **Monitoring** page, choose the **DPS** tab.
5. With the vehicle engine running in PARK and without any steering effort, the indications on the B.U.D.S. DPS **Monitoring** page should be as per following table.

TORQUE SENSOR	DPS CURRENT
0 Nm	0 Amp

6. Turn the steering wheel side to side, momentarily against each steering hard stop and observe the DPS **Torque Sensor** value. The torque value should increase with steering effort applied to the steering wheel.

The **DPS Current** value should increase proportionately to the torque applied, and decrease with the torque as steering assist is provided.

NOTE: The increase and decrease in torque and current readings is very brief as steering assist is quickly provided. Current draw should remain within green scale but may momentarily peak to or exceed 60 amps, then drop off close to 0 amps as torque applied is nulled out by steering assist. If steering is held against hard stops the torque and current readings will remain high.

If current draw tends to remain high, carry out the following:

– *STEERING COMPONENTS ALIGNMENT*
– *TORQUE OFFSET RESET* procedure detailed in this section (only if steering components alignment did not solve the problem)
– DPS unit replacement.

NOTE: The *STEERING COMPONENTS ALIGNMENT CHECK* must always be carried out before even considering a torque offset reset.

7. Turn steering to LH stop and hold at least 8 Nm. Note DPS current value.
8. Turn steering to RH stop and hold at least 8 Nm. Note DPS current value.
9. Repeat previous two steps while holding at (+ or -) 5 Nm. Note DPS current value.

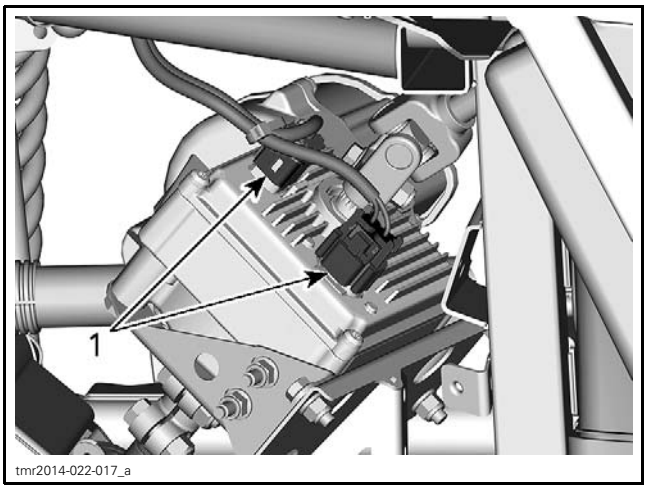
LH and RH DPS current readings should be the same for the same applied torque.

If the *STEERING COMPONENTS ALIGNMENT* and *TORQUE OFFSET RESET* procedures have been carried out, and the current or steering imbalance is too great, the DPS unit will require replacement to resolve the problem.

DPS Unit Removal

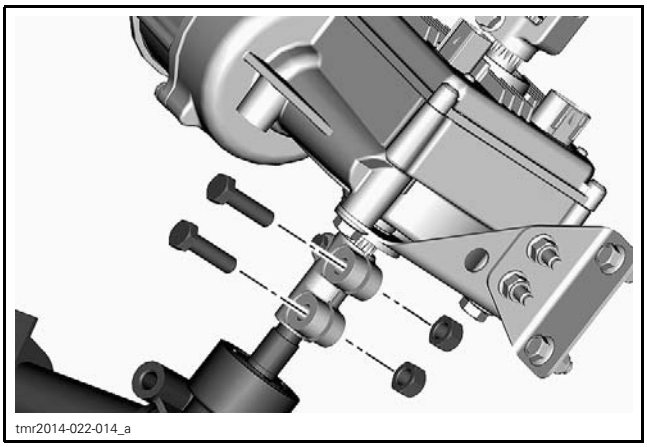
NOTICE **Before proceeding with the DPS removal, remove the 50 Amp DPS fuse (F3) in the fuse box no. 2. Handle the DPS unit with extreme care as it is very sensitive to physical shock. Store unit in a secure area. If the DPS unit is dropped, it must be replaced even if only minimal damage is apparent.**

1. Remove both front wheels.
2. Disconnect the electrical connectors from the DPS unit.

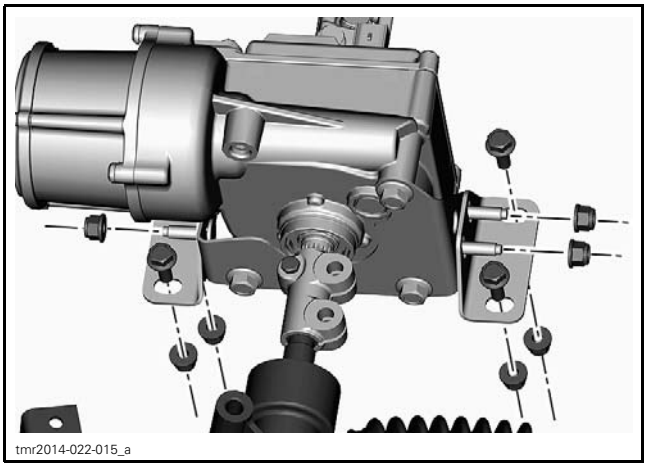


1. DPS connectors

3. Remove steering column. Refer to *STEERING COLUMN REMOVAL* in this subsection.
4. Remove the DPS coupler pinch bolts and nuts. Discard the nuts.



5. Remove all DPS unit retaining screws.



6. Pull up on DPS unit to disengage from the rack and pinion shaft and remove it from the vehicle.

NOTE: If replacing DPS unit, remove the DPS support and DPS coupler from the unit.

DPS Unit Inspection

Inspect DPS shaft splines. If damaged, replace DPS unit.

Inspect DPS coupler splines. If damaged, replace coupler.

Inspect and clean terminal contacts.

DPS Unit Installation

NOTICE The following installation sequence MUST be strictly followed (see procedure details in upcoming paragraphs). Failure to do so may result in DPS misalignment and poor DPS operation due to an induced erroneous torque on DPS shaft or the impossibility to perform a torque sensor reset.

If Replacing DPS Unit

Remove DPS support from unit and install it on new DPS unit. Torque mounting bolts.

Insert DPS coupler on DPS output shaft. Ensure DPS coupler opening is aligned with staked tooth on DPS output shaft.

Loosely install DPS coupler locking bolt (M6) and nut.

Loosely install one DPS coupler pinch bolt (M10) and nut (nearest DPS).

Continue with IF INSTALLING SAME DPS UNIT.

If Installing Same DPS Unit

Engage DPS coupler on rack and pinion shaft. Ensure rack and pinion input shaft is and remains centered when installing DPS on pinion.

Loosely install DPS coupler pinch bolts (2 x M10)

Loosely install side brackets on DPS support and DPS unit on frame (DO NOT torque nuts).

Engage steering column on DPS input shaft. Ensure opening in steering column U-joint is aligned with staked tooth on DPS input shaft.

Engage steering column and steering shaft. Ensure alignment key in steering column U-joint is aligned with blind tooth on steering shaft.

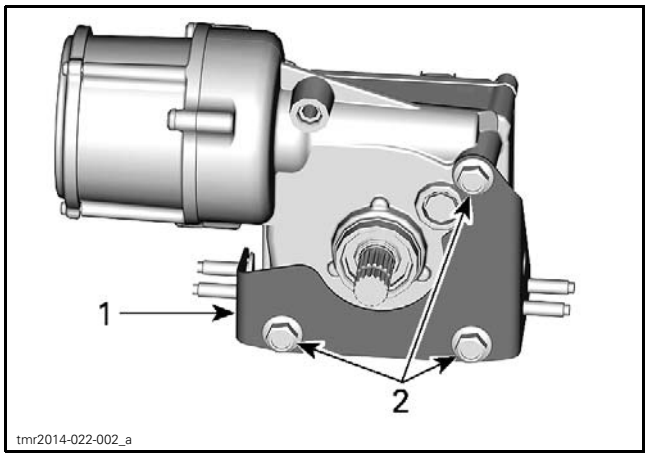
Loosely install pinch bolts on both ends of steering column.

Refer to *STEERING SYSTEM TIGHTENING SEQUENCE* illustration and *STEERING SYSTEM TORQUE SPECIFICATIONS* in this subsection.

If replacing DPS unit, refer to *DPS REPLACEMENT* for DPS software installation

DPS Unit Installation Procedure

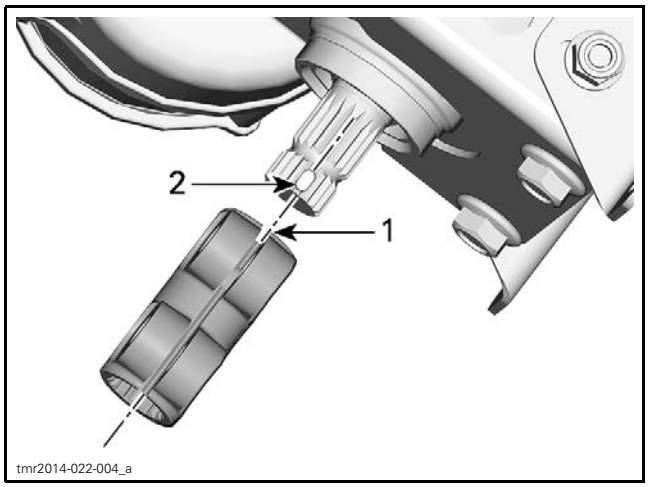
1. Align front wheels parallel to rear wheels.
2. Pre-assemble DPS unit for mounting as per following illustrations.
   2.1 Install DPS support and torque mounting bolts (3).



DPS SUPPORT INSTALLATION
1. *DPS support*
2. *Bolts torqued*

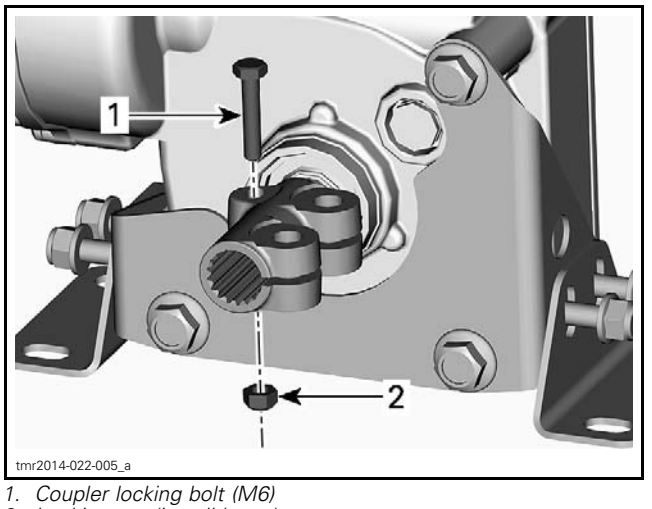
   2.2 Apply LOCTITE 767 (ANTISEIZE LUBRICANT) (P/N 293 800 070) to DPS output shaft.

   2.3 Align and insert DPS coupler on output shaft.

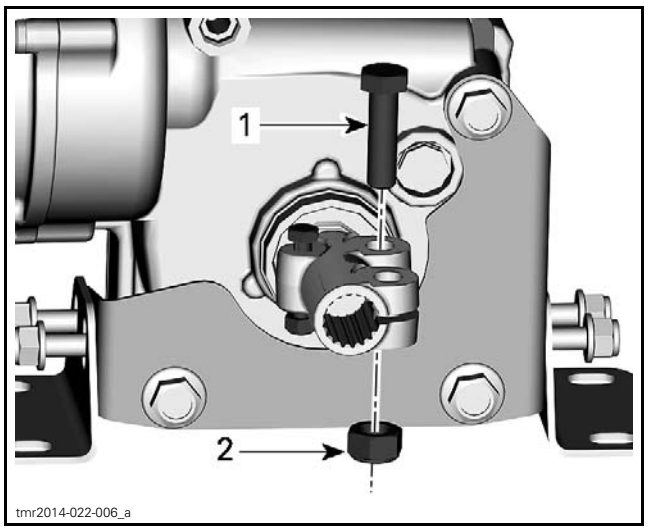


DPS COUPLER ALIGNMENT
1. *Opening in DPS coupler*
2. *Staked spline on DPS output shaft (alignment key)*

   2.4 Loosely install DPS coupler M6 locking bolt and nut, and the M10 pinch bolt nearest DPS.

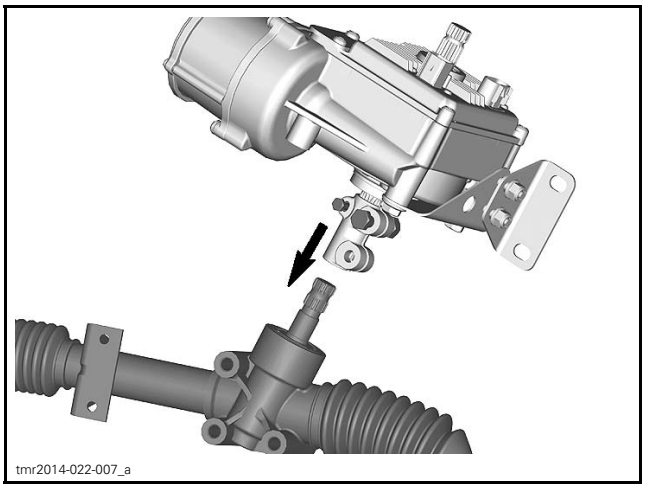


1. *Coupler locking bolt (M6)*
2. *Locking nut (install loose)*

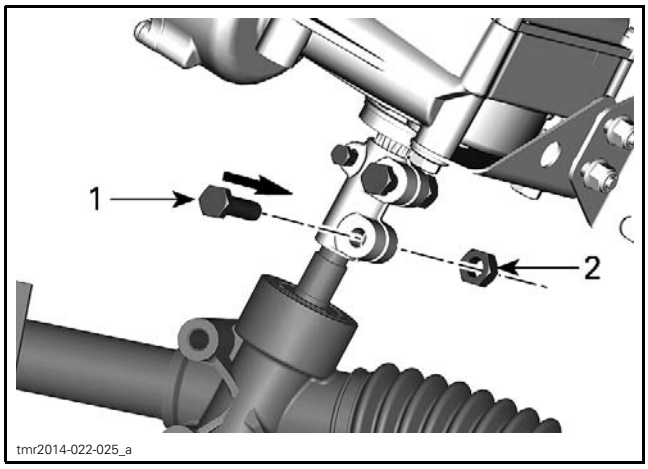


1. *M10 bolt loose*
2. *Locking nut (install loose)*

3. Engage DPS coupler on rack and pinion shaft. Ensure pinion shaft remains centered.



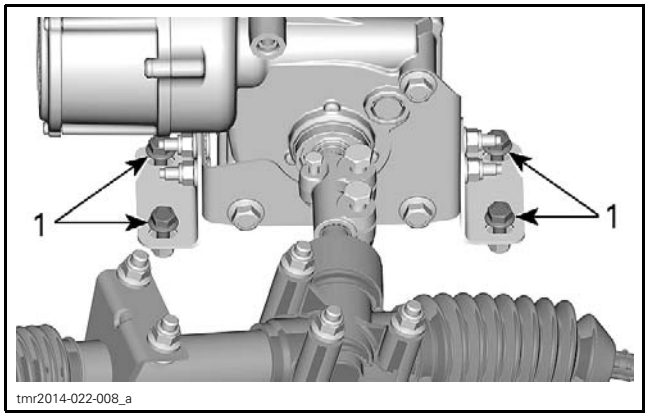
4. **Loosely** install second M10 DPS coupler pinch bolt (rack and pinion end).



1. M10 pinch bolt nearest pinion
2. Locking nut (install loose)

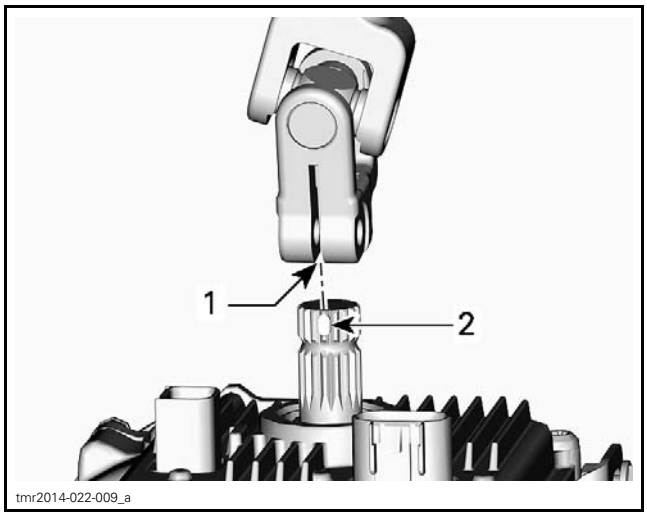
5. Loosely install side brackets on DPS support and DPS unit on frame (DO NOT torque nuts).

NOTICE When installing bolts make sure to keep both brackets LOOSE.



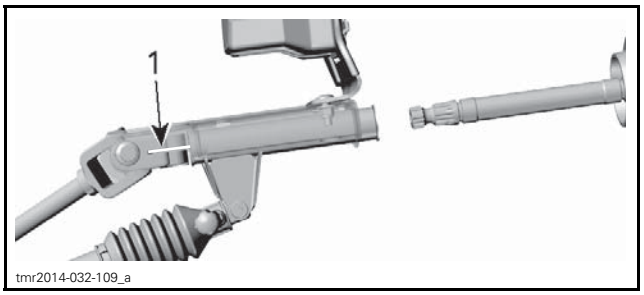
1. Loosely install bolts x4

6. Apply LOCTITE 767 (ANTISEIZE LUBRICANT) (P/N 293 800 070) to DPS input shaft.
7. **Loosely** install steering column on DPS and steering shaft.

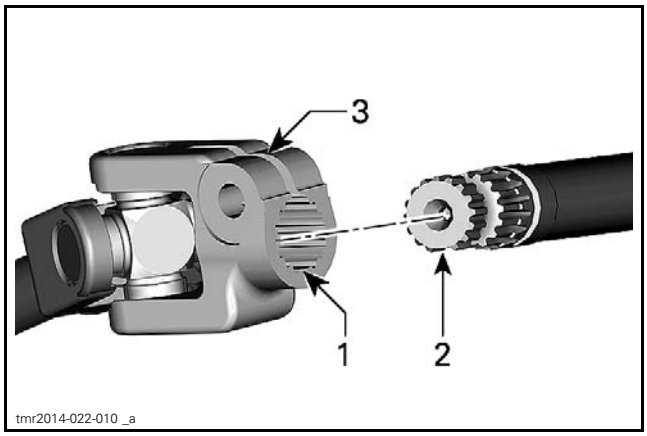


STEERING COLUMN INDEXED TO DPS SHAFT
1. Opening in steering column U-joint
2. Stake tooth on DPS input shaft

NOTE: If upper yoke opening is not horizontal when the steering shaft is installed, the steering wheel will appear crooked if the height is adjusted.

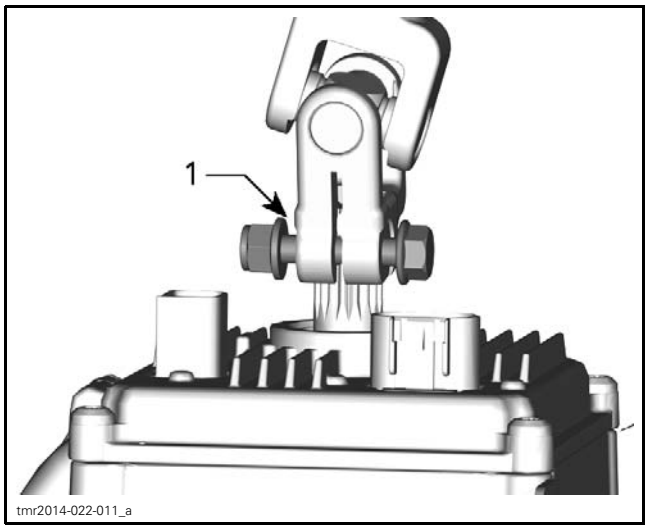


1. Horizontal yoke opening

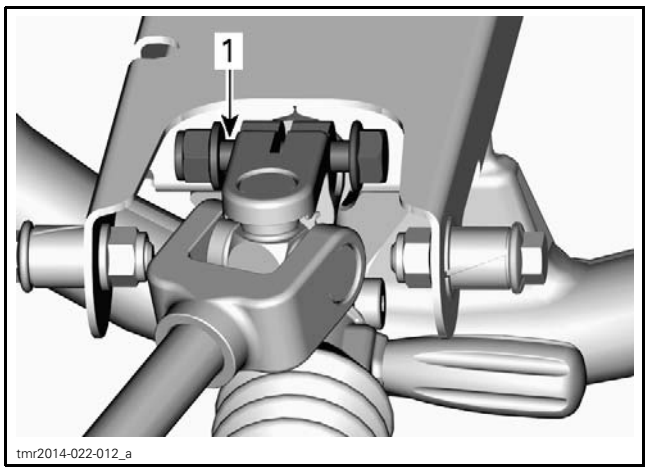


STEERING COLUMN INDEXED TO STEERING SHAFT
1. Alignment key in upper steering column U-joint
2. Blind tooth on steering shaft
3. Opening in upper steering column U-joint

8. **Loosely** install pinch bolts on both ends of steering column.



LOWER U-JOINT ON STEERING COLUMN
1. Pinch bolt mounted loose



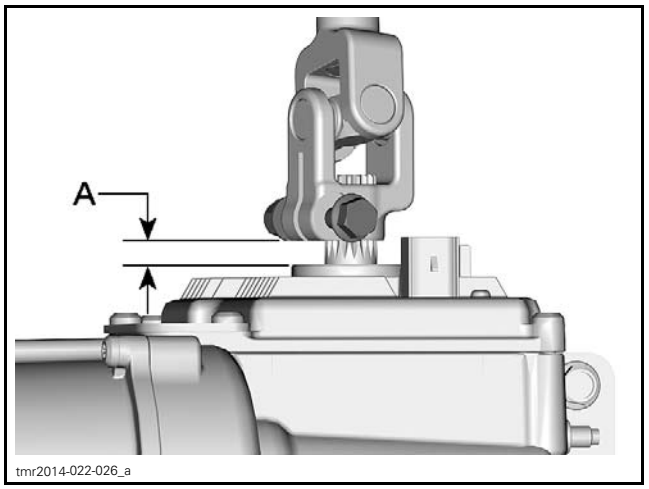
UPPER U-JOINT ON STEERING COLUMN
1. Pinch bolt mounted loose

9. Torque all steering system fasteners to specification. Refer to *STEERING SYSTEM TIGHTENING SEQUENCE* illustration and *STEERING SYSTEM TORQUE SPECIFICATIONS* in this subsection.

NOTICE The steering system tightening sequence must be strictly followed. Failure to do so may result in a steering component misalignment, poor DPS operation due to an induced erroneous torque on DPS shaft, or the impossibility to perform a torque sensor reset.

NOTICE When tightening all screws on the DPS side brackets, be sure to hold the brackets snugly against the frame and DPS unit to remove any gap. The side brackets must NOT apply any force on the DPS unit in any direction. This would create an induced erroneous torque to the DPS shaft.

IMPORTANT: Before tightening lower U-joint bolt on steering column, ensure the following measurements for the steering column engagement depth.



STEERING COLUMN ENGAGEMENT DEPTH

STEERING COLUMN ENGAGEMENT DEPTH (DISTANCE "A")	
Minimum distance	8.5 mm (.335 in)
Maximum distance	15 mm (.591 in)

10. Apply DIELECTRIC GREASE (P/N 293 550 004) on harness connector terminals.
11. Connect DPS connectors to DPS unit.
12. If installing a replacement DPS unit, refer to *DPS REPLACEMENT* in this subsection.
13. Check *STEERING ALIGNMENT*. Refer to *STEERING SYSTEM* subsection.
14. Carry out the *DPS SYSTEM FINAL VERIFICATION*.

DPS System Final Verification

With the front wheels off the ground:

1. Start engine to enable DPS unit.
2. Slowly turn steering wheel from one side to the other 3 times.

Make sure:

– Assistance and travel are equal when turning right or left
– Steering system operates smoothly through all its range.

3. Lower vehicle on the ground.
4. Repeat step 2.

RESULT	ACTION
Uneven/incorrect steering behavior	Troubleshoot steering problem

5. Carry out a test ride of the vehicle to ensure proper operation of the DPS unit.

DPS Unit Replacement

New DPS units **do not** come with the required software programmed into the unit. A DPS unit fault will be generated when the vehicle is powered up. The check engine light will come on and a CHECK DPS message will appear in the multifunction gauge.

The new DPS unit will require 2 mandatory updates. The first update is required for the DPS to recognize what type of vehicle it is installed in, the second to upload the software required for proper operation on that vehicle.

When DPS unit installation is complete, carry out the following steps.

1. Connect the vehicle to the latest B.U.D.S. software.
2. Select the **Read Data** button.
3. A message window will appear in B.U.D.S. asking you if you would like to update the DPS module; select **YES** and follow the instructions. When a second window appears asking you the same question, select **YES** again.
4. Once the correct DPS software file is installed, go to the **Faults** page and clear the fault codes.
5. Carry out the *TORQUE OFFSET RESET* procedure (if required) as described in this subsection.
6. Test drive the vehicle to ensure proper DPS operation.

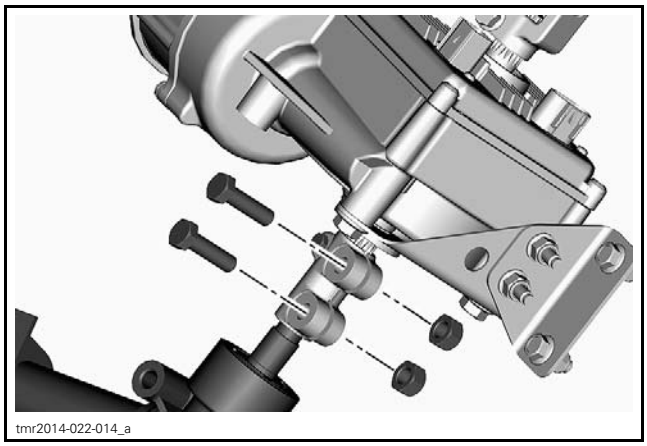
RACK AND PINION

Rack and Pinion Servicing

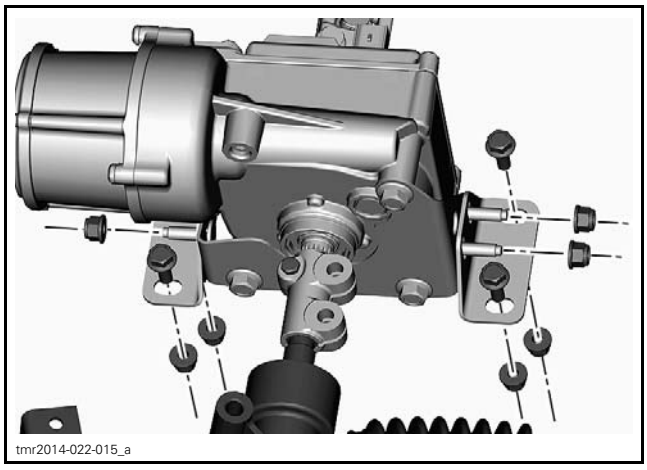
The rack and pinion cannot be serviced except for replacement of the boots and tie rod ends.

Rack and Pinion Removal

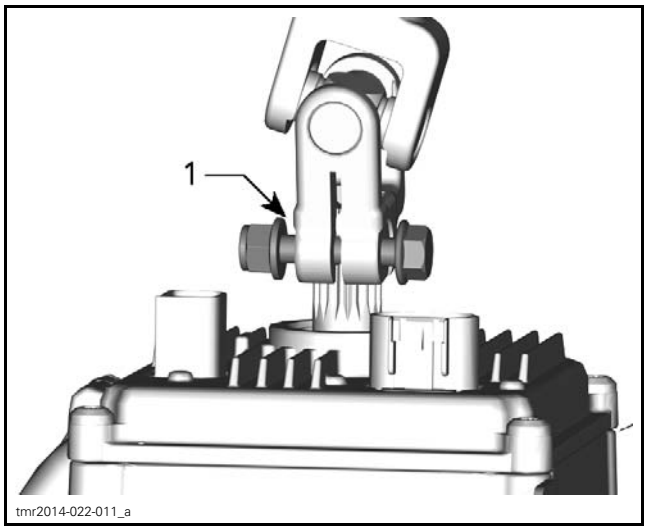
1. Safely lift and support the front of vehicle. Refer to *INTRODUCTION* subsection.
2. Remove both front wheels.
3. Detach tie-rod ends from knuckles. Refer to *TIE ROD END REPLACEMENT* in this subsection.
4. Remove the DPS coupler pinch bolts and nuts. Discard the nuts.



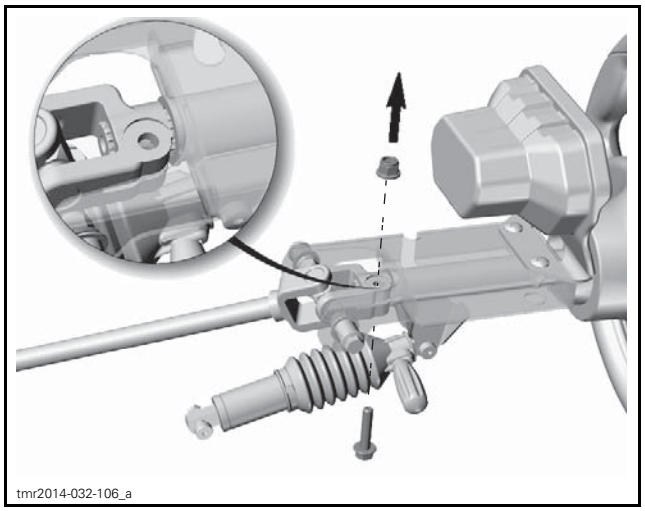
5. Loosen all DPS unit retaining bolts.



6. Loosen steering column pinch bolts (both upper and lower U-joints).

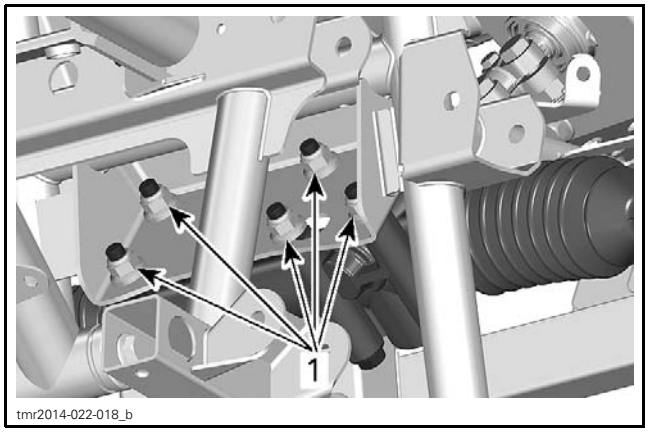


LOWER U-JOINT ON STEERING COLUMN
1. Pinch bolt



UPPER U-JOINT ON STEERING COLUMN

7. Remove the following 5 bolts and nuts securing rack and pinion to frame.



LH SIDE VIEW
1. Five nuts and bolts to remove

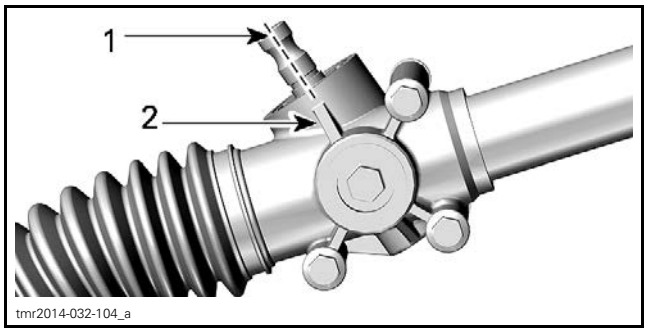
8. Pull down rack and pinion to detach it from the DPS unit.
9. From the LH side, remove rack and pinion from vehicle.

Rack and Pinion Installation

The installation is the reverse of the removal procedure. However, pay attention to the following.

Find rack and pinion center as follows:

– Calculate the total pinion shaft rotations from side to side.
– Position the pinion shaft at **half** the total rotations.
– Using a paint marker, make an alignment mark on pinion and on the rack housing.



1. Mark center
2. Rack and pinion casing

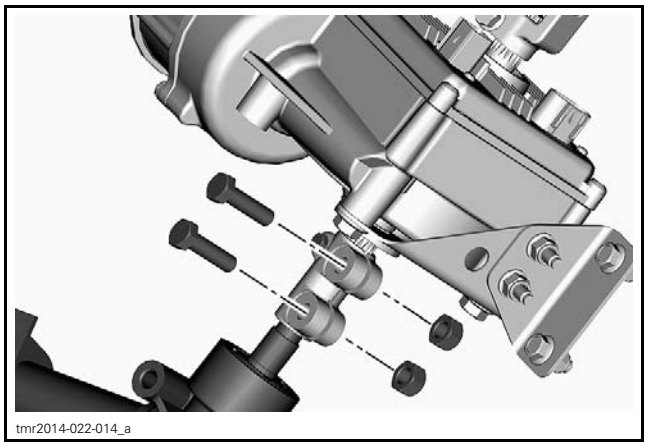
Ensure steering wheel is centered (horizontal).

Loosely install retaining bolts and nuts of rack and pinion.

Position rack and pinion in frame and engage pinion in DPS.. Make sure steering wheel remains centered.

Tighten rack and pinion retaining bolts and nuts.

Loosely install DPS coupler pinch bolts.

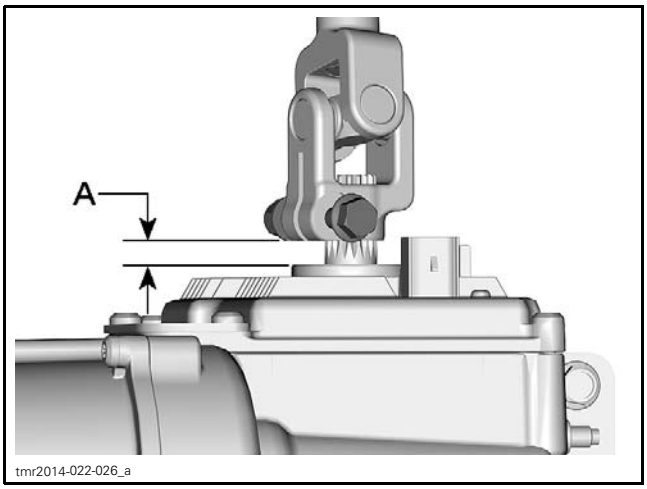


NOTICE The steering system tightening sequence must be strictly followed. Failure to do so may result in a steering component misalignment, poor DPS operation due to an induced erroneous torque on DPS shaft or the impossibility to perform a torque sensor reset.

Torque all steering system retaining nuts to specifications using the specified sequence. Refer to *STEERING SYSTEM TIGHTENING SEQUENCE* and *STEERING SYSTEM TORQUE SPECIFICATIONS* in this subsection.

NOTICE When tightening all screws on the DPS side brackets, be sure to hold the brackets snugly against the frame and DPS unit to remove any gap. The side brackets must NOT apply any force on the DPS unit in any direction. This would create an induced erroneous torque to the DPS shaft

NOTE: IMPORTANT: Before tightening lower U-joint bolt on steering column, ensure the following measurements for the steering column engagement depth.



STEERING COLUMN ENGAGEMENT DEPTH

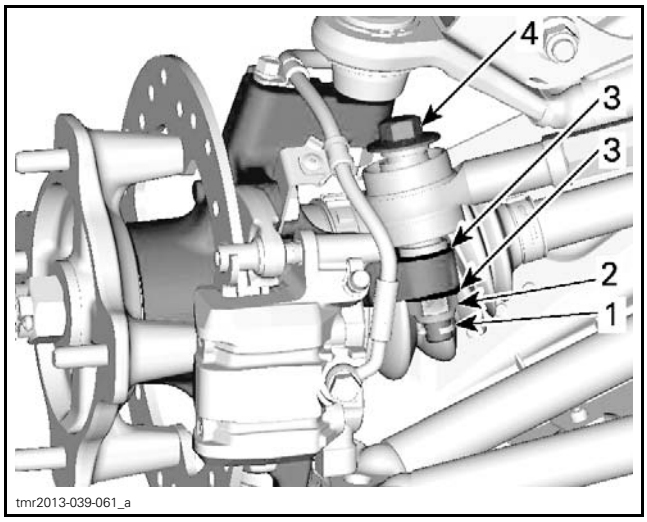
STEERING COLUMN ENGAGEMENT DEPTH (DISTANCE "A")	
Minimum distance	8.5 mm (.335 in)
Maximum distance	15 mm (.591 in)

Check steering alignment. Refer to *STEERING ALIGNMENT* in this subsection.

TIE-ROD ENDS

Tie-Rod End Replacement

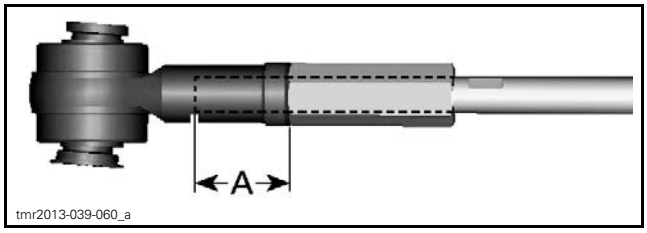
1. Safely lift and support the front of vehicle. Refer to *INTRODUCTION* subsection.
2. Remove front wheel.
3. Detach tie-rod end by removing:
   - Cotter pin
   - Tie-rod end retaining nut
   - Hardened washers
   - Tie-rod end bolt.



1. Cotter pin
2. Tie-rod end retaining nut
3. Hardened washers
4. Tie-rod end bolt

4. Discard cotter pin and nut.
5. Replace tie-rod end.
6. Adjust tie-rod end to the nominal engagement length.

TIE-ROD END NOMINAL ENGAGEMENT LENGTH
25 turns or 31 mm (1.22 in)



A. Nominal length

⚠ WARNING

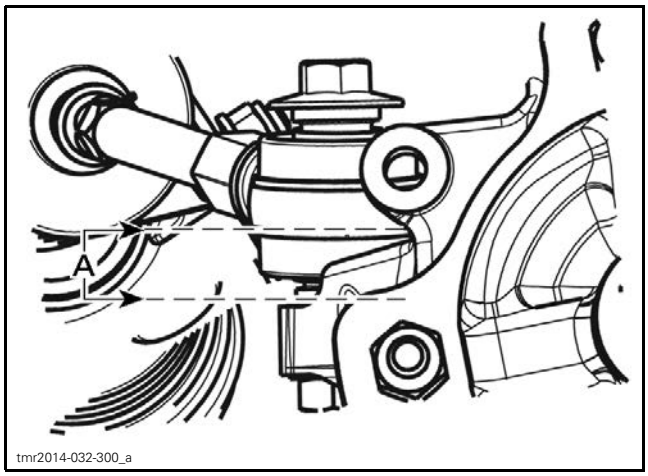
The minimum tie-rod end length engagement in the tie rod must be 25 mm (1 in).

7. Torque tie-rod end **locking** nut to specification.

TIE-ROD END **LOCKING** NUT TORQUE
34 N•m ± 2 N•m (25 lbf•ft ± 1 lbf•ft)

8. Attach tie-rod end on knuckle as the reverse of removal.

NOTE: When tightening, make sure tie-rod end casing is parallel with knuckle mounting face to avoid damaging the casing.



TIE ROD END ASSEMBLY
A. Parallel planes

9. Install a NEW tie-rod end **retaining** nut and torque to specification.

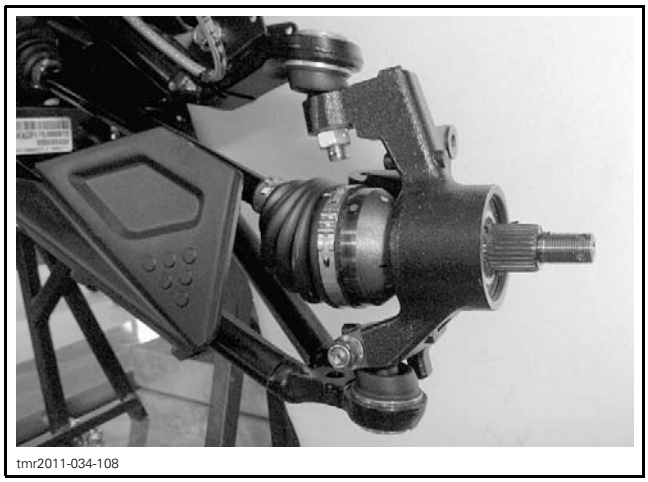
TIE-ROD END **RETAINING** NUT TORQUE
105 N•m ± 15 N•m (77 lbf•ft ± 11 lbf•ft)

10. Install a NEW cotter pin. Both ends of cotter pins must be folded.
11. Install front wheel.
12. Check the steering alignment, refer to *STEERING ALIGNMENT* in this subsection.

KNUCKLES

Knuckle Removal

1. Safely lift and support the front of vehicle. Refer to *INTRODUCTION* subsection.
2. Remove front wheel.
3. Detach tie-rod end from knuckle, refer to *TIE-ROD END* in this subsection.
4. Remove caliper, refer to *BRAKES* subsection.



TYPICAL

5. Remove wheel hub, refer to *FRONT DRIVE* subsection.
6. Detach upper suspension arm from knuckle, refer to *FRONT SUSPENSION*.
7. Detach lower suspension arm from knuckle, refer to *FRONT SUSPENSION*.
8. Remove knuckle from vehicle.

Knuckle Inspection

Check knuckle for cracks or other damages.

Replace if necessary.

Knuckle Installation

The installation is the reverse of the removal procedure.

WHEEL BEARINGS

Wheel Bearing Inspection (Maintenance)

Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.

Wheel Bearing Inspection (During Component Removal)

Whenever the drive axle or knuckle is removed, check wheel bearing as follows:

– Check if wheel bearing turns freely and smoothly.
– Check seal condition.

Replace if necessary.

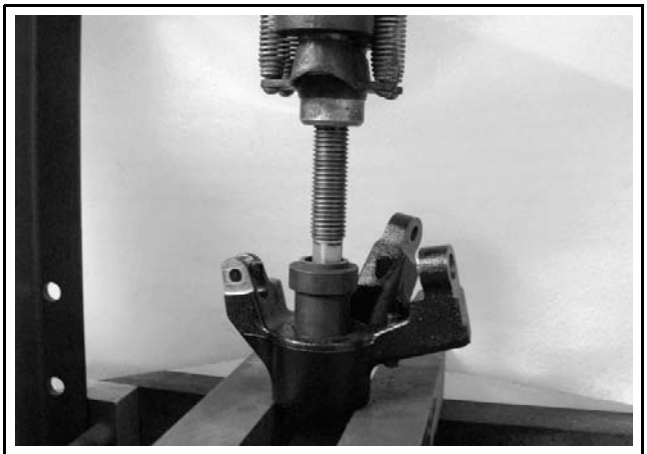
Wheel Bearing Removal

1. Remove knuckle from vehicle, refer to *KNUCKLE REMOVAL* in this subsection.
2. Remove and discard knuckle seal.
3. Remove circlip.

1. Seal
2. Circlip

4. Install knuckle on a press.

5. Use an appropriate bearing remover.
6. Remove bearing from knuckle.



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NOTE: It may be necessary to heat the knuckle to remove bearing.

⚠ WARNING

Clean all grease, outside and inside, from knuckle before heating it.

Wheel Bearing Installation

The installation is the reverse of the removal procedure. However, pay attention to the following.

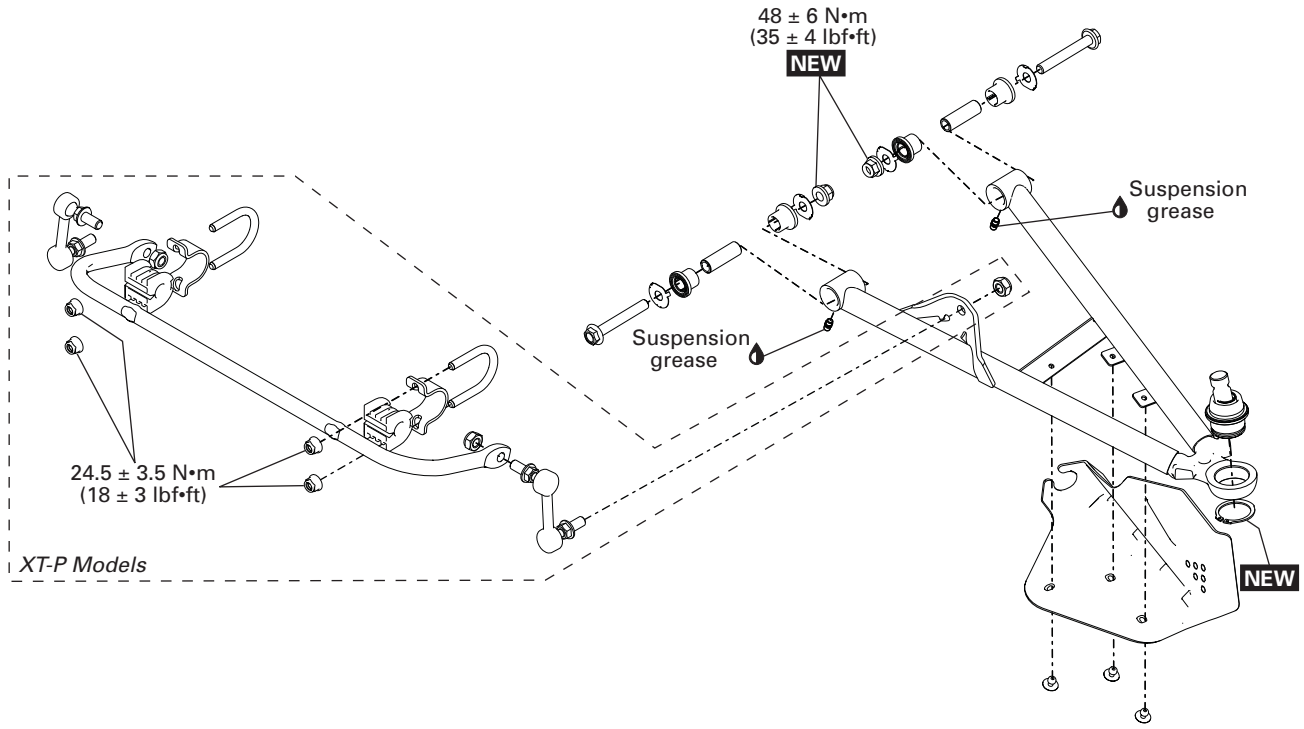
To ease wheel bearing installation:

– Place bearing in a freezer for 10 minutes.
– Place knuckle in oven to 100°C (212°F) for 30 minutes maximum.

When knuckle is cooled down, install NEW circlip and NEW seal.

FRONT SUSPENSION

LOWER SUSPENSION ARM AND STABILIZER BAR



NEW = Component must be replaced when removed.

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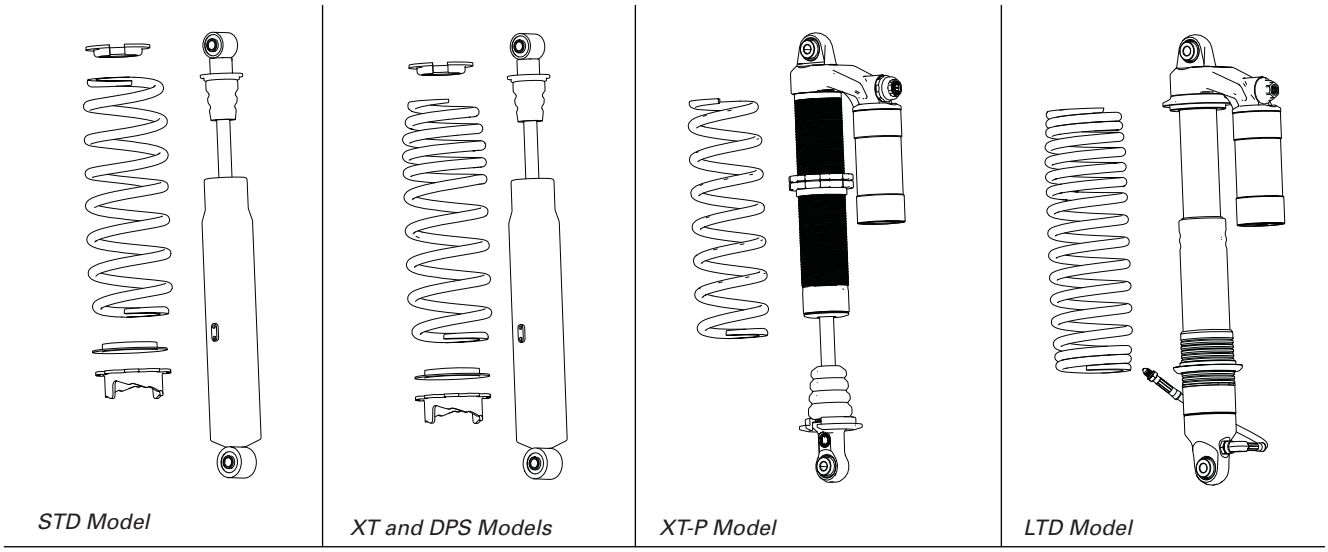
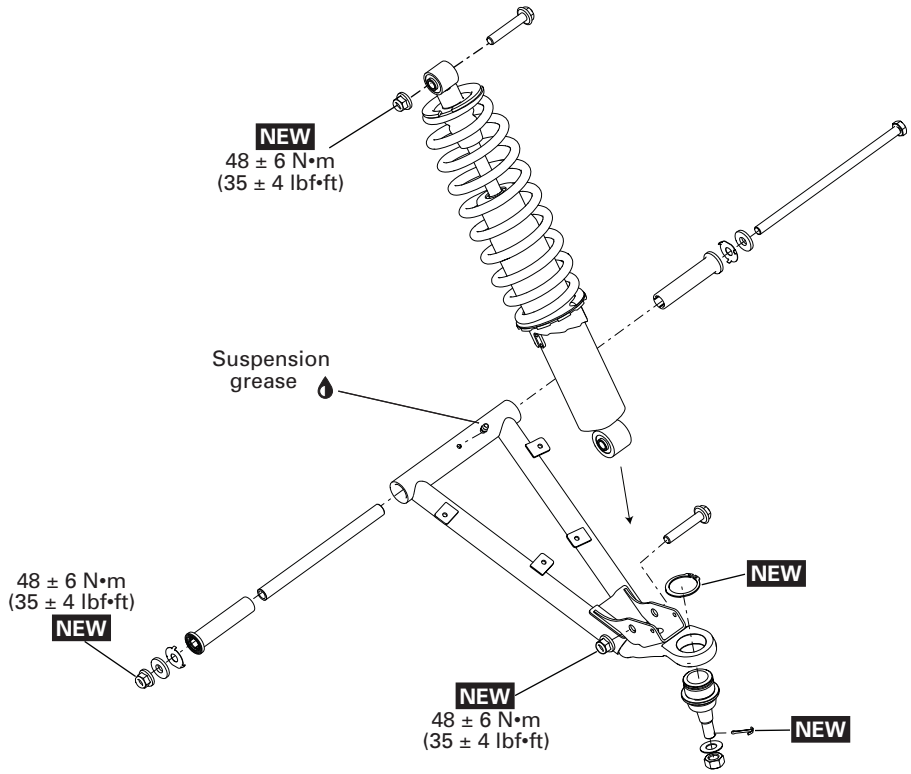
UPPER SUSPENSION ARM



STD Model | *XT and DPS Models* | *XT-P Model* | *LTD Model*



NEW = Component must be replaced when removed.

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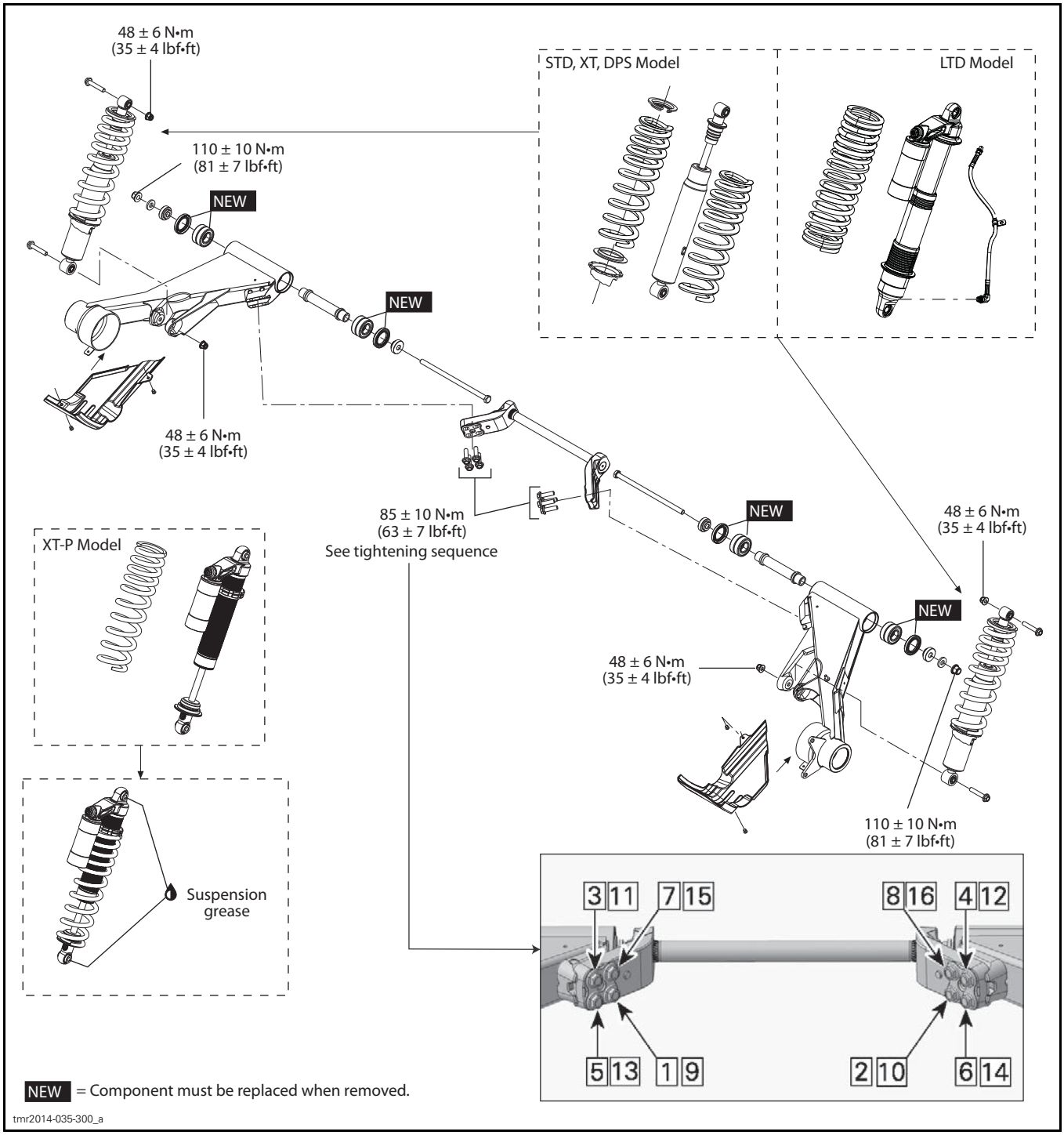
REAR SUSPENSION

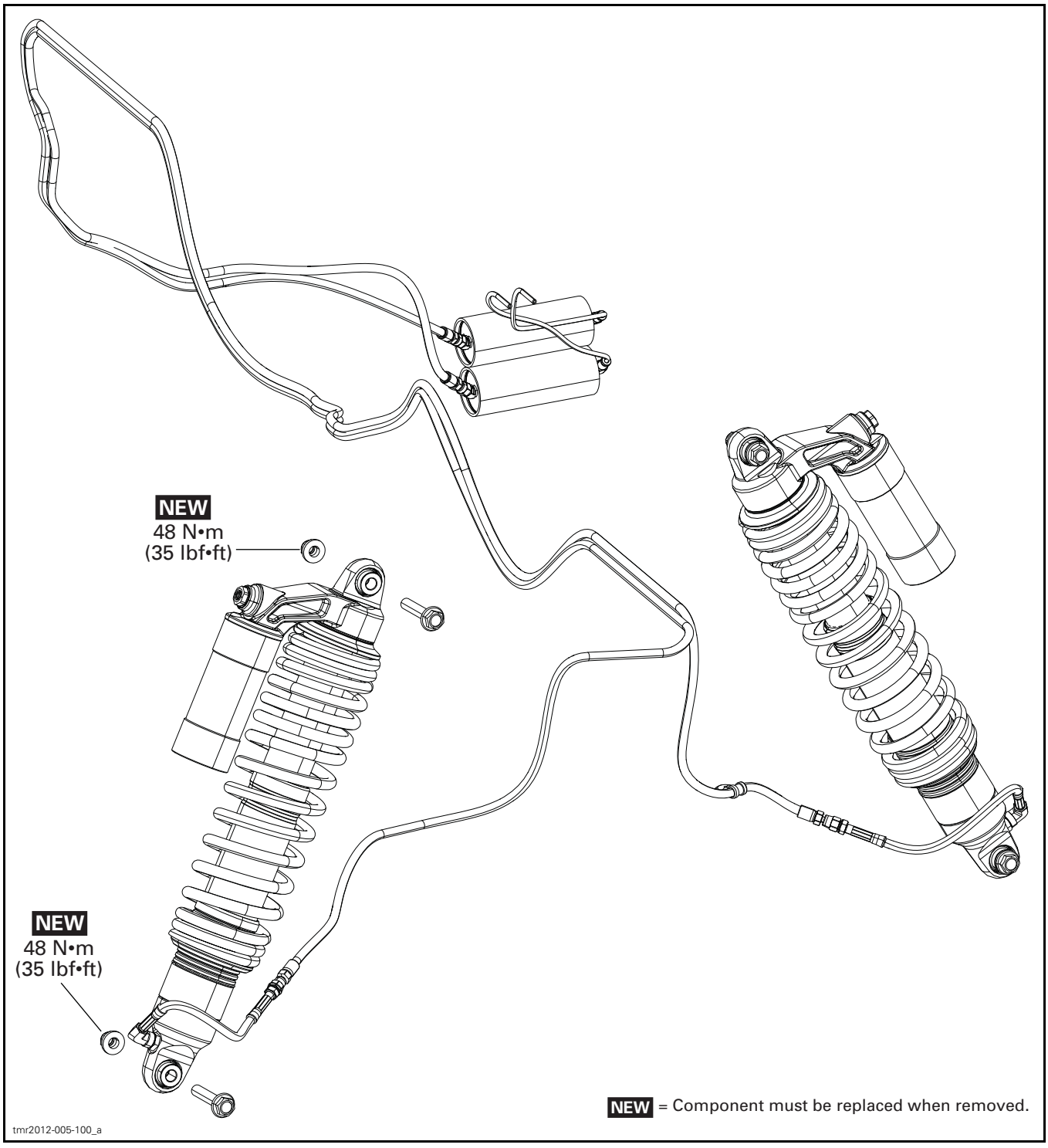


AIR CONTROLLED SUSPENSION (ACS)

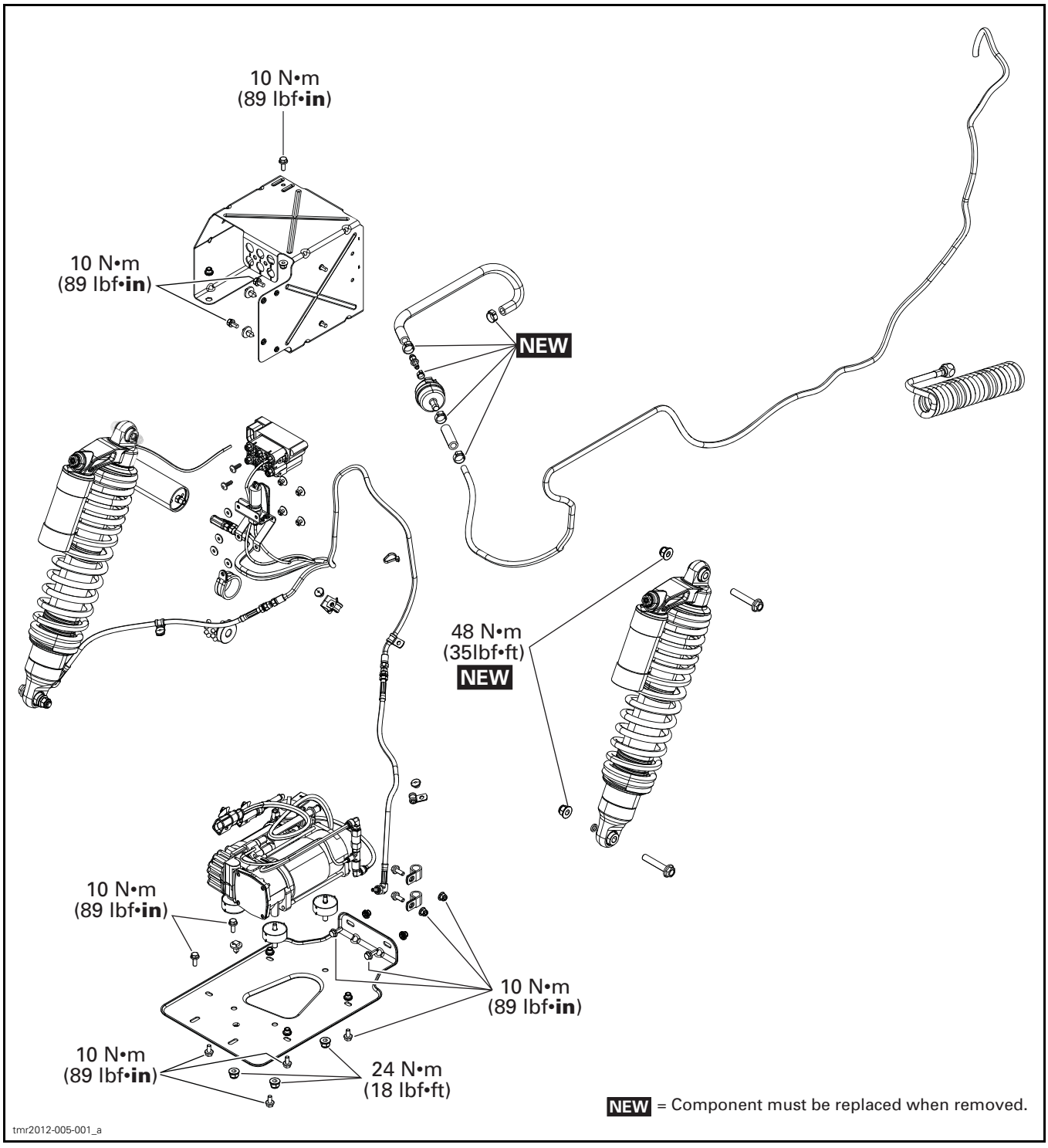
SERVICE TOOLS

Description	Part Number	Page
FLUKE 115 MULTIMETER	529 035 868	400–404, 406–408

ACS FRONT SUSPENSION



ACS REAR SUSPENSION



GENERAL

Be careful while manipulating nylon hoses, they must not be kinked.

Vehicle must be running to adjust ACS suspension or perform certain tests.

⚠ **CAUTION** Always wear safety goggles when working with pressurized air system.

⚠ **CAUTION** The ACS suspension system may be under high pressure (over 900 kPa (130 PSI)). Release air pressure prior to working on the system. Refer to *AIR PRESSURE RELEASE FOR SERVICING*.

SYSTEM DESCRIPTION (OPERATION)

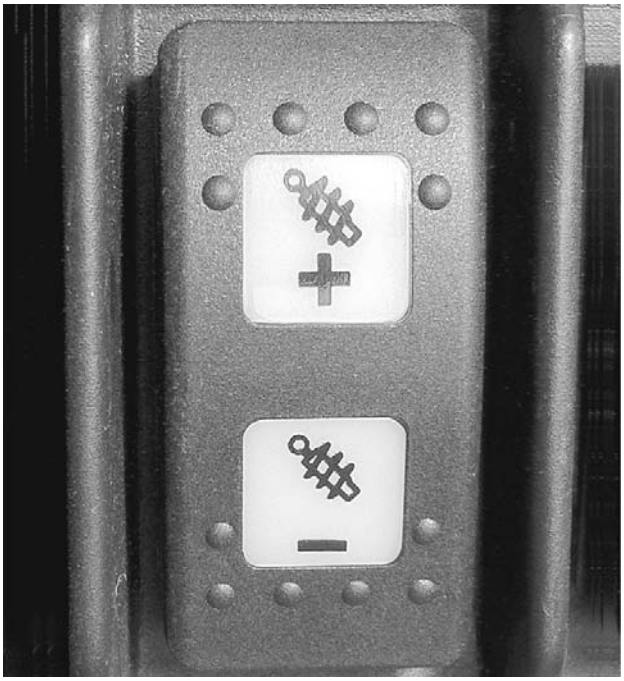
The Commander LTD comes equipped with front and rear air-controlled suspension and HPG shocks with remote reservoir (piggyback).

By changing the ACS setting, air pressure in the front and rear shocks absorbers will change to provide a multitude of different suspension adjustments.

The ACS adjusts the front and rear shocks to 6 rider selectable levels depending on trail conditions or riders preference.

The front shocks pressure is lower than the rear shocks. The pressure are determined by the setting position.

This system allows the operator to adjust the front and rear suspension by pressing the suspension button.


vdd2012-001-712

⚠ WARNING

Always adjust the ACS suspension setting according to load, riding condition, and speed.

NOTE: The ACS suspension will NOT self-adjust unless the engine is running, even when key switch is set to on.

The ACS has 2 modes for suspension adjustment:
– ACS auto mode
– ACS manual mode.

NOTE: The DPS is prioritized and as a result, when the DPS is heavily used, the ACS commands will be queued and executed when the DPS amp usage drops below a certain level.

ACS AUTO Mode

The automatic mode allows for simultaneous adjustments on the front and rear suspensions.

In auto mode, the suspension will automatically be adjusted to the preselected riding comfort position.

ACS SUSPENSION SETTINGS		
SETTING	RIDING COMFORT	RECOMMENDED LOAD
ACS 1	Softest	Operator only
ACS 2	Soft	
ACS 3	Semi-soft	Transporting a passenger **OR** a cargo
ACS 4	Semi-firm	
ACS 5	Firm with high ground clearance	Transporting a passenger **AND** a cargo
ACS 6	Firmest and highest ground clearance	

vdd2012-001-714

ACS AUTO MODE

Use ACS 1 to ACS 4 for trail riding.

Use the ACS 5 or ACS 6 settings to maximize ground clearance and increase performance while riding in the following environments:

– Muddy
– Watery
– Obstacles.

Use the ACS 6 setting is to maximize ground clearance and increase performance while carrying heavy loads:

⚠ WARNING

Always adjust the ACS suspension setting according to load, riding condition, and speed.

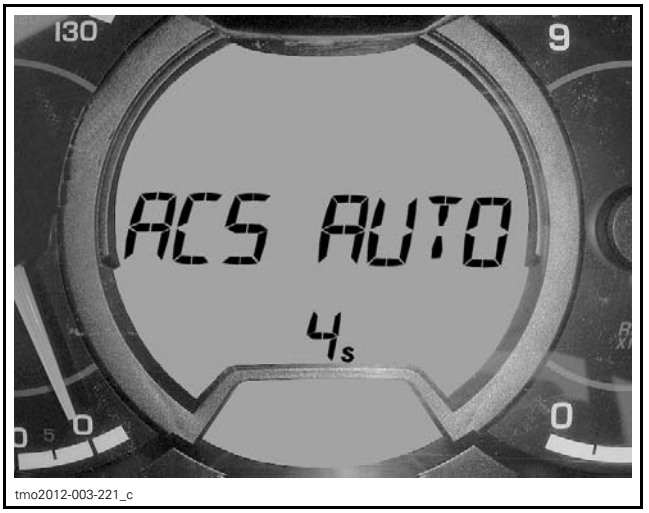
To Enter ACS Automatic Mode:

Press the MODE button until either ACS AUTO or ACS MAN is displayed.

Press SET button to have current ACS mode blink on screen.

Press SET button to select ACS AUTO mode.

NOTE: Selected ACS Setting from ACS1 to ACS6 displayed through gearbox position indicator.

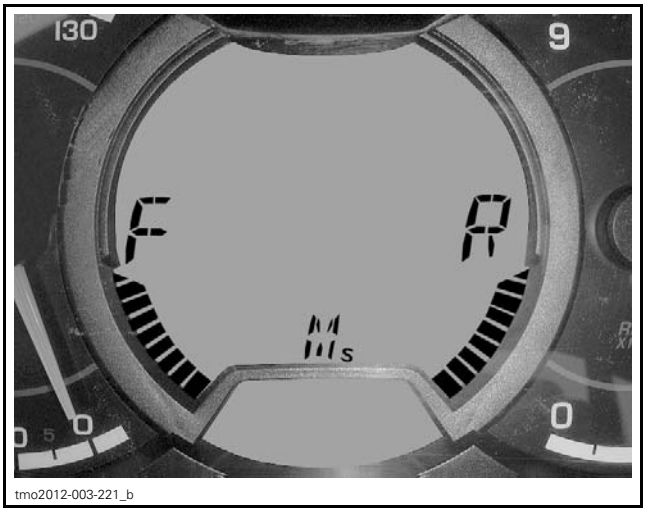


tmo2012-003-221_c

Press and hold SET button to confirm selection.

ACS MANUAL Mode

In manual mode the front and rear shock pressures can be adjusted independently. The fuel and temperature indicators will respectively become front and rear ACS pressure setting indicators.



tmo2012-003-221_b

ACS MANUAL MODE

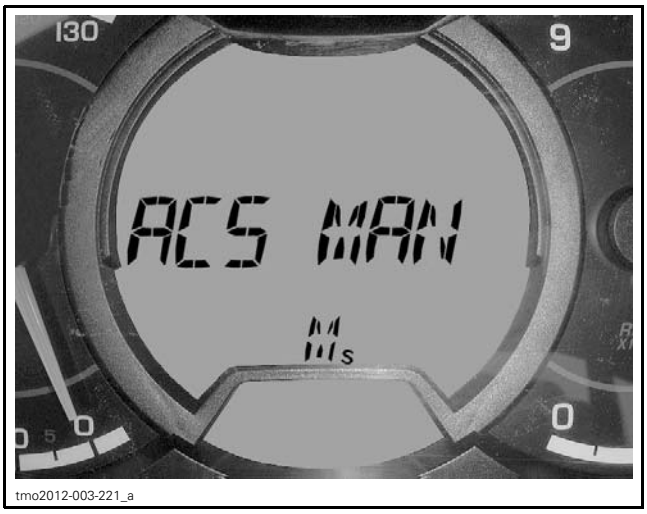
To Enter ACS Manual Mode:

Press the MODE button until either ACS AUTO or ACS MAN is displayed.

Press SET button to have current ACS mode blink on screen.

Press SET button to select ACS MAN mode.

NOTE: ACS set points and actual settings displayed through fuel, temp and gearbox position indicators.

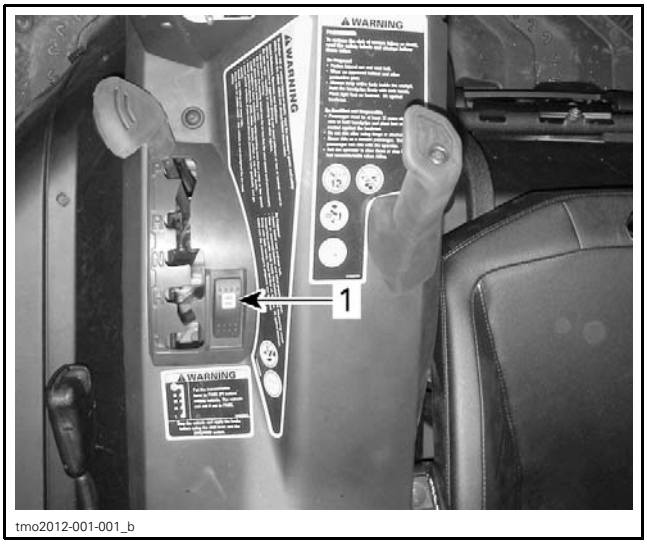


tmo2012-003-221_a

Press and hold SET button to confirm selection.

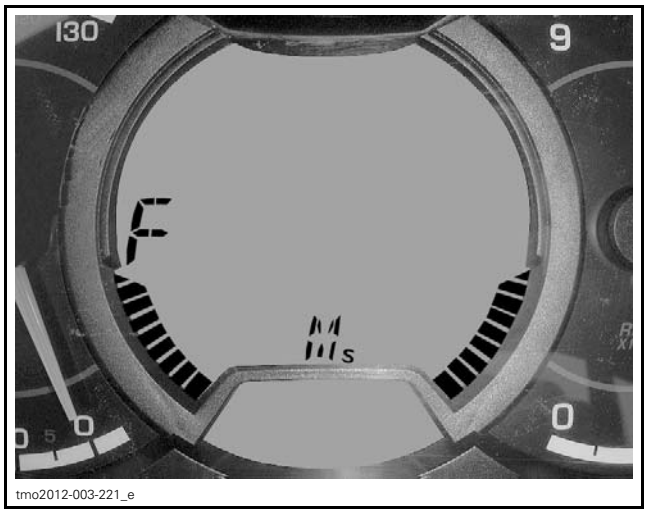
To Adjust Front Suspension:

Press on the OVERRIDE button until front (F) is blinking to select front (F) suspension setting.



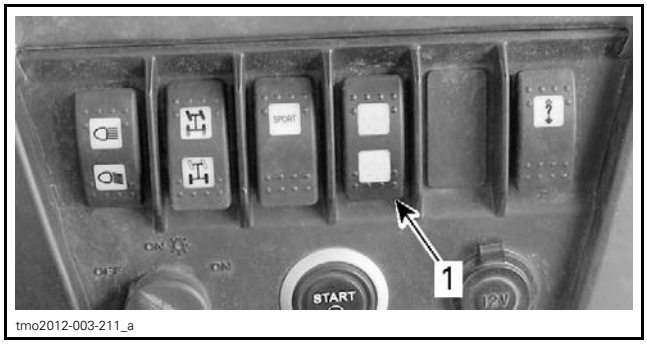
tmo2012-001-001_b

1. Override switch



tmo2012-003-221_e

Press and hold ACS button to lower or raise the front suspension until desired setting is achieved.

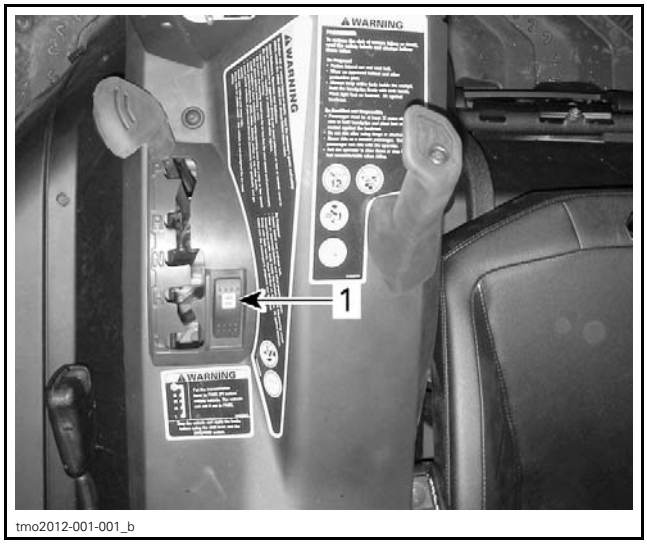


tmo2012-003-211_a

1. ACS button

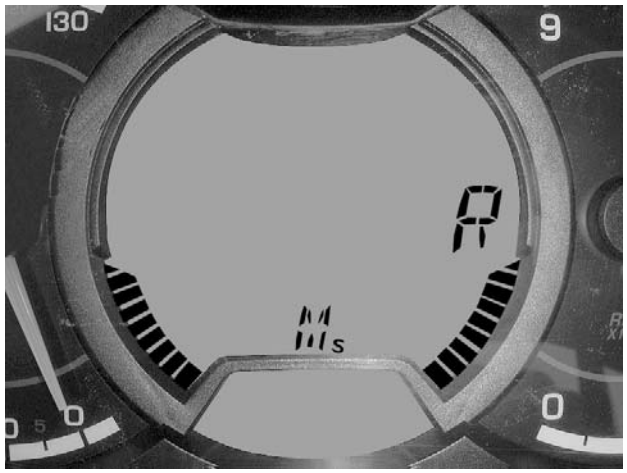
To Adjust Rear Suspension:

Press on the OVERRIDE button until rear (R) is blinking to select rear (R) suspension setting.



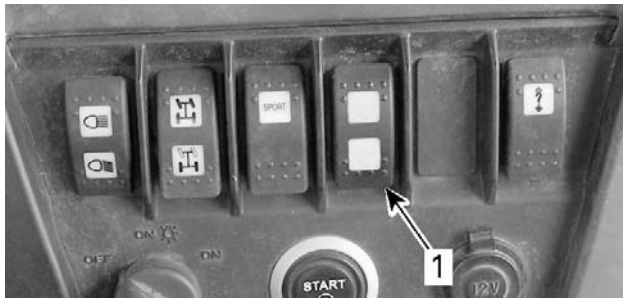
tmo2012-001-001_b

1. Override switch



tmo2012-003-221_d

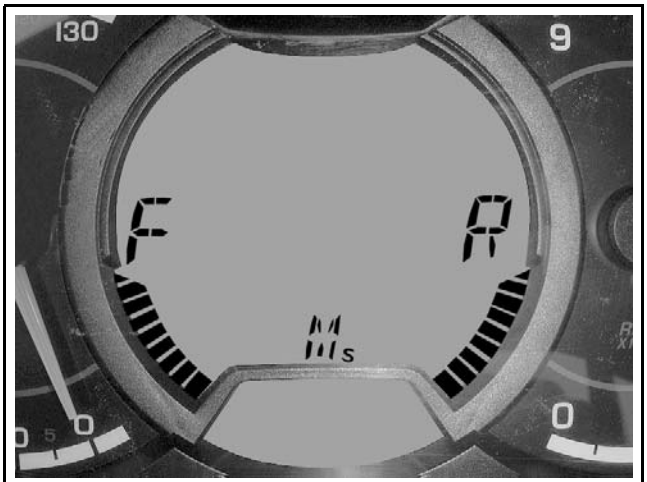
Use the ACS button to lower or raise the rear suspension.



tmo2012-003-211_a

1. ACS button

NOTE: Fuel and temperature indicators will respectively become front and rear ACS setting indicators.



tmo2012-003-221_b

Quick Mode Selection

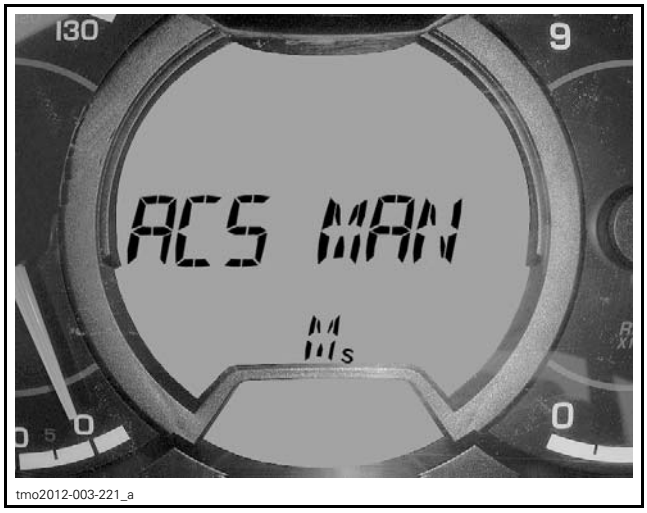
The last setting utilized in each mode is stored in the system. This allows for quick selections between the stored automatic mode setting and the stored manual mode setting.

To Enter Quick Mode Selection:

Press the MODE button until either ACS AUTO or ACS MAN is displayed.

Press SET button to have current ACS mode blink on screen.

Press SET button to select desired mode.



tmo2012-003-221_a

tmo2012-003-221_c

Press and hold SET button to confirm selection.

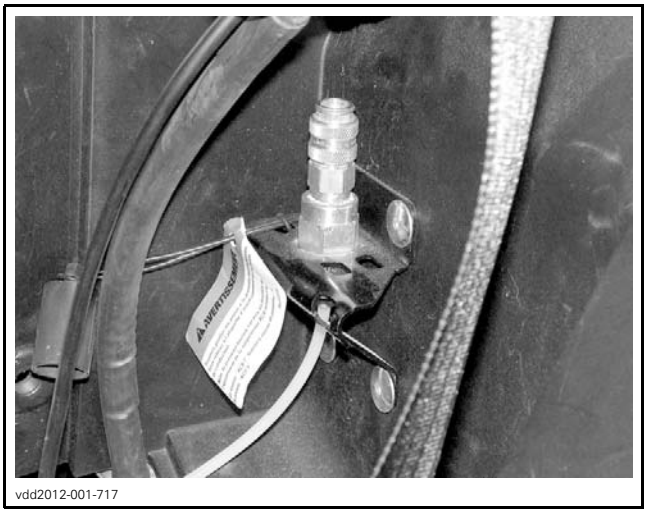
ACS system will adjust to the last settings.

SYSTEM DESCRIPTION (FEATURES)

Tire Inflation Using the ACS Compressor

The ACS compressor also comes with an auxiliary hose that can be used to inflate tires out on the trail.

The air outlet fitting is located behind the driver's seat.



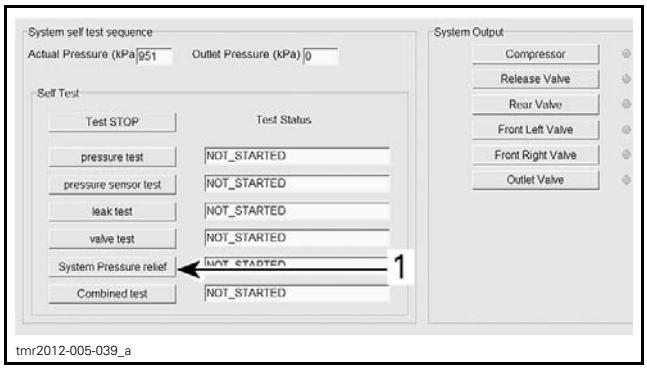
vdd2012-001-717

Air Pressure Release for Servicing

It is recommended to release air pressure in the system before servicing any components.

1. Connect vehicle to the latest appropriate version of B.U.D.S. Refer to *COMMUNICATION TOOLS AND B.U.D.S. SOFTWARE* subsection.
2. Select **Activation** page.
3. Select **ACS** folder.
4. Press the **System Pressure relief** button to proceed.

⚠ CAUTION Vehicle height will change during test. Keep away from wheelwell and suspension.



tmr2012-005-039_a

1. **System Pressure relief** *button*

NOTE: After activating the **System Pressure relief** button the system is not completely empty. The compressor setting does not allow to drop pressure under 207 kPa (30 PSI).

SYSTEM DESCRIPTION (COMPONENTS)

Fuse and Relay

ACS Fuse

The ACS system is protected by the fuse F3 (50 A) located in the fuse block no. 2. This fuse powers the ACS compressor through the ACS relay (R5).

NOTE: The ACS and DPS systems share the same fuse.

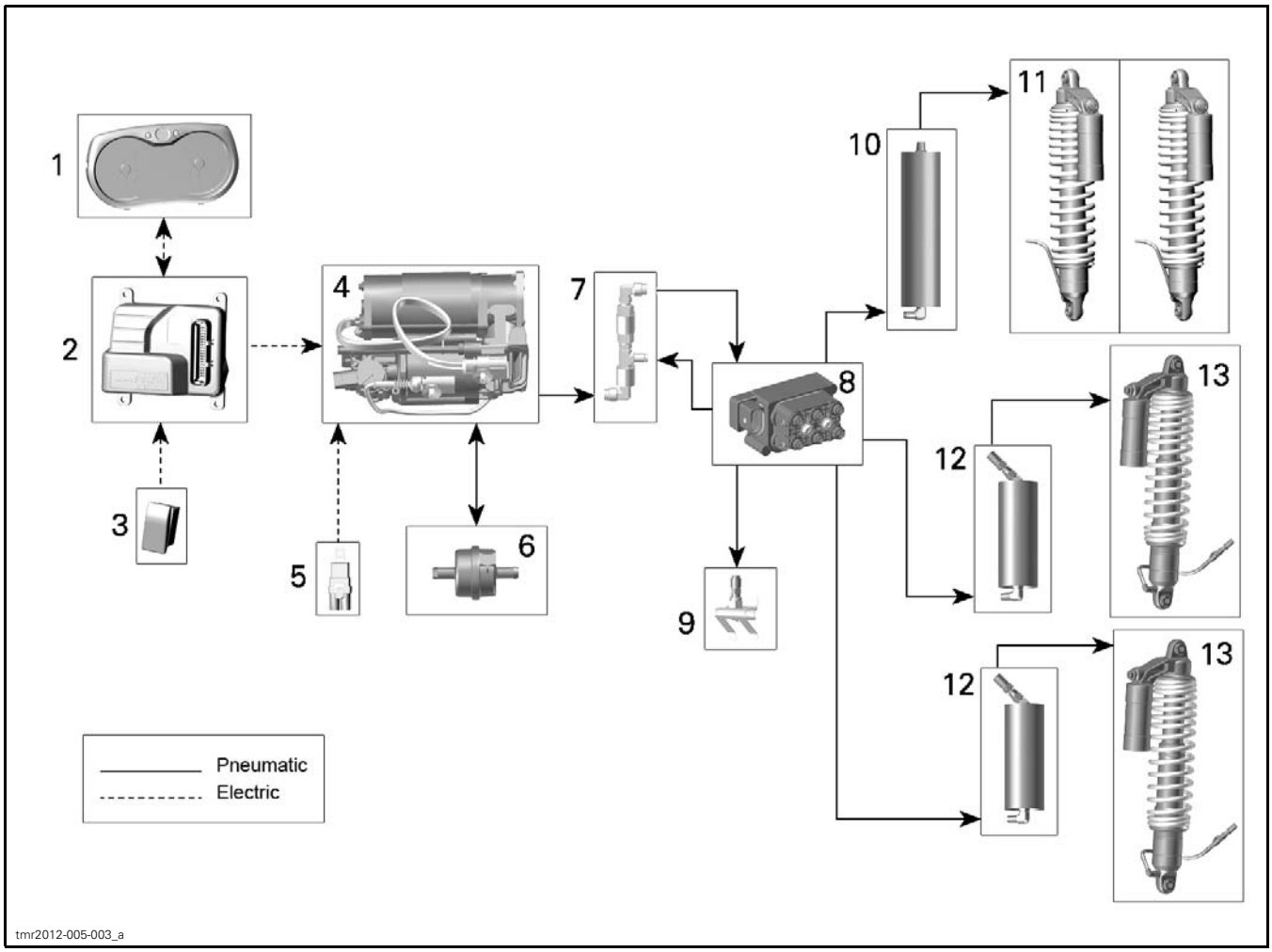
F12 powers the valve and the ACS relay.

F4 powers the electronic components.

ACS Compressor Relay (R5)

ACS compressor relay (R5) is located near ACS compressor, under driver's seat.

ACS Main Components



Pneumatic
Electric

1. *Multifunction gauge*
2. *Suspension control module (SCM)*
3. *ACS button*
4. *ACS compressor (including temperature sensor)*
5. *ACS relay (R5)*
6. *Air filter*
7. *Pressure distributor*
8. *ACS solenoid valve (including pressure sensor)*
9. *Outlet fitting*
10. *Rear air reservoir*
11. *Rear shock absorbers*
12. *Front air reservoirs*
13. *Front shock absorbers*

TROUBLESHOOTING

DIAGNOSTIC TIPS

Error Message Displayed in Multifunction Gauge

Two error messages can appear in the multifunction gauge and they are not necessarily related to a failure of the ACS system.

AIR FAULT

If this message appears, it indicates a disparity between the requested and the actual suspension settings. The system should react to correct this situation and the message will disappear.

If the message remains active for a long period, it may indicate one of the fuses (F3, F4 or F12) is burned or a major leak in the system. In this case, the suspension control module (SCM) will automatically shut down the compressor to prevent it from overheating. The shut down procedure of the compressor will stay active until the next restart of the vehicle (key OFF, key ON).

If there is a major leak in the system, check the system for leakage, refer to *ACS SYSTEM LEAK TEST*.

If there is no leak, the problem can be electrical or mechanical. In this case, an electrical failure of the compressor or the solenoid valve will result in the impossibility to change the actual suspension setting; a mechanical failure of the solenoid valve will create the same situation.

After multiple attempts to change suspension setting, the suspension control module (SCM) will activate error message AIR FAULT. Refer to *TROUBLESHOOTING GUIDELINES* for further troubleshooting procedure.

COMPRESSOR TEMPERATURE OVERHEAT

This message appears when the compressor temperature is over the calibrated value.

This situation can occur if the compressor or the solenoid valves are used during a long period of time (continually or with brief halts).

Let the compressor cool down before using it again.

TROUBLESHOOTING GUIDELINES

In AUTO Mode

GAUGE DISPLAY SETTING (S1 TO S6) CHANGED BUT SUSPENSION DOES NOT WORKED

1. Burn fuse F3 (50 A).
   - *Replace.*
2. Faulty compressor.
   - *Carry out a compressor operation test. Refer to ACS COMPRESSOR OPERATION TEST.*
3. Faulty solenoid valve.
   - *Carry out a solenoid valve operation test. Refer to ACS SOLENOID VALVE OPERATION TEST.*
4. Faulty suspension control module (SCM).
   - *Check the SCM. Refer to SUSPENSION CONTROL MODULE (SCM).*

GAUGE DISPLAY SETTING (S1 TO S6) DOES NOT CHANGED BUT SUSPENSION WORKED

1. Burned fuse.
   - *Replace.*
2. Faulty suspension control module (SCM).
   - *Check the SCM. Refer to SUSPENSION CONTROL MODULE (SCM).*
3. Faulty multifunction gauge.
   - *Check the multifunction gauge.*

GAUGE DISPLAY DOES NOT CHANGE AND SUSPENSION DOES NOT WORKED

1. Make sure engine is running.
   - *Start engine.*
2. Burn fuse F3 (50 A).
   - *Replace.*
3. Faulty suspension control module (SCM).
   - *Check the SCM. Refer to SUSPENSION CONTROL MODULE (SCM).*
4. Faulty ACS button or wiring.
   - *Check ACS button continuity.*
   - *Check ACS button control circuit.*

In Manual Mode

GAUGE DISPLAY SETTING (F OR R) DOES NOT CHANGED

1. Faulty Override button.
   - *Check the Override button.*

2. Faulty multifunction gauge.
   - *Check the multifunction gauge.*

AUTO and MANUAL Mode

SUSPENSION PRESSURE CAN BE INCREASED ONLY

1. Faulty solenoid valve.
   - *Carry out a release valve operation test. Refer to ACS RELEASE VALVE OPERATION TEST.*
2. Faulty ACS release valve.
   - *Carry out a solenoid valve operation test. Refer to ACS SOLENOID VALVE OPERATION TEST.*
3. Faulty ACS button or wiring.
   - *Check ACS button continuity. Refer to ACS BUTTON.*
   - *Check ACS button control circuit. Refer to ACS BUTTON.*
4. Faulty suspension control module (SCM).
   - *Check the SCM. Refer to SUSPENSION CONTROL MODULE (SCM).*

SUSPENSION PRESSURE CAN BE DECREASED ONLY

1. Faulty relay (R5).
   - *Check the ACS relay. Refer to ACS RELAY.*
2. Faulty compressor.
   - *Carry out a compressor operation test. Refer to ACS COMPRESSOR OPERATION TEST.*
3. Faulty solenoid valve.
   - *Carry out a solenoid valve operation test. Refer to ACS SOLENOID VALVE OPERATION TEST.*
4. Faulty ACS button or wiring.
   - *Check ACS button continuity. Refer to ACS BUTTON.*
   - *Check ACS button control circuit. Refer to ACS BUTTON.*
5. Faulty suspension control module (SCM).
   - *Check the SCM. Refer to SUSPENSION CONTROL MODULE (SCM).*

SUSPENSION PRESSURE CANNOT BE CHANGED

1. Make sure engine is running.
   - *Start engine.*
2. Burn fuse F3 (50 A).
   - *Replace.*
3. Battery voltage too low.
   - *Check battery voltage with engine running. It must be over 13 V.*
4. Faulty charging system.
   - *Check the charging system. Refer to CHARGING SYSTEM subsection.*
5. Faulty relay (R5).
   - *Check the ACS relay. Refer to ACS RELAY.*
6. Faulty compressor.
   - *Carry out a compressor operation test. Refer to ACS COMPRESSOR OPERATION TEST.*
7. Faulty solenoid valve.
   - *Carry out a solenoid valve operation test. Refer to ACS SOLENOID VALVE OPERATION TEST.*
8. Faulty ACS button or wiring.
   - *Check ACS button continuity. Refer to ACS BUTTON.*
   - *Check ACS button control circuit. Refer to ACS BUTTON.*
9. Faulty suspension control module (SCM).
   - *Check the SCM. Refer to SUSPENSION CONTROL MODULE (SCM).*

AIR OUTLET FITTING DOES NOT WORKS

1. Make sure engine is running.
   - *Start engine.*
2. Faulty solenoid valve.
   - *Carry out a solenoid valve operation test. Refer to ACS SOLENOID VALVE OPERATION TEST.*

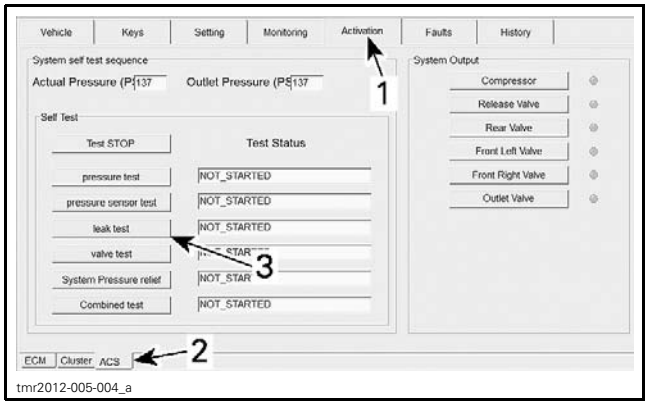
TROUBLESHOOTING WITH B.U.D.S.

Check battery voltage before performing any B.U.D.S. test. Battery must be fully charged or use a power pack to ensure adequate power for all required tests.

ACS System Leak Test

1. Connect vehicle to the latest appropriate version of B.U.D.S. Refer to *COMMUNICATION TOOLS AND B.U.D.S. SOFTWARE* subsection.
2. Select **Activation** page.
3. Select **ACS** folder.
4. In **Self Test** region, press the **leak test** button to proceed.

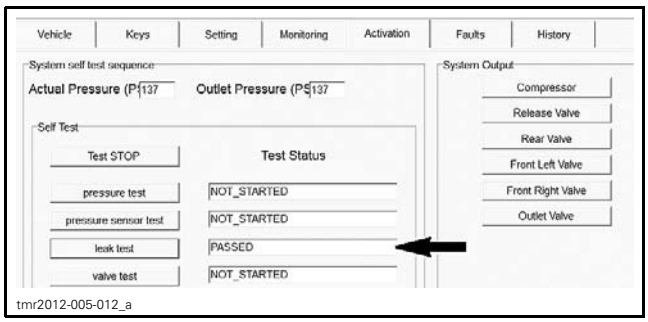
⚠ CAUTION Vehicle height will change during test. Keep away from wheelwell and suspension.



tmr2012-005-004_a

1. *Activation page*
2. *ACS folder*
3. *Leak test button*

The result will be indicated in the TEST STATUS box beside the **leak test** button.



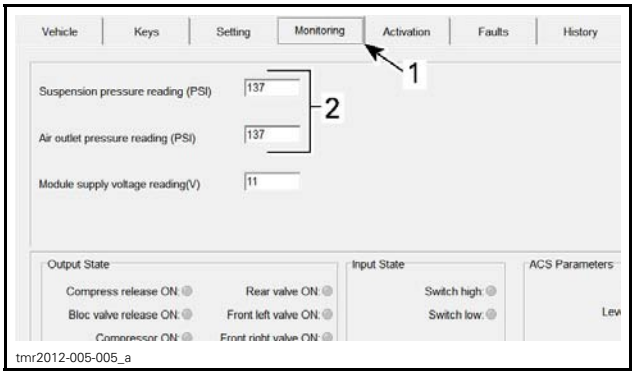
tmr2012-005-012_a

If a leak is detected, pressurize the system again and inspect hoses and fittings with soapy water to locate the faulty component.

ACS Air Pressure Monitoring

To monitor air pressure in the system during troubleshooting operation, proceed as follows:

1. Connect vehicle to the latest appropriate version of B.U.D.S. Refer to *COMMUNICATION TOOLS AND B.U.D.S. SOFTWARE* subsection.
2. Select **Monitoring** page.
3. Select **ACS** folder.



tmr2012-005-005_a

1. *Monitoring page*
2. *Suspension pressure*

PROCEDURES

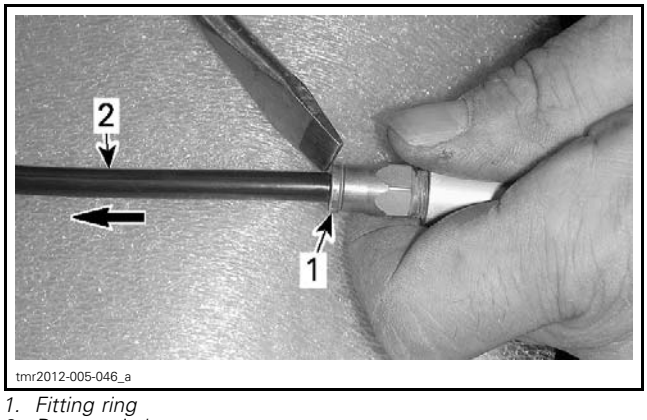
PNEUMATIC HOSE

NOTICE **Do not attempt to disconnect pneumatic hoses from ACS manifold or ACS exhaust compressor valve.**

Pneumatic Hose Removal

Release air pressure from the ACS system. Refer to *AIR PRESSURE RELEASE FOR SERVICING* in this subsection.

Pneumatic hoses may be disconnected by pushing inwards on the air fitting ring (towards the air fitting) while pulling outwards on the hose.



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1. *Fitting ring*
2. *Pneumatic hose*

NOTE: Pull the hose slightly and wait during the release of the remaining air. When all air is released, remove pneumatic hose from its fitting.

Pneumatic hose Installation

Before installing the hose, verify the end of the pneumatic hose.

If deep nicks are found, cut a small portion of the hose end.

HOSE END LENGTH TO BE CUT
3.18 mm to 6.35 mm (1/8 in to 1/4 in)

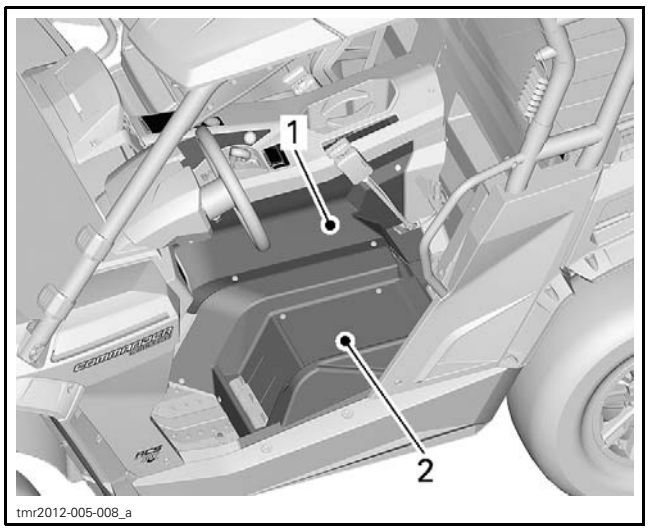
Push the hose inwards then pull the air fitting ring outwards to reestablish a good seal and lock the hose in place.

ACS RELEASE VALVE

ACS Release Valve Access

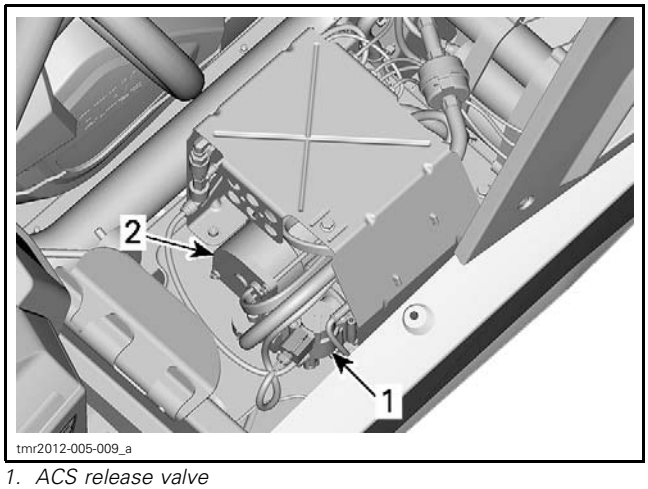
To access to ACS release valve, remove the following:

– Driver's seat
– LH lateral console panel
– Floor panel.



SIDE NET REMOVED FOR CLARITY
1. LH lateral console panel
2. Floor panel

The ACS release valve is a component of the ACS compressor. The release valve is located at the left of compressor.

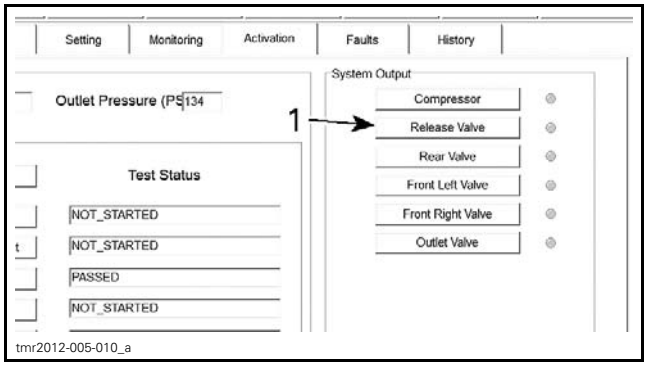


1. ACS release valve
2. ACS compressor

ACS Release Valve Operation Test

1. Connect vehicle to the latest appropriate version of B.U.D.S. Refer to *COMMUNICATION TOOLS AND B.U.D.S. SOFTWARE* subsection.
2. Select **Activation** page.
3. Select **ACS** folder.
4. Press the **Release Valve** button to proceed.

⚠ CAUTION Vehicle height will change during test. Keep away from wheelwell and suspension.

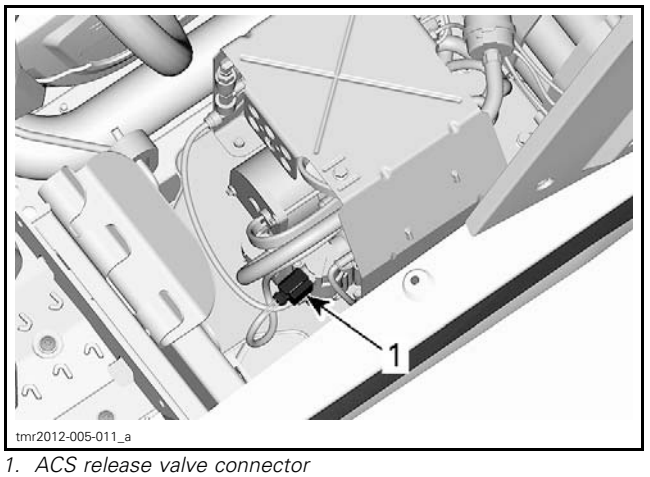


1. Release valve button

5. Listen for air exits from underneath dash and around valve to confirm proper operation.

ACS Release Valve Input Voltage Test

1. Unplug the ACS release valve connector.



1. ACS release valve connector

2. Start engine.
3. Measure voltage as per the following table.

REQUIRED TOOL
FLUKE 115 MULTIMETER (P/N 529 035 868)

TEST PROBES		VOLTAGE
Pin 1 (release valve connector)	Battery negative (–) post	Battery voltage

ACS Release Valve Ground Test

1. With ACS release valve connector unplugged and engine running, measure voltage as per the following table.

REQUIRED TOOL
FLUKE 115 MULTIMETER (P/N 529 035 868)

TEST PROBES		VOLTAGE
Pin 2 (release valve connector)	Battery negative (+) post	Battery voltage

ACS Release Valve Replacement

The ACS release valve is not available separately.

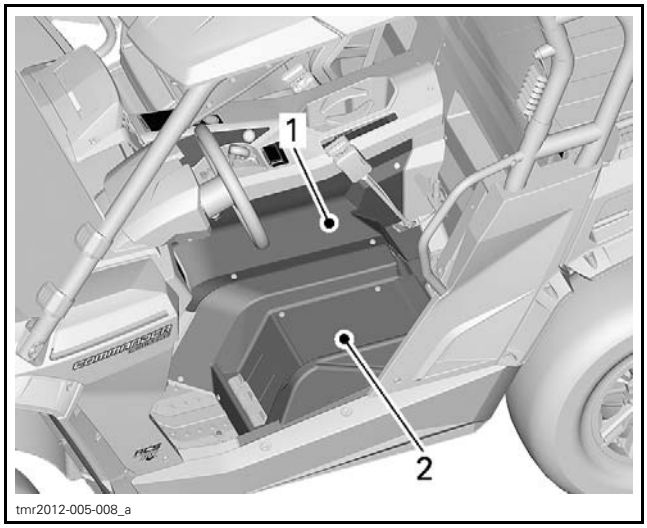
Replace the ACS compressor. Refer to *ACS COMPRESSOR* for complete procedure.

ACS SOLENOID VALVE

ACS Solenoid Valve Access

To access to ACS solenoid valve, remove the following:

– Driver's seat
– LH lateral console panel
– Floor panel.



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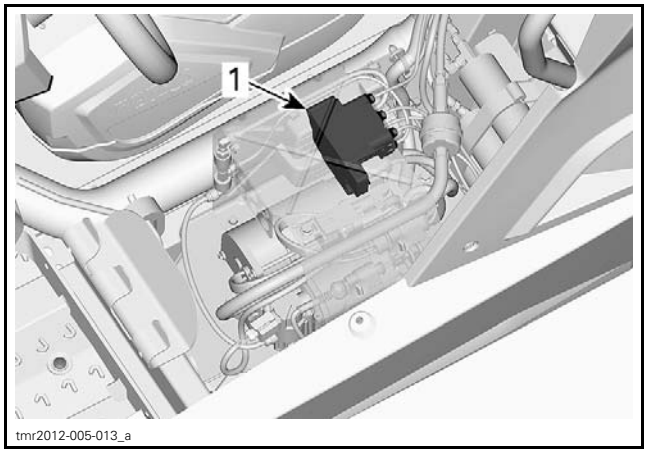
SIDE NET REMOVED FOR CLARITY
1. LH lateral console panel
2. Floor panel

The ACS solenoid valve is mounted on the rear side of the ACS compressor protector.



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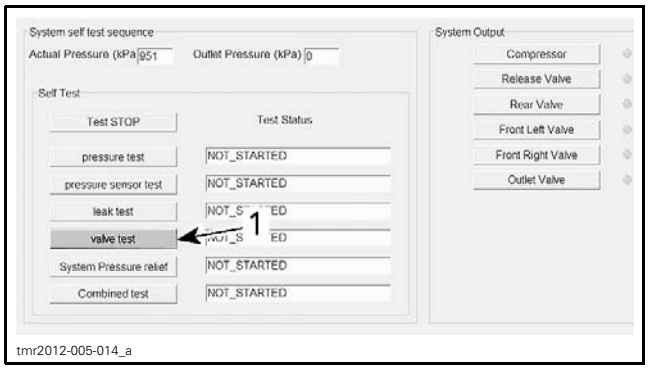
1. ACS solenoid valve

ACS Solenoid Valve Operation Test

1. Connect vehicle to the latest appropriate version of B.U.D.S. Refer to *COMMUNICATION TOOLS AND B.U.D.S. SOFTWARE* subsection.
2. Select **Activation** page.
3. Select **ACS** folder.
4. Press the **valve test** button to proceed.

⚠ CAUTION **Vehicle height will change during test. Keep away from wheelwell and suspension.**



1. Valve test button

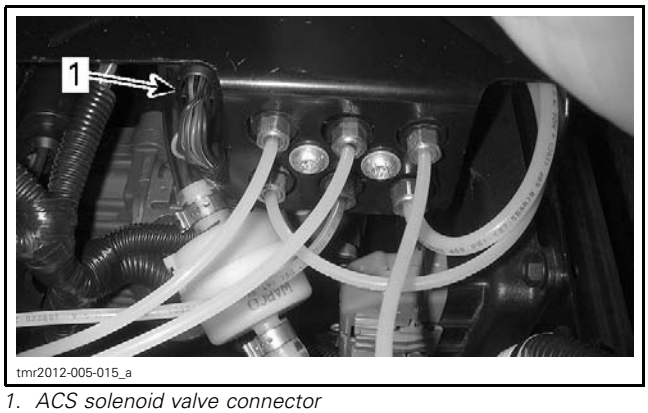
The result will be indicated in the TEST STATUS box beside the **valve test** button.

If test fails, carry out the *ACS SOLENOID VALVE INPUT VOLTAGE TEST*.

If the ACS solenoid valve passed the test, check the ACS button.

ACS Solenoid Valve Input Voltage Test

1. Unplug the ACS solenoid valve connector.



1. ACS solenoid valve connector

2. Start engine.
3. Measure voltage as per the following table.

REQUIRED TOOL
FLUKE 115 MULTIMETER (P/N 529 035 868)

TEST PROBES		VOLTAGE
Pin 5 (solenoid valve connector)	Battery negative (–) post	Battery voltage
Pin 6 (solenoid valve connector)		

If the test fails, carry out an *ACS SOLENOID VALVE POWER WIRE CONTINUITY TEST*.

If result is within specification, continue the test with the *ACS SOLENOID VALVE GROUND TEST*.

ACS Solenoid Valve Ground Test

With ACS solenoid valve connector unplugged and engine running, measure voltage as per the following table.

REQUIRED TOOL
FLUKE 115 MULTIMETER (P/N 529 035 868)

TEST PROBES		VOLTAGE
Pin 7 (solenoid valve connector)	Battery negative (+) post	Battery voltage

If the test fails, carry out an *ACS SOLENOID VALVE GROUND WIRE CONTINUITY TEST*.

If result is within specification, check the ACS button.

ACS Solenoid Valve Power Wire Continuity Test

1. Unplug the relay R5.
2. Check the continuity between ACS solenoid valve connector and relay R5 holder as per the following table.

REQUIRED TOOL
FLUKE 115 MULTIMETER (P/N 529 035 868)

TEST PROBES		RESISTANCE
Pin 5 (solenoid valve connector)	Position 85	Close to 0 Ω
Pin 6 (solenoid valve connector)		

ACS Solenoid Valve Ground Wire Continuity Test

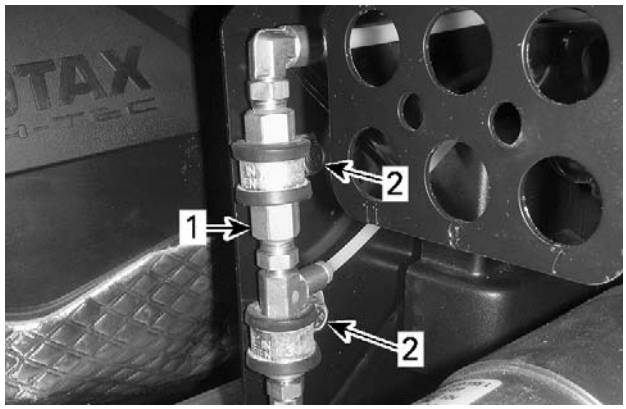
1. Unplug the suspension control module (SCM) connector.
2. Check the continuity between ACS solenoid valve connector and SCM connector as per the following table.

REQUIRED TOOL	
FLUKE 115 MULTIMETER (P/N 529 035 868)	

TEST PROBES		RESISTANCE
Pin 7 (solenoid valve connector)	Pin 14 (SCM)	Close to 0 Ω

ACS Solenoid Valve Removal

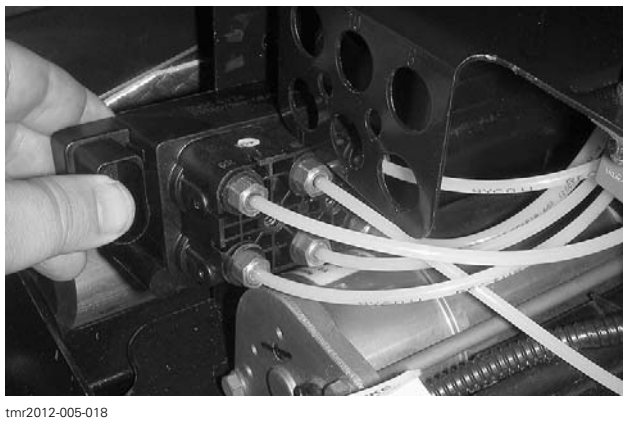
1. Remove bolts retaining the air pressure distributor.



tmr2012-005-017_a

1. Air pressure distributor
2. Retaining bolts

2. Disconnect pneumatic hoses from:
   – Air outlet fitting
   – Air reservoirs
   – Pressure distributor (except the lower one).
3. Unplug ACS solenoid valve connector.
4. Remove screws securing the ACS solenoid valve to compressor protector.
5. Remove the ACS solenoid valve from the vehicle.


tmr2012-005-018

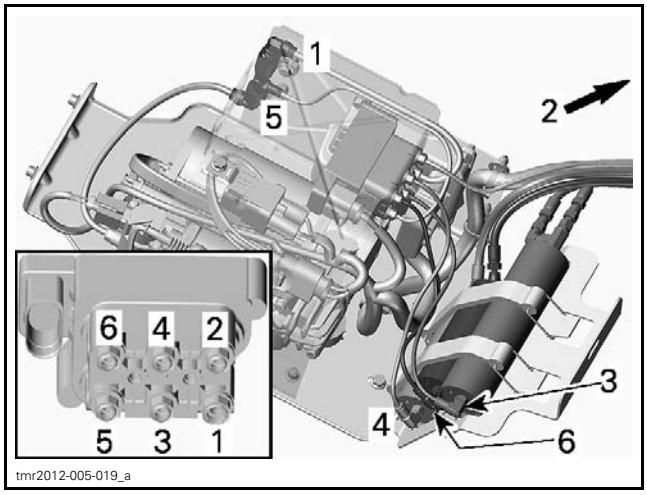
ACS Solenoid Valve Installation

The installation procedure is the reverse of removal procedure, however pay attention to the following.

Position the ACS solenoid valve on the compressor and route all pneumatic hoses through corresponding support holes.

Secure the ACS solenoid valve to its support.

Connect pneumatic hoses as per the following illustration.



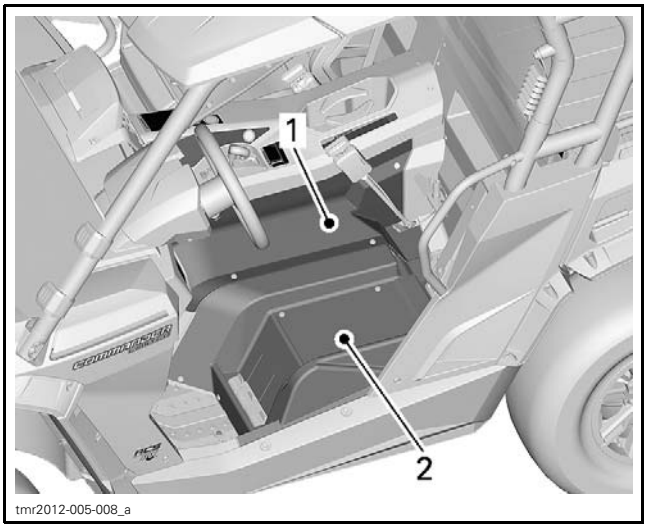
tmr2012-005-019_a

1. Air pressure distributor
2. Air outlet fitting
3. Rear air reservoir
4. Front RH air reservoir
5. Air pressure distributor
6. Front LH air reservoir

SUSPENSION CONTROL MODULE (SCM)

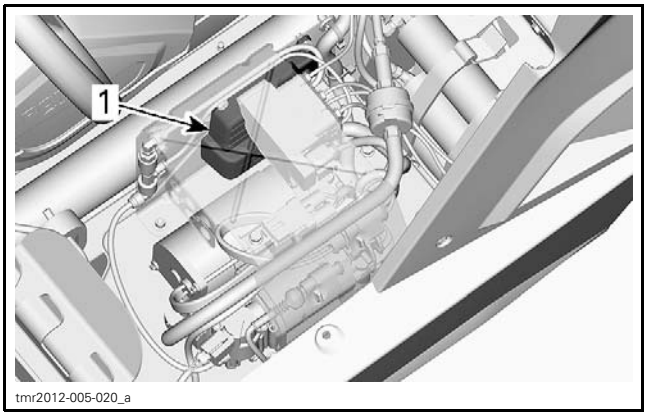
SCM Access

To access the SCM, remove the following:
– Driver's seat
– LH lateral console panel
– Floor panel.



SIDE NET REMOVED FOR CLARITY
1. *LH lateral console panel*
2. *Floor panel*

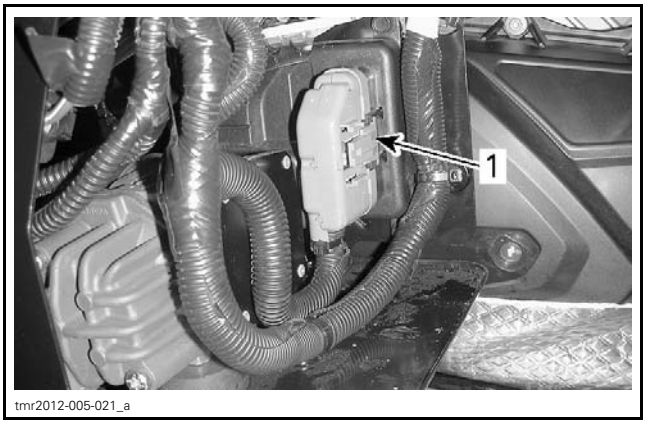
The suspension control module (SCM) is mounted on the wall of the ACS compressor protector.



1. *SCM*

SCM Signal Circuit Continuity Test

1. Unplug multifunction gauge connector. Refer to *LIGHTS, GAUGE AND ACCESSORIES* subsection.
2. Unplug SCM connector.



1. *SCM connector*

3. Measure resistance as per the following tables.

REQUIRED TOOL	
FLUKE 115 MULTIMETER (P/N 529 035 868)	

SCM CONNECTOR	GAUGE CONNECTOR	RESISTANCE
Pin 1	Pin 19	Close to 0 Ω
Pin 2	Pin 18	

If the test fails, repair or replace wires and connectors.

If result is within specification, continue the test with the *SCM INPUT VOLTAGE TEST*.

SCM Input Voltage Test

1. Turn ignition switch to ON position.
2. Measure voltage as per the following table.

REQUIRED TOOL	
FLUKE 115 MULTIMETER (P/N 529 035 868)	

TEST PROBES		VOLTAGE
Pin 17 (SCM connector)	Battery negative (–) post	Battery voltage
Pin 18 (SCM connector)		
Pin 35 (SCM connector)		
Pin 36 (SCM connector)		

If the test fails, repair or replace wires and connectors.

If result is within specification, continue the test with the *SCM GROUND TEST*.

SCM Ground Test

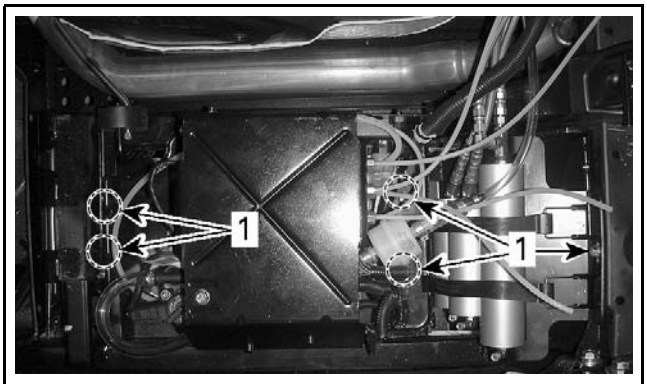
1. Turn ignition switch to ON position.
2. Measure voltage as per the following table.

REQUIRED TOOL	
FLUKE 115 MULTIMETER (P/N 529 035 868)	

TEST PROBES		VOLTAGE
Pin 31 (SCM connector)	Battery positive (+) post	Battery voltage
Pin 32 (SCM connector)		
Pin 33 (SCM connector)		

SCM Removal

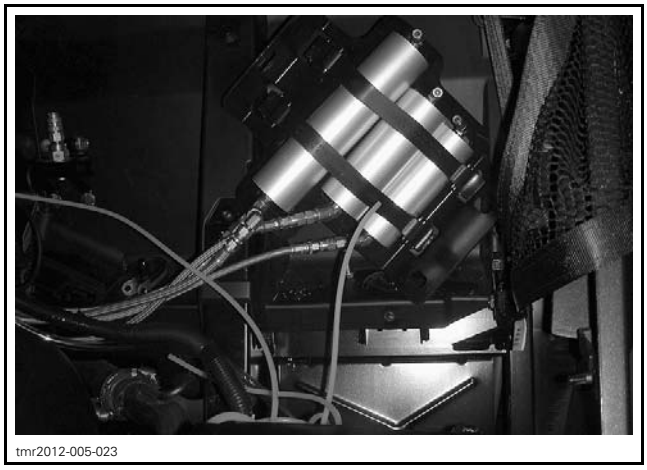
1. Remove screws retaining the air reservoir support and the compressor support.



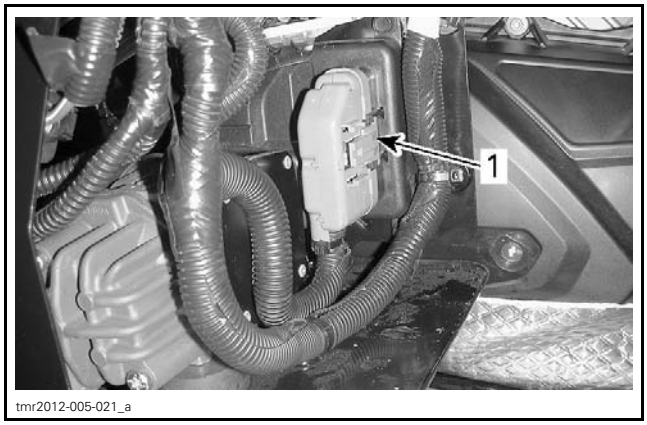
tmr2012-005-022_a

1. Screws to be removed

2. Disconnect pneumatic hoses from air reservoirs and air outlet fitting.
3. Place the air reservoir support aside to make room.


tmr2012-005-023

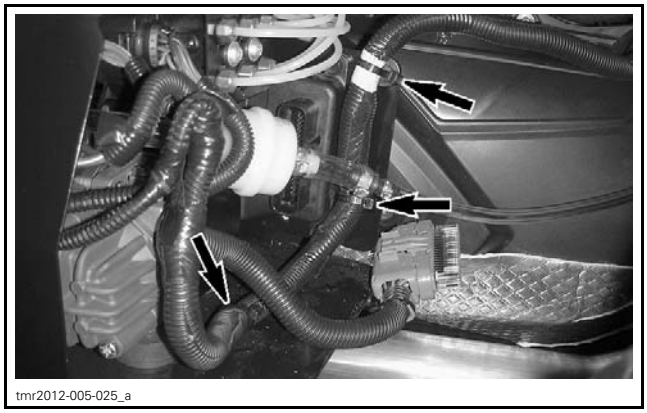
4. Unplug the SCM connector.



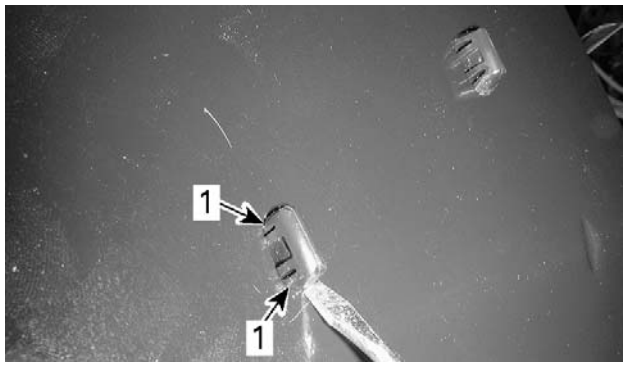
tmr2012-005-021_a

1. SCM connector

5. Cut locking ties securing the wiring harness.


tmr2012-005-025_a

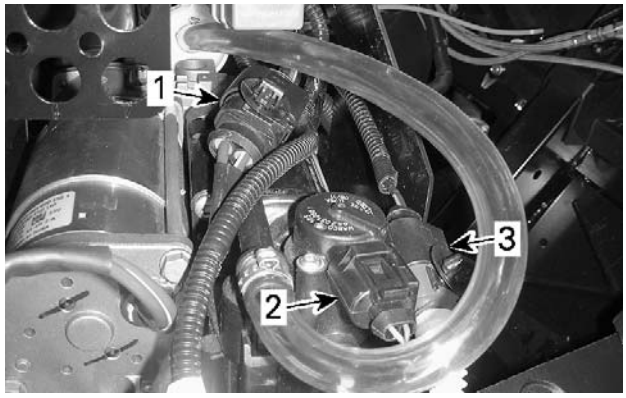
6. Using a small screwdriver, detach both connector housings from the compressor protector wall.



tmr2012-005-026_a

1. Press these tabs inside

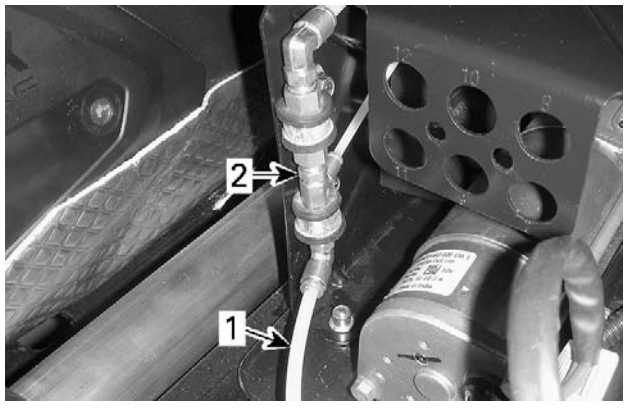
7. Unplug the following connectors:
   – Compressor connector
   – Release valve connector
   – Pressure sensor connector.



tmr2012-005-028_a

1. Compressor connector
2. Release valve connector
3. Pressure sensor connector.

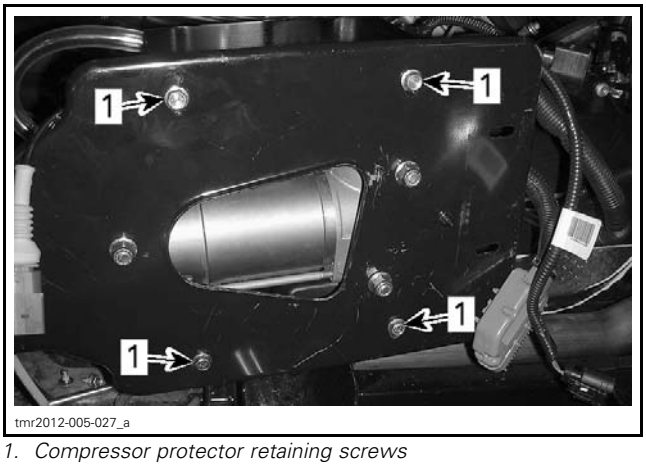
8. Disconnect the lower pneumatic hose from the pressure distributor.



tmr2012-005-024_a

1. Disconnect this hose
2. Pressure distributor

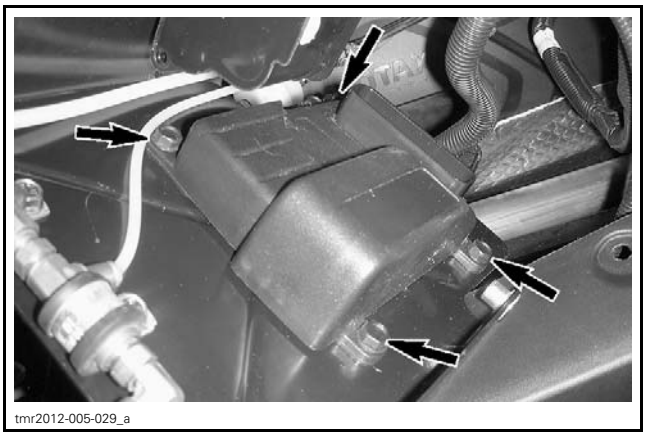
9. Turn the compressor support on the side to remove screws retaining the compressor protector.



tmr2012-005-027_a

1. Compressor protector retaining screws

10. Separate compressor protector from the compressor support.
11. Remove screws securing the SCM on the wall of the compressor protector.


tmr2012-005-029_a

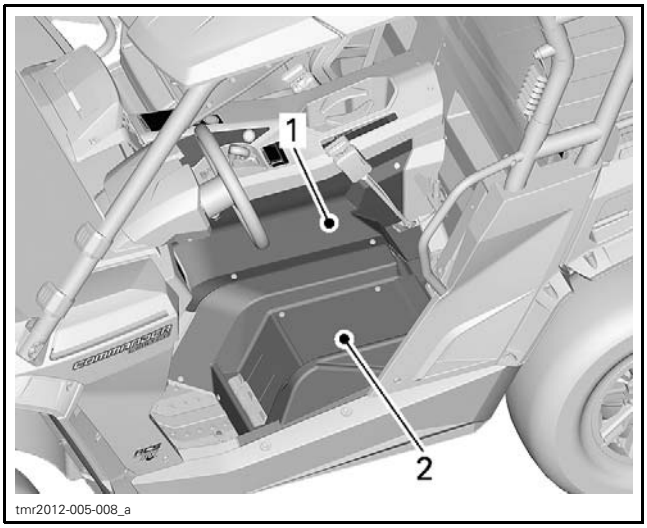
SCM Installation

The installation procedure is the reverse of removal procedure.

ACS RELAY (R5)

ACS Relay (R5) Access

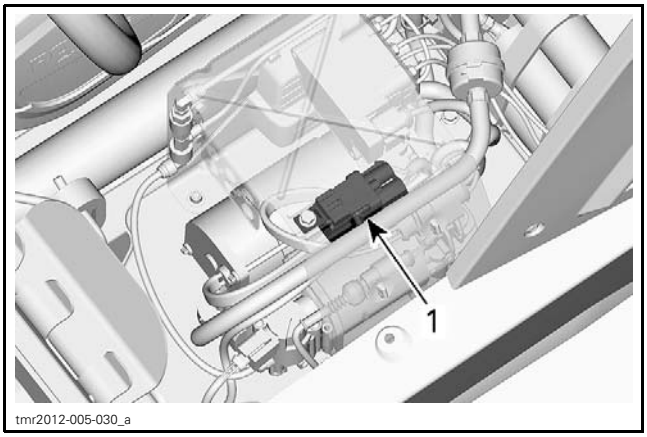
To access to ACS relay, remove the following:
– Driver's seat
– LH lateral console panel
– Floor panel.



tmr2012-005-008_a

SIDE NET REMOVED FOR CLARITY
1. *LH lateral console panel*
2. *Floor panel*

The ACS relay is mounted under the top of the ACS compressor protector.

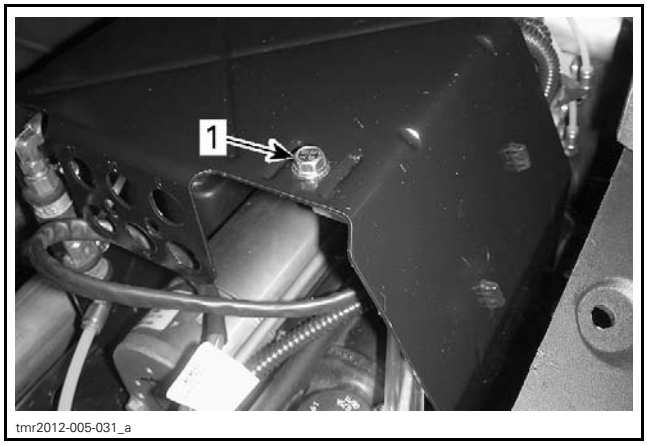


tmr2012-005-030_a

1. *ACS relay (R5)*

ACS Relay Continuity Test

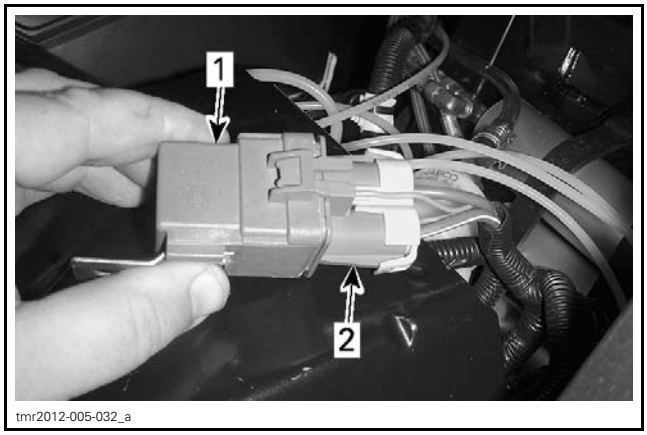
1. Remove relay (R5).
   1.1 Remove bolt and nut retaining the relay holder on the top of the compressor protector.



tmr2012-005-031_a

1. *Relay retaining bolt*

   1.2 From the rear, pull relay out from underneath of compressor protector.
   1.3 Remove the relay from its holder.



tmr2012-005-032_a

1. *Relay*
2. *Relay holder*

2. Measure resistance as per the following table.

REQUIRED TOOL	
FLUKE 115 MULTIMETER (P/N 529 035 868)	

TEST PROBES		RESISTANCE
Terminal 30 (relay holder)	Terminal 87 (relay holder)	Open (OL)

3. Apply 12 volts on terminals 86 and 85 and measure resistance again as per the following table.

TEST PROBES		RESISTANCE
Terminal 30 (relay holder)	Terminal 87 (relay holder)	Close to 0 Ω

If results are not as per the above tables, replace relay.

ACS Relay Input Voltage Test

1. Measure voltage as per the following table.

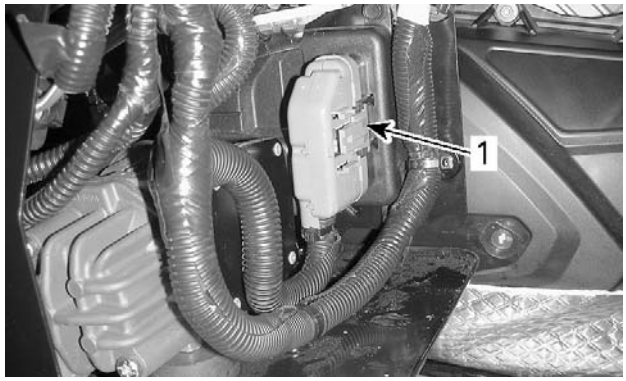
REQUIRED TOOL
FLUKE 115 MULTIMETER (P/N 529 035 868)

TEST PROBES		VOLTAGE
Pin 87 (relay holder)	Battery negative (–) post	Battery voltage

If voltage is not as specified, check wiring, connector and terminal condition.

ACS Relay Ground Wire Continuity Test

1. Unplug suspension control module (SCM) connector.



1. SCM connector

2. Measure resistance as per the following table.

REQUIRED TOOL
FLUKE 115 MULTIMETER (P/N 529 035 868)

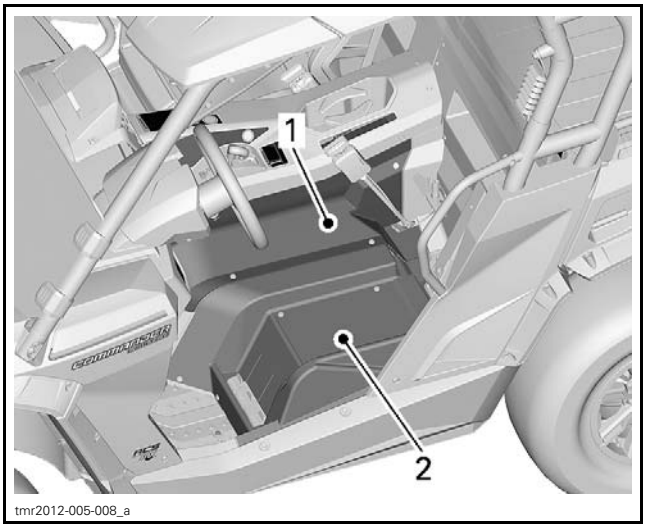
TEST PROBES		RESISTANCE
Pin 86 (relay holder)	Pin 28 (SCM connector)	Close to 0 Ω

ACS COMPRESSOR

ACS Compressor Access

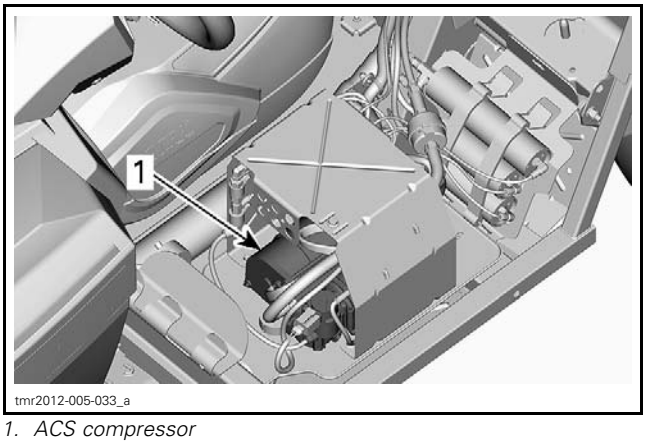
To access to ACS compressor, remove the following:

– Driver's seat
– LH lateral console panel
– Floor panel.



SIDE NET REMOVED FOR CLARITY
1. LH lateral console panel
2. Floor panel

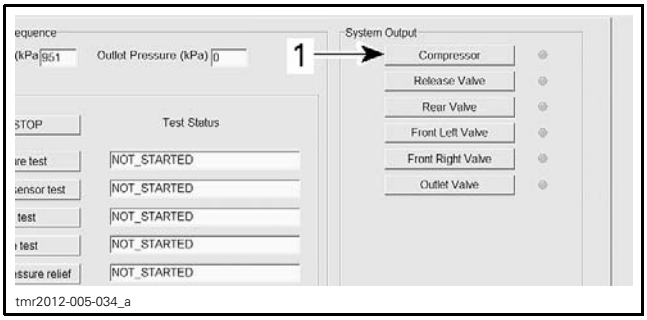
The ACS compressor is mounted on the ACS compressor support.



1. ACS compressor

ACS Compressor Operation Test

1. Connect vehicle to the latest appropriate version of B.U.D.S. Refer to *COMMUNICATION TOOLS AND B.U.D.S. SOFTWARE* subsection.
2. Select **Activation** page.
3. Select **ACS** folder.
4. Press **Compressor** button to proceed.

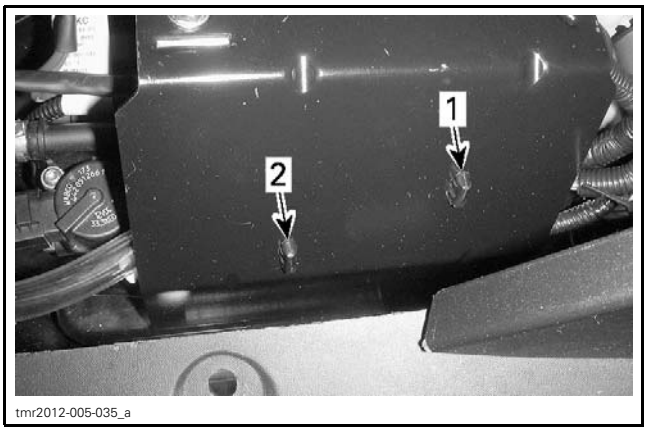


1. Compressor operation test button

5. Verify if compressor works properly.

ACS Compressor Input Voltage Test

1. Using a small screwdriver, detach the ACS compressor connector housings from the compressor protector wall.



1. ACS compressor connector
2. ACS compressor pressure sensor

2. Unplug ACS compressor connector.
3. Place ignition switch to ON position.
4. Measure voltage as per the following table.

REQUIRED TOOL
FLUKE 115 MULTIMETER (P/N 529 035 868)

TEST PROBES		VOLTAGE
Pin 1 (ACS compressor connector)	Battery negative (–) post	Battery voltage

ACS Compressor Ground Test

1. Place ignition switch to ON position.
2. Measure voltage as per the following table.

REQUIRED TOOL
FLUKE 115 MULTIMETER (P/N 529 035 868)

TEST PROBES		VOLTAGE
Pin 2 (ACS compressor connector)	Battery positive (+) post	Battery voltage

ACS Compressor Power Wire Continuity Test (from Relay)

1. Remove relay (R5).
2. Measure resistance as per the following table.

REQUIRED TOOL
FLUKE 115 MULTIMETER (P/N 529 035 868)

TEST PROBES		RESISTANCE
Pin 30 (relay holder)	Pin 1 (ACS compressor connector)	Close to 1 Ω

ACS Compressor Ground Wire Continuity Test

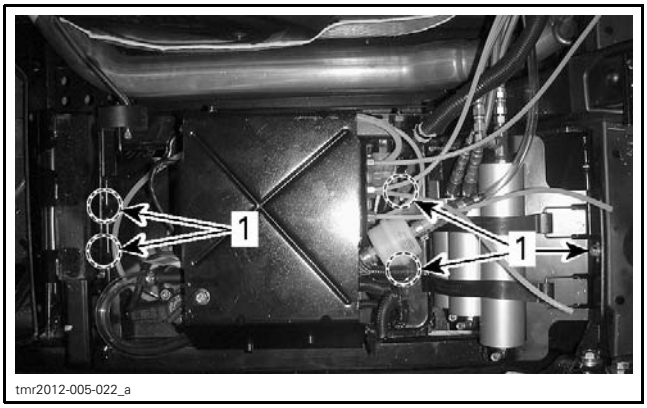
1. Reconnect the relay (R5).
2. Check the continuity as per the following table.

REQUIRED TOOL
FLUKE 115 MULTIMETER (P/N 529 035 868)

TEST PROBES		RESISTANCE
Pin 2 (ACS compressor connector)	Battery negative (–) post	Close to 1 Ω

ACS Compressor Removal

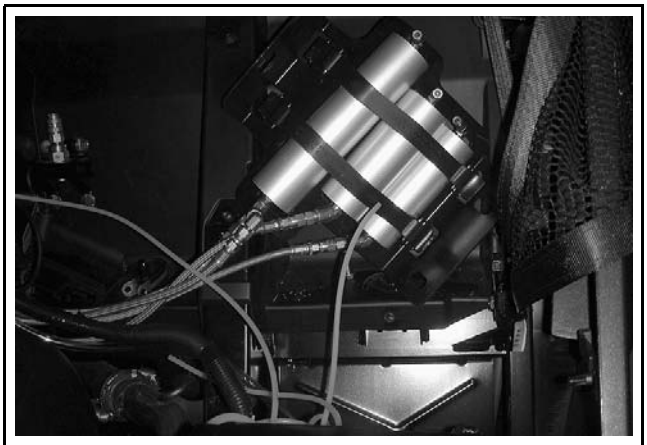
1. Remove screws retaining the air reservoir support and the compressor support.



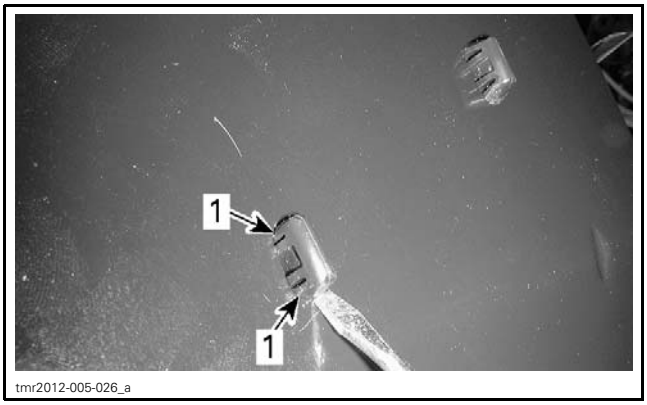
tmr2012-005-022_a

1. Screws to be removed

2. Disconnect pneumatic hoses from air reservoirs and air outlet fitting.
3. Place the air reservoir support aside to make room.


tmr2012-005-023

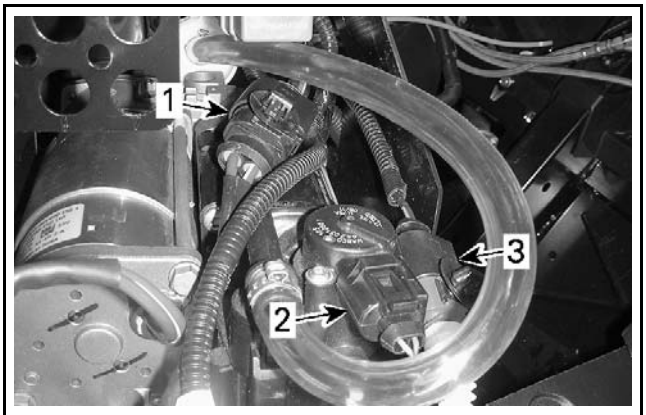
4. Using a small screwdriver, detach both connector housings from the compressor protector wall.



tmr2012-005-026_a

1. Press these tabs inside

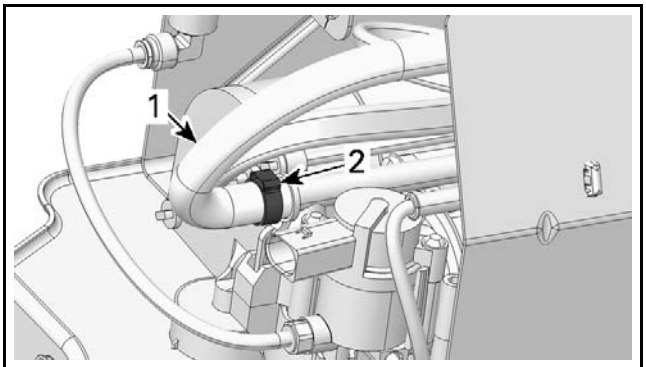
5. Unplug the following connectors:
   – Compressor connector
   – Release valve connector
   – Pressure sensor connector.



tmr2012-005-028_a

1. Compressor connector
2. Release valve connector
3. Pressure sensor connector.

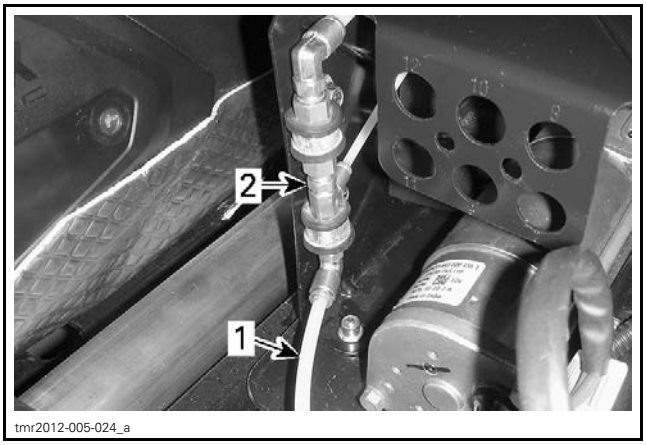
6. Detach the filter hose from the compressor intake/outlet fitting.



tmr2012-005-036_a

1. Air filter hose
2. Clamp to be removed

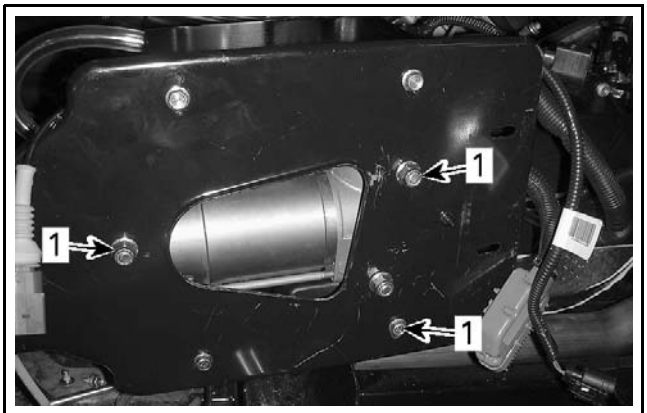
7. Disconnect the lower pneumatic hose from the pressure distributor.



tmr2012-005-024_a

1. Disconnect this hose
2. Pressure distributor

8. Turn the compressor support on the side to remove screws retaining the compressor.



tmr2012-005-027_b

1. Compressor retaining screws

9. Remove the ACS compressor.

ACS Compressor Installation

The installation is the reverse of removal procedure.

ACS AIR FILTER

Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.

SHOCK ABSORBERS

Shock Absorbers Identification

When installing shock absorbers, make sure not to mix front and rear shock absorbers.

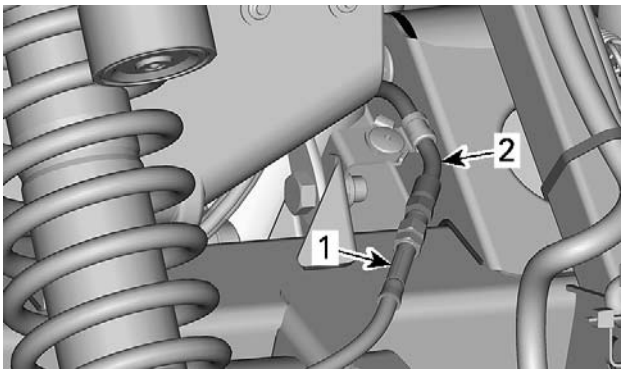
Front and rear shock absorbers can be easily identified by comparing the length of air hoses.

FRONT SHOCK ABSORBER	
Shock absorber with a short air hose on reservoir side	

REAR SHOCK ABSORBER	
Shock absorber with a long air hose on the opposite side of reservoir	

Rear Shock Absorber Removal

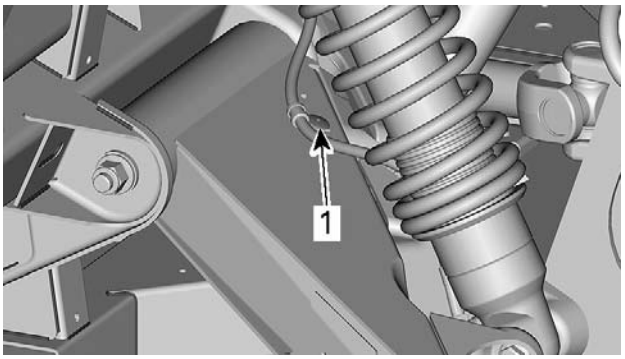
1. Block front wheels.
2. Loosen wheel lug nuts.
3. Open cargo box.
4. Place the jack under the hitch and lift the rear of vehicle.
5. Install jack stands to support the vehicle.
6. Remove wheel.
7. Disconnect shock absorber hose from vehicle air supply hose.



tmr2012-005-042_a

1. Shock absorber hose
2. Vehicle air supply hose

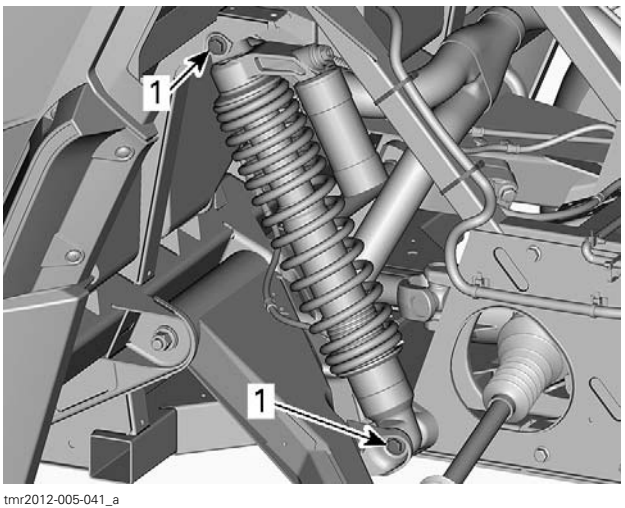
8. Drill the rivet securing the shock absorber hose to trailing arm.



tmr2012-005-040_a

REAR LH SIDE OF VEHICLE SHOWN
1. Rivet to be drilled

9. Remove upper and lower bolts retaining the shock absorber. Discard nuts.

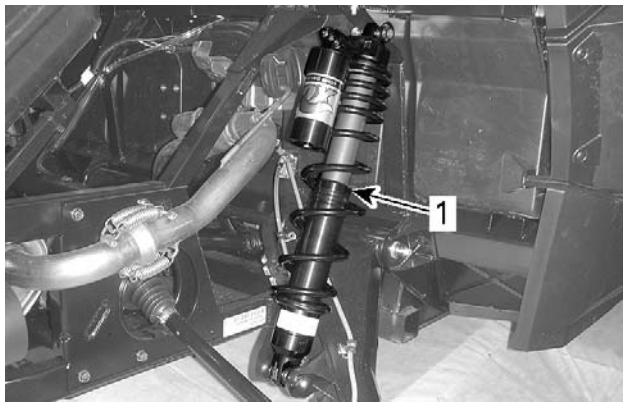


tmr2012-005-041_a

1. Shock absorber retaining bolts

Rear Shock Absorber Installation

Install shock absorbers with the reservoir rearwards.

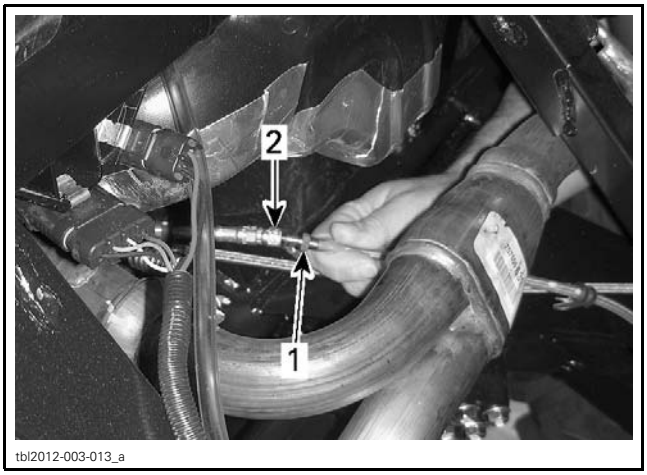


TYPICAL
1. RH rear shock absorber

Secure with new nuts.

TIGHTENING TORQUE	
Shock absorber nuts	48 N•m (35 lbf•ft)

Connect shock absorber hoses to vehicle air supply hoses.

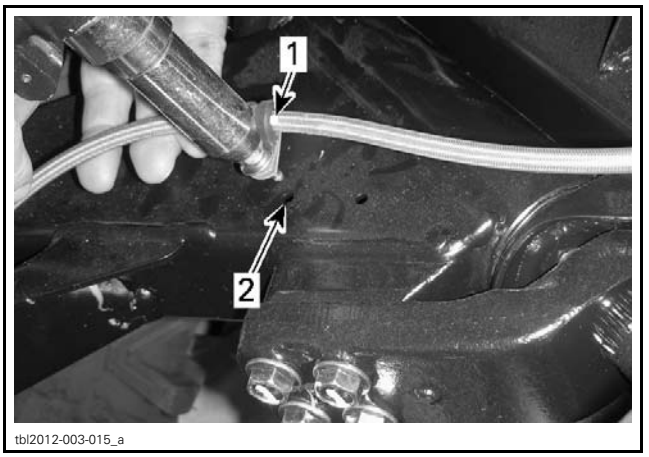


TYPICAL
1. RH shock absorber hose
2. Vehicle air supply hose

TIGHTENING TORQUE	
Air supply hose	6 N•m ± 0.5 N•m (53 lbf•**in** ± 4 lbf•**in**)

Secure shock absorber hoses to trailing arms. Ensure to position hose clamp between YELLOW dots.

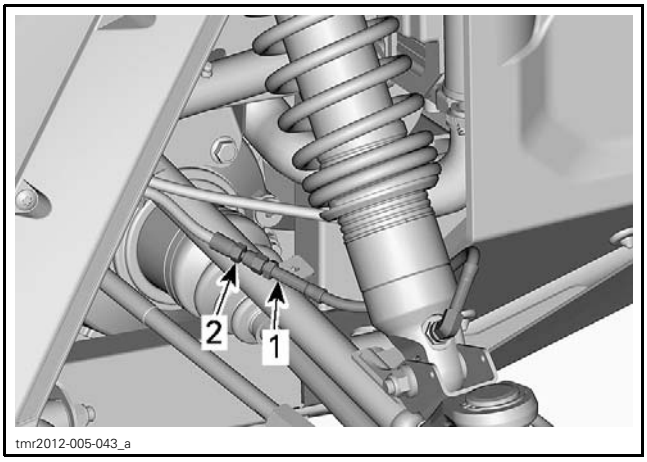
RH SIDE OF VEHICLE
1. YELLOW dots
2. Rivet



LH SIDE OF VEHICLE
1. YELLOW dot
2. Install the rivet in this hole

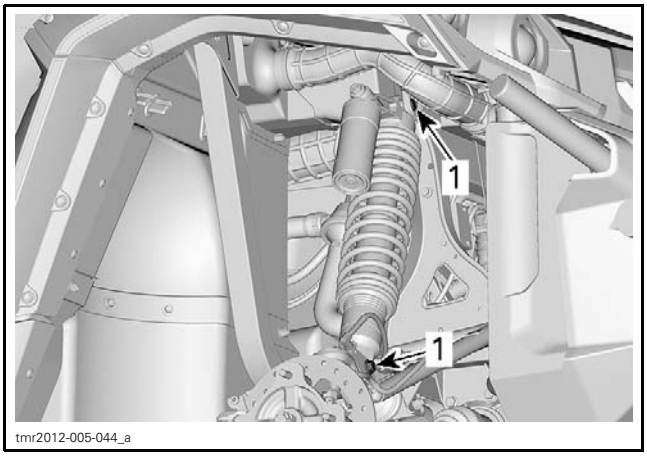
Front Shock Absorber Removal

1. Block rear wheels.
2. Loosen wheel lug nuts.
3. Lift the front of vehicle and support it securely.
   - 3.1 Insert the jack under the vehicle by the side, behind front wheels.
   - 3.2 Place the jack under the central beam.
   - 3.3 Lift the front of vehicle.
4. Remove front wheels.
5. Cut locking ties securing shock absorber hose to suspension arm.
6. Disconnect shock absorber hose from vehicle air supply hose.



TYPICAL
1. *RH shock absorber hose*
2. *Vehicle air supply hose*

7. Remove upper and lower bolts retaining the shock absorber. Discard nuts.



1. *Shock absorber retaining bolts*

8. Remove shock absorber from vehicle.

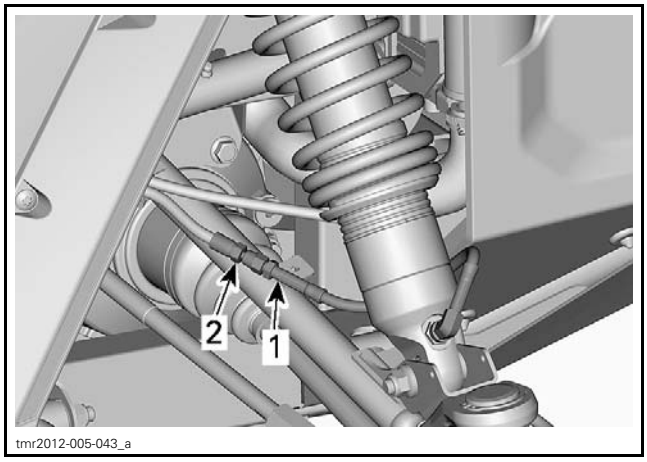
Front Shock Absorber Installation

Install shock absorbers with the reservoir outwards.

Secure it using previously removed bolts and new nuts. Tighten nuts to specification.

TIGHTENING TORQUE	
Shock absorber nuts	48 N•m (35 lbf•ft)

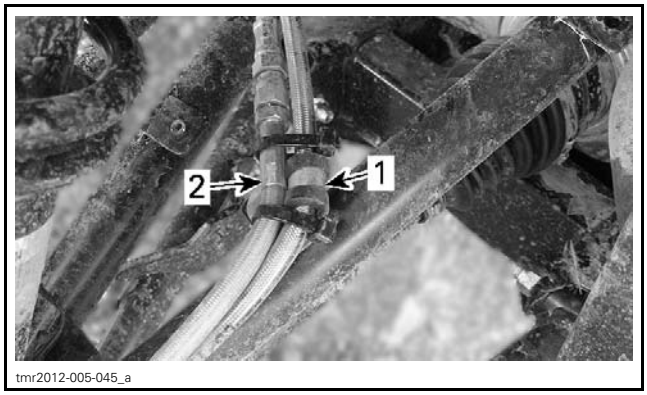
Route the hose in front of the shock absorber.



TYPICAL
1. *RH shock absorber hose*
2. *Vehicle air supply hose*

TIGHTENING TORQUE	
Air supply hose	6 N•m ± 0.5 N•m (53 lbf•**in** ± 4 lbf•**in**)

Secure the shock absorber hose to brake hose. Install a locking tie each side of the brake hose retaining clamp.



1. *Brake hose retaining clamp*
2. *Shock absorber hose*

BRAKES

SERVICE TOOLS

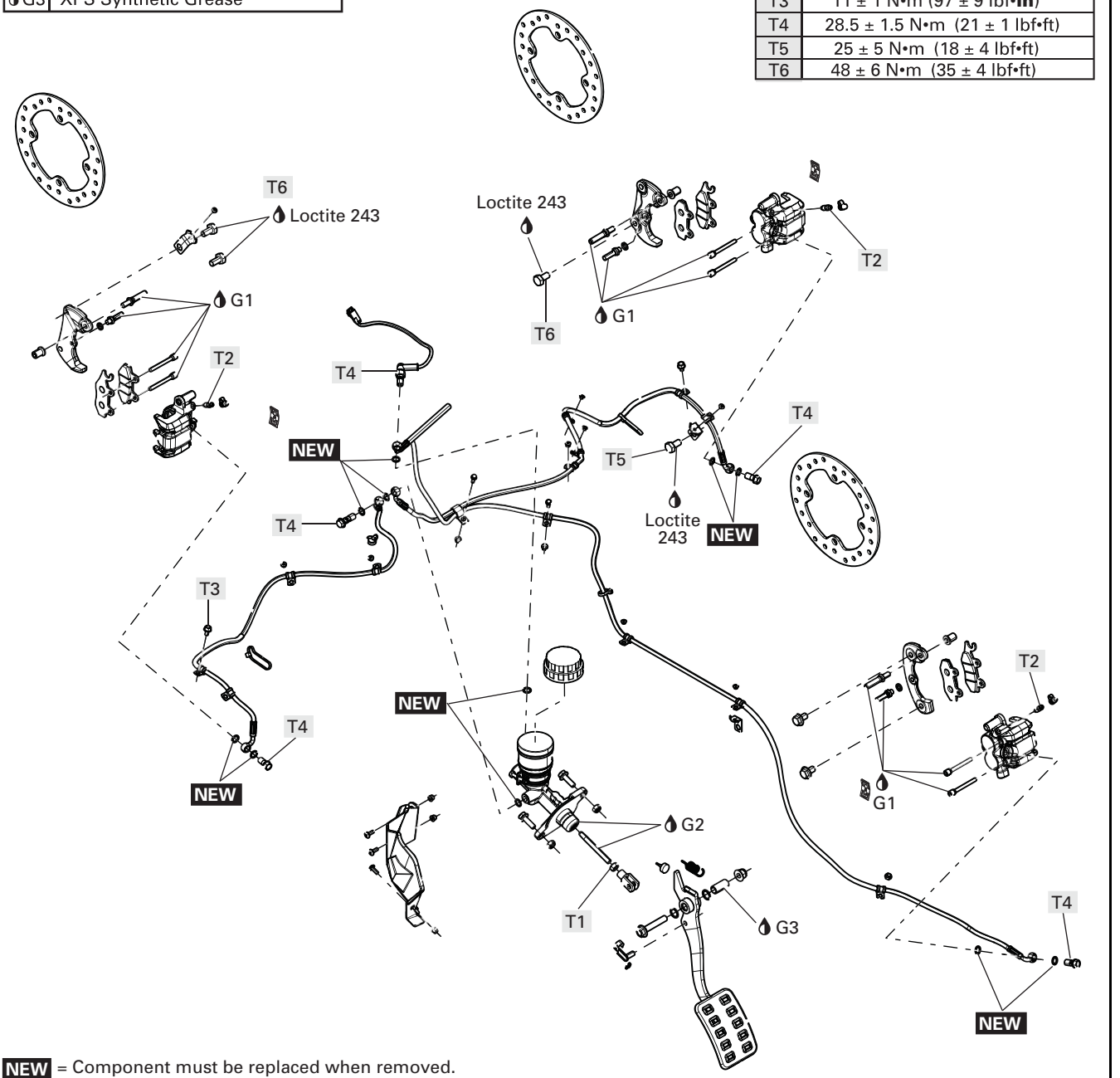
Description	Part Number	Page
ECM ADAPTER TOOL	529 036 166	416

SERVICE PRODUCTS

Description	Part Number	Page
COSMO RUBBER GREASE	293 550 055	418
LOCTITE 243 (BLUE)	293 800 060	419
XPS BRAKES AND PARTS CLEANER	219 701 705	419

G1	Brake Caliper Synthetic Grease
G2	Cosmo Rubber Grease
G3	XPS Synthetic Grease

T1	5.0 ± 1 N•m (44 ± 9 lbf•**in**)
T2	5.5 ± 1.5 N•m (49 ± 13 lbf•**in**)
T3	11 ± 1 N•m (97 ± 9 lbf•**in**)
T4	28.5 ± 1.5 N•m (21 ± 1 lbf•ft)
T5	25 ± 5 N•m (18 ± 4 lbf•ft)
T6	48 ± 6 N•m (35 ± 4 lbf•ft)



NEW = Component must be replaced when removed.

tmr2013-044-101

GENERAL

⚠ WARNING

Always check brake system operation after removing or servicing a brake component. If brake pedal feels spongy, make sure all components are properly installed and system is properly bled.

NOTICE Avoid spilling brake fluid on plastic, rubber or painted parts. Protect these parts with a rag when servicing brake system.

NOTE: Sealing washers must be discarded and replaced with new ones every time a Banjo fitting is unscrewed.

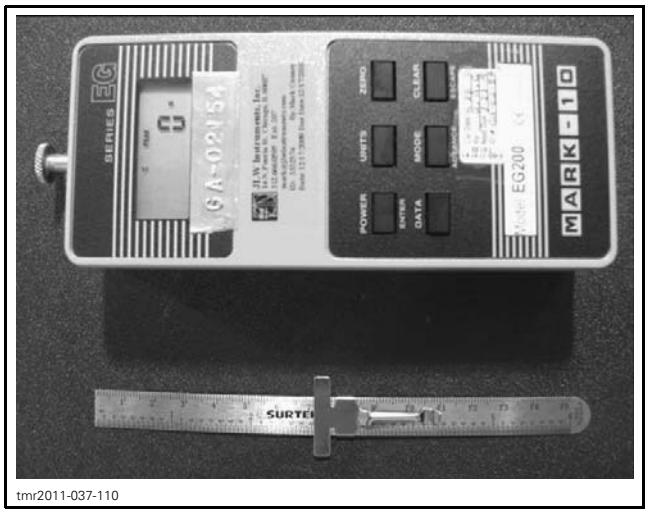
NOTE: Always clean the area around a brake component before servicing.

INSPECTION

BRAKE SYSTEM PRESSURE VALIDATION

NOTICE Do not pump up the brake pedal repeatedly before doing the validation.

1. Use an appropriate compression force gauge such as *MARK-10 EG-200* and a ruler.



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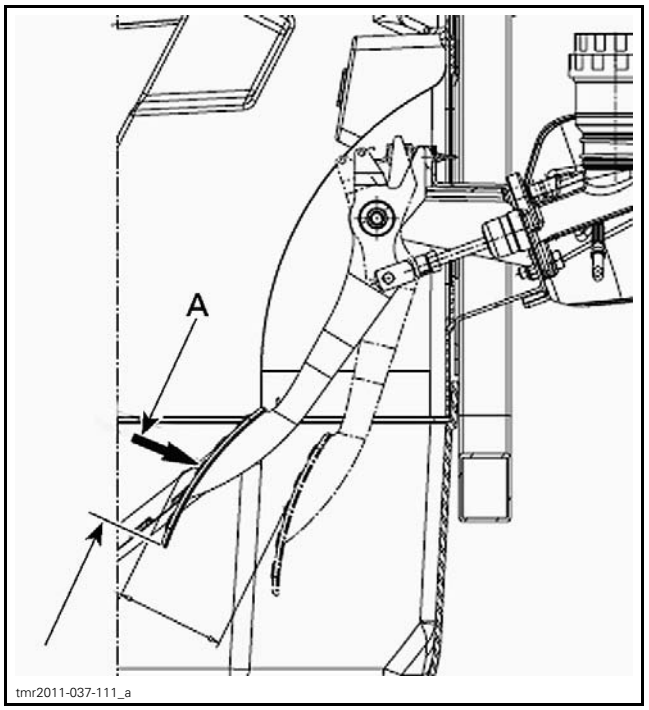
TYPICAL

2. Position force gauge on brake pedal at 64 mm ± 5 mm (2.5 in ± .2 in) from lower edge.
3. Position a ruler perpendicularly to brake pedal.



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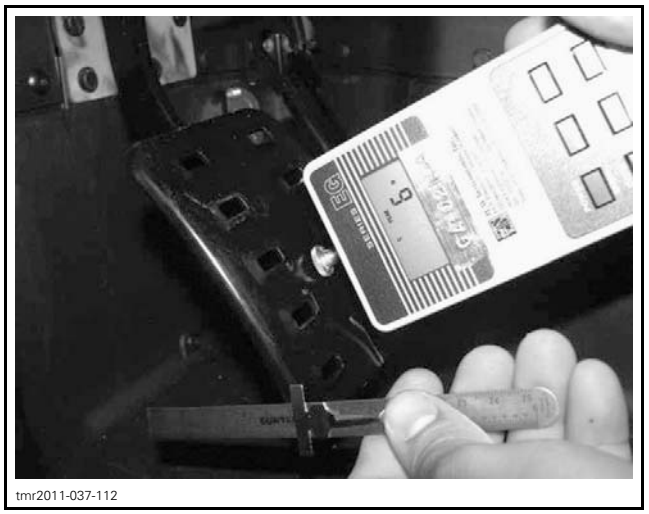
A. 64 mm ± 5 mm (2.5 in ± .2 in)

4. Push brake pedal from 70 mm (2-3/4 in) using force gauge.



tmr2011-037-112

TYPICAL

5. Read the maximum load recorded by the force gauge.
6. Load reading must be as per the following table.

BRAKE PEDAL LOAD AT 70 MM
Minimum 250 N (56 lbf)

7. If load reading is not in accordance with the specification:
   - 7.1 Perform a brake system inspection and cleaning.
   - 7.2 Bleed brake system.

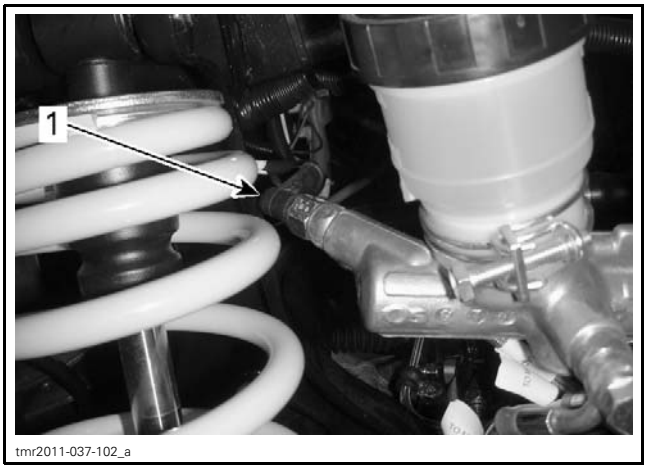
NOTE: Refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.

PROCEDURES

BRAKE LIGHT SWITCH

Brake Light Switch Location

Brake light switch is located underneath LH front fender on master cylinder.



1. Brake light switch

Brake Light Switch Resistance Test

1. Disconnect brake light switch connector.
2. Check switch operation as follows.

BRAKE LIGHT SWITCH POSITION	PIN		RESISTANCE
Firmly pushed	1	2	Close to 0 Ω
Released			Infinite (OL)

If switch is defective, replace with a new one.

If the switch tests good, verify wire continuity between harness connector and ECM-B connector.

NOTE: Use the ECM ADAPTER TOOL (P/N 529 036 166).

ECM-B CONNECTOR PIN	HARNESS CONNECTOR WIRES	RESISTANCE
C-3	RED/ORANGE	Close to 0 Ω

NOTE: If only the LH taillight does not work, check brake relay (R8) in fuse box 1.

Brake Light Switch Replacement

1. Disconnect brake light switch connector.
2. Drain rear brake line.
3. Remove brake light switch from master cylinder.

NOTE: Use shop rags to catch any spilled brake fluid.

4. Install NEW sealing washers.
5. Install brake light switch on master cylinder.

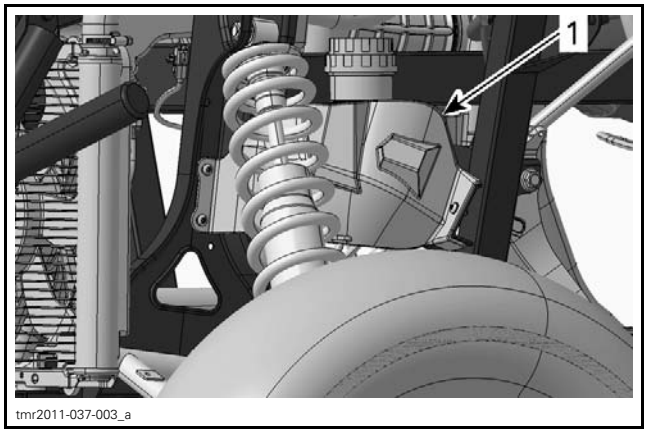
BRAKE LIGHT SWITCH NUT TORQUE
28.5 N•m ± 1.5 N•m (21 lbf•ft ± 1 lbf•ft)

6. Connect brake light switch connector.
7. Refill and bleed brake system, refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.

MASTER CYLINDER

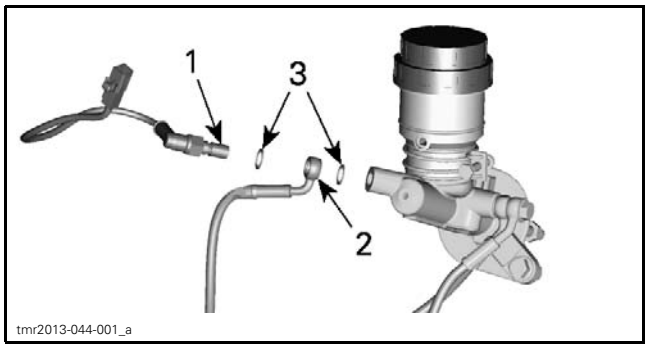
Master Cylinder Removal

1. Drain brake system, refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.
2. Remove master cylinder protective cover.



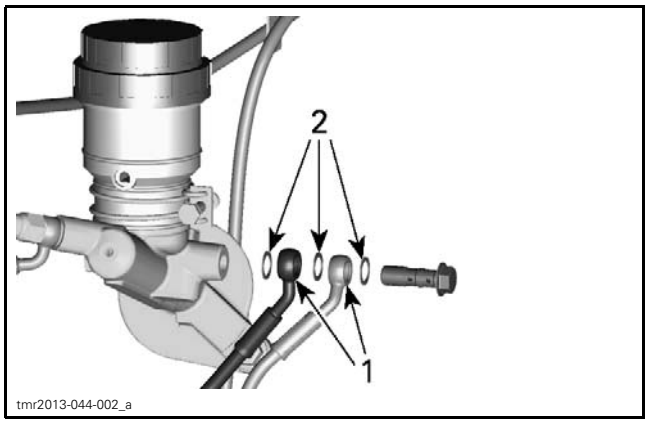
1. Master cylinder protective cover

3. Remove brake light switch retaining rear brake hose.



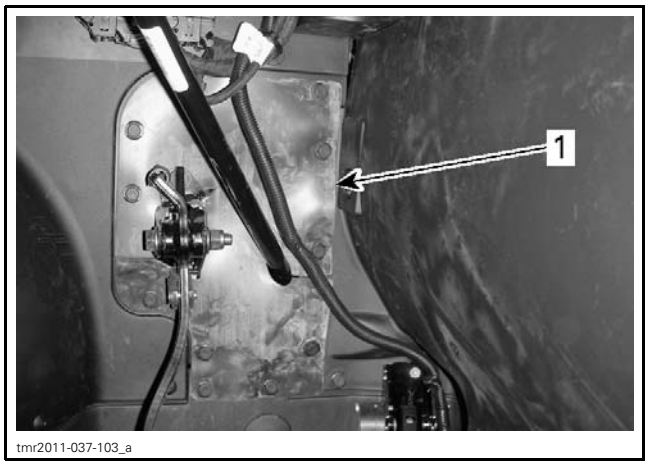
SOME PARTS REMOVED FOR CLARITY PURPOSE
1. *Brake light switch*
2. *Rear brake hose*
3. *Sealing washers*

4. Unscrew front brake hoses from master cylinder.



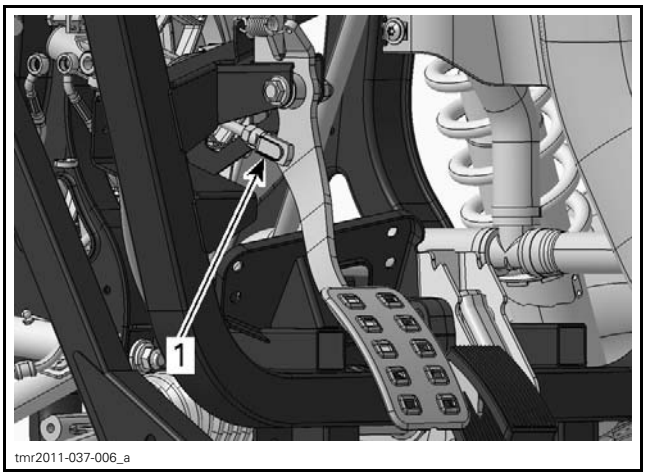
SOME PARTS REMOVED FOR CLARITY PURPOSE
1. *Front brake hoses*
2. *Sealing washers*

5. Remove protective rubber from underneath dashboard.



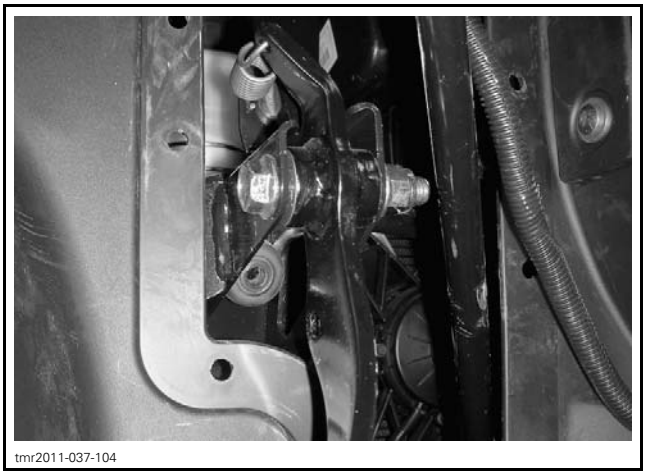
UNDERNEATH DASHBOARD
1. *Protective rubber*

6. Remove cotter pin.
7. Disconnect brake pedal clip.
8. Disconnect master cylinder rod from brake pedal.



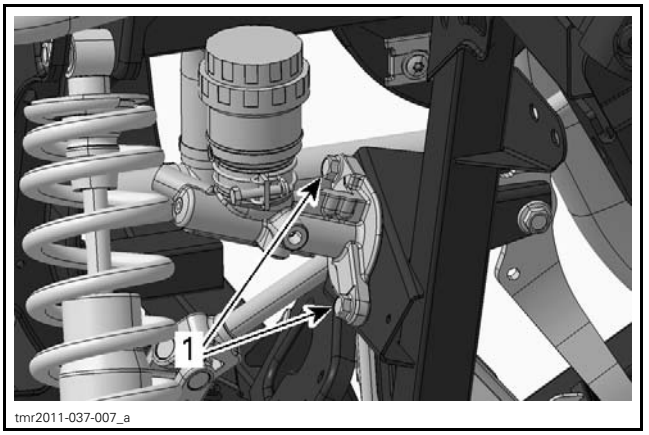
1. *Master cylinder rod*

9. Remove master cylinder rod from master cylinder.



MASTER CYLINDER ROD REMOVED

10. Remove master cylinder retaining bolts and nuts.



1. *Master cylinder retaining bolts*

11. Remove master cylinder from vehicle.

Master Cylinder Inspection

Check boot for crack.

Check rod for wear and scratch.

Check master cylinder housing and reservoir for leaks or damage.

Master Cylinder Installation

The installation is the reverse of the removal procedure. However, pay attention to the following.

Tighten brake light switch and front brake hoses to specification.

FRONT BRAKE HOSES SCREW TORQUE
28.5 N•m ± 1.5 N•m (21 lbf•ft ± 1 lbf•ft)

BRAKE LIGHT SWITCH NUT TORQUE
28.5 N•m ± 1.5 N•m (21 lbf•ft ± 1 lbf•ft)

Lubricate push rod end and inside master cylinder boot.

PUSH ROD END LUBRICATION
COSMO RUBBER GREASE (P/N 293 550 055)

MASTER CYLINDER BOOT LUBRICATION
COSMO RUBBER GREASE (P/N 293 550 055)

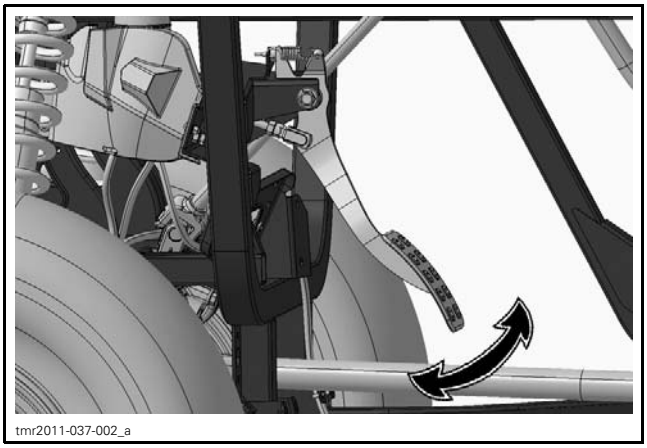
Install **NEW** sealing washers.

Refill and bleed brake system, refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.

Adjust master cylinder rod, refer to *MASTER CYLINDER ROD ADJUSTMENT* in this subsection.

Master Cylinder Rod Adjustment

1. Loosen locking nut of master cylinder rod.
2. Move brake pedal up and down to check if there is a free play.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3. Rotate master cylinder rod to generate a free play according to specification.

BRAKE PEDAL FREE PLAY
3.5 mm ± 1.5 mm (1/8 in ± 1/16 in)

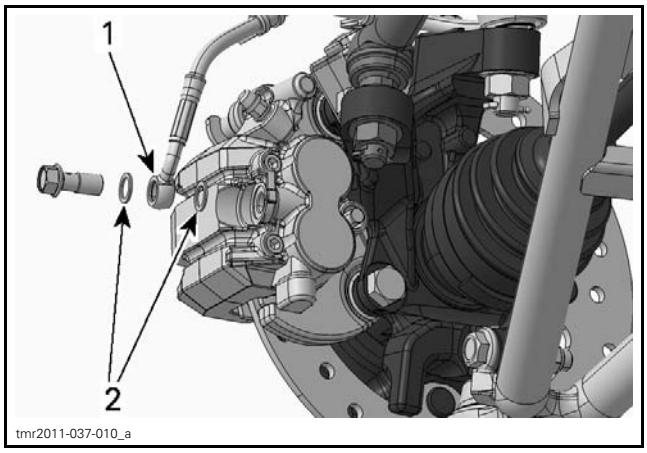
4. Tighten locking nut of master cylinder rod to specification.

ROD LOCKING NUT TORQUE
5 N•m ± 1 N•m (44 lbf•**in** ± 9 lbf•**in**)

CALIPER

Caliper Removal

1. Safely lift and support the vehicle. Refer to *INTRODUCTION* subsection.
2. Remove wheel, refer to *WHEELS AND TIRES* subsection.
3. If caliper is removed from vehicle for replacement:
   - 3.1 Drain brake system, refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.
   - 3.2 Unscrew brake hose from caliper.



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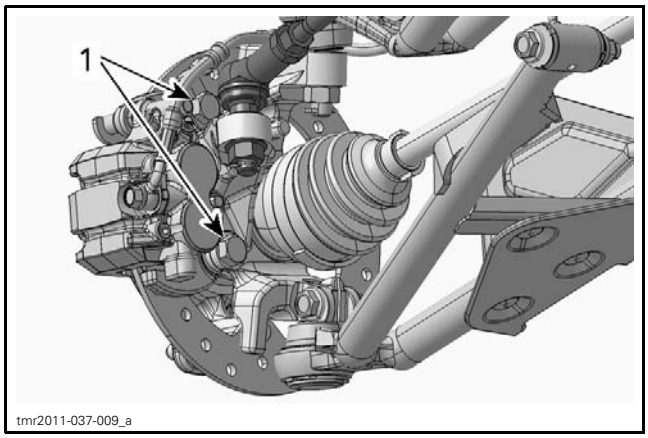
TYPICAL - FRONT CALIPER SHOWN
1. Brake hose
2. Sealing washers

4. Remove fasteners retaining brake hose to knuckle.
5. Remove screws securing caliper support to knuckle.



TYPICAL - FRONT CALIPER SHOWN
1. Caliper screws

6. Place caliper assembly onto a support.

NOTICE **Do not let caliper hangs by the hose and do not stretch or twist hose.**

Caliper Installation

The installation is the reverse of the removal procedure. However, pay attention to the following.

If caliper was removed for replacement:

– Refill and bleed brake system, refer to *PERIODIC MAINTENANCE PROCEDURES* subsection.
– Install NEW sealing washers.

Apply threadlocker on caliper retaining screws.

CALIPER RETAINING SCREWS THREADLOCKER
LOCTITE 243 (BLUE) (P/N 293 800 060)

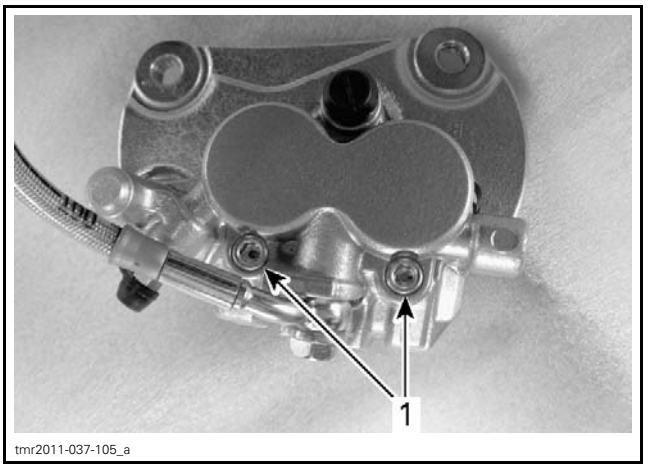
Tighten caliper retaining screws to specification.

CALIPER RETAINING SCREWS TORQUE
48 N•m ± 6 N•m (35 lbf•ft ± 4 lbf•ft)

BRAKE PADS

Brake Pads Replacement

1. Remove caliper from knuckle, refer to *CALIPER REMOVAL* in this subsection.
2. Remove brake pad pins from caliper.

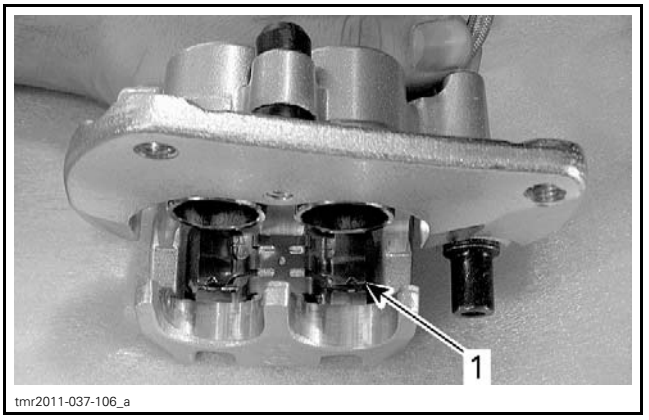


1. Brake pad pins

3. Remove brake pads.
4. Clean pistons end using XPS BRAKES AND PARTS CLEANER (P/N 219 701 705).
5. Push caliper pistons inward.

NOTE: To avoid damaging pistons, use an old pad to push it into the caliper using a C-clamp.

6. Ensure brake pad spring is properly positioned onto caliper.



1. Brake pad spring

7. Install NEW brake pads.
8. Clean brake pad pins using XPS BRAKES AND PARTS CLEANER (P/N 219 701 705).
9. Install brake pad pins on caliper and torque to specification.

BRAKE PAD PINS
17.5 N•m ± 2.5 N•m (155 lbf•**in** ± 22 lbf•**in**)

10. Install caliper on knuckle, refer to *CALIPER INSTALLATION* in this subsection.

BRAKE DISC

Brake Disc Inspection

1. Check disc surfaces for scratches or grooves on both sides.
2. Measure thickness of the disc.

DISC MINIMUM THICKNESS	
FRONT	4 mm (.157 in)
REAR	4 mm (.157 in)

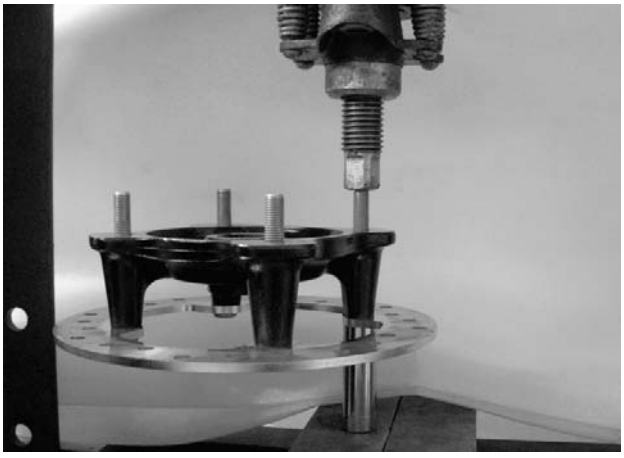
NOTICE Brake discs must never be machined.

3. Check warpage of the disc.

MAXIMUM DISC WARPAGE	
FRONT	0.2 mm (.01 in)
REAR	

Brake Disc Replacement

1. Remove caliper from knuckle, refer to *CALIPER REMOVAL* in this subsection.
2. Remove wheel hub, refer to *FRONT DRIVE* or *REAR DRIVE* subsection.
3. Remove wheel studs using a press.



tmr2011-037-107

4. Replace brake disc.
5. Align wheel stud knurling into hub grooves.
6. Install wheel studs using a press.

NOTE: If wheel studs are damaged, replace them.

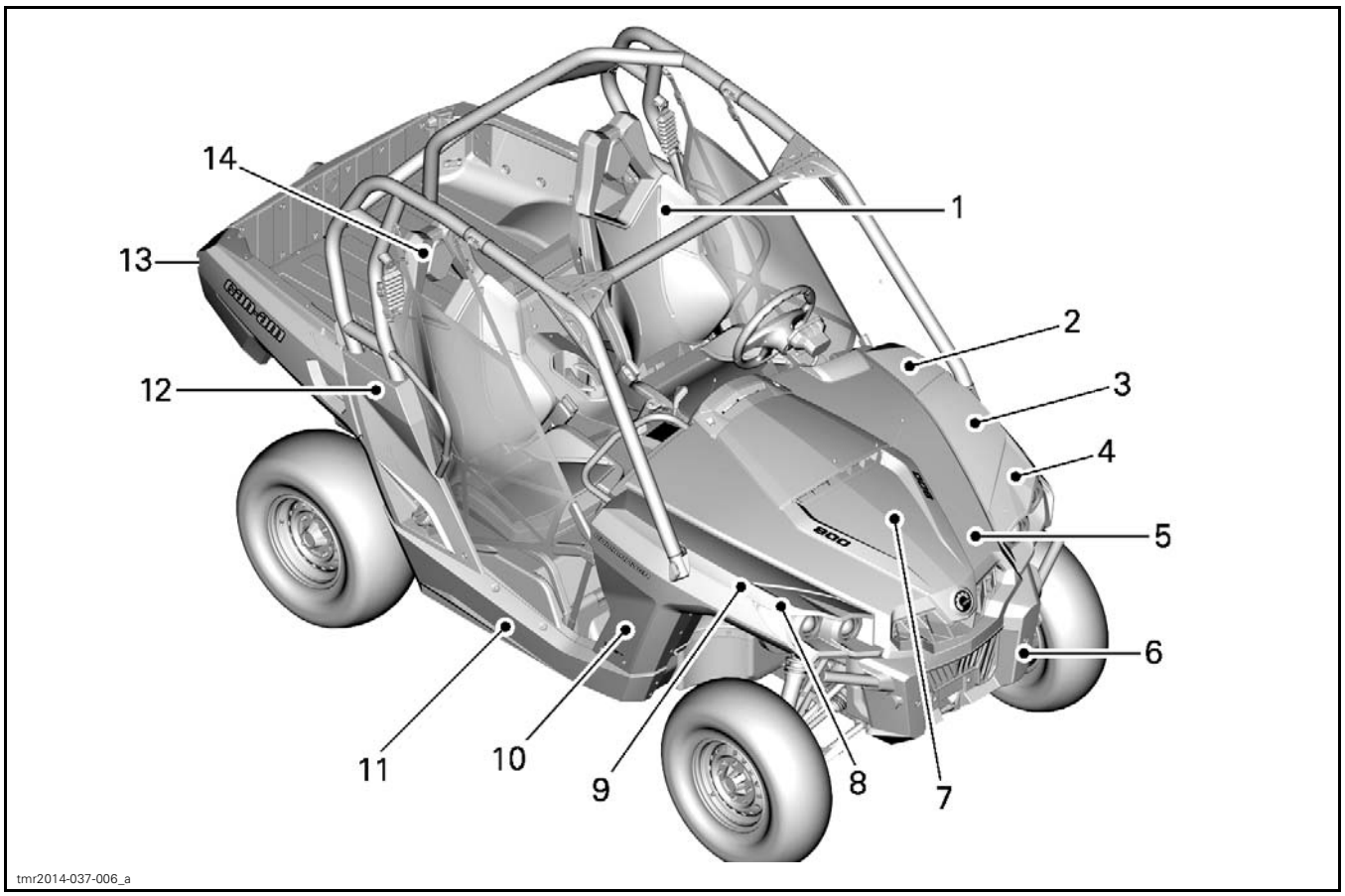
7. Install wheel hub then caliper.
8. Install NEW cotter pin to secure wheel hub nut.

BODY

SERVICE TOOLS

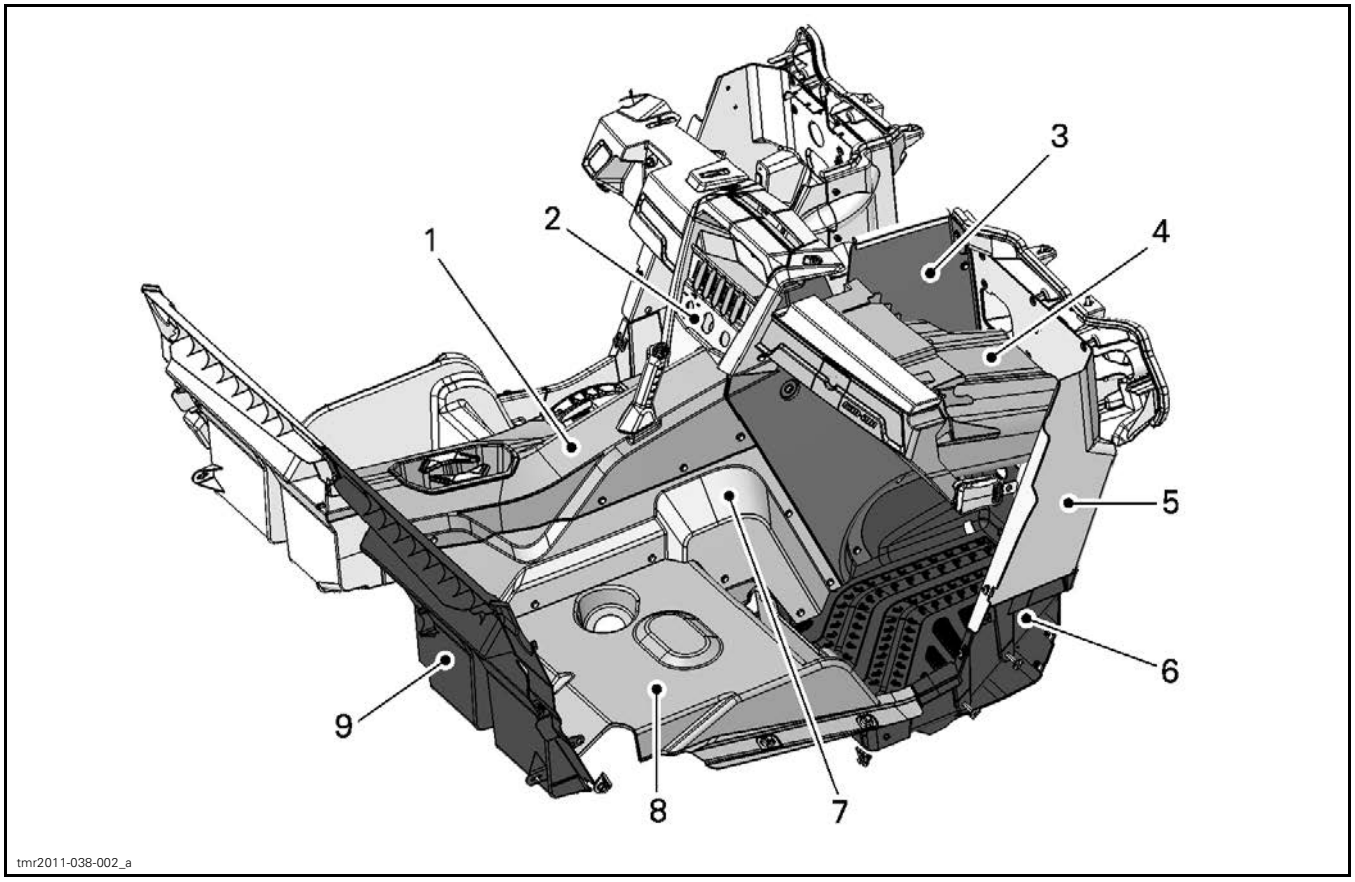
Description	Part Number	Page
OETIKER PLIERS	295 000 070	11

BODY (Parts Nomenclature)



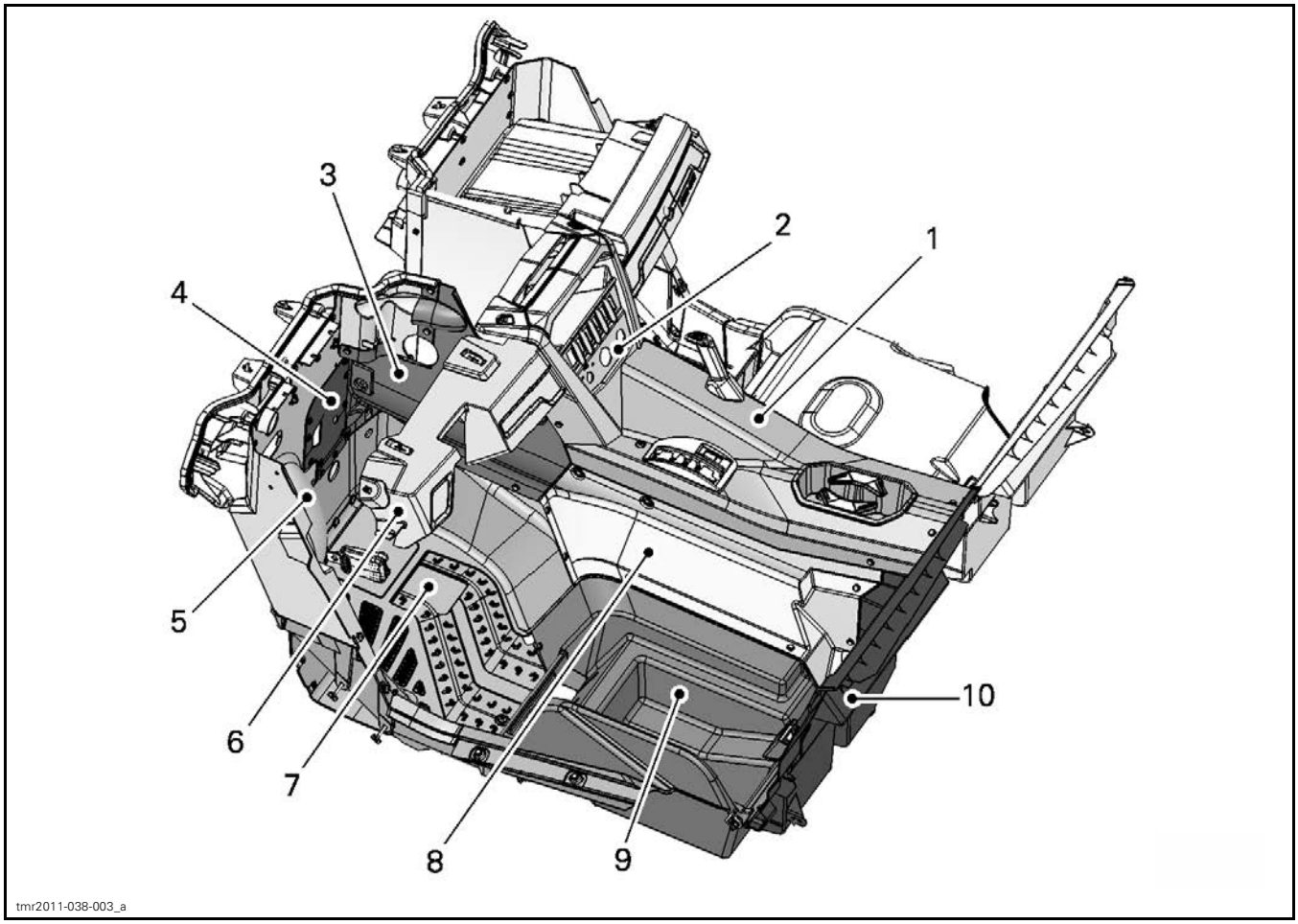
1. *Driver seat*
2. *CVT air inlet cover*
3. *LH front fender*
4. *LH headlight trim*
5. *Hood*
6. *Front fascia*
7. *Service cover*
8. *RH headlight trim*
9. *RH front fender*
10. *Front lateral panel*
11. *Central lateral panel*
12. *Rear lateral panel*
13. *Cargo box*
14. *Passenger seat*

COCKPIT – PASSENGER SIDE (Parts Nomenclature)



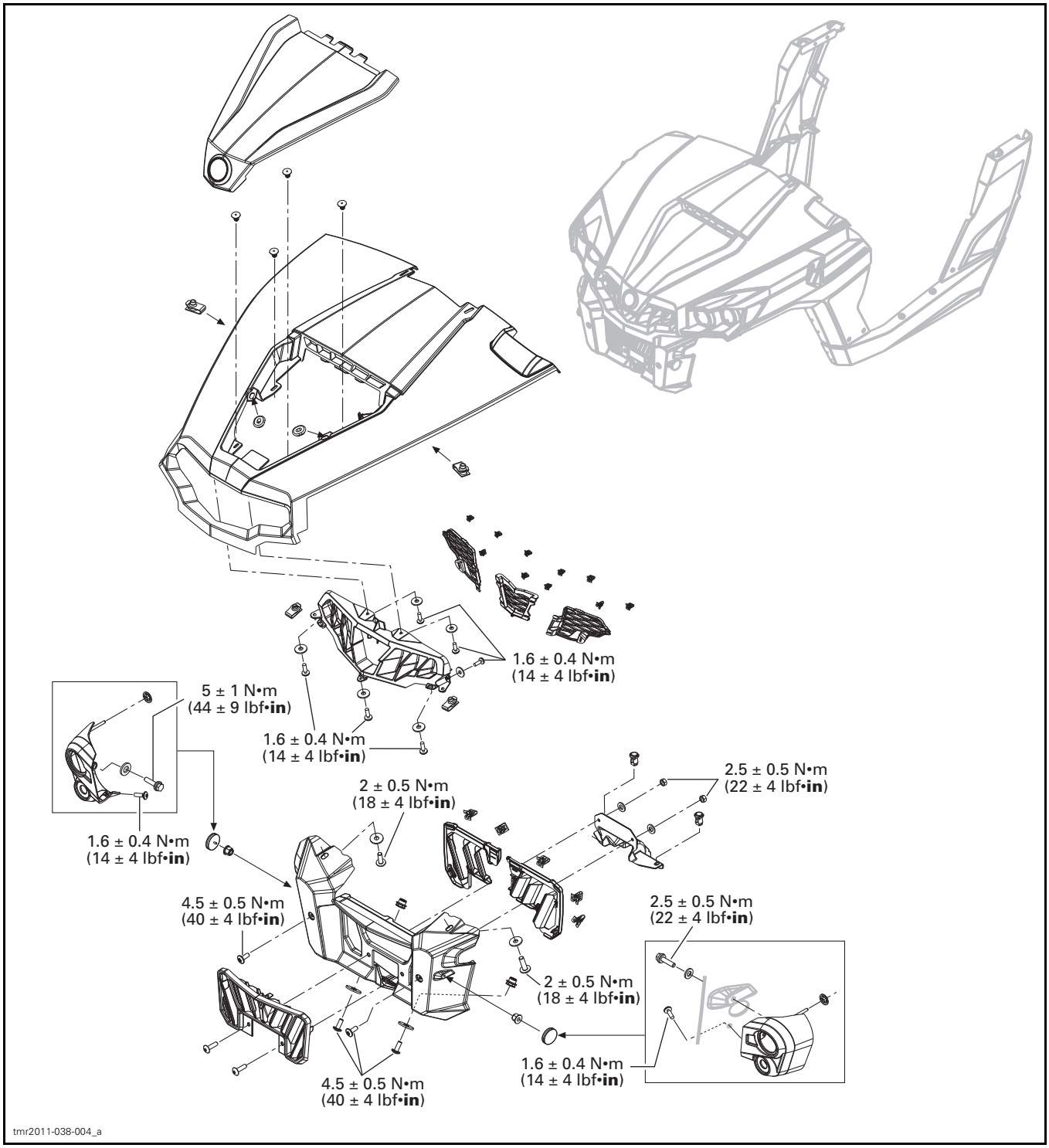
1. *Lower console*
2. *Upper console*
3. *RH inner kick panel*
4. *Glove box*
5. *Right front bulkhead*
6. *Right floor panel*
7. *Right lateral console panel*
8. *Fuel tank cowl*
9. *Right rear bulkhead*

COCKPIT – DRIVER SIDE (Parts Nomenclature)

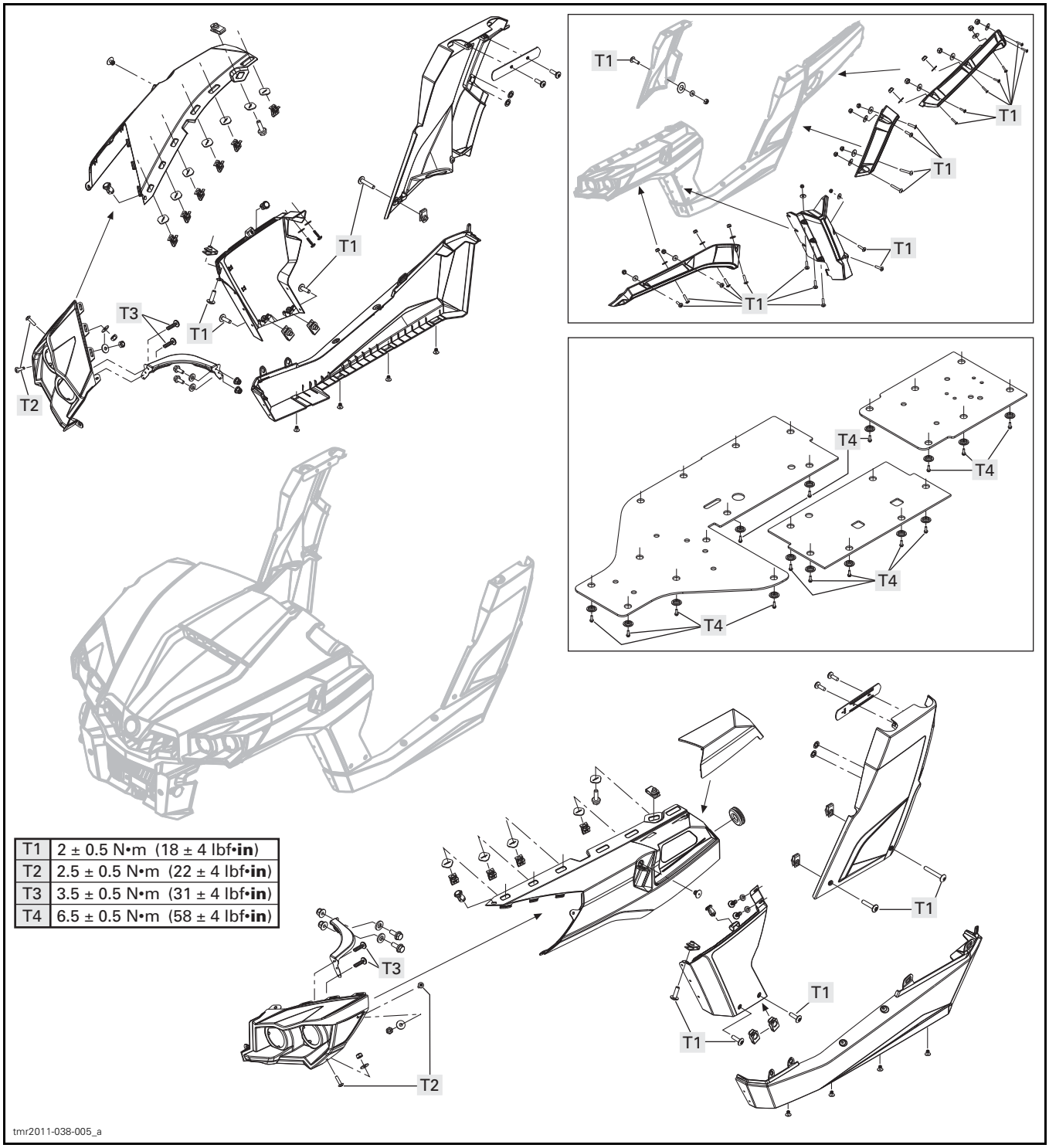


1. *Lower console*
2. *Upper console*
3. *LH inner kick panel*
4. *Bulkhead access panel*
5. *Left front bulkhead*
6. *Dash*
7. *Left floor panel*
8. *Left lateral console panel*
9. *Under seat storage compartment*
10. *Left rear bulkhead*

FRONT BODY PARTS (Torques and Service Products)

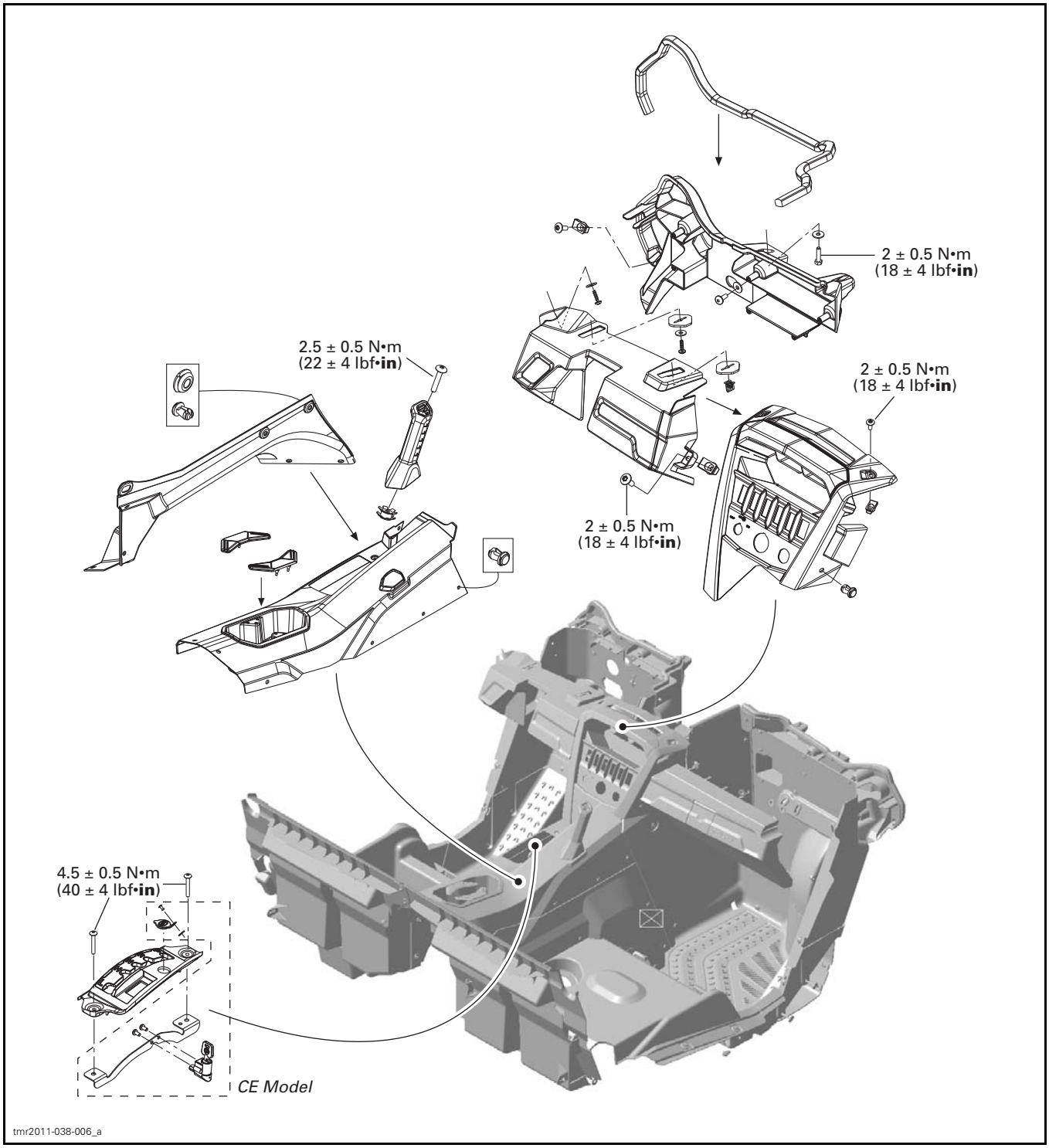


SIDE BODY PARTS (Torques and Service Products)

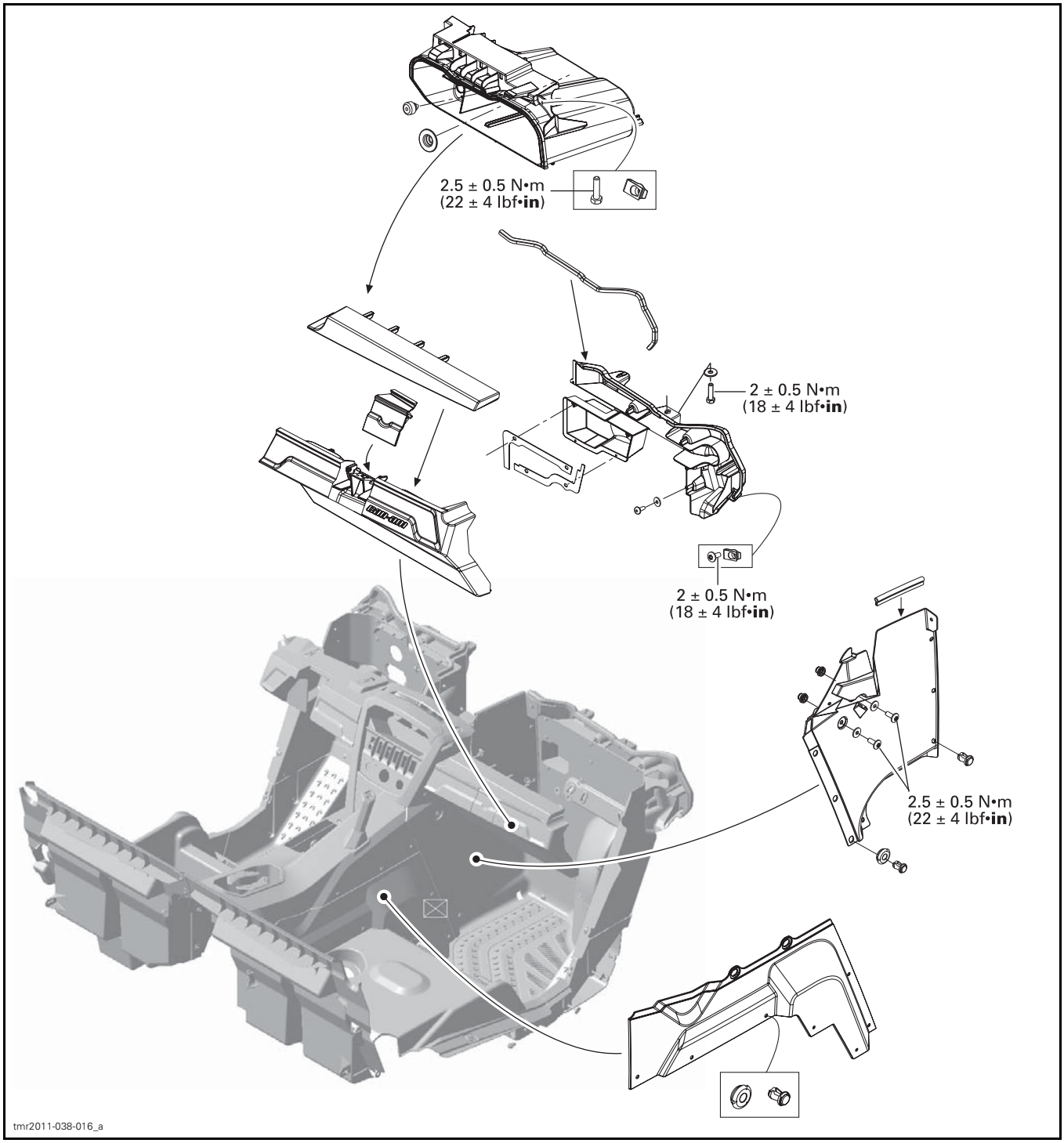


T1	2 ± 0.5 N•m (18 ± 4 lbf•**in**)
T2	2.5 ± 0.5 N•m (22 ± 4 lbf•**in**)
T3	3.5 ± 0.5 N•m (31 ± 4 lbf•**in**)
T4	6.5 ± 0.5 N•m (58 ± 4 lbf•**in**)

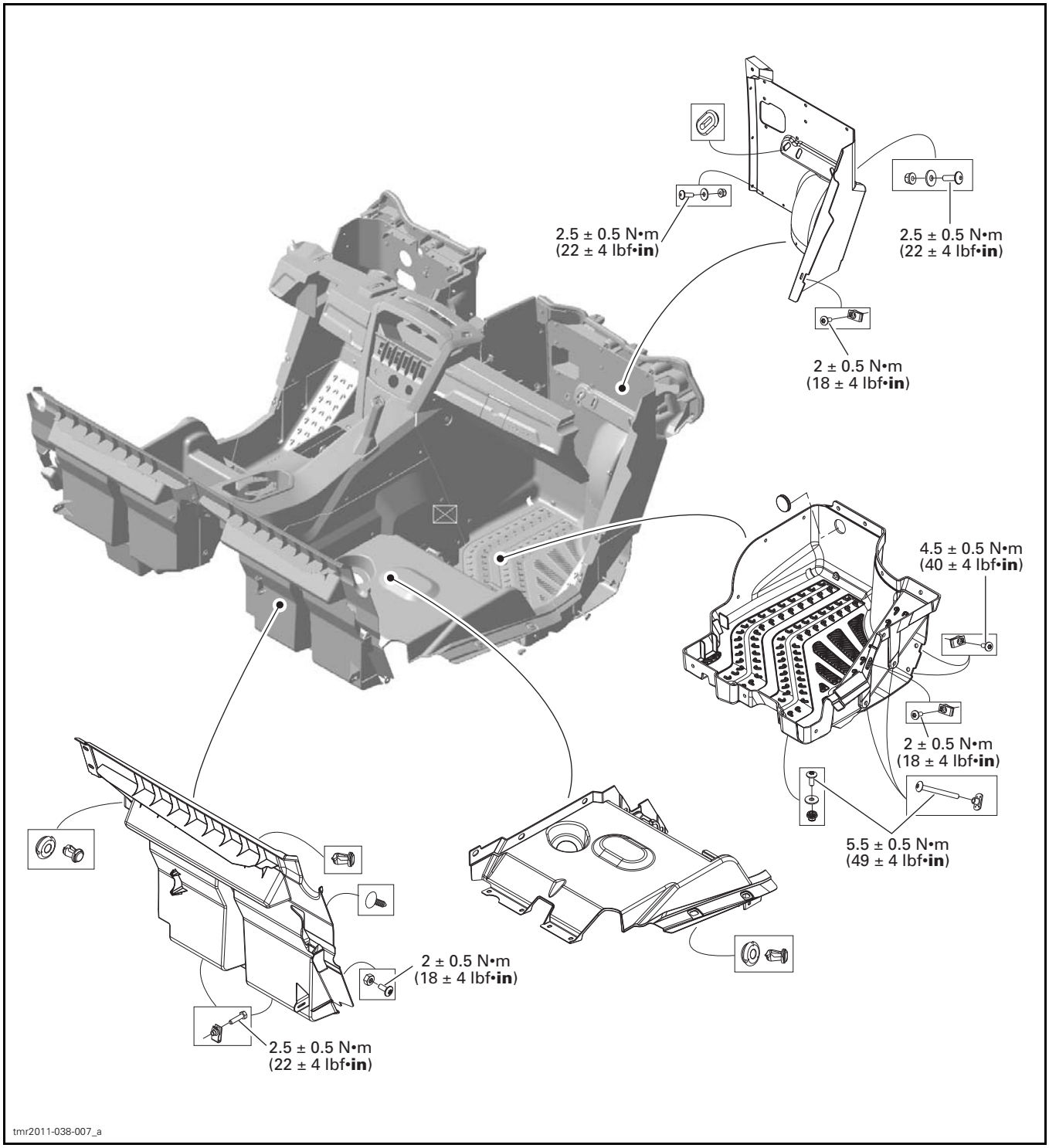
COCKPIT TRIMS – DRIVER SIDE (Torques and Service Products)



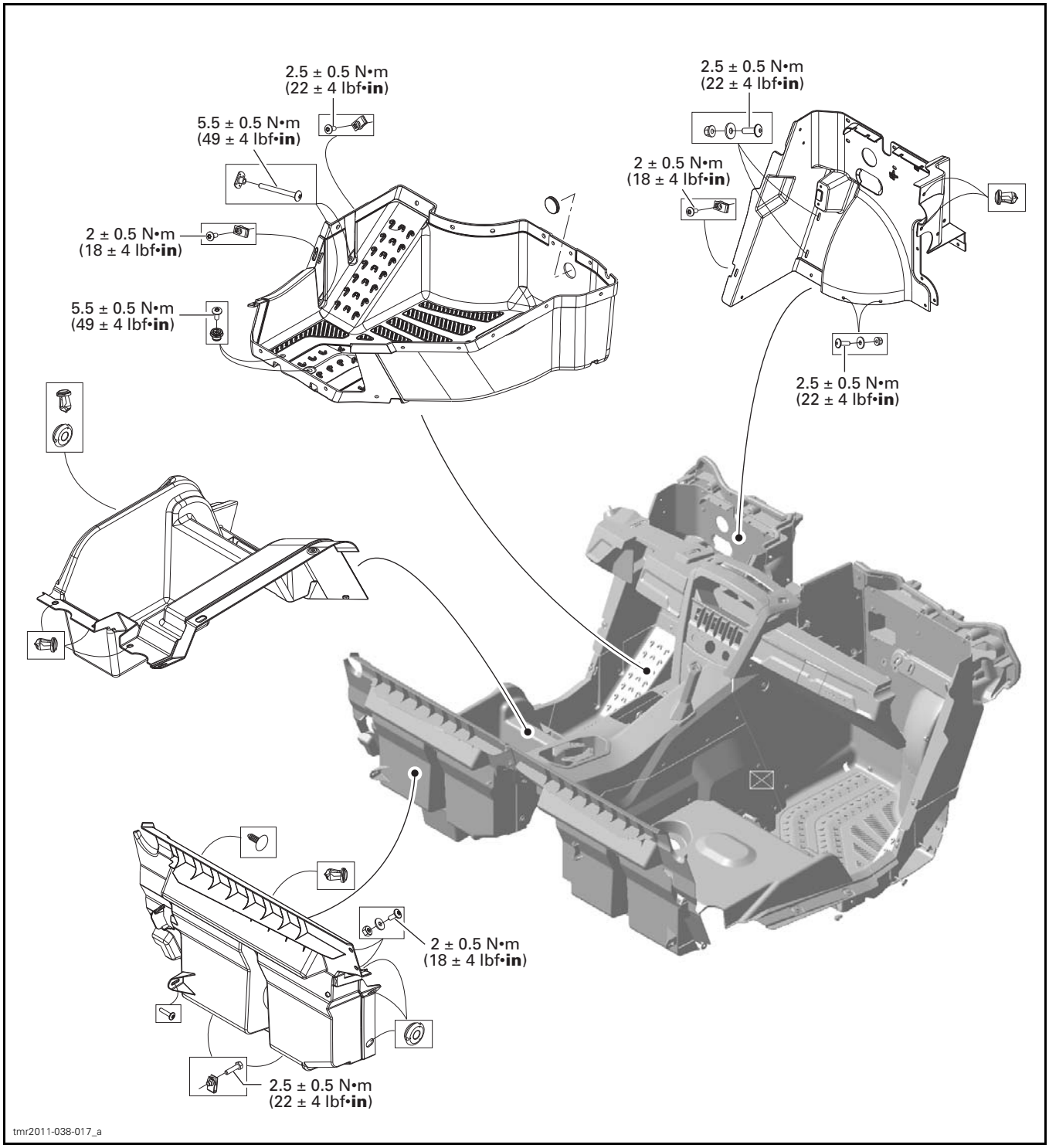
COCKPIT TRIMS – PASSENGER SIDE (Torques and Service Products)



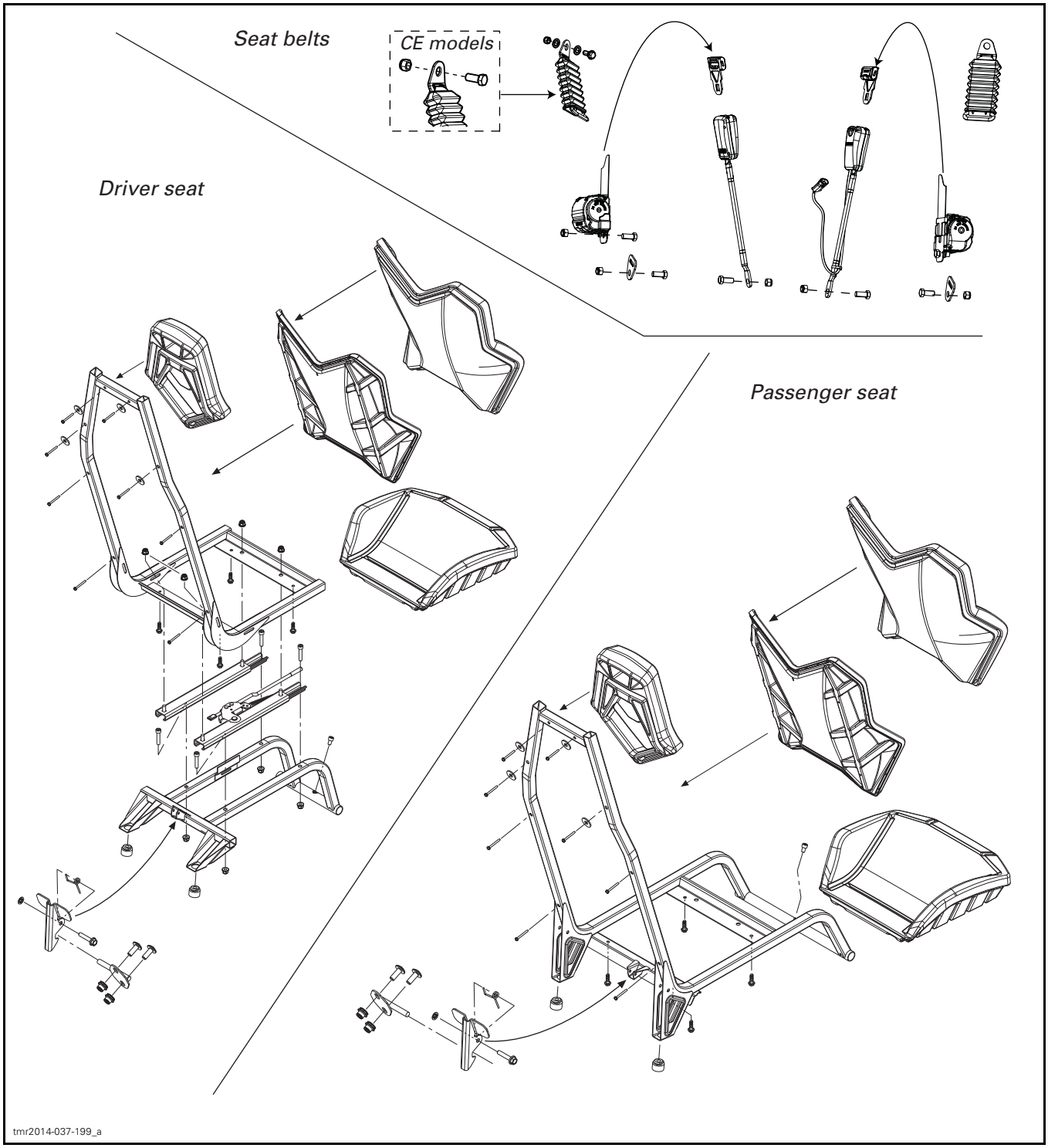
COCKPIT STRUCTURE PANELS – PASSENGER SIDE (Torques and Service Products)



COCKPIT STRUCTURE PANELS – DRIVER SIDE (Torques and Service Products)



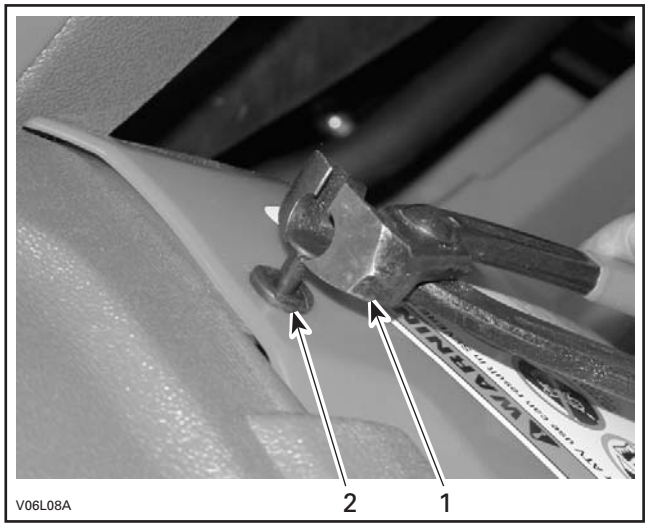
SEATS


Seat belts
CE models
Driver seat
Passenger seat
tmr2014-037-199_a

PROCEDURES

PLASTIC RIVET

Plastic rivets are used in the riveting of the various body parts. Plastic rivets can be reused many times. Use the OETIKER PLIERS (P/N 295 000 070) to remove them.



TYPICAL
1. *Pliers*
2. *Plastic rivet*

DECALS

Decal Removal

Using a heat gun warm up one end of decal for a few seconds until decal can roll off when rubbing with your finger.

Pull decal slowly and when necessary apply more heat to ease removal on the area that has to be peeled off.

If decal tears while pulling off, it has to be heated for a few seconds longer. If decal tends to stretch while pulling off, stop heating and wait a few seconds to let it cool, then peel it off.

Decal Installation

Using isopropyl alcohol, clean the surface and dry thoroughly.

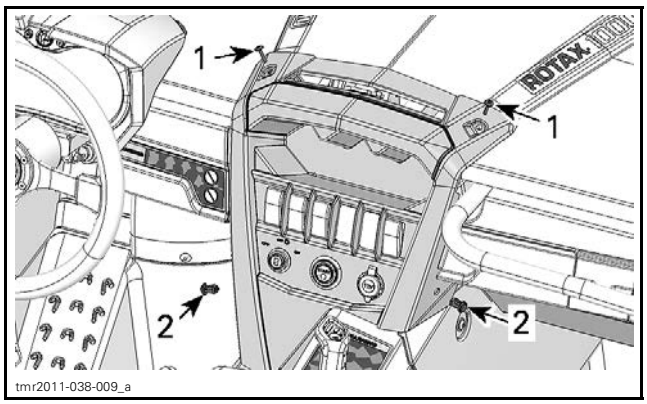
Apply liquid soap to new decal and carefully position it. Using a sponge or a squeegee, remove the air bubbles and surplus water working from the center toward the edges. Allow to air dry.

NOTICE **Do not apply isopropyl alcohol or solvent directly on decals. Use these products in a well ventilated area.**

UPPER CONSOLE

Upper Console Removal and Installation

1. Remove:
   - Screws
   - Plastic rivets.



1. *Top screws*
2. *Plastic rivets*

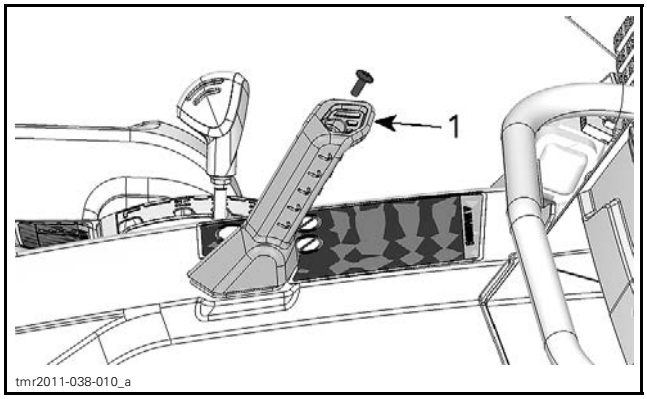
2. Pull out the upper console and disconnect electrical connectors.
3. Remove the upper console.

The installation is the reverse of the removal procedure.

LOWER CONSOLE

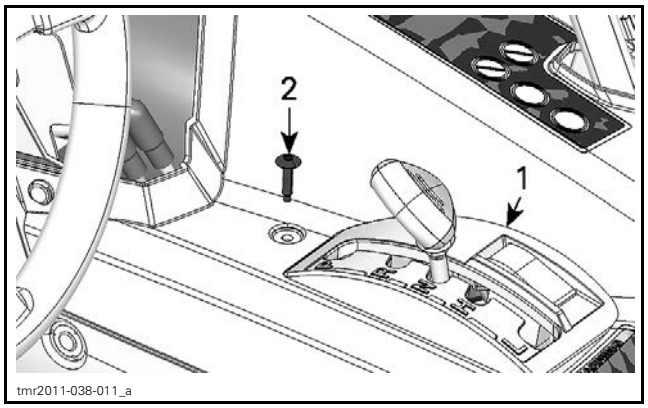
Lower Console Removal and Installation

1. Remove both seats.
2. Remove screws and plastic rivets securing the upper console and place it on the hood.
3. Remove the LH passenger handhold screw.



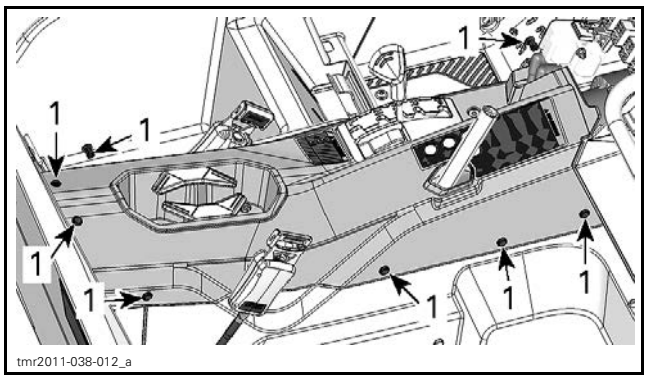
1. *LH passenger handhold*

4. Remove the front screw of the shift lever indicator.



1. Shift lever indicator
2. Front retaining screw

5. Remove all plastic rivets securing the lower console.



1. Plastic rivets

6. Remove the lower console.

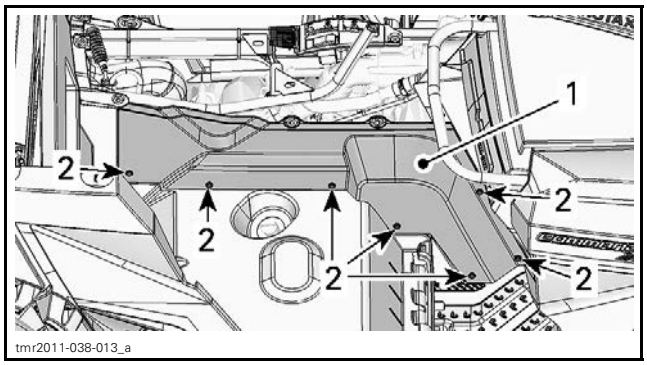
The installation is the reverse of the removal procedure.

LATERAL CONSOLE PANELS

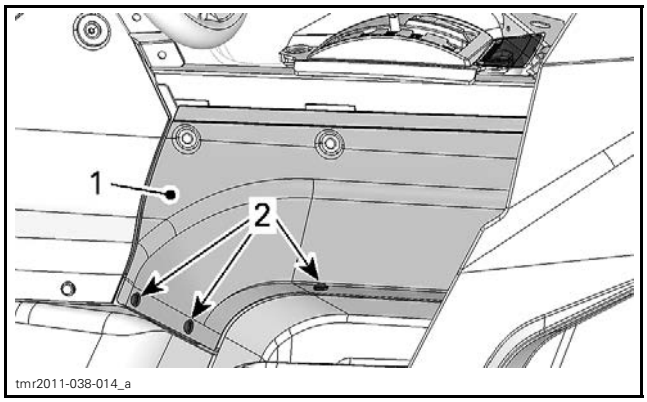
Lateral Console Panels Removal and Installation

1. Remove seat.
2. Remove plastic rivets securing the lateral console panel.
3. Remove the lateral console panel.

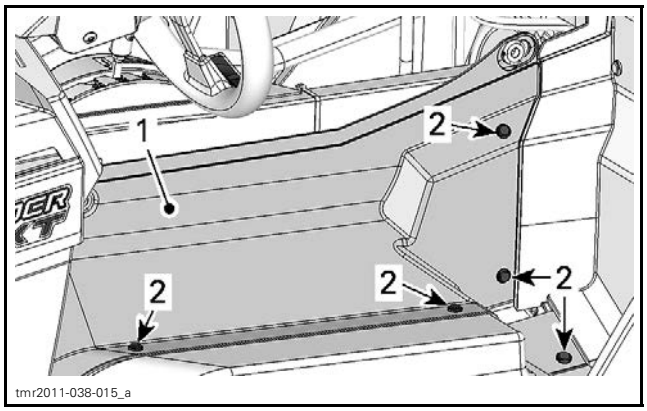
NOTE: On following illustrations, the cage and the side net are removed for clarity purpose.



1. RH lateral console panel
2. Plastic rivets



FRONT PORTION OF THE LH LATERAL CONSOLE PANEL
1. LH lateral console panel
2. Plastic rivets

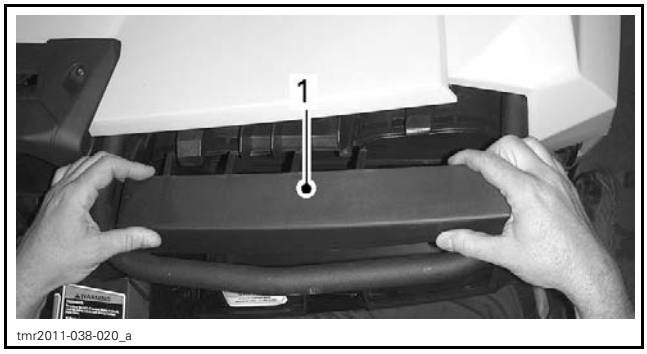


REAR PORTION OF THE LH LATERAL CONSOLE PANEL
1. LH lateral console panel
2. Plastic rivets

The installation of the lateral console panels is the reverse of the removal procedure.

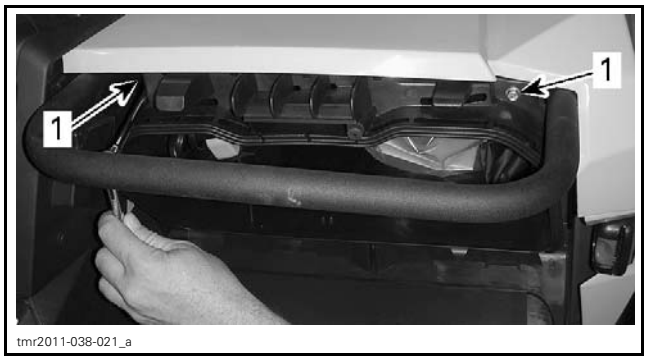
GLOVE BOX REMOVAL AND INSTALLATION

1. Remove the glove box trim.



1. Glove box trim

2. Remove glove box retaining screws.



1. Glove box retaining screws

3. Pull glove box to remove it.

The installation of the glove box is the reverse of the removal procedure.

FUEL TANK COWL

Fuel Tank Cowl Removal and Installation

Remove rivets securing fuel tank cowl.

Remove fuel tank cowl.

The installation of the fuel tank cowl is the reverse of the removal.

SEAT COVER

Seat Cover Removal

Remove plastic clips securing seat cover to seat.

Remove seat cover from seat.

Seat Cover Installation

Install seat cover onto seat.

Apply pressure to padded areas for a close fit.

Insert plastic clips to secure seat cover onto seat.

SEAT BELTS

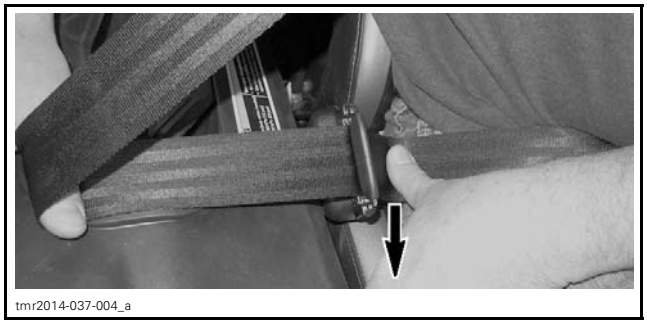
Seat Belt Operation

All models except CE models are now equipped with a slide locking tab on the seat belt.

SEAT BELT ENGAGED
1. Slide locking tab

1. To lock: adjust the seat belt tightly against your body and raise or move the lap belt upward.

2. To unlock: place seat belt as shown and push down on the lap belt where indicated.



Seat Belt Cleaning

To clean dirt and debris from the seat belts, sponge the straps with mild soap and water. Do not use bleach, dye, or household detergents.

⚠ WARNING

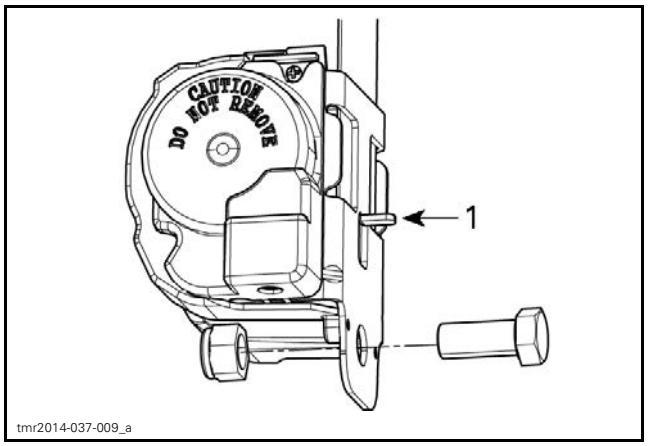
Do not use pressure washer to clean seat belt components. Use of pressure washer can permanently damage seat belt components.

Seat Belt Replacement

Follow standard torque specifications and pay attention to mounting hardware.

When installing seat belt retractor, the hardware must be assembled as illustrated below.

Align locating tab with hole in frame bracket.

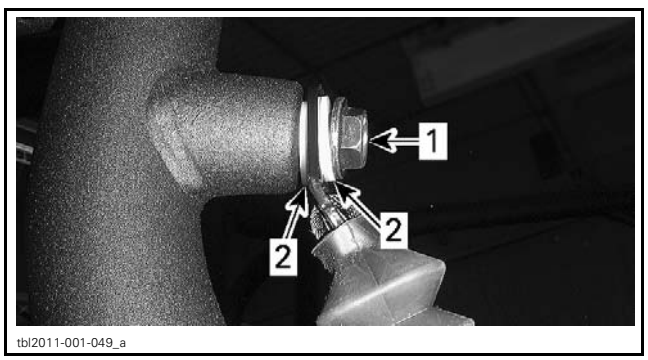


SEAT BELT RETRACTOR
1. Locating tab

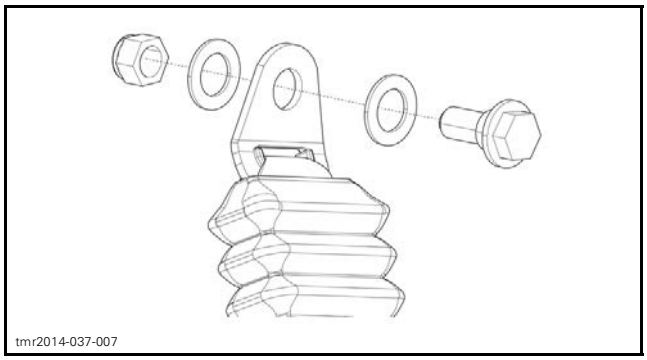
PART	TORQUE
7/16-20 x 1 hexagonal flange bolt	60 N•m (44 lbf•ft)

Except CE models.

NOTICE **Make sure belt is not twisted.**



1. Shoulder bolt
2. Nylon flat washer

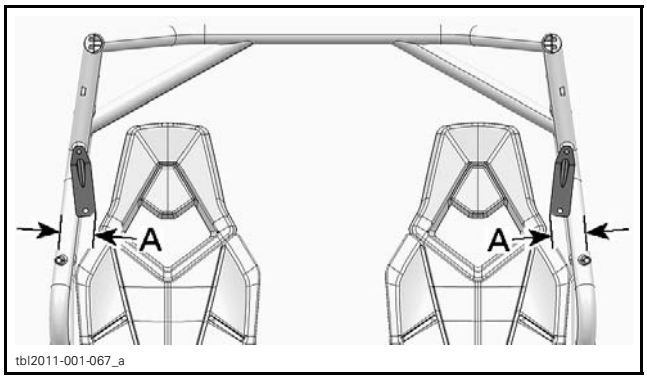


PART	TORQUE
7/16-20 x 1 shoulder bolt	60 N•m (44 lbf•ft)

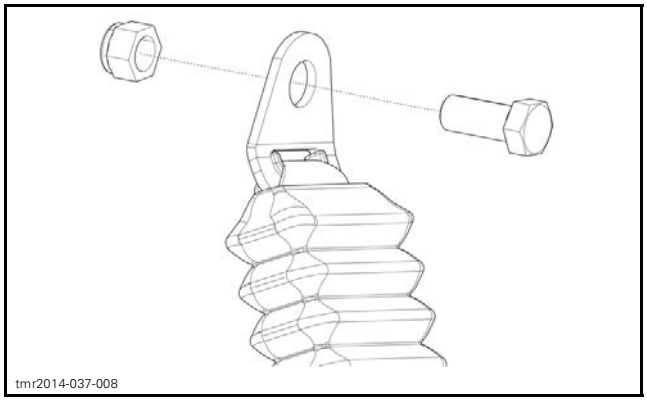
CE models.

NOTICE **Make sure belt is not twisted.**

Position seat belt bracket as per the following illustration. No nylon flat washers are necessary.



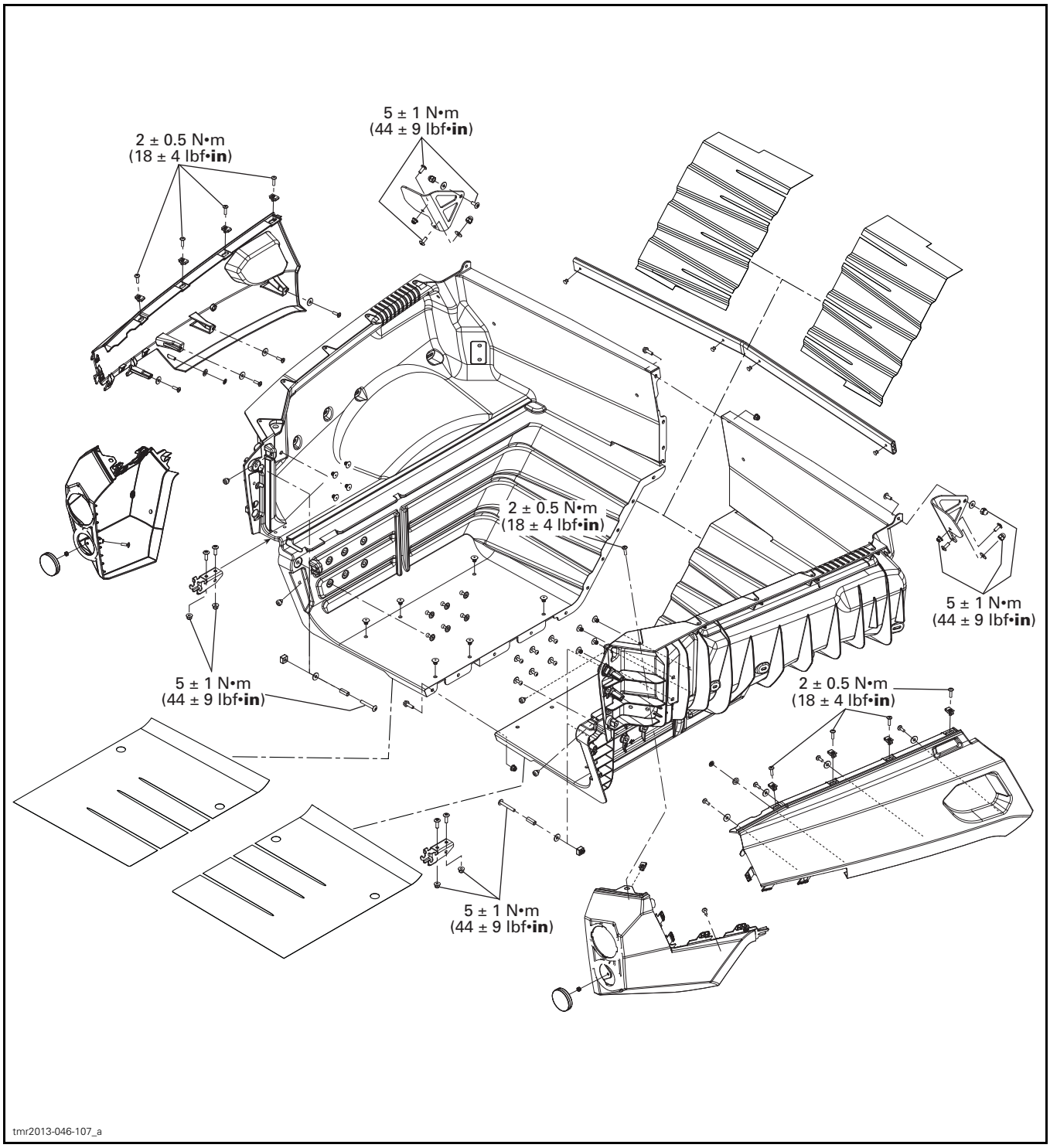
A. Approximately 90 mm (3-17/32 in)



PART	TORQUE
7/16-20 x 1 hexagonal flange bolt	60 N•m (44 lbf•ft)

CARGO BOX

CARGO BOX TRIMS



CARGO BOX TILT RELEASE MECHANISM

Midwest Manuals
Green Manuals
Paperless Manuals
For a Better Tomorrow
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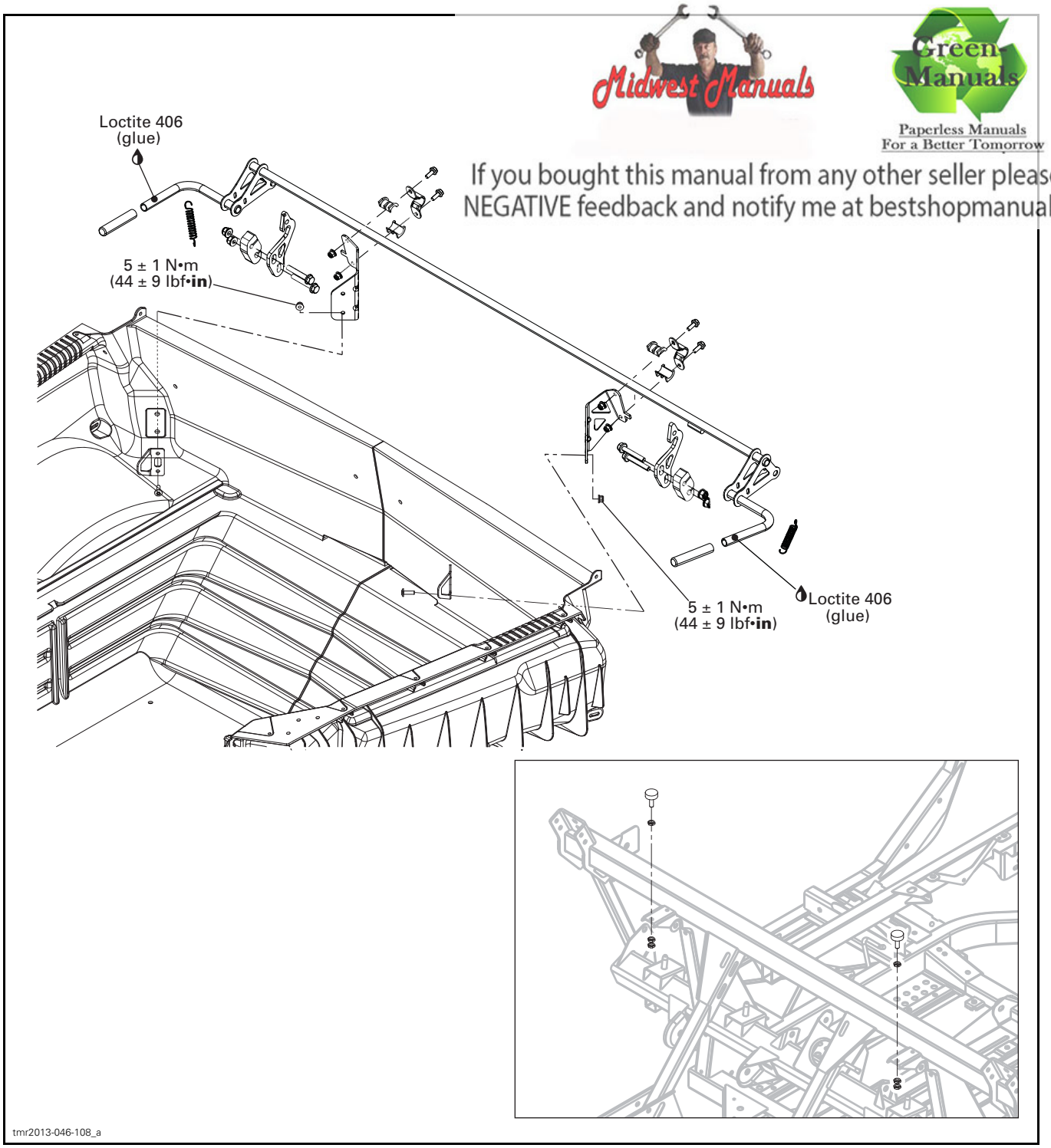
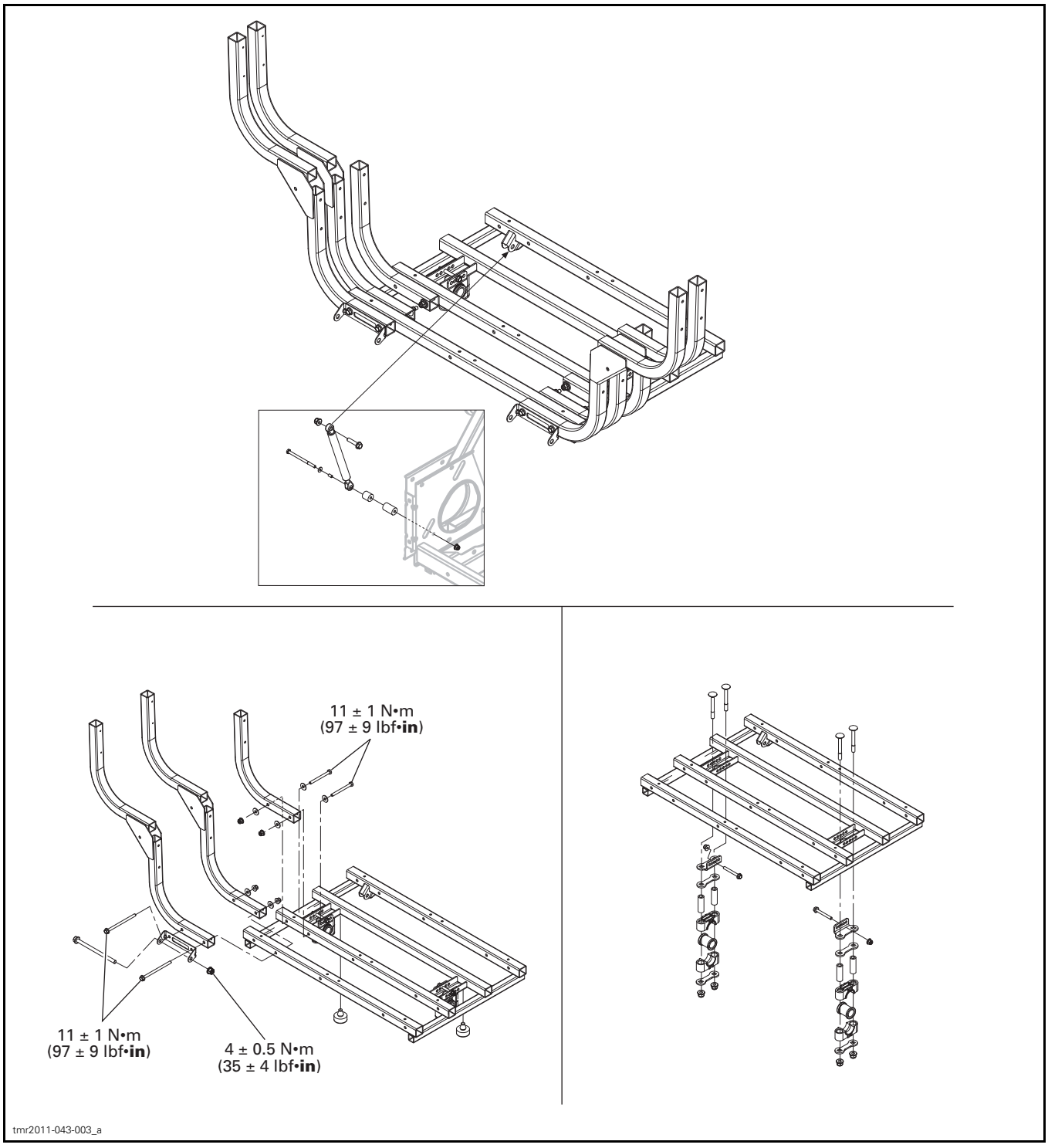
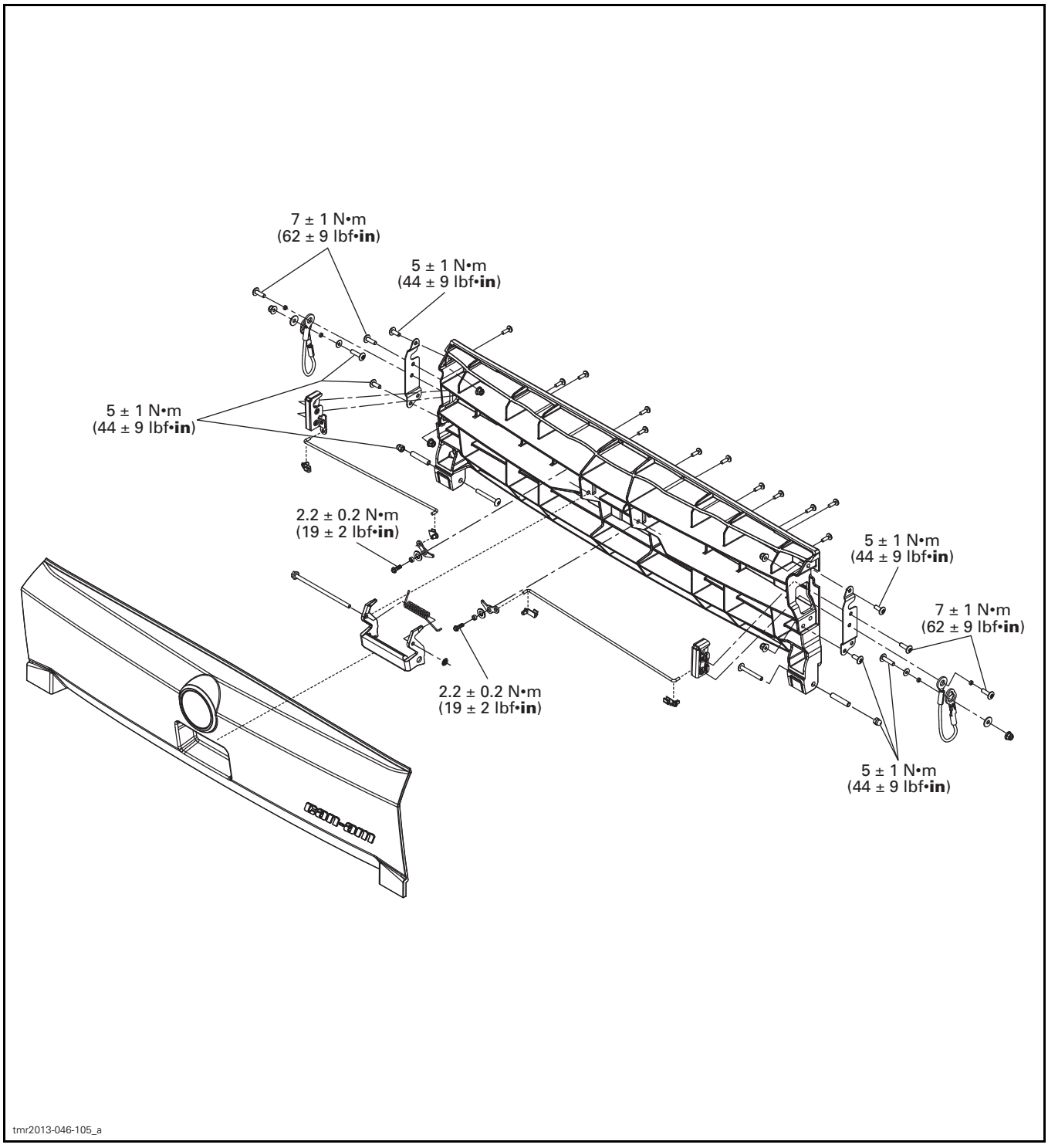


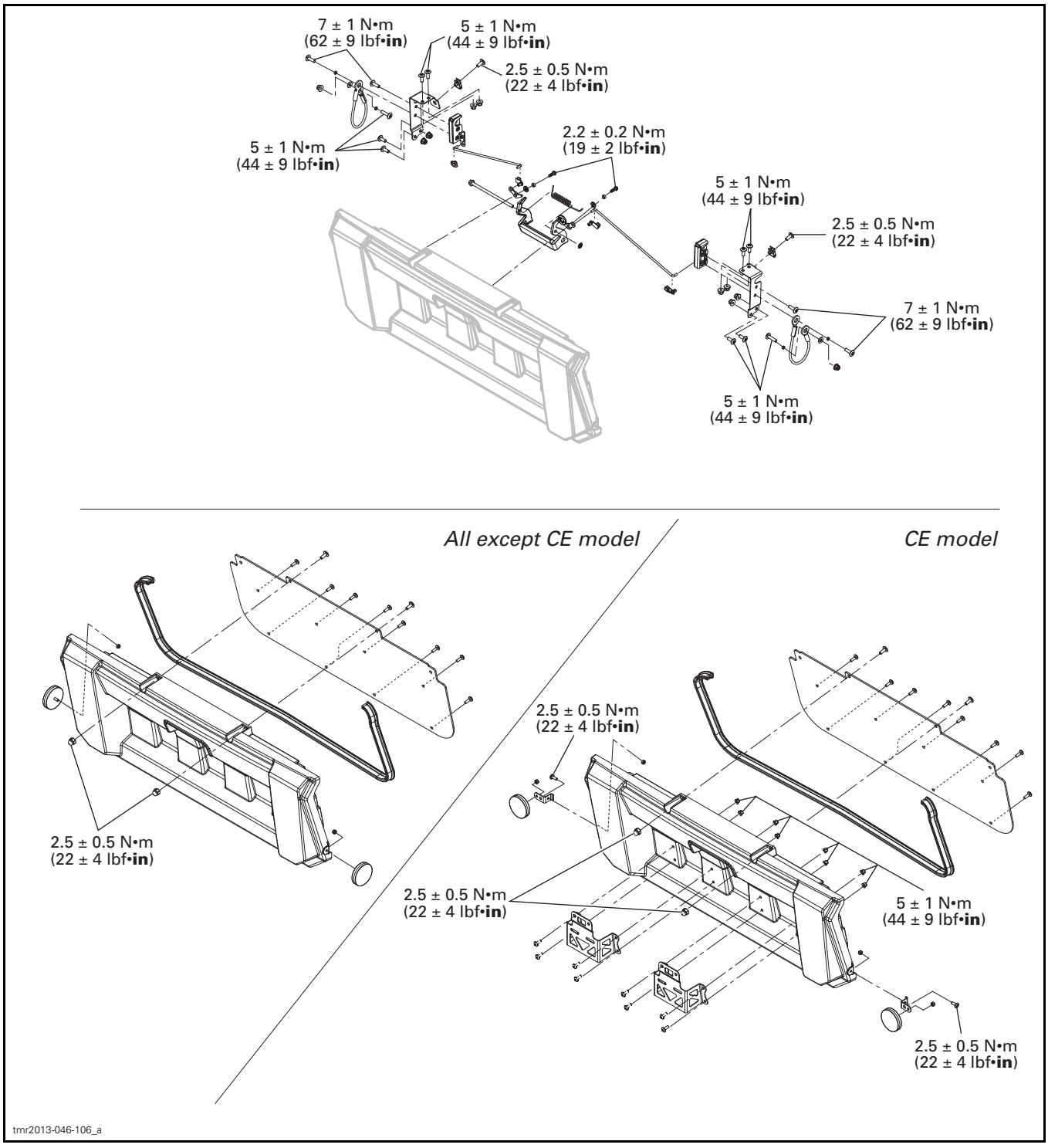
CARGO BOX SUPPORT



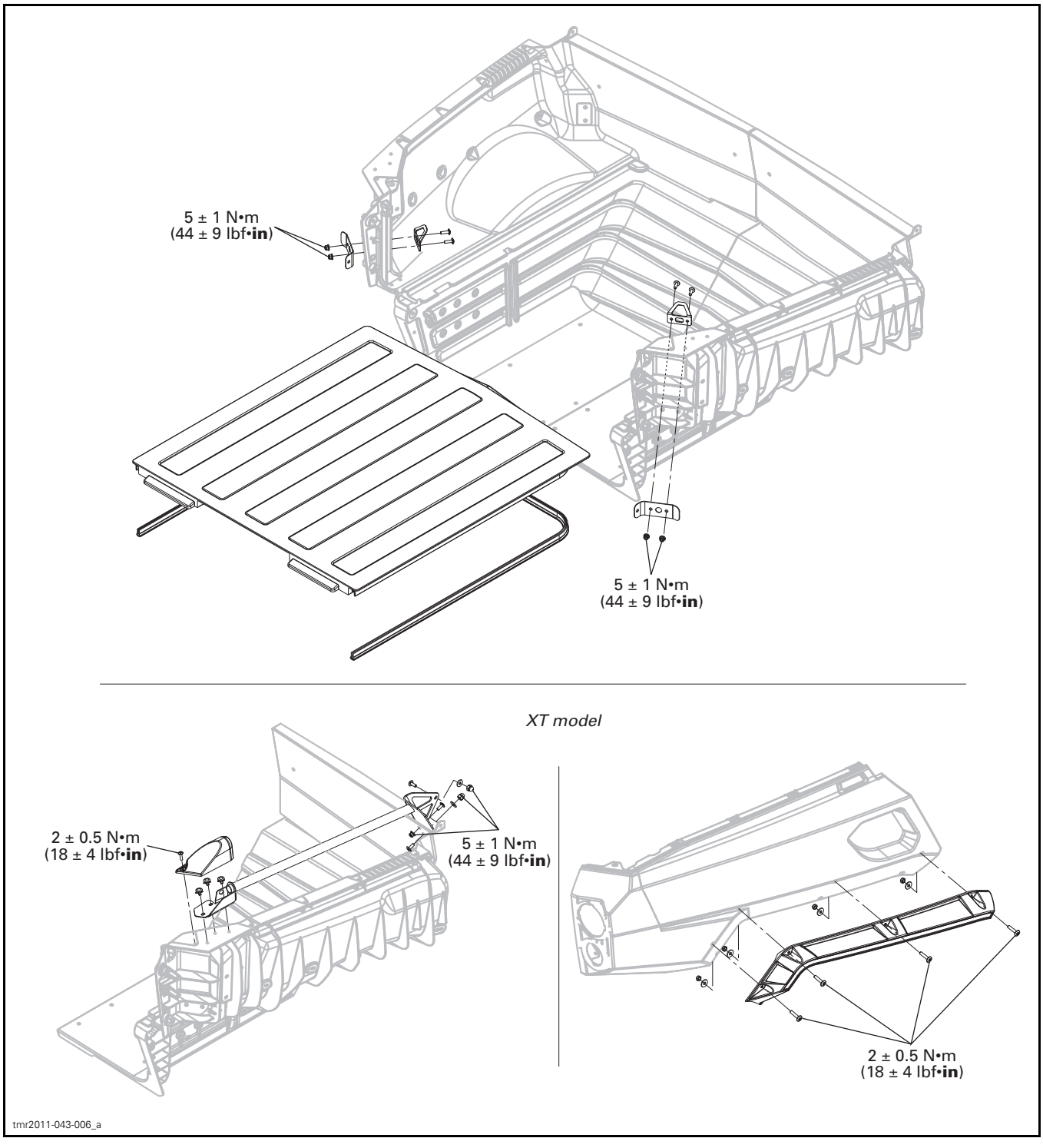
UPPER TAIL GATE



LOWER TAIL GATE



CARGO BOX ACCESSORIES



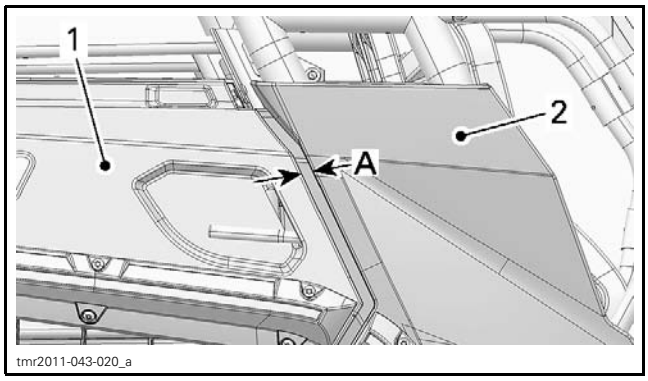
ADJUSTMENT

CARGO BOX ADJUSTMENTS

Cargo Box Alignment

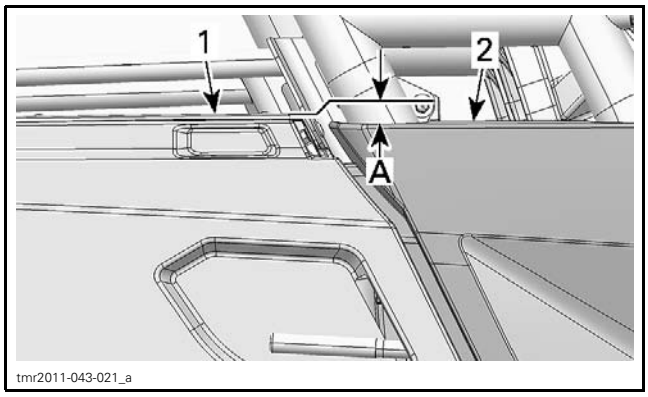
The cargo box is properly aligned when:

– The gap between the cargo box and rear lateral panel is equalled on each side (± 19 mm (3/4 in)).
– Cargo box side and rear lateral panel are flushed. The top of cargo box side may be raised for a maximum of 6 mm (15/64 in) over the top of rear lateral panel.



GAP BETWEEN CARGO BOX AND REAR LATERAL PANEL
1. *Cargo box side*
2. *Rear lateral panel*

A. Approximately 19 mm (3/4 in)

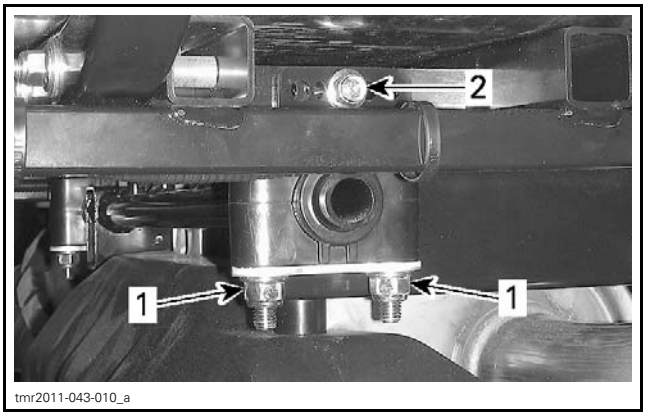


CARGO BOX HEIGHT GAP
1. *Top of cargo box side*
2. *Top of rear lateral panel*

A. Maximum of 6 mm (15/64 in)

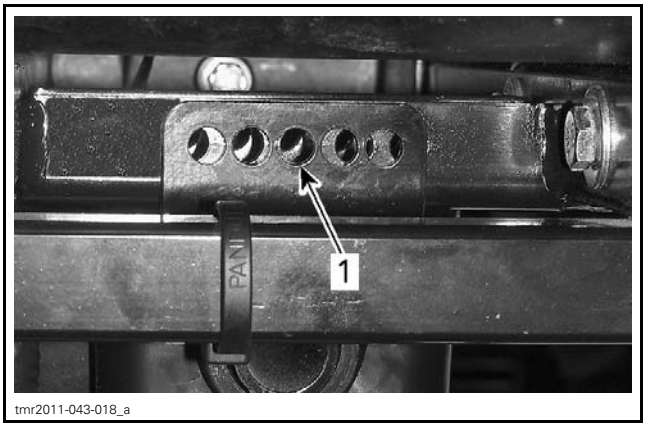
If an adjustment is required, proceed as follows:

1. Loosen cargo box pivot point nuts.
2. Remove adjuster bolts securing the cargo box to cargo box support adjuster.



TYPICAL – RH SIDE SHOWN
1. *Cargo box pivot point nuts*
2. *Adjuster bolt*

3. Position cargo box to align it as described above.
4. Reinstall adjuster bolts in corresponding holes.



1. *Corresponding holes*

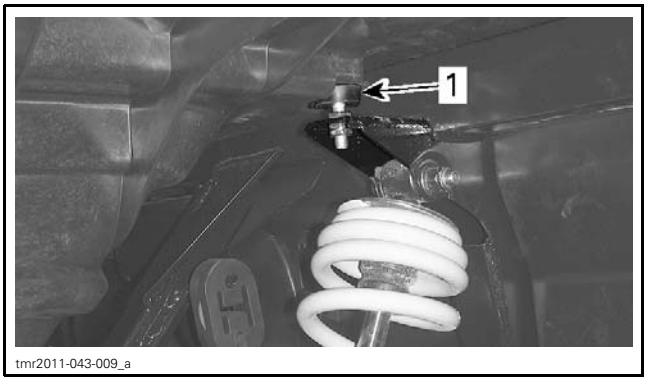
5. Tighten nuts and bolts.

PART	TORQUE
Adjuster bolts	10 N•m ± 2 N•m (89 lbf•**in** ± 18 lbf•**in**)
Cargo box pivot point nuts	24.5 N•m ± 3.5 N•m (18 lbf•ft ± 3 lbf•ft)

6. Verify the cargo box retainer height.

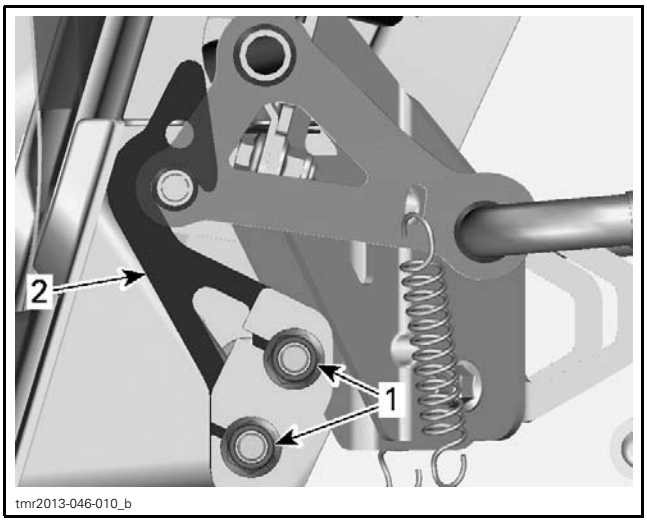
Cargo Box Retainer Height Adjustment

1. Open cargo box.
2. Loosen rubber bumpers.



RH SIDE SHOWN
1. *Rubber bumper*

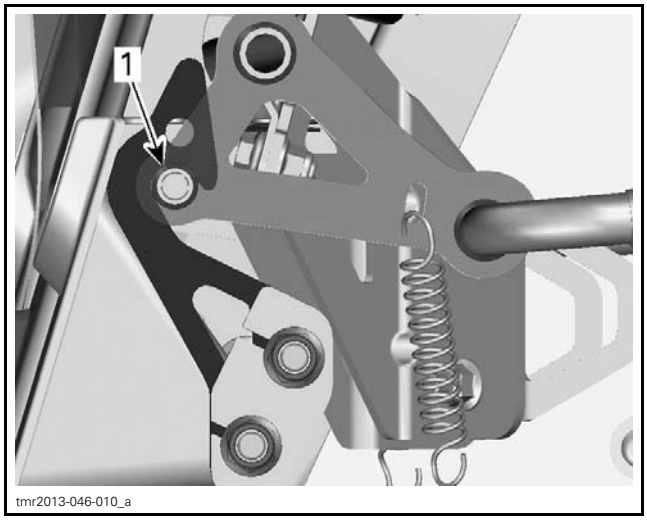
3. Close the cargo box and check the gap between cargo box retainer and the end of the latch lever.
   3.1 Break torque from cargo box retainer bolts.



TYPICAL – RH SIDE SHOWN
1. *Cargo box retainer nuts*
2. *Cargo box retainer*

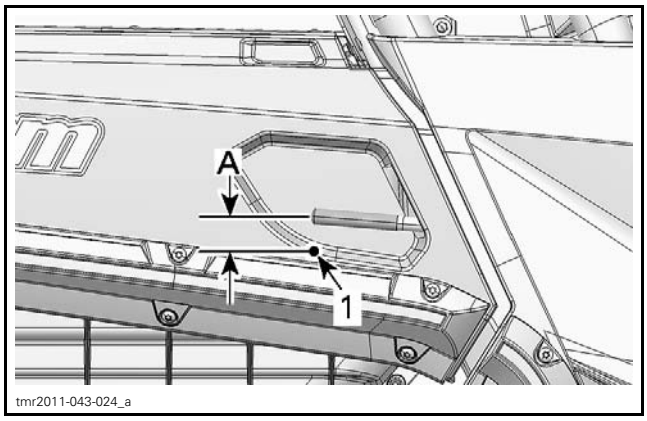
   3.2 Using a small hammer, reposition the cargo box retainer. Temporarily retighten bolts.
   3.3 Close the cargo box and check the cargo box retainer gap.

NOTE: No vertical gap is permitted between cargo box retainer and the end of the latch lever.



1. *No gap here*

4. Check the tilt release handle stroke.
   4.1 Determine a reference point on the body.
   4.2 With the cargo box unlatch, measure the distance between the handle and your reference point.
   4.3 Latch the cargo box and repeat the measurement using same reference points (handle and body).
   4.4 The difference between measurements should be approximately 2 mm (.079 in).

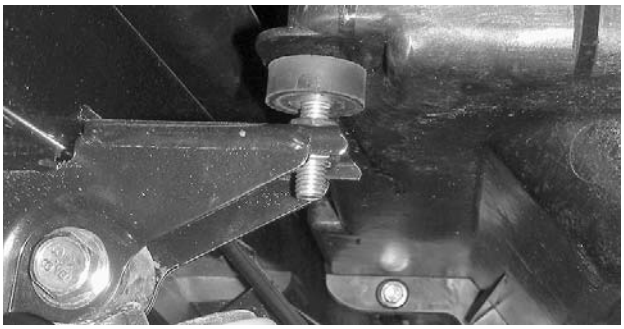


1. *Reference point*
A. *Difference: approximately 2 mm (.079 in)*

5. Repeat steps 3 and 4 until cargo box is properly adjusted.
6. Retighten all cargo box retainer bolts.

PART	TORQUE
Cargo box retainer bolts	24.5 N•m ± 3.5 N•m (18 lbf•ft ± 3 lbf•ft)

7. Reposition the rubber bumper against the cargo box without any pressure.


tmr2011-043-019

PROCEDURES

CARGO BOX GAS SHOCK

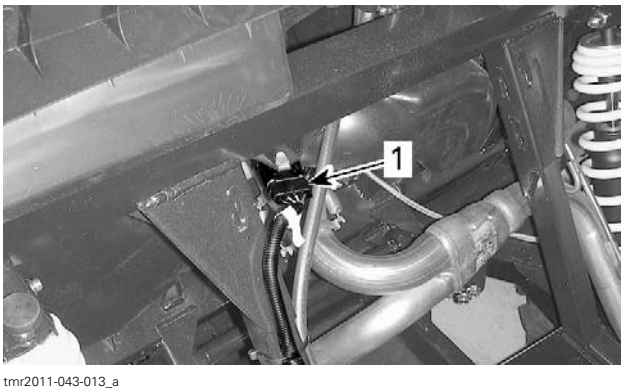
Cargo Box Gas Shock Replacement

1. Unlock and raise the cargo box.
2. Secure the cargo box with wooden blocks (or an equivalent).
3. Remove the upper and lower gas shock bolts.
4. Remove gas shock from vehicle and install the new one.
5. Remove supports and lower the cargo box.

CARGO BOX

Cargo Box Removal

1. Unlock and raise the cargo box.
2. Unplug the cargo box harness connector.



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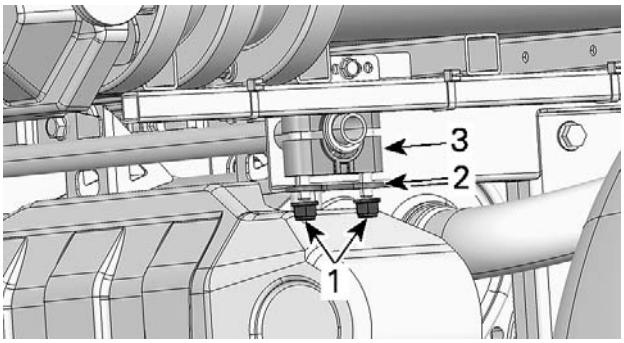
1. Cargo box harness connector

3. From the LH of vehicle, cut all locking ties securing harness to frame.
4. Secure the cargo box with wooden blocks (or an equivalent) and remove the upper gas shock bolt.
5. Remove supports and lower the cargo box.
6. From underneath of cargo box, remove nuts, support plates and halve housings.



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RH SIDE SHOWN
1. Nuts
2. Support plate
3. Half housing

7. Unlock the cargo box.
8. Using a hoist or with the help of another person, remove the cargo box.

⚠ CAUTION **To avoid injury or vehicle damages, never handle the cargo box alone.**

Cargo Box Installation

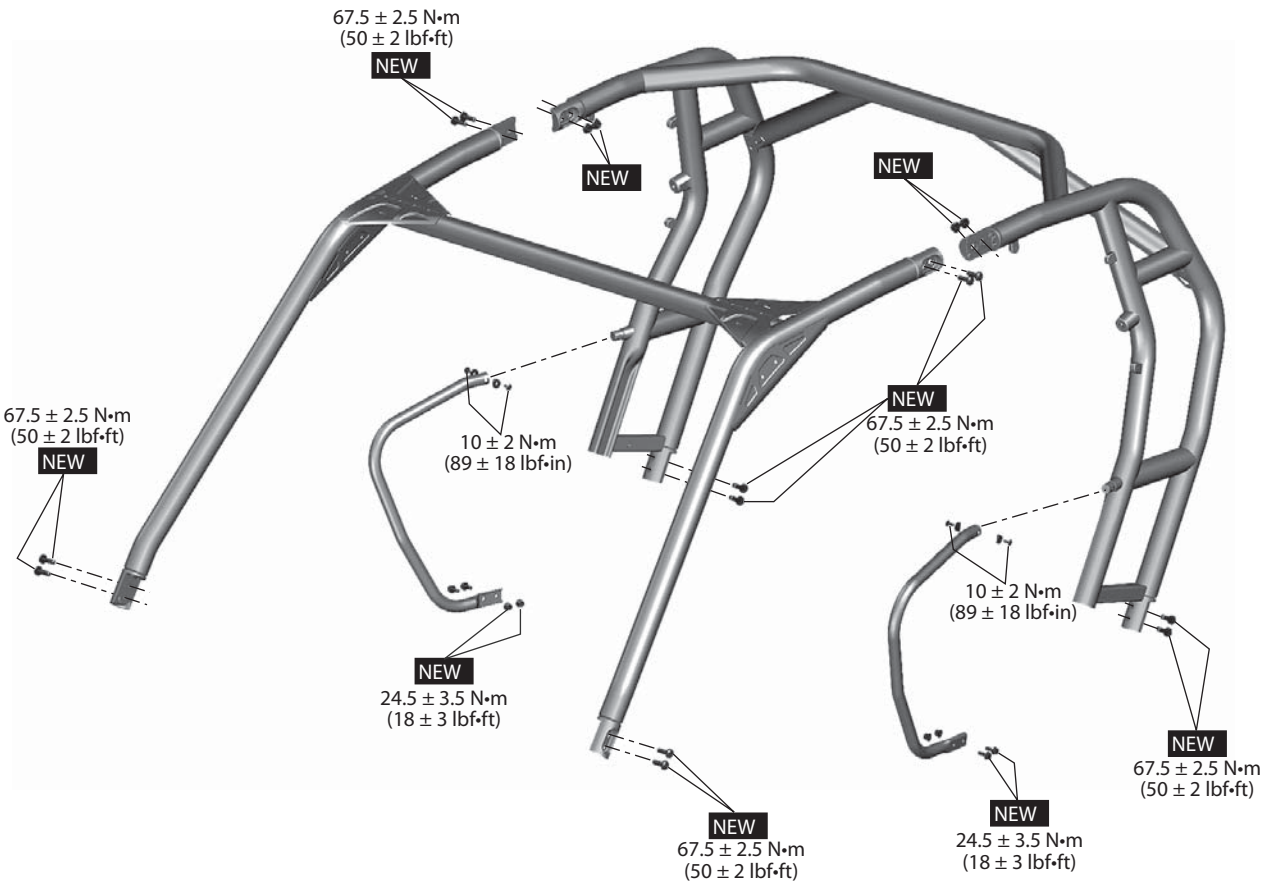
The installation is the reverse of the removal procedure. However, pay attention to the following.

If any parts of the locking mechanism have been replaced or loosen, check cargo box adjustments. Refer to *CARGO BOX ADJUSTMENTS*.

FRAME

New cage and new shoulder guards.

New side nets.



NEW = Component must be replaced when removed.

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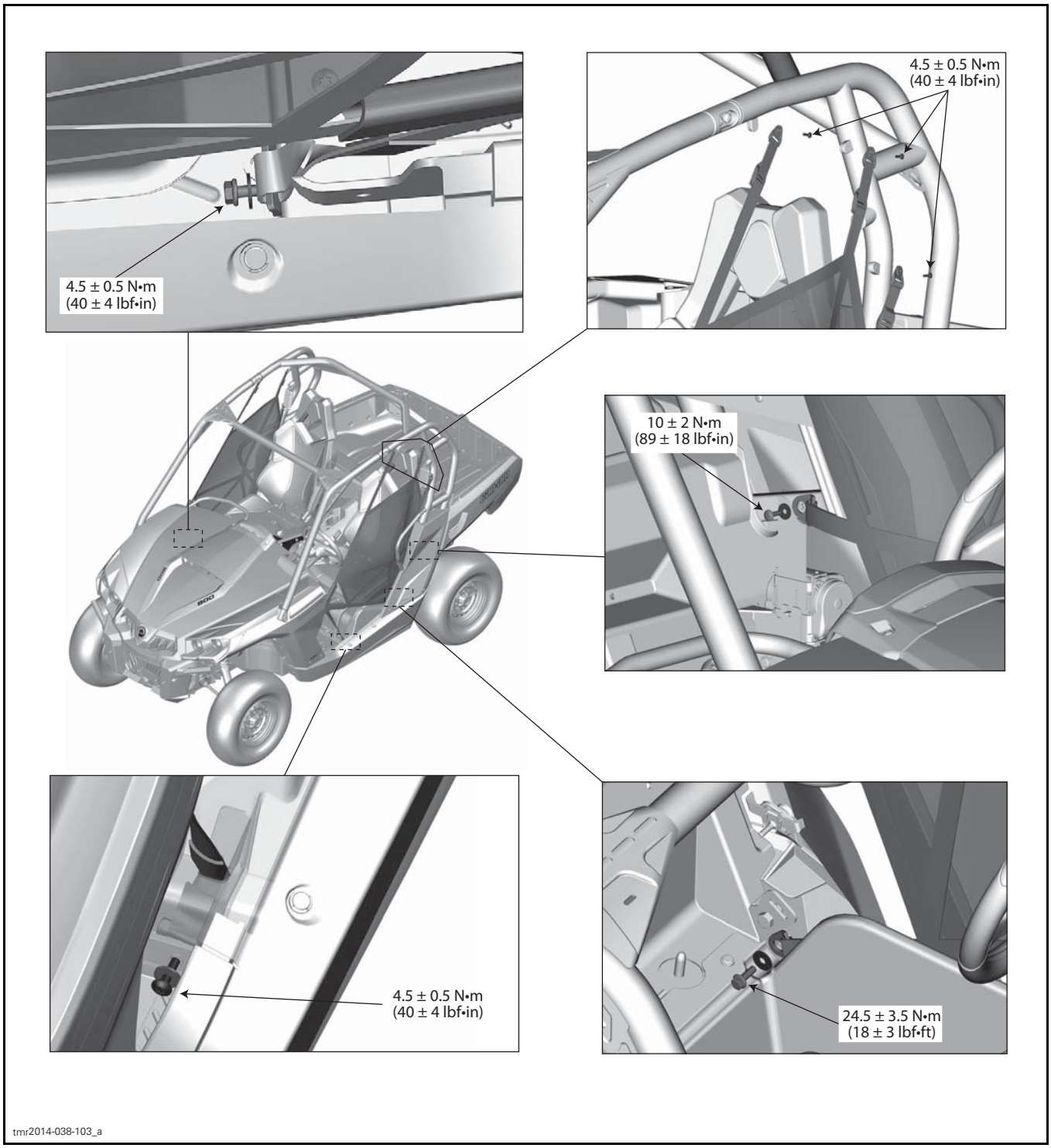

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COMMANDER

MODEL			COMMANDER 800R/1000
ENGINE			
Engine type		800R	ROTAX® 810, 4-stroke, 2 cylinders (V-twin), liquid cooled
		1000	ROTAX® 1010, 4-stroke, 2 cylinders (V-twin), liquid cooled
Valvetrain			4 valves/cylinder (mechanical adjustment), Single Over Head Camshaft (SOHC) with timing chain
Bore			91 mm (3.58 in)
Stroke		800R	61.5 mm (2.42 in)
		1000	75 mm (2.95 in)
Displacement		800R	799 cm³ (48.8 in³)
		1000	976 cm³ (59.6 in³)
Compression ratio		800R	10.3:1
		1000	10.5:1
Maximum HP RPM		800R	7250 RPM
		1000	7000 RPM
Exhaust system			Spark arrestor approved by USDA Forest Service
Air filter			Corrugated synthetic paper
Intake valve opening			5° BTDC
Intake valve closing		800R	45° ABDC
		1000	60° ABDC
Exhaust valve opening		800R	55° BBDC
		1000	65° BBDC
Exhaust valve closing		800R	5° ATDC
		1000	5° BTDC
Valve clearance		Intake	0.06 mm to 0.14 mm (.0024 in to .0055 in)
		Exhaust	0.11 mm to 0.19 mm (.0043 in to .0075 in)
Valve stem diameter	Intake	New	4.966 mm to 4.980 mm (.1955 in to .1961 in)
		Service limit	4.930 mm (.1941 in)
	Exhaust	New	4.956 mm to 4.970 mm (.1951 in to .1957 in)
		Service limit	4.930 mm (.1941 in)
Valve out of round		New	0.005 mm (.0002 in)
		Service limit	0.06 mm (.0024 in)
Valve guide diameter		New	4.998 mm to 5.018 mm (.1968 in to .1976 in)
		Service limit	5.050 mm (.1988 in)
Valve spring free length		New	40.81 mm (1.607 in)
		Service limit	39.00 mm (1.535 in)
Valve seat contact width	Intake	New	1.05 mm to 1.35 mm (.041 in to .053 in)
		Service limit	1.8 mm (.071 in)
	Exhaust	New	1.25 mm to 1.55 mm (.049 in to .061 in)
		Service limit	2 mm (.079 in)

MODEL			COMMANDER 800R/1000
ENGINE (cont'd)			
Rocker arm bore diameter		New	12.036 mm to 12.050 mm (.4739 in to .4744 in)
		Service limit	12.060 mm (.4748 in)
Rocker arm shaft diameter		New	12.000 mm to 12.018 mm (.4724 in to .4731 in)
		Service limit	11.990 mm (.472 in)
Piston diameter		New	90.950 mm to 90.966 mm (3.5807 in to 3.5813 in)
		Service limit	90.900 mm (3.5787 in)
Piston/cylinder clearance		New	0.027 mm to 0.057 mm (.0011 in to .0022 in)
		Service limit	0.100 mm (.0039 in)
Piston ring type		1st	Upper compression ring, rectangular
		2nd	Lower compression ring, tapered face
		3rd	Oil scraper ring
Ring end gap	Rectangular	New	0.20 mm to 0.40 mm (.008 in to .016 in)
	Tapered face		0.20 mm to 0.40 mm (.008 in to .016 in)
	Oil scraper ring		0.20 mm to 0.70 mm (.008 in to .028 in)
	Rectangular	Service limit	0.60 mm (.024 in)
	Tapered face		0.70 mm (.028 in)
	Oil scraper ring		1.00 mm (.039 in)
Ring/piston groove clearance	Rectangular	New	0.03 mm to 0.07 mm (.0012 in to .0028 in)
	Tapered face		0.02 mm to 0.06 mm (.0008 in to .0024 in)
	Oil scraper ring		0.01 mm to 0.18 mm (.0004 in to .0071 in)
	Rectangular	Service limit	0.15 mm (.0059 in)
	Tapered face		0.15 mm (.0059 in)
	Oil scraper ring		0.25 mm (.0098 in)
Cylinder bore		New	90.993 mm to 91.007 mm (3.5824 in to 3.583 in)
Cylinder taper		Maximum New	0.038 mm (.0015 in)
		Service limit	0.090 mm (.0035 in)
Cylinder out of round		Maximum New	0.015 mm (.0006 in)
		Service limit	0.020 mm (.0008 in)
Camshaft main bearing journal	Timing chain side	New	34.959 mm to 34.975 mm (1.3763 in to 1.377 in)
		Service limit	34.950 mm (1.376 in)
	Spark plug side	New	21.959 mm to 21.980 mm (.8645 in to .8654 in)
		Service limit	21.950 mm (.8642 in)
Camshaft main bearing journal bore	Timing chain side	New	35.000 mm to 35.025 mm (1.378 in to 1.3789 in)
		Service limit	35.040 mm (1.3795 in)
	Spark plug side	New	22.000 mm to 22.021 mm (.8661 in to .867 in)
		Wear limit	22.040 mm (.8677 in)

MODEL				COMMANDER 800R/1000
ENGINE (cont'd)				
Camshaft lobe	Intake valve	800R	New	32.890 mm to 33.090 mm (1.2949 in to 1.3028 in)
			Service limit	32.870 mm (1.2941 in)
		1000	New	32.960 mm to 33.160 mm (1.2976 in to 1.3055 in)
			Service limit	32.940 mm (1.2969 in)
	Exhaust valve	800R	New	32.950 mm to 33.150 mm (1.2972 in to 1.3051 in)
			Service limit	32.930 mm (1.2965 in)
		1000	New	32.860 mm to 33.060 mm (1.2937 in to 1.3016 in)
			Service limit	32.840 mm (1.2929 in)
Crankshaft main bearing journal diameter (MAG/PTO side)			New	42.016 mm to 42.040 mm (1.6542 in to 1.6551 in)
			Service limit	42.000 mm (1.6535 in)
Crankshaft radial play (MAG/PTO side)			Service limit	0.07 mm (.0028 in)
Crankshaft bearing journal diameter (in PTO cover)			New	34.004 mm to 34.020 mm (1.3387 in to 1.3394 in)
			Service limit	33.998 mm (1.3385 in)
Crankshaft radial play (PTO cover bearing)			Service limit	0.10 mm (.0039 in)
Crankshaft axial play			New	0.200 mm to 0.500 mm (.0079 in to .0197 in)
			Service limit	0.600 mm (.0236 in)
Crankshaft pin diameter		800R	New	40.009 mm to 40.025 mm (1.5752 in to 1.5758 in)
			Service limit	39.990 mm (1.5744 in)
		1000	New	41.986 mm to 42.010 mm (1.653 in to 1.6539 in)
			Service limit	41.967 mm (1.6522 in)
Crankshaft deflection		MAG/ PTO side	New	0.050 mm (.002 in)
Crankcase plain bearing		MAG/ PTO side	Service limit	42.100 mm (1.6575 in)
PTO cover plain bearing			Service limit	34.120 mm (1.3433 in)
Connecting rod big end diameter		800R	Service limit	40.100 mm (1.579 in)
		1000		42.100 mm (1.6575 in)
Connecting rod big end radial play			Service limit	0.09 mm (.0035 in)
Connecting rod big end axial play		800R	New	0.200 mm to 0.500 mm (.008 in to .02 in)
			Service limit	0.600 mm (.024 in)
		1000	New	0.250 mm to 0.550 mm (.0098 in to .0217 in)
			Service limit	0.600 mm (.024 in)
Connecting rod small end diameter		800R	New	20.010 mm to 20.020 mm (.7878 in to .7882 in)
			Service limit	20.060 mm (.7898 in)
		1000	New	22.010 mm to 22.020 mm (.8665 in to .8669 in)
			Service limit	22.050 mm (.8681 in)
Piston pin diameter		800R	New	19.996 mm to 20.000 mm (.7872 in to .7874 in)
			Service limit	19.980 mm (786.614 in)
		1000	New	21.996 mm to 22.000 mm (865.984 in to 866.142 in)
			Service limit	21.980 mm (.8654 in)
Connecting rod/piston pin clearance (radial play)			Service limit	0.080 mm (.0031 in)

MODEL			COMMANDER 800R/1000
LUBRICATION SYSTEM			
Type			Wet sump
Oil filter			BRP Rotax paper type, replaceable cartridge
Engine oil pressure		Minimum	300 kPa (44 PSI) at 6000 RPM
Engine oil	Capacity (oil change with filter)		2 L (2.11 qt (U.S. liq.))
	Recommended		For the summer season, use XPS synthetic blend oil (summer grade) (P/N 293 600 121). For the winter season, use XPS synthetic oil (winter grade) (P/N 293 600 112). If not available, use a 5W 40 motor oil that meets the requirements for API service classification SM, SL or SJ
COOLING SYSTEM			
Coolant	Type		Ethyl glycol/water mix (50% coolant, 50% water). Use premixed coolant sold by BRP (P/N 219 700 362) or coolant specifically designed for aluminum engines
	Capacity	800R	3.9 L (1 U.S. gal.)
		1000	4.3 L (1.1 U.S. gal.)
Thermostat	Starts to open		65°C (149°F)
	Fully open	800R	75°C (167°F)
		1000	88°C (190°F)
Radiator cap opening pressure			110 kPa (16 PSI)
TRANSMISSION			
Type			CVT (Continuously Variable Transmission)
Engagement RPM			1750 ± 100 RPM
Drive belt width		Service limit	30.00 mm (1.181 in)
Governor cup roller outer diameter		New	13.70 mm to 13.80 mm (.539 in to .543 in)
		Service limit	13.20 mm (.52 in)
Governor cup roller inner diameter		New	8.05 mm to 8.15 mm (.317 in to .321 in)
		Service limit	9.00 mm (.354 in)
Centrifugal lever pivot bolt diameter		New	6.078 mm to 6.100 mm (.239 in to .24 in)
		Service limit	6.000 mm (.236 in)
Centrifugal lever bore diameter		New	6.035 mm to 6.078 mm (.2376 in to .2393 in)
		Service limit	6.200 mm (.244 in)
Drive pulley sliding half centrifugal lever pivot bolt bore diameter		New	6.113 mm to 6.171 mm (.241 in to .243 in)
		Service limit	6.300 mm (.248 in)
Drive pulley sliding half large bushing		New	55.000 mm to 55.040 mm (2.165 in to 2.167 in)
		Service limit	55.200 mm (2.173 in)
Drive pulley sliding half small bushing		New	32.000 mm to 32.040 mm (1.26 in to 1.261 in)
		Service limit	32.200 mm (1.268 in)
Drive pulley spring free length	800R	Service limit	85 mm (3.346 in)
	1000		105 mm (4.134 in)
Drive pulley spring free squareness		Service limit	4 mm (.157 in)
Spring sleeve length		New	9.2 mm to 9.4 mm (.362 in to .37 in)
		Service limit	9.0 mm (.354 in)

MODEL			COMMANDER 800R/1000
TRANSMISSION (suite)			
Driven pulley sliding half bushing		New	30.060 mm to 30.100 mm (1.183 in to 1.185 in)
		Service limit	30.200 mm (1.189 in)
Driven pulley sliding fixed bushing		New	30.060 mm to 30.100 mm (1.183 in to 1.185 in)
		Service limit	30.200 mm (1.189 in)
Torque gear on driven pulley		Service limit	7.500 mm (.295 in)
Driven pulley spring free length		Service limit	125 mm (4.921 in)
Driven pulley spring free squareness		Service limit	3.8 mm (.15 in)
GEARBOX			
Type			Dual range (HI-LO) with park, neutral and reverse
Gear ratios		Angle drive subtransmission	37/15 = 2.467
		Intermediate	45/44 = 1.023
		High	36/27 = 1.333
		Low	44/19 = 2.316
		Reverse	34/12 =2.833
Overall gear ratios		High	3.364
		Low	5.842
		Reverse	7.148
Gearbox oil		Capacity	450 ml (15 U.S. oz)
		Recommended	XPS synthetic gear oil (P/N 293 600 140) or a 75W140 API GL-5 synthetic gear oil
Coupling sleeve groove width		New	5.25 mm to 5.35 mm (.207 in to .211 in)
		Service limit	5.50 mm (.217 in)
Coupling fork claw thickness		New	4.95 mm to 5.05 mm (.195 in to .199 in)
		Service limit	4.80 mm (.189 in)
Shift fork claw thickness (high, low and reverse gear shift fork)		New	5.10 mm to 5.20 mm (.201 in to .205 in)
		Service limit	5.00 mm (.197 in)
Width of shift fork engagement groove		New	5.30 mm to 5.40 mm (.209 in to .213 in)
		Service limit	5.50 mm (.217 in)
Diameter free pinions		New	29.000 mm to 29.013 mm (1.1417 in to 1.1422 in)
		Service limit	29.015 mm (1.1423 in)
Intermediate gear shaft		New	24.987 mm to 25.000 mm (.9837 in to .9843 in)
		Service limit	24.977 mm (.983 in)
Countershaft	MAG side	New	19.977 mm to 19.990 mm (.7865 in to .787 in)
		Service limit	19.973 mm (.7863 in)
	CVT side	New	24.977 mm to 24.990 mm (.9833 in to .9839 in)
		Service limit	24.970 mm (.9831 in)
Main shaft	Free pinion bearing	New	24.987 mm to 25.000 mm (.9837 in to .9843 in)
		Service limit	24.984 mm (.9836 in)
	Bearing journal MAG/CVT side	New	16.980 mm to 16.991 mm (.6685 in to .6689 in)
		Service limit	16.976 mm (.6683 in)

MODEL			COMMANDER 800R/1000
ELECTRICAL SYSTEM			
Magneto generator output			625 W @ 6000 RPM
Stator resistance (20°C (68°F))			0.15 to 0.30 Ω
Ignition system type			IDI (Inductive Discharge Ignition)
Ignition timing			Not adjustable
Spark plug		Quantity	2
		Make and type	NGK DCPR8E
		Gap	0.7 mm to 0.8 mm (.028 in to .031 in)
Engine RPM limiter setting		Forward	8000 RPM
		Reverse	20 km/h to 25 km/h (12 MPH to 16 MPH) (8000 RPM with Override)
Battery		Type	Maintenance free
		Voltage	12 volts
		Nominal rating	18 A•h
		Power starter output	0.7 KW
Headlight		High	2 x 60 W
		Low	2 x 60 W
Taillight			2 x 5/21
Turn signals (CE)			10 W
Position light			LED, 0.7 V approximately (each)
Fuses	– Main	MF1	40 A
	– Main accessories	MF2	50 A
	– DPS – ACS (LTD models only)	F3	50 A
	– Brake lights switch – Gauge – Taillights – Brake relay	F4	10 A
	– Ignition coils – Fuel injectors – Speed sensor	F5	7.5 A
	– Engine control module (ECM)	F6	5 A
	– Winch – 4WD actuator	F7	5 A
	– Gauge – Ignition switch – Clock – Starter solenoid	F8	5 A
	– Fan motor	F9	25 A
	– European component	F10	5 A
	– Lights relay	F11	30 A

MODEL				COMMANDER 800R/1000
ELECTRICAL SYSTEM (cont'd)				
Fuses (cont'd)	– Connectors (DC3 and DC4) – 12 V power outlet – Communication connector		F12	15 A
	– Relays coils (R1 and R3)		F13	5 A
	– Accessories (DC5 and DC6)		F14	15 A
	– Fuel pump		F15	5 A
FUEL SYSTEM				
Fuel delivery			Type	Electronic Fuel Injection (EFI), 54 mm throttle body with iTC (Intelligent Throttle Control), 1 injector per cylinder
Fuel pump			Type	Electrical (in fuel tank)
			Operating pressure	350 kPa (51 PSI)
Idle speed				1250 RPM ± 100 (not adjustable)
Fuel		Type		Regular unleaded gasoline
		Octane rating	Inside North America	87 (R+M)/2 or higher
			Outside North America	92 RON or higher
Fuel tank capacity				38 L (10 U.S. gal.)
Fuel remaining when low fuel light turns ON				± 12 L (3.2 U.S. gal.)
DRIVE SYSTEM				
Front drive		STD models		Straight gear Visco-Lok†
		All except STD models		Visco-Lok† QE
Front drive ratio				3.6:1
Rear drive				Shaft driven/spiral bevel gear
Rear drive ratio				3.6:1
Front differential oil			Capacity	500 ml (17 U.S. oz)
			Recommended	XPS synthetic gear oil (P/N 293 600 043) or synthetic gear oil 75W90 API GL-5
Rear final drive oil			Capacity	280 ml (9.47 U.S. oz)
			Recommended	XPS synthetic gear oil (P/N 293 600 140) or synthetic gear oil 75W140 API GL-5
CV joint grease				CV joint grease (P/N 293 550 019)
Propeller shaft grease				Propeller shaft grease (P/N 293 550 063)
STEERING				
Type				Rack and pinion
Assisted steering system		All except standard models		Dynamic Power Steering (DPS)
Steering wheel				Adjustable tilt steering
Turning radius				244 cm (96 in)
Total toe (vehicle on ground)				0 mm ± 4 mm (0 in ± .157 in)
Camber angle (vehicle on ground)				0.7° positive

MODEL			COMMANDER 800R/1000
FRONT SUSPENSION			
Suspension type		All except LTD	Double suspension-arm with dive-control geometry
		LTD	Double suspension-arm with dive control geometry with ACS (Air Controlled Suspension)
Suspension travel			254 mm (10 in)
Shock absorber	Qty		2
	Type	Standard XT	Oil
		XT-P	HPG shock with remote reservoir. Dual speed compression damping and rebound damping adjustments
		LTD	HPG shock with remote reservoir. Compression damping (low speed) and air pressure adjustments
Spring free length		Standard DPS XT	355.6 mm (14 in)
		XT-P	350 mm (13.78 in)
		LTD	358.7 mm (14.12 in)
Preload adjustment type		Standard DPS XT	5 positions cam
		XT-P	Threaded spring retainer
		LTD	Variable spring preload according to air pressure
REAR SUSPENSION			
Suspension type		All except LTD	Torsional Trailing arm Independant (TTI) with external sway bar
		LTD	Torsional Trailing arm Independant (TTI) with external sway bar and ACS (Air Controlled Suspension)
Suspension travel			254 mm (10 in)
Shock absorber	Qty		2
	Type	Standard DPS XT	Oil
		XT-P	HPG shock with remote reservoir. Dual speed compression damping and rebound damping adjustments
		LTD	HPG shock with remote reservoir. Compression damping (low speed) and air pressure adjustments
Spring free length		Standard DPS XT	358 mm (14.09 in)
		XT-P	373 mm (14.69 in)
		LTD	355.6 mm (14 in)
Preload adjustment type		Standard DPS XT	5 positions cam
		XT-P	Threaded spring retainer
		LTD	Variable spring preload according to air pressure

MODEL			COMMANDER 800R/1000
BRAKES			
Front brake		Qty	2
		Type	214 mm ventilated disc brakes with hydraulic twin-piston calipers
Rear brake		Qty	1
		Type	214 mm ventilated disc brake with hydraulic twin-piston caliper
Brake fluid		Capacity	250 ml (8.5 U.S. oz)
		Type	DOT 4
Caliper			Floating
Brake pad material			Metallic
Minimum brake pad thickness			1 mm (.04 in)
Minimum brake disc thickness			4 mm (.157 in)
Maximum brake disc warpage			0.2 mm (.01 in)
TIRE			
Pressure		Front	Maximum: 83 kPa (12 PSI) Minimum: 69 kPa (10 PSI)
		Rear	Maximum: 152 kPa (22 PSI) Minimum: 83 kPa (12 PSI)
Minimum tire thread depth			3 mm (.118 in)
Size	Front	Standard	27 x 9 x 12 (in)
		DPS	27 x 9 x 14 (in)
		XT-P	27 x 9 x 12 (in)
		XT	27 x 9 x 14 (in)
		LTD	27 x 9 x 14 (in)
	Rear	Standard	27 x 11 x 12 (in)
		DPS	27 x 11 x 14 (in)
		XT-P	27 x 11 x 12 (in)
		XT	27 x 11 x 14 (in)
		LTD	27 x 11 x 14 (in)

MODEL			COMMANDER 800R/1000
WHEELS			
Type		Standard	Steel
		DPS	Cast Aluminum
		XT-P	Aluminum beadlock wheels
		XT	Cast Aluminum
		LTD	Cast Aluminum
Rim size	Front	Standard	12 x 6 (in)
		DPS	14 x 7 (in)
		XT-P	12 x 6 (in)
		XT	14 x 7 (in)
		LTD	14 x 7 (in)
	Rear	Standard	12 x 8 (in)
		DPS	14 x 8.5 (in)
		XT-P	12 x 8 (in)
		XT	14 x 8.5 (in)
		LTD	14 x 8.5 (in)
Wheel nuts torque			100 N•m ± 10 N•m (74 lbf•ft ± 7 lbf•ft)
CHASSIS			
Cage type			50 mm (2 in) diameter, high strength steel, ROPS-approved cage
Hitch support			50.8 mm (2 in) x 50.8 mm (2 in)
DIMENSION			
Overall length		Standard DPS XT-P LTD	300.4 cm (118.3 in)
		XT	304.8 cm (120 in)
Overall width		Standard DPS XT-P	1 490 mm (58.7 in)
		XT LTD	1 587.5 mm (62.5 in)
Overall height			182.9 cm (72 in)
Wheel base			192.4 cm (75.7 in)
Wheel track		Front	125.7 cm (49.5 in)
		Rear	121.9 cm (48 in)
Ground clearance			27.9 cm (11 in)

MODEL			COMMANDER 800R/1000
WEIGHT AND LOADING CAPACITY			
Dry weight		Standard	593 kg (1,307 lb)
		DPS	600 kg (1,323 lb)
		XT-P	633 kg (1,396 lb)
		XT models	646 kg (1,424 lb)
		LTD	686 kg (1,512 lb)
Weight distribution	Front/rear	Standard DPS	44/56
		XT-P XT models LTD	46/54
Cargo box capacity		Total (upper + lower)	272 kg (600 lb)
		Upper	181 kg (400 lb)
		Lower	272 kg (600 lb)
Total vehicle load allowed (including driver, passenger, all other loads and added accessories)			363 kg (800 lb)
Gross vehicle weight rating		Standard	990 kg (2,183 lb)
		DPS XT-P XT LTD	1 026 kg (2,262 lb)
Towing capacity		Except CE version	680 kg (1,500 lb)
		CE version	270 kg (595 lb)
Tongue capacity			68 kg (150 lb)

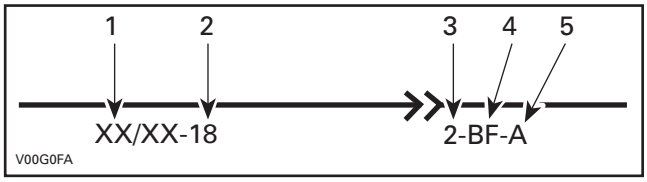
WIRING DIAGRAM INFORMATION

GENERAL

WIRING DIAGRAM LOCATION

The wiring diagrams are stored in the back cover pocket.

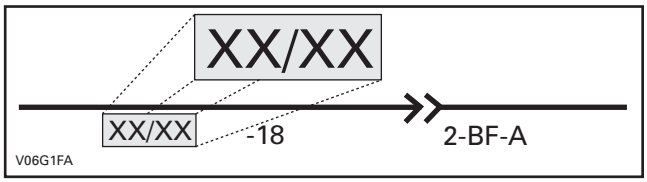
WIRING DIAGRAM CODES



1. *Wire colors*
2. *Wire gauge*
3. *Connector housing area*
4. *Connector identification*
5. *Wire location in connector*

Wire Colors

It identifies the color of a wire. When a 2-color scheme is used, the first color is the main color while the second color is the tracer color.

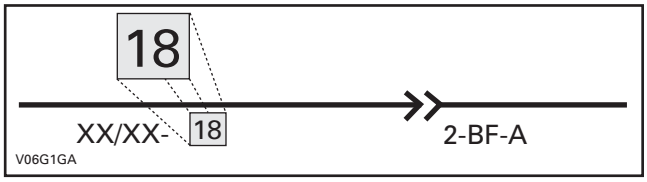


THE SHADED PART INDICATES THE WIRE COLOR

Example: YL/BK is a YELLOW wire with a BLACK stripe.

Wire Gauge

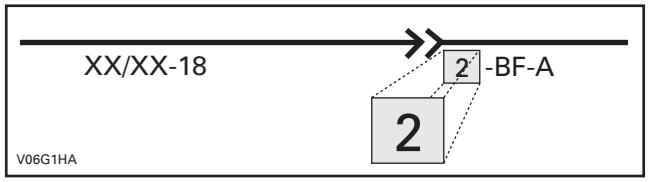
The number after wire color indicates the gauge of a wire.



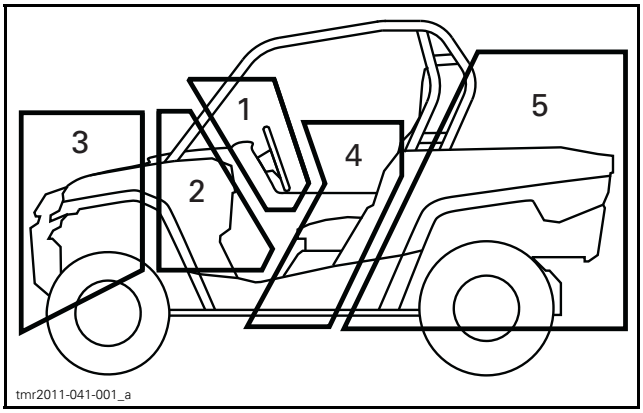
THE SHADED PART INDICATES THE WIRE GAUGE

Example: The number that follows the wire color indicates the wire size used, in this case 18 gauge wire.

Connector Housing Area



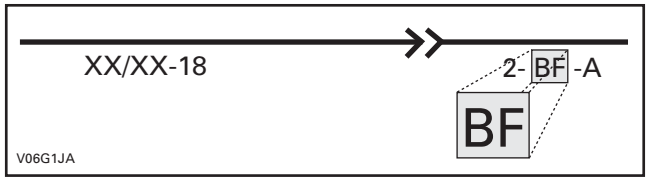
The first number in the connector/pin contact number represents the area in the vehicle where the connector is located.



AREA	LOCATION
1	Steering, dashboard and upper console area
2	Under dashboard and front bulkhead area
3	Front of vehicle
4	Engine, seat and lower console area
5	Rear of vehicle

Connector Identification

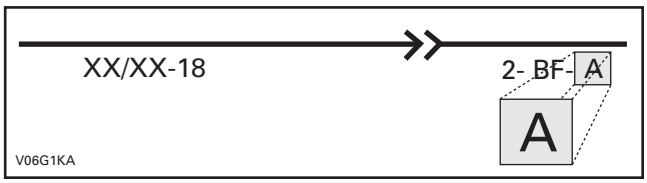
The letters in the middle of the connector/pin contact number Indicates the connector's function. If there are many connectors in the same area, this helps to identify which wire is in which connector.



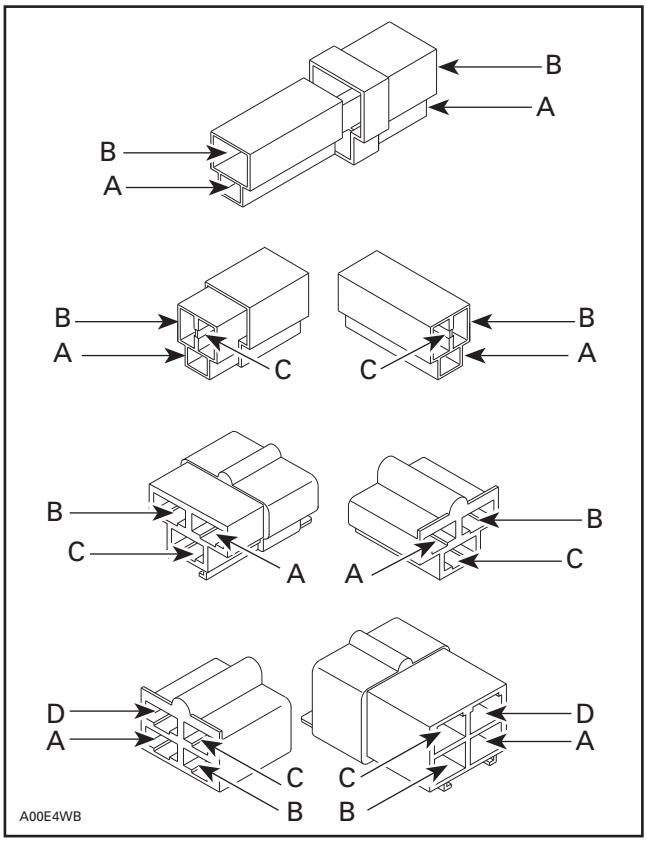
THE SHADED PART INDICATES A CONNECTOR

Wire Location in Connector

This is the wire position in the connector. The number or letter given refers to the physical identification stamped or molded on the connector.



THE SHADED PART INDICATES THE CONNECTOR LOCATION IN HOUSING



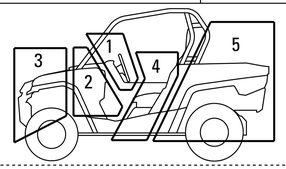
TYPICAL

NOTES

NOTES

COMMANDER 2014

GENERAL SYSTEM



STANDARD USAGE OF ACCESSORY CONNECTORS

DC3 GPS
DC5 TRUNK BOX
DC6 RADIO
DPS2 SEE DPS SYSTEM DIAGRAM
HIC8 SEE ACS SYSTEM DIAGRAM

TERMINAL IDENTIFICATION						
	NAME	ZONE-	CONNECTOR NAME-		TERMINAL #/A	
EX:	CI	1	-	CI	-	15
EX:	CV	4	-	CV	-	A
EX:	ME	2	-	ME		

ZONE #	ZONE DESCRIPTION
1	STEERING AREA
2	MODULE AREA
3	FRONT OF VEHICLE
4	ENGINE AREA
5	REAR OF VEHICLE

	WELDED JOINT
	SHRINKED JOINT
	CROSSED WIRE
	WIRE BUS
	SIMPLE CONDUCTOR WIRE
	FEMALE TERMINAL
	MALE TERMINAL
	STEEL LINK (FRAME)
	TERMINAL

COLOR CODE	
BE	BEIGE
BK	BLACK
BU	BLUE
BR	BROWN
GN	GREEN
GY	GREY
OR	ORANGE
RD	RED
VI	VIOLET
WH	WHITE
YL	YELLOW
PK	PINK
LT BU	LIGHT BLUE

JT RD/GN
JT RD/GY
JT OR/BE
JT OR/GN
JT RD/BE
JT BK/YL
JT VI/BU
JT WH/BK
JT WH/BE
JT RD/BR
JT RD/YL
JT RD/VI
JT OR/BK
JT RD/OR
JT GN
JT BU
JT OR/VI
JT BK1
JT BK2
JT BK3
JT BK4
JT BK5

PF2 (1/3) MAIN FUSE (F1) 40 A
PF2 (2/3) ACCES. FUSE (F2) 40 A
PF2 (3/3) DPS/ ACS (F3) 50 A
DPS2
HIC- 8
PF1 CONTROL EURO F10 5A
1-HIBM-4
PF1 KEY SWITCH FUSE (F8) 5 A
JT BE/WH
CC IGNITION KEY (ON & DESS)
OFF
ON W/LIGHT
ON WO/LIGHT
PF1 MAIN RELAY (R2)
PF1 RELAY SPEEDO FUSE (F4) 10 A
PF1 RELAY DRIVER FUSE (F13) 5 A
PF1 FUEL PUMP (F15) 5 A
PF1 ECM FUSE (F6) 5 A
PF1 INJECTORS IGNITION FUSE (F5) 7.5 A
SS STARTER SOLENOID
FREE WEELING DIODE (D2)
SM STARTER MOTOR
SPORT SWITCH
FREE
SPORT
SEAT BELT
FREE
LOCK
STSW START SWITCH
FREE
START
BAT BATTERY 12 VDC 18 AH
RD RECTIFIER
U V W –
CA MAGNETO
ETA ELECTRONIC THROTTLE TPS
2,5k
300
2,5k
OVR OVERRIDE
FREE
OVER RIDE
CTS COOLANT TEMP SENSOR
VSS VEHICULE SPEED SENSOR
HALL
FP (1/2) FUEL PUMP
INJ1 FUEL INJECTOR (FRONT)
INJ2 FUEL INJECTOR (REAR)
BA IGNITION COIL
SPK2 SPARK PLUG (REAR)
SPK1 SPARK PLUG (FRONT)
MAPTS MANIFOLD AIR PRESSURE / TEMP SENSOR
HO2S1 O_2 SENSOR
HO2S2 O_2 SENSOR
ECM ENGINE CONTROL MODULE
CI SPEEDOMETER & PILOT LAMPS
P
RD FUEL
YL ENGINE
YL 4WD
BU HI BEAM
FP (2/2) FUEL LEVEL SENSOR
GBPS GEAR - BOX POSITION SENSOR
CPS CRANKSHAFT POSITION SENSOR
SD 2WD/4WD ACTUATOR SWITCH
DB DIAGNOSTIC CONNECTOR
MD 2WD/4WD ACTUATOR
2WD
4WD
BD 2WD/4WD SWITCH
TAS THROTTLE ACCELERATOR SENSOR
SW WINCH RELAY
IN OUT
ONE-WAY DIODE (D5)
ONE-WAY DIODE (D4)
SWWRC-C
SWWRC-B
WM WINCH MOTOR
SWW WINCH SWITCH
OUT
FREE
IN
PF1 WINCH 2WD/4WD FUSE (F7) 5 A
PF1 DC OUTLETS FUSE (F12) 15A
PF1 ACC2 FUSE (F14) 15A
PF1 LIGHT FUSE (F11) 30A
FRA BRAKE LIGHT SWITCH
PF1 ACCESSORIES RELAY (R3)
PF1 COOLING FAN FUSE (F9) 25 A
PF1 FAN RELAY (R1)
FT COOLING FAN
DC6 DC OPTION
DC5 DC OPTION
PF1 LIGHTS RELAY (R4)
HIBM HI- BEAM SWITCH
HIBM
LOBM
PF1 BRK RELAY (R8)
DC3 DC OPTION
DC DC OUTLET
OPS OIL PRESSURE SWITCH
PRD RIGHT TAIL LIGHT
PRG LEFT TAIL LIGHT
DC4

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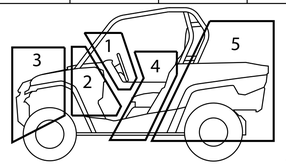
COMMANDER 2013

ACS SYSTEM



TERMINAL IDENTIFICATION						
	NAME	ZONE-	CONNECTOR NAME-		TERMINAL #/A	
EX:	CI	1	-	CI	-	15
EX:	CV	4	-	CV	-	A
EX:	ME	2	-	ME		

AWG	MAX. CURRENT	MAX. FUSE CURRENT	MAX. WATT
# 6	100 amps	125 amps	1450 watts
# 8	65 amps	80 amps	930 watts
# 10	40 amps	50 amps	580 watts
# 12	25 amps	30 amps	365 watts
# 14	16 amps	20 amps	230 watts
# 16	10 amps	15 amps	145 watts
# 18	6 amps	7.5 amps	85 watts
* AT	50°C MAX		

ZONE #	ZONE DESCRIPTION
1	STEERING AREA
2	MODULE AREA
3	FRONT OF VEHICLE
4	ENGINE AREA
5	REAR OF VEHICLE

●	WELDED JOINT
⊸	SHRINKED JOINT
⊸	CROSSED WIRE
⊸	WIRE BUS
—	SIMPLE CONDUCTOR WIRE
⊱	FEMALE TERMINAL
→	MALE TERMINAL
⊸	STEEL LINK (FRAME)
⊣	TERMINAL

⏚	FRAME GROUND
⏚	EGINE GROUND
✪	PHILLIPS SCREW
⬢	NUT CONNECTION
✪	SPLICE CONNECTION
⧋	COMPONENT CONNECTION
▭	SECTION OF MODULE
⊖	SLOTTED SCREW
– –	OPTIONAL

COLOR CODE	
BE	BEIGE
BK	BLACK
BU	BLUE
BR	BROWN
GN	GREEN
GY	GREY
OR	ORANGE
RD	RED
VI	VIOLET
WH	WHITE
YL	YELLOW
PK	PINK
LT BU	LIGHT BLUE

MAIN HARNESS SIDE

ACS HARNESS SIDE

DB1 FROM MAIN HARNESS DIAGNOSTIC CONNECTOR

SEE MAIN HARNESS DIAGRAM FOR DETAILS ON DB1 AND HIC- 8

JT RD/BR

RD/PK

JT RD/GY

JT OR/GN

PF2 (1/3) MAIN FUSE (F1) 40 A

PF2 (2/3) FAN / ACCES. FUSE (F2) 50 A

PF2 (3/3) DPS FUSE (F3) 50 A

CI SPEEDOMETER & PILOT LAMPS

SS START ER SOLEN OID

BAT BATTERY 12 VDC 18 AH

SM STARTER MOTOR

RD RECTI FIER

CA MAGNETO

R5

AIR COMPRES SOR

BN1

TEMPERATURE SENSOR

S1 (1/2)

S1 (2/2)

SCM SUSPENSION CONTROL MODULE

PRESSURE SENSOR

(VALVE PUMP VENT)

(VALVE VENT)

(VALVE FRONT RIGHT)

(VALVE FRONT LEFT)

(VALVE USER)

(VALVE REAR)

CAN LOW

CAN HI

JT WH/BE

JT WH/BK

JT BR/PK

JT BK

JT BK1

JT BK2

JT BK3

JT BK4

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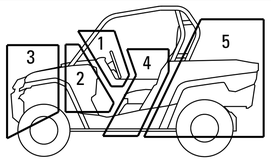
COMMANDER / MAVERICK 2014

DPS SYSTEM



TERMINAL IDENTIFICATION								
	NAME	ZONE-		CONNECTOR NAME-		TERMINAL # / ID		
EX:	CI	1	-	CI	-	15		
EX:	CV	4	-	CV	-	A		
EX:	ME	2	-	ME				

AWG	MAX. CURRENT	MAX. FUSE CURRENT	MAX. WATT
# 6	100 amps	125 amps	1450 watts
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# 14	16 amps	20 amps	230 watts
# 16	10 amps	15 amps	145 watts
# 18	6 amps	7.5 amps	85 watts
* AT	50°C MAX		

ZONE #	ZONE DESCRIPTION
1	STEERING AREA
2	MODULE AREA
3	FRONT OF VEHICLE
4	ENGINE AREA
5	REAR OF VEHICLE

●	WELDED JOINT
⊸	SHRINKED JOINT
⟶	CROSSED WIRE
⟋	WIRE BUS
—	SIMPLE CONDUCTOR WIRE
⊱	FEMALE TERMINAL
⊰	MALE TERMINAL
⊸	STEEL LINK (FRAME)
⊣	TERMINAL

⏚	FRAME GROUND
⏚	EGINE GROUND
⊕	PHILLIPS SCREW
⬢	NUT CONNECTION
●	SPLICE CONNECTION
⏃	COMPONENT CONNECTION
⏢	SECTION OF MODULE
⊖	SLOTTED SCREW
— —	OPTIONAL

COLOR CODE	
BE	BEIGE
BK	BLACK
BU	BLUE
BR	BROWN
GN	GREEN
GY	GREY
OR	ORANGE
RD	RED
VI	VIOLET
WH	WHITE
YL	YELLOW
PK	PINK
LT BU	LIGHT BLUE

JT RD/GY

RD/GY-12 RD/GN-12 RD/pk-12

PF2 PF2 PF2
(1/3) (2/3) (3/3)
MAIN FUSE (F1) 40 A
DPS FUSE (F3) 50 A

PF2-A PF2-B PF2-C PF2-1

RD-12

HIC-8

JT OR/GN

RD/GY-14 RD/GY-14 OR/GN-14

PF1
MAIN RELAY (R2)

PF1
RELAYS SPEEDO FUSE (F4) 10 A

OR/BU-18 RD/BE-14 RD/BE-14

FOR SPECIFIC PIN POSITION, REFER TO GENERAL SYSTEM DIAGRAM

RD/GY-16

CI
SPEEDOMETER & PILOT LAMPS

OR/GN-18 1-CI-17

FUEL ENGINE 4WD HI BEAM

1-CI-21 CI-4 CI-19 CI-18 1-CI-7 CI-6 1-CI-20 1-CI-5

VI/PK-18 BR/PK-18 WH/BE-18 WH/BK-18 BK/BE-18 GY/BU-18 BK-18 BU-18 OR/GN RD/PK

DPS

DPS1-3 DPS2-A DPS1-4 DPS1-8 DPS2-8

WH/BK WH/BE-18 WH/BK-18

3-DB-5 3-DB-2

DB
DIAGNOSTIC CONNECTOR

3-DB-3 3-DB-1

WH/BE-18

JT WH/BE

WH/BE-18 WH/BK-18

BK

GY/BU-18

DPS SW

2 3

5-BP2 5-BP1

SS
STARTER SOLENOID

RD-6

5-BP3

RD-12 RD-6 RD-6

5-BAT1 4-SM

BAT
BATTERY 12 VDC 18 AH

M
SM
STARTER MOTOR

5-BAT2

BK-6

RD-12

5-RD1-1

RD
RECTIFIER

U V W –

5-RD2-1 5-RD2-2 5-RD2-3 5-RD1-3

YL-12 YL-12 YL-12 BK-12 BK-6

CA-1 CA-2 CA-3

YL-14 YL-14 YL-14

CA
MAGNETO

BK-12 BK-6

BK-6 4-BN5

5-BN2 5-BN4 5-BN1 5-BN3

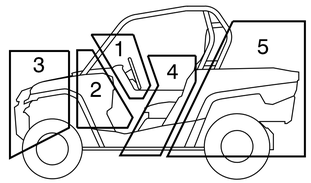
BK-12

JT BK1
JT BK2
JT BK3
JT BK4

BK-12 BK-12 BK-12

COMMANDER (2014)

CE SYSTEM



TERMINAL IDENTIFICATION		
	NAME	ZONE-CONNECTOR NAME-TERMINAL #/A
EX:	CI	1 - CI - 15
EX:	CV	4 - CV - A
EX:	ME	2 - ME

AWG	MAX. CURRENT	MAX. FUSE CURRENT	MAX. WATT
# 6	100 amps	125 amps	1450 watts
# 8	65 amps	80 amps	930 watts
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# 16	10 amps	15 amps	145 watts
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* AT	50°C MAX		

ZONE #	ZONE DESCRIPTION
1	STEERING AREA
2	MODULE AREA
3	FRONT OF VEHICLE
4	ENGINE AREA
5	REAR OF VEHICLE

	WELDED JOINT
	SHRINKED JOINT
	CROSSED WIRE
	WIRE BUS
	SIMPLE CONDUCTOR WIRE
	FEMALE TERMINAL
	MALE TERMINAL
	STEEL LINK (FRAME)
	TERMINAL

	FRAME GROUND
	EGINE GROUND
	PHILLIPS SCREW
	NUT CONNECTION
	SPLICE CONNECTION
	COMPONENT CONNECTION
	SECTION OF MODULE
	SLOTTED SCREW
	OPTIONAL

COLOR CODE	
BE	BEIGE
BK	BLACK
BU	BLUE
BR	BROWN
GN	GREEN
GY	GREY
OR	ORANGE
RD	RED
VI	VIOLET
WH	WHITE
YL	YELLOW
PK	PINK
LT BU	LIGHT BLUE

FROM VEHICLE MAIN HARNESS

FROM MAIN HARNESS HI/LO BEAM CONNECTOR (1 OF 2)

FROM VEHICULE MAIN HARNESS HI/LO BEAM CONNECTOR (2 OF 2)

2-HIBM-5 OR
2-HIBM-4 RD/WH
2-HIBM-3 GN
2-HIBM-2 BU

JT RD/WH

OR/GN
BK
5-HIC5-B
5-HIC5-A
OR/GN
BK
TRUNK HARNESS
5-TG-B
OR/GN
JT OR/GN
5-TG-A
5-PLG-2
LICENCE PLATE LIGHT
5-PLG-1
5-PLD-2
5-PLD-1
JT BK
PANEL HARNESS

2-HIBM-1 BK
2-HIBM-6 OR/GN

JT OR/GN
OR/GN
JT GN/OR

HAZARD
HZ-8
HZ-2
FREE
HZ
HZ-7
HZ-3
BK/OR
GN/OR

FLASHER
MGB-3
FREE
LH
RH
MGB-4
MGB-2

HIBEAM
MGC-4
MGC-1
FREE
PASS
HI
MGC-5
MGC-2
JT GN
JT BU

OR/GN
OR
BE/OR
BE/GY
RD/WH
MC1-5
MC2-4
MC1-1
MC1-2
MC2-1
GN/OR
MC1-6
MC (FLASHER UNIT MODULE)
MC1-4
MC2-2
MC2-3
RIGHT
LEFT
BR
GY

HORN
MGB-1
FREE
HRN
MGB-6
BE/BU
KX-2
KX-1
BK
HORN

FRONT POSITION LIGHT
FPG-2
FPD-2
FPG
FPD
FPG-1
FPD-1

D3
D4
A
C

FRONT RIGHT
FRONT LEFT
REAR RIGHT
REAR LEFT
CAD-2
HIC6-C
HIC6-B
CAG-2
CAD
CAG
CAD-1
CRD-2
CRG-2
CRG-1
CRD
CRG
CRD-1
CAG-1
HIC6-A

JT BK1
JT BK2

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August 23, 2013 Subject: **Introduction of Long Life Antifreeze (P/N 219 702 685)** No. **2014-6**

MODEL YEAR	MODELS	MODEL NUMBER	SERIAL NUMBER
2014	ALL	ALL	ALL

NEW COOLANT

BRP is now offering long life antifreeze for all vehicles platforms. This new LONG LIFE ANTIFREEZE (P/N 219 702 685) can be identified by its orange color and is being introduced on 2014 vehicles.

Orange LONG LIFE ANTIFREEZE (P/N 219 702 685) provides:

- A longer service interval
- Similar properties in heat transfer ability
- Increased corrosion protection
- Improved boiling behavior (erosion in the water jacket).

IMPORTANT

1. Due to major differences in chemical composition, this new **orange** antifreeze should not be mixed with the previous **green** coolant or any other coolant types.

NOTICE **Mixing different coolants could compromise the properties of the coolants and could form also a gel-like substance that could inhibit coolant flow.**

2. Some of BRP's 2014 service publications such as Predelivery bulletins, Shop Manuals and Operator's Guides might refer to the inappropriate antifreeze. Always validate which color of antifreeze is used in your vehicle before performing maintenance or repairs.
3. Should you choose to replace the old coolant with new LONG LIFE ANTIFREEZE (P/N 219 702 685), proper cooling system flushing is required.

PROPER FLUSHING

To change from **green** coolant to **orange** antifreeze you must fully drain the cooling system as per the instructions in the appropriate shop manual.

Before refilling the cooling system:

1. Add distilled water to the cooling system and run the engine to operating temperature.
2. Allow the engine to cool.
3. Drain distilled water.
4. Refill the system with the new LONG LIFE ANTIFREEZE (P/N 219 702 685).

NOTICE **The refilling and bleeding procedures are specific for each model of vehicle. Always refer to appropriate shop manual.**

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can-am BRP

SIDE-BY-SIDE VEHICLES
SERVICE Bulletin

June 6th, 2013 Subject: **Batteries Activation, Charging and Maintenance** No. **2014-1**

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
2014	All	All	All

GENERAL INFORMATION

As a reference to predelivery inspection bulletin, this service publication provides instructions for the activation, charging and maintenance of new SSV batteries. It contains standard practices and can be used as a reference for preparing vehicles before delivery to customers.

For complete battery information and detailed procedures, refer to *SSV SHOP MANUAL* and manufacturer's instructions.

BATTERIES ON MY2014 VEHICLES

For MY2014 vehicles, the dry cell batteries could be either:

– Dealer activated
– Factory activated.

The battery is a VRLA (Valve Regulated Lead Acid) maintenance free and non-spillable. It never need electrolyte level check, readjustment and refilling, however, they still need periodic charging.

Dealer Activated Battery

– This battery is NOT activated.
– It comes with an electrolyte container (acid pack) and needs to be activated.
– It is of the uppermost importance to activate it properly and to perform an initial charging.

Factory Activated Battery

– This battery is factory filled and activated.
– It requires an initial charging to ensure proper operation and maximum life span.

BATTERY PREPARATION (DEALER ACTIVATED)

The following table is a summary of the steps required for proper battery activation. Refer to *BATTERY ACTIVATION AND INITIAL CHARGING* for complete procedure.

STEP	TASK SUMMARY
1	Place battery on a level workbench
2	Install electrolyte container on battery
3	Keep container in place for 20 minutes minimum to fill
4	Remove electrolyte container from battery
5	Do not install cap strip before battery is fully charged
6	**Wait for 1 hour minimum**
7	Charge battery for 4 - 9 hours at 2 A
8	Install cap strip on battery
9	**Wait for 2 hours (without charger)**
10	Check battery voltage
11	Ensure that voltage is 12.8 V or higher. If less, charge as required
12	**Keep battery leveled (upright) for 12 - 17 hours prior to installation**
13	Install battery on vehicle

NOTICE **A minimum of 24 hours is required between STEP 1 and STEP 13, otherwise acid spillage can occur after battery installation.**

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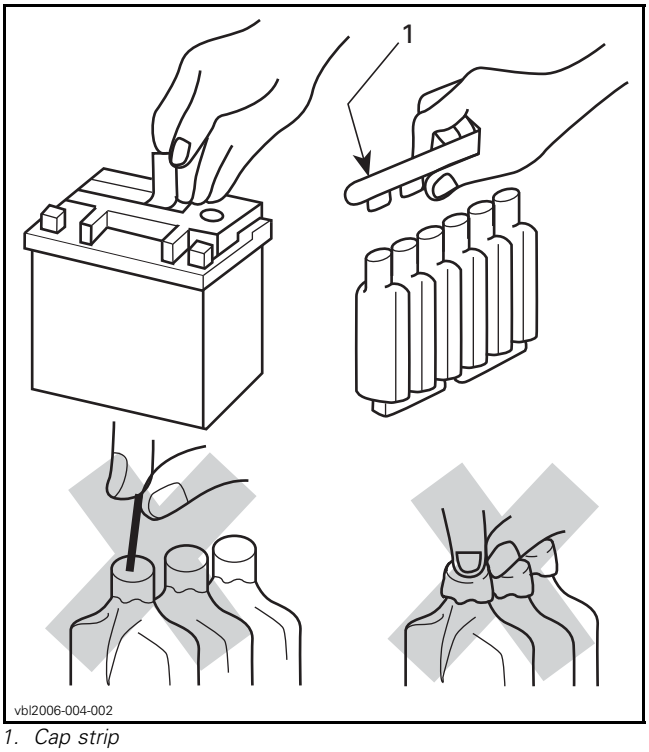
Battery Activation and Initial Charging

1. Carefully read the *SAFETY WARNINGS* section before starting.
2. Wear plastic gloves and eye protection.
3. Remove battery from vehicle.
4. Place battery on a level surface.
5. Remove electrolyte container from vinyl bag.
6. Remove the strip of caps.
7. Put the cap strip aside (will be used later as the battery sealing plug).
8. Ensure to use only the dedicated container that comes with the battery.

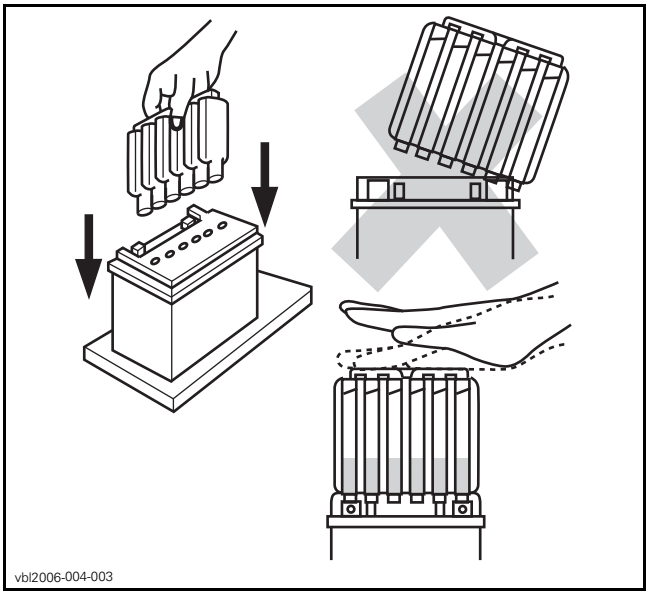


1. Cap strip

9. Place electrolyte container, sealed top of the cells down, into the filler ports of the battery.
10. Hold the container level then push down to break the seals.
11. Check the electrolyte flow.
12. Keep the container in place for 20 minutes or longer until it empties completely.

NOTE: Air bubbles will appear as the ports fill. Do not tilt or compress the electrolyte container.

NOTE: If no air bubbles are coming up from the filler ports, or if container cells have not emptied completely, tap the container a few times. Do not remove the container from the battery until it's empty. The battery requires all the electrolyte from the container for proper operation.



13. Remove the electrolyte container from battery.
14. Let stand for at least 1 hour. (This allows the electrolyte to permeate into the plates for optimum performance.)

NOTE: Gently shake the battery to insure that the electrolyte is totally permeated into the plate before the charging process. If the electrolyte is not totally absorbed by the plates, let the battery stand for another 30 minutes.

NOTICE Do not install cap strip before battery is fully charged

15. Place a clean rag over the open filler port of battery while charging it.
16. Charge battery to bring it to a full state of charge.
    - **When using a constant current charger:** Refer to the standard (STD) charging method indicated on the battery. Keep an eye on the voltmeter and battery to avoid overcharging.
    - **When using an automatic type taper charger**Check to make sure that the charger current (amps) is equal to or greater than the standard (STD) charging method indicated on the battery.

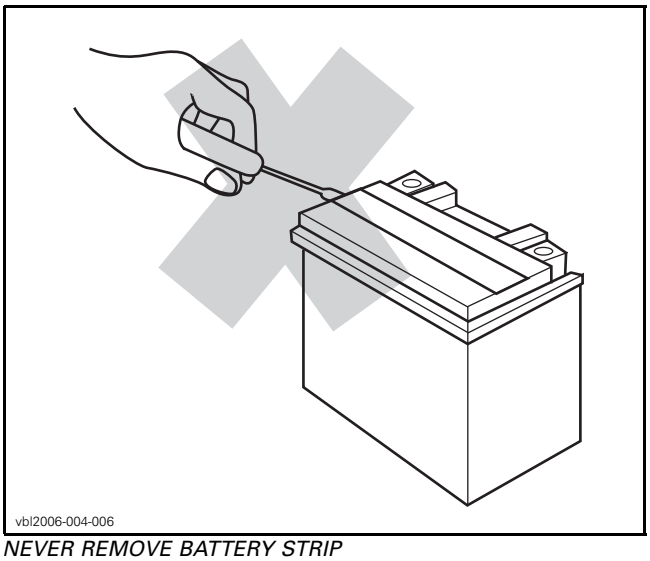
TYPICAL CHARGING METHOD LABEL
Some batteries may differ

17. Remove clean rag from battery.
18. Install cap strip on battery and press down firmly with both hands after charging is completed (do not pound or hammer).
19. Let stand for at least 2 hours.
20. Check battery voltage using a voltmeter.
21. Ensure that the battery voltage is 12.8 V or higher.

NOTE: Reading for a charged, newly-activated battery should be 12.8 V or higher. If less, it needs additional charge.

22. Let stand for 12 - 17 hours while battery is level (upright) prior to installation.
23. Install battery on vehicle.

NOTICE Never remove cap strip from battery or add electrolyte for the life of the battery.



NEVER REMOVE BATTERY STRIP

BATTERY PREPARATION (FACTORY ACTIVATED)

Battery Activation

Sealed VRLA batteries are WET (factory activated); they never need to be activated using electrolyte container (acid packs). The electrolytes are already in the batteries.

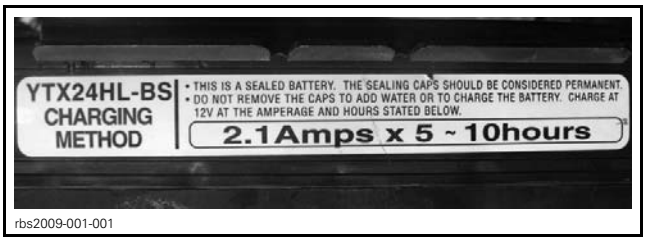
Battery Initial Charging

Sealed VRLA batteries require an initial charge before being used in the vehicle.

NOTE: Since batteries state of charge need to be checked 3 months after their manufacturing date or their last charge, it is highly recommended to check the batteries of all newly arrived vehicles. Consult the "Identification of reminder sticker" section and battery chart on last page.

If you are using a constant current charger, refer to the standard (STD) charging method printed on the battery.

For YTX24HL batteries (21 AH), the initial charge must be 2.1 A for 5 - 10 hours.



YTX24HL CHARGING METHOD

When using an automatic type taper charger, check to make sure that the charger current (amps) is equal to or greater than the standard (STD) charging method listed on the battery.

If the battery gets very hot to the touch, cease charging and allow battery to cool down for 6 to 12 hours. Check voltage using a voltmeter. A fully charged, battery should be 12.8 volts or higher after the battery has been off the charger 1-2 hours. If less, it needs additional charge.

BATTERY ROUTINE CHARGING

Use the following information to maintain the charge of a battery already activated and charged.

NOTICE Overcharging can harm the battery beyond recovery.

Charging for Voltage of 11.6 V to 12.8 V

The most important thing to properly maintain a VRLA battery is to never let stand discharged. A sealed VRLA battery should always be kept to near fully charged for peak performance and maximum life span. In fact, it can need charging more often than a car battery because it is probably not used routinely and, therefore, not "automatically" charged.

A fully charged battery should read 12.8 V or higher after battery has been off the charger 2 hours.

NOTE: The static voltage of a battery should be considered an indication of the state of charge only. A battery can show a good voltage while not being able to supply suitable power. In doubt, a load test should be carried out.

It is not recommended to overcharge sealed VRLA batteries. Because of their characteristics, too much of a boost charge will decrease the volume of electrolyte. The longer the overcharge time, the greater the drop in electrolyte and starting power.

Refer to the following tables for charging routine.

Note that charging times can vary depending on type of charger. Follow the charger's instructions for details.

STATE OF CHARGE : 100%		
VOLTAGE	ACTION	CHARGE TIME *
12.9 – 13.0	None Check at 3 months from date of manufacture	None required
* Using a constant current charger at standard amps specified on the battery		

STATE OF CHARGE : 75% - 100%		
VOLTAGE	ACTION	CHARGE TIME *
12.6 – 12.8	May need slight charge If no charge given, check in 3 months	3 – 6 hours
* Using a constant current charger at standard amps specified on the battery		

STATE OF CHARGE : 50% - 75%		
VOLTAGE	ACTION	CHARGE TIME *
12.1 – 12.5	Need charge	5 – 11 hours
* Using a constant current charger at standard amps specified on the battery		

STATE OF CHARGE : 25% - 50%		
VOLTAGE	ACTION	CHARGE TIME *
11.6 – 12.0	Need charge	At least 13 hours verify state of charge
* Using a constant current charger at standard amps specified on the battery		

Charging for Voltage of 11.5 V or Less

Batteries with voltage below 11.5 V may require special equipment and procedures to recharge.

In charging an over discharged battery having a terminal voltage of 11.5 V or lower, its internal resistance may be too high to charge at a normal charge voltage.

Therefore, it may be necessary to raise the voltage of the battery initially (25 V as a maximum), and charge for approximately 5 minutes. If the ammeter shows no change in current after 5 minutes, you need a new battery.

Current flowing into the battery at high voltage can become excessive. Monitor amperage and adjust voltage as necessary to keep current at the battery's standard amp rating. Charge for approximately 20 hours.

STATE OF CHARGE : 0% - 25%		
VOLTAGE	ACTION	CHARGE TIME *
11.5 or less	Need charge	20 hours
* Using a constant current charger at standard amps specified on the battery		

BATTERY MAINTENANCE

These batteries require little maintenance to perform perfectly. Follow this simple check list for optimum battery performance:

– Check voltage every 3 months using a voltmeter.
– Keep a battery fully charged to 100% (12.9 V - 13.0 V after standing 2 hours).
– Check and charge battery if the voltage drops below 12.5 V.

– Keep the battery top free of grime.
– Clean terminals and connectors if necessary.
– For storage, pull battery or disconnect battery cables.

BATTERY STORAGE

Battery storage is critical for battery life, it is important to follow the above battery maintenance check list to keep an optimal condition.

Always remove battery from vehicle for storage. Keeping the battery in vehicle for storage may lead to contacts degradation/corrosion and case damage if freezing occurs. A discharged battery will freeze and break in area where freezing point is experienced. Electrolyte leakage will damage surrounding parts.

Regularly charging the battery during storage will prevent cell sulfation.

Keep in mind that higher storage temperatures cause faster self-discharge and require checking more often.

BATTERY CARE REMINDER

Through proper maintenance and care, today's modern batteries can survive long storage periods, however one must adhere to the proper maintenance procedures as specified in this bulletin.

It is a good practice to strictly follow all activated batteries and apply the maintenance procedure to keep them at a high level of performance.

All batteries which did not receive proper periodic maintenance will not be covered by the warranty.

BATTERY PREMATURE FAILURE

In order to understand and PREVENT premature battery failures, here are some key elements that need to be considered:

– If a vehicle is a non current sale which has been crated for more than 3 months, the battery should be fully charged either by removing it from the unit OR by charging the battery in the unit. If battery is removed from unit it would not be necessary to reinstall it but rather identified with the unit's VIN and stored in a cool and dry place.
– Inventoried batteries should also be fully charged every 3 months following its last charge. Consult the "Identification of reminder sticker" section and battery chart on last page.

Some specific equipment can help prevent premature battery failures.

We recommend to use similar equipment (as listed below) to charge and maintain your batteries.

We also recommend to use such equipment to test potentially defective batteries before performing a claim.

Always refer to manufacturer's instructions while using these specific equipments.

The Ultra PRO ULT 95260 -- 500 amp Carbon Pile Battery Tester

– 500 amp variable load carbon pile tester with built in 15 second alarm.
– Unit will test batteries up to 1000 CCA.
– Colour coded, temperature compensation pass / fail bands indicate precise load test results.

The Yuasa MB-2040 -- Automatic 12V 4 Amp Battery Charger

– Automatic battery charger. High output charging current (4 amps).
– High voltage capable (20 volts) - designed to improve recovery of sulfated batteries.
– Switchable mode operation: "Fast Mode" for quick vehicle set up. "Normal Mode" ideal for smaller batteries, initial activation, and deeply discharged batteries.
– Automatic shut-off. Reverse Polarity protection / spark-free operation. (UL/CUL approved).

The Yuasa YUA1200901 -- Automatic 12V 900 mA Battery Charger

– Fully automatic 3 level charge cycle for effective charging.

– Reaches 14.4 volt peak, then automatically switches to float.
– Reverse polarity protection.

NOTE: The previously mentioned equipment is listed as reference only.

SAFETY WARNINGS

Here are important safety things to keep in mind before working with batteries. Any person who intends to work with batteries should read and understand the information contained on the following safety warnings before doing so.

⚠ WARNING

⚠ Absolutely no smoking, sparks or open flames around batteries. Batteries can produce hydrogen and oxygen; if they ignite the battery can rupture.

⚠ Properly connect charger to battery: positive to positive, negative to negative. Unplug the charger or turn it off before you disconnect the leads; that cuts down on the chance of sparks.

⚠ Always wear eye protection, protective gloves and protective clothing.

⚠ Clean up acid spills immediately, using a water and baking soda solution to neutralize.

⚠ If sulfuric acid is swallowed or splashed in the eyes, take immediate action. While the diluted sulfuric acid used as electrolyte can burn the skin, this type of injury is generally less serious. Sulfuric acid in the eyes can cause blindness. Serious internal injuries or death can result from ingesting sulfuric acid.

⚠ Always ventilate battery charging area.

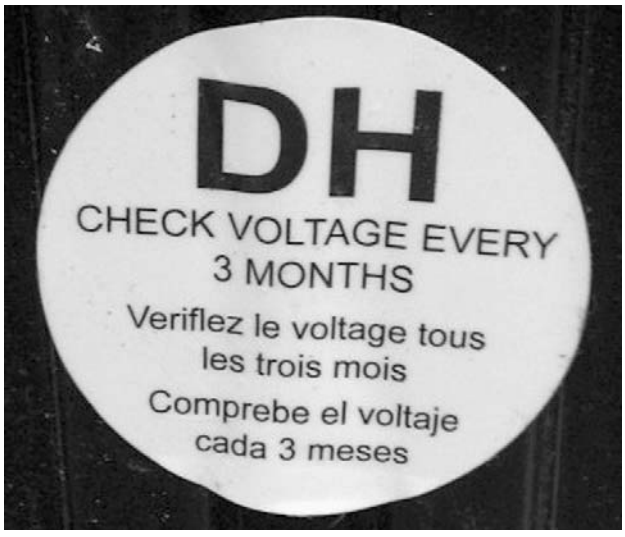
⚠ Never charge or boost battery while installed on vehicle.

NOTICE

– Store the battery in a cool, dry place out of direct sunlight.
– The sealed VRLA battery will not be topped off during its life. Never pry off sealing caps: it is dangerous and damaging. Water cannot be added to the sealed VRLA battery.
– Always stop charging if the battery becomes really warm to the touch. Let it cool down for 6 - 12 hours and resume charging. Overcharging can warp plates, making future charging difficult or impossible. Watch charging times carefully, or ideally, use a Yuasa Automatic Charger. A battery that is too hot can rupture.
– Improper activation or excessive over charging (possibly by equipment failure) could cause damage to the battery or vehicle by forcing acid out of the safety vent.
– Always connect battery cables exactly in the specified order. Connect RED (+) cable first, then BLACK (–) ground cable.

IDENTIFICATION OF REMINDER STICKER

A reminder sticker can be found on the battery. The letters on the sticker should be used with the chart below to plan the next charging requirement.



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CHECK VOLTAGE EVERY 3 MONTHS												
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2008	AE	BE	CE	DE	EE	FE	GE	HE	JE	KE	LE	ME
2009	AF	BF	CF	DF	EF	FF	GF	HF	JF	KF	LF	MF
2010	AG	BG	CG	DG	EG	FG	GG	HG	JG	KG	LG	MG

CHECK VOLTAGE EVERY 3 MONTHS												
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2011	AH	BH	CH	DH	EH	FH	GH	HH	JH	KH	LH	MH
2012	AJ	BJ	CJ	DJ	EJ	FJ	GJ	HJ	JJ	KJ	LJ	MJ
2013	AK	BK	CK	DK	EK	FK	GK	HK	JK	KK	LK	MK
2014	AL	BL	CL	DL	EL	FL	GL	HL	JL	KL	LL	ML
2015	AM	BM	CM	DM	EM	FM	GM	HM	JM	KM	LM	MM
2016	AN	BN	CN	DN	EN	FN	GN	HN	JN	KN	LN	MN
2017	AO	BO	CO	DO	EO	FO	GO	HO	JO	KO	LO	MO

June 18th, 2013 Subject: **Side-by-side Paint Codes** No. **2014-5**

YEAR	MODEL	MODEL NUMBER	SERIAL NUMBER
2014	Commander™ Series	All	All
	Maverick™ Series		

NOTE: The illustrations in this bulletin are typical and may not show the exact model-year vehicle.
NOTE: These paint mixes should be used for minor touch-ups only.

CORRESPONDING PAINT CODES			
BRP COLORS		B.A.S.F., R-M	PPG
B-101	Can-Am Red	805694	N/A
B-160	Deep Black	85366, RM 85366	DCC 95066 / DBC 9554
B-176	Viper Red	94820	DCC 74790
B-190	Yellow 2000	625282	DBU 88272
B-229	Bright White	757238	DCC-DG 917825
B-282	Hyper Silver (Cast aluminium.)	796411	DBC 922715
B-302	Eternal Metallic Black	862278	929092
B-321	Pure Magnesium Metallic	879305	931118
B-322	Carbon Black	870215	935126
B-341	Hybrid Pearl White	900899	933650
N/A: Not applicable			

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VEHICLE COLOR CODES

COMMANDER Standard

COMMANDER DPS, XT

COMMANDER XT-P

COMMANDER LTD

Maverick RS

Maverick X rs, X rs DPS, X xc

June 13th, 2013 Subject: **Spring Chart** No. **2014-3**

COMMANDER SERIES			
ENGINE	MODEL	MODEL NUMBER	SERIAL NUMBER
800R	STD	6CEA, 6CEB, 6CEC	All
	DPS	6TEA, 6TEB	
	XT	6DEA, 6DEB, 6DEC	
1000	STD	6AEA, 6AEB	
	DPS	6PEA	
	XT	6BEA, 6BEB, 6BED, 6BEE, 6BEF, 6BEG, 6BEH	
	XT-P	6EEA, 6EEB, 6EEC	
	LTD	6GEA, 6GEB, 6GED	

MAVERICK SERIES			
ENGINE	MODEL	MODEL NUMBER	SERIAL NUMBER
1000	STD	7AEA, 7AEB, 7AEC,	All
	X rs	7BEA, 7BEB, 7BED	
	X rs DPS	7EEA, 7EEB, 7EEC, 7EED, 7EEE	
	X xc	7CEA, 7CEB, 7CEC, 7CED	
	MAX STD	6LEA, 6LEC	
	MAX X rs	7DEA, 7DEB, 7BEC, 7DED	

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The information in this bulletin applies to above models.

This bulletin is divided into 3 main sections:

Spring Information

– Provides information about spring identification and spring type.

Spring Applications

– Provides information on spring application according to model.

Spring Specifications

– Provides spring specifications.

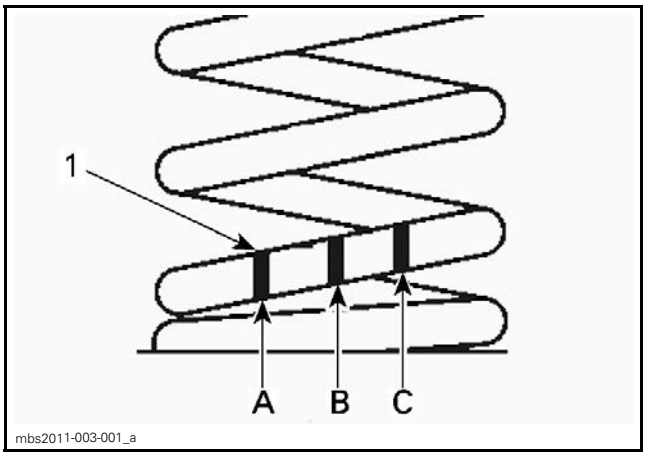
SPRING INFORMATION

Spring Identification

Spring identification is done by color code stripes **or** by its part number.

Color code

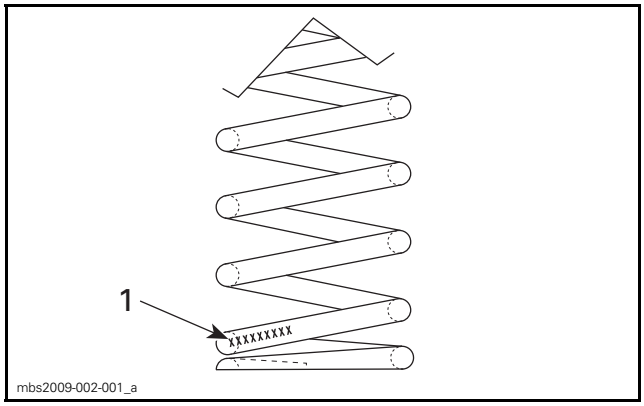
Read color codes when spring is upright and stripes are down.



IDENTIFICATION BY COLOR STRIPES
1. Color stripes when spring is upright with the stripes down
A. 1st stripe
B. 2nd stripe
C. 3rd stripe

Part number

Part number is printed within the first 1-1/4 coils



1. Part number ink marked

Color Code Legend

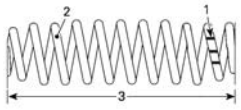
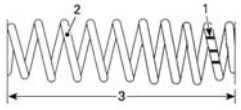
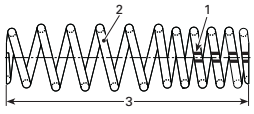
COLOR CODE					
BK	—	BLACK	PI	—	PINK
BL	—	BLUE	RD	—	RED
GD	—	GOLD	SI	—	SILVER
GN	—	GREEN	WH	—	WHITE
OR	—	ORANGE	YL	—	YELLOW

Spring Types

All call-outs below each following illustrations refer to:

1. Color code stripes or part number,
2. Wire diameter,
3. Spring free length.

NOTE: Read color codes when spring is upright and stripes are down.

Spring type		
Type T and V (barrel shape at both ends)	Single Rate Spring	
Type 2 and 6 (barrel shape at both ends)	Dual Rate Spring	
Type 8 (barrel shape at both ends)	Dual Rate Spring	

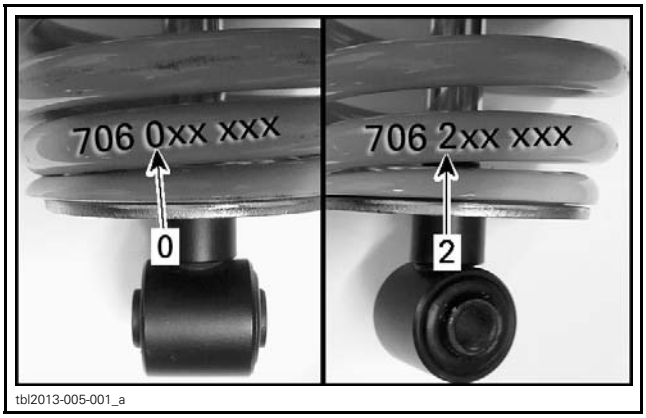
SPRING APPLICATIONS

MODEL	MODEL NUMBER	SPRING PART NUMBER	
		Front	Rear
800 Series			
Commander Std	All	706 201 631	706 001 043
Commander DPS	All	706 200 860	706 000 667
Commander XT	All	706 201 367 706 200 860 706 201 369	706 000 667 706 001 043 706 001 045
1000 Series			
Commander Std	All	706 201 631	706 001 043
Commander DPS	All	706 200 860	706 000 667
Commander LTD		706 201 473 706 201 369	706 001 040
Commander XT-P	All	706 201 124	706 000 821
Commander XT	All	706 200 860 706 201 367 706 201 369	706 000 667 706 001 043 706 001 045

MODEL	MODEL NUMBER	SPRING PART NUMBER	
		Front	Rear
Maverick Std	All	706 201 580 706 201 820	706 001 241 706 001 588
Maverick X rs Maverick X rs DPS	All	706 201 600 706 201 822	706 001 313 706 001 585
Maverick X xc	All	706 201 715 706 201 825	706 001 462 706 001 591
Maverick MAX Std	All	706 201 707	706 001 454
Maverick MAX X rs	All	706 201 711 706 201 827	706 001 458 706 001 594

SPRING SPECIFICATIONS

NOTE: The 4th digit of the spring part number indicates its mounting location.



0 = Rear
2 = Front

P/N	TYPE	SPRING RATE (LB/IN) ± 10 _____ (RATE 1 / RATE 2)	FREE LENGTH (MM) ± 3	WIRE DIAMETER (MM) ± .05	STRIPE COLOR CODE
COMMANDER					
706 000 667	6	200 / 251.3	358	11.5	Blue-Gold
706 000 821	2	158.2 / 259.2	373	11.5	Gold-Gold
706 001 040	2	145.6 / 250	355.6	10.6	Yellow-White
706 001 043	6	200 / 251.3	358	11.5	Blue-Yellow
706 001 045	6	200 / 251.3	358	11.5	Green-Yellow
706 200 860	6	137 / 162.7	363	10.6	Green-Black-Black
706 201 124	T	150 ± 5	350	10.6	Green-Gold
706 201 367	6	137 / 162.7	363	10.6	Gold-Yellow
706 201 369	6	137 / 162.7	363	10.6	Red-Yellow
706 201 473	2	119.3 / 162	358.65	9.98	Red-White
MAVERICK					
706 001 241	T	175	368.3	11.5	Black Red Black
706 001 313	V	200	381	12.2	White Black
706 201 707	T	200	400	11.88	Red Silver Black
706 201 711	V	200	380.6	12.2	Blue Silver Black
706 201 715	2	142.8 / 200	355.6	11.1	Red White Black
706 201 718	T	125	355.6	9.53	Blue White Black
706 201 820	2	133.6 / 199.9	406.4	11.1	Black Yellow
706 201 822	6	163.9 / 220	385.6	11.88	White White
706 201 825	2	142.8 / 200	355.6	11.1	Blue Gold Black
706 201 827	V	200	380.6	12.2	Black Gold Black
706 001 454	V	302.6	395.6	13.5	White Green Black
706 001 458	10	302.6	375.6	13.5	Silver Blue Black
706 001 462	T	225	355.6	11.88	White Black Black
706 001 466	T	150	355.6	9.98	White Blue Black

P/N	TYPE	SPRING RATE (LB/IN) ± 10 (RATE 1 / RATE 2)	FREE LENGTH (MM) ± 3	WIRE DIAMETER (MM) ± .05	STRIPE COLOR CODE
706 001 585	V	200	381	12.2	White Green
706 001 588	T	175	368.3	11.5	Black Green Black
706 001 591	T	225	355.6	11.88	Silver Gold Black
706 001 594	10	302.6	375.6	13.5	White Gold Black
706 201 580	2	133.6 / 199.9	406.4	11.1	Black Blue Black
706 201 600	6	163.9/ 220	385.6	11.88	Gold Black

Commander 800 STD, DPS, XT, 2014: 00- Model Numbers

The illustrations figuring in this parts catalog show typical construction of the different assemblies and, in all cases, may not reproduce the full detail or exact shape of the parts shown. However, they represent parts which have the same or similar function.

Les illustrations contenues dans ce catalogue indiquent la disposition des pièces les unes par rapport aux autres. Il est donc possible qu'elles ne rendent pas compte de la forme exacte de ces pièces ainsi que de leurs détails de fabrication. Ces illustrations ont pour but d'identifier des pièces qui remplissent la même fonction ou une fonction identique.

SYMBOLS USED IN THIS CATALOG

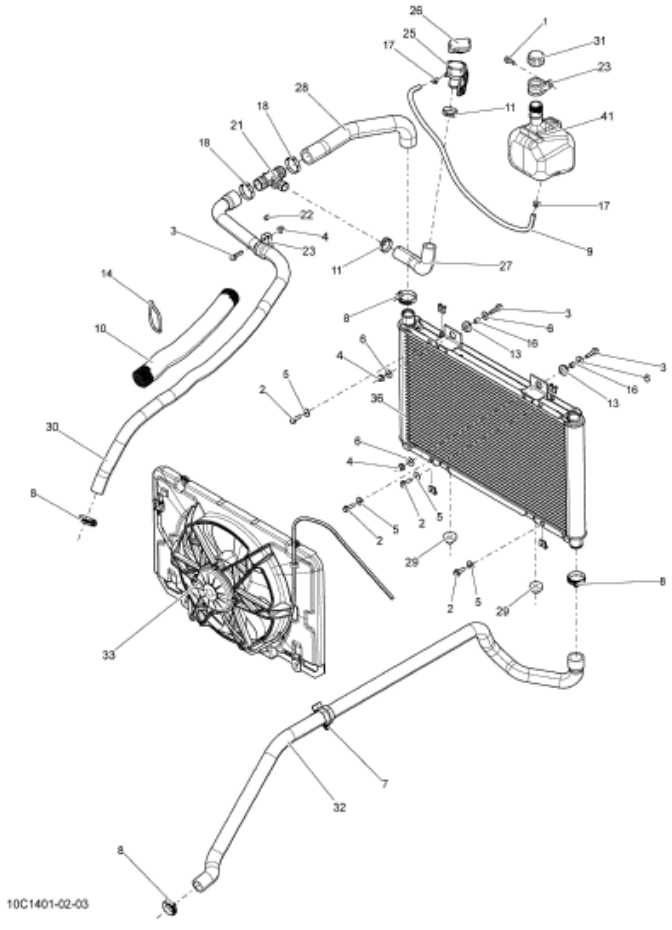
@	In «Quantity» column means «Use as Required».
Opt	In «Quantity» column means «Optional».
XXX	Parts marked with «XXX» are not available as spare parts.

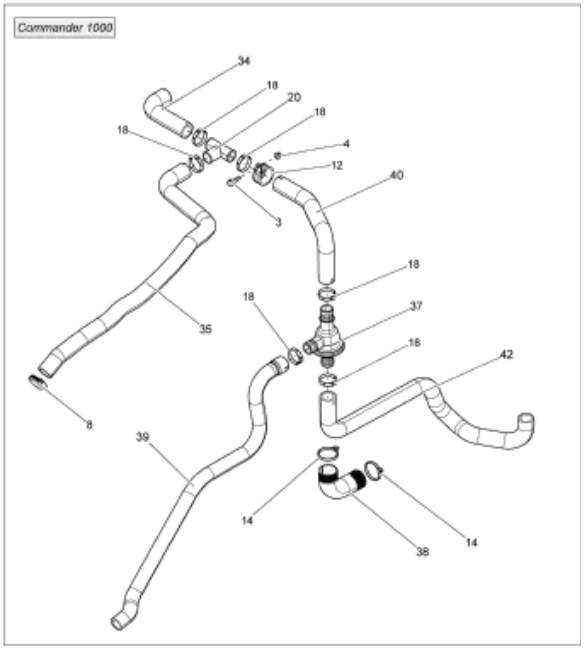
SYMBOLES UTILISÉS DANS CE CATALOGUE

@	Dans la colonne «Quantité» signifie «Au besoin».
Opt	Dans la colonne «Quantité» signifie «En option».
XXX	Les articles marqués d'un «XXX» ne sont pas disponibles comme pièces de remplacement.

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	6CEA	COMMANDER, 4X4 STD, 800R EFI CVT, Red. North America				1
2	6CEB	COMMANDER, 4X4 STD, 800R EFI CVT, Red. International				1
3	6CEC	COMMANDER, 4X4 STD, 800R EFI CVT, Red. Europe				1
4	6TEA	COMMANDER, 4X4 DPS, 800R EFI CVT, Yellow. North America				1
5	6TEB	COMMANDER, 4X4 DPS, 800R EFI CVT, Yellow. International				1
6	6DEA	COMMANDER, 4X4 XT, 800R EFI CVT, Yellow. North America				1
7	6DEB	COMMANDER, 4X4 XT, 800R EFI CVT, Magnesium. North America				1
8	6DEC	COMMANDER, 4X4 XT, 800R EFI CVT, Camo. North America				1

Commander 800 STD, DPS, XT, 2014: 01- Cooling System

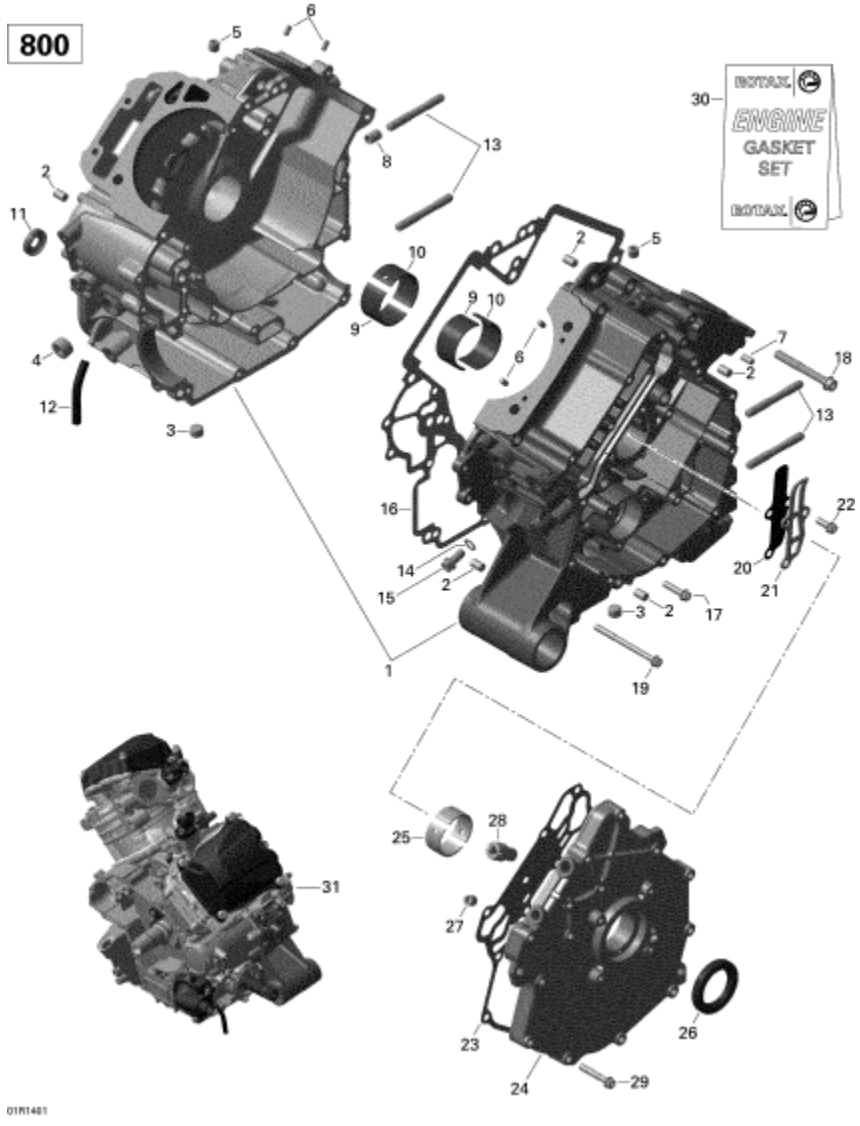




#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207661644	Hex. Flanged Screw M6 X 16	0.58		1	1
2	207662044	Hex. Flanged Screw M6 X 20	1.99		4	4
3	207662534	Hex. Flanged Screw	1.99		4	4
4	233261434	Flanged Elastic Nut M6	3.99		4	4
5	234062410	Flat Washer 6 mm	0.62		4	4
6	250200082	Flat Washer	1.99		4	4
7	275500590	Retainer	4.99		1	1
7	275500590	Retainer	5.99		1	1
8	293650098	Norma Gear Clamp	3.49		6	6
8	293650098	Norma Gear Clamp	3.99		6	6
9	415110000	Polyurethane Hose 5.2 mm	9.99		@	1
10	515176260	Tubing 35mm	7.49		@	1
10	515176260	Tubing 35mm	7.99		@	1
11	293650099	Crimp Clamp	3.49		2	2
11	293650099	Crimp Clamp	3.99		2	2
12	N/A	Not available for this vehicle			1	
13	293720053	Grommet	2.49		2	2
13	293720053	Grommet	2.99		2	2

14	293750008	Tie-Rap 350 mm	0.49	1	1
14	293750008	Tie-Rap 350 mm	0.99	1	1
16	293900105	Bushing	4.49	2	2
16	293900105	Bushing	4.99	2	2
17	414554800	Spring Clamp	0.72	2	2
18	509000162	Gear Clamp	4.99	2	2
18	509000162	Gear Clamp	5.99	2	2
20	N/A	Not available for this vehicle		1	
21	509000372	T-Fitting	6.99	1	1
21	509000372	T-Fitting	7.99	1	1
22	707000065	Spacer	3.30	1	1
22	707000065	Spacer	3.99	1	1
23	709200036	Hose Anchor	6.63	2	2
23	709200036	Hose Anchor	6.99	2	2
25	709200179	Filler Neck	10.99	1	1
25	709200179	Filler Neck	11.99	1	1
26	709200207	Pressure Cap	14.49	1	1
26	709200207	Pressure Cap	15.99	1	1
27	709200264	Filler Neck Hose	6.99	1	1
28	709200265	Radiator Outlet Hose	7.49	1	1
29	709200285	Grommet	5.99	2	2
29	709200285	Grommet	6.99	2	2
30	709200295	Intermediate Hose	25.99	1	1
31	709200328	Tank Cap	2.49	1	1
31	709200328	Tank Cap	2.99	1	1
32	709200355	Radiator Inlet Hose	42.99	1	1
33	709200375	Fan Ass'y	190.99	1	1
34	N/A	Not available for this vehicle		1	
35	N/A	Not available for this vehicle		1	
36	709200395	Radiator	176.99	1	1
37	N/A	Not available for this vehicle		1	
38	N/A	Not available for this vehicle		1	
39	N/A	Not available for this vehicle		1	
40	N/A	Not available for this vehicle		1	
41	709200504	Coolant Tank	9.99	1	1
42	N/A	Not available for this vehicle		1	

Commander 800 STD, DPS, XT, 2014: 01- Crankcase



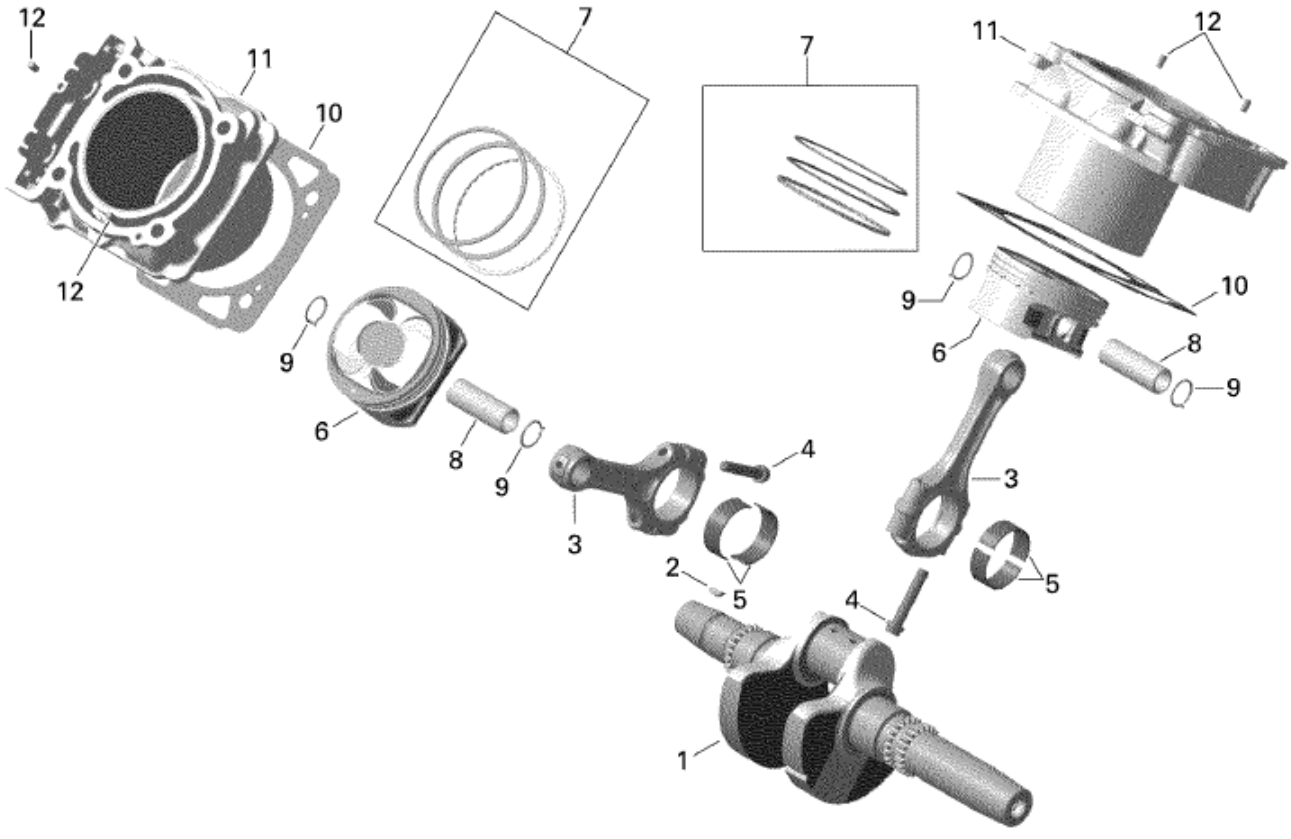
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420685253	Crankcase Ass'y. Includes 1 to 12	999.99		1	1
1	420685253	Crankcase Ass'y. Includes 1 to 12	1332.99		1	1
2	420632010	Center Pin 8 X 12	3.49		5	5
2	420632010	Center Pin 8 X 12	3.66		5	5
3	420840657	Plug Screw M12 X 1.5	5.99		2	2
3	420840657	Plug Screw M12 X 1.5	6.99		2	2
4	420240170	Plug Screw M18 X 1.5	5.99		1	1
4	420240170	Plug Screw M18 X 1.5	6.29		1	1
5	420641323	Plug Screw M10 X 1	9.99		2	2
5	420641323	Plug Screw M10 X 1	10.99		2	2

6	420929650	Drive Pin 5 X 10	1.49		4	4
6	420929650	Drive Pin 5 X 10	1.56		4	4
7	420932780	Needle Pin	5.99		1	1
7	420932780	Needle Pin	6.29		1	1
8	420929670	Dowel Pin 10 X 13	7.49		1	1
8	420929670	Dowel Pin 10 X 13	7.99		1	1
9	420233960	Plain Bearing	22.49		2	2
10	420233965	Plain Bearing	22.49		2	2
11	420650310	Oil Seal	10.99		1	1
11	420650310	Oil Seal	11.54		1	1
12	415110000	Polyurethane Hose 5.2 mm	9.99		1	1
13	420240814	Stud	4.99		4	4
13	420240814	Stud	5.99		4	4
14	420950141	Sealing Ring	1.99		1	1
14	420950141	Sealing Ring	2.09		1	1
15	420440852	Flanged Torx Screw M8 X 16	3.49		1	1
15	420440852	Flanged Torx Screw M8 X 16	3.66		1	1
16	420651225	Gasket	23.49		1	1
17	420641238	Flanged Torx Screw M6 X 25	2.99		2	2
17	420641238	Flanged Torx Screw M6 X 25	3.14		2	2
18	420440402	Flanged Torx Screw M8 X 65	5.99		4	4
18	420440402	Flanged Torx Screw M8 X 65	6.29		4	4
19	420440657	Flanged Torx Screw M6 X 75	2.49		13	13
19	420440657	Flanged Torx Screw M6 X 75	2.99		13	13
20	420224720	Valve Plate	13.49		1	1
20	420224720	Valve Plate	14.16		1	1
21	420224725	Reed Valve Stop	8.99		1	1
21	420224725	Reed Valve Stop	9.44		1	1
22	420641048	Flanged Torx Screw M6 X 16	2.49		3	3
22	420641048	Flanged Torx Screw M6 X 16	2.61		3	3
23	420651211	Gasket	19.99		1	1
23	420651211	Gasket	20.99		1	1
24	420612128	PTO Cover Ass'y. Includes 24 to 27	187.49		1	1
25	420233995	Bearing Sleeve	18.49		2	2
25	420233995	Bearing Sleeve	19.99		2	2
26	420631933	Oil Seal	18.49	420631932	1	1
26	420631933	Oil Seal	19.99	420631932	1	1
27	420641323	Plug Screw M10 X 1	9.99		1	

					1
27	420641323	Plug Screw M10 X 1	10.99	1	1
28	420256334	Hose Nipple M12 X 1.5	5.49	1	1
28	420256334	Hose Nipple M12 X 1.5	5.99	1	1
29	420440274	Flanged Torx Screw M6 X 35	1.99	14	14
30	420684155	Gasket Kit, Engine	348.49	1	1
31	420081020	Long Block, 800	4599.99	1	1
31	420081020	Long Block, 800	5192.99	1	1

Commander 800 STD, DPS, XT, 2014: 01- Crankshaft, Piston And Cylinder

800

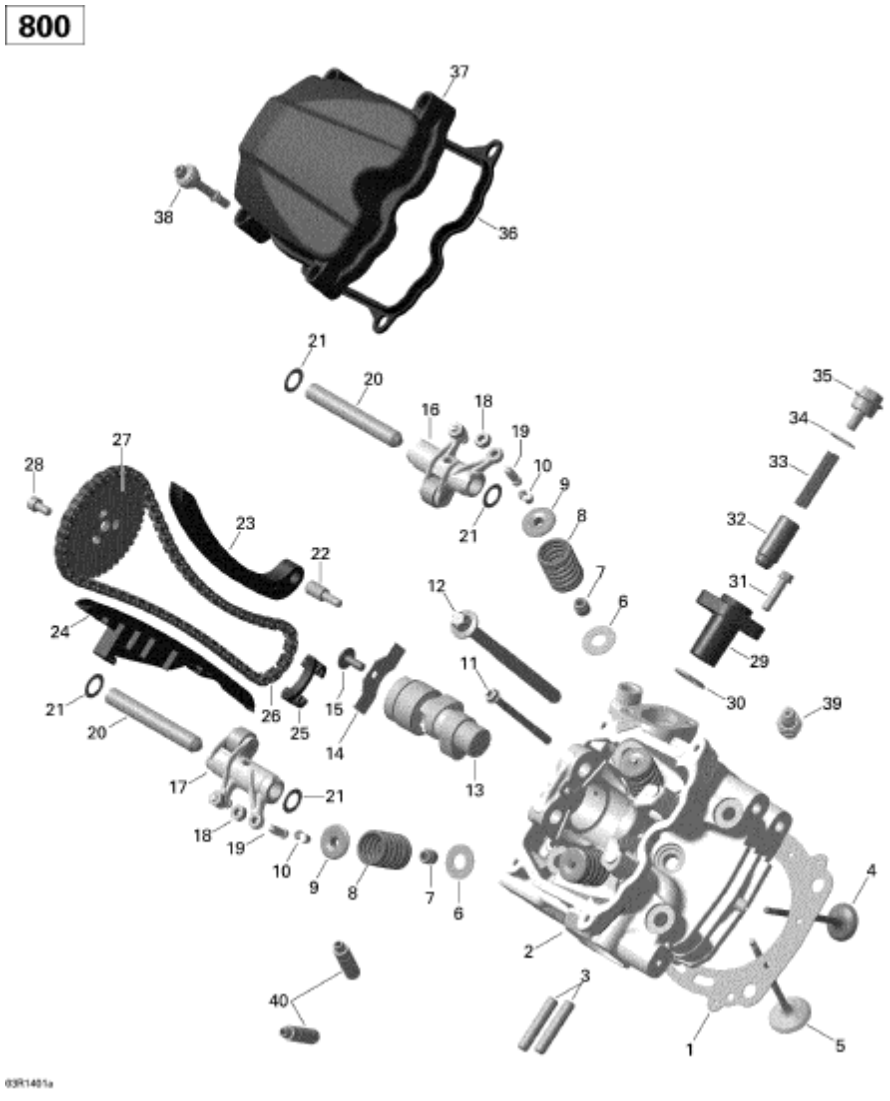


02R1401

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420219745	Crankshaft	901.99		1	1
2	420246570	Woodruff Key 4 X 5	2.99		1	1
2	420246570	Woodruff Key 4 X 5	3.14		1	1
3	420217429	Connecting Rod Ass'y. Includes 3 to 4	194.49		2	2
4	420641640	Connecting Rod Screw M8 X 1	10.99		4	4
4	420641640	Connecting Rod Screw M8 X 1	11.54		4	4
5	420233980	Plain Bearing 40 X 43 X 15	18.49		4	4
5	420233980	Plain Bearing 40 X 43 X 15	19.99		4	4
6	420296775	Piston Ass'y, 90.958 mm. Includes 6 to 7	124.49		2	2
6	420296776	Piston Ass'y, Oversize, 91.208 mm. Includes 6 to 7	143.49		@	1
7	420296774	Piston Ring Set	79.49		2	2
8	420216270	Piston Pin	28.49		2	2
9	420845109	Piston Circlip	2.49		4	4

9	420845109	Piston Circlip	2.99		4	4
10	420630210	Gasket	10.99		2	2
10	420630210	Gasket	11.54		2	2
11	420613581	Cylinder With Sleeve	325.49	420613587	2	2
11	420613581	Cylinder With Sleeve	325.49	420613587	2	2
12	420929650	Drive Pin 5 X 10	1.49		4	4
12	420929650	Drive Pin 5 X 10	1.56		4	4

Commander 800 STD, DPS, XT, 2014: 01- Cylinder Head, Front

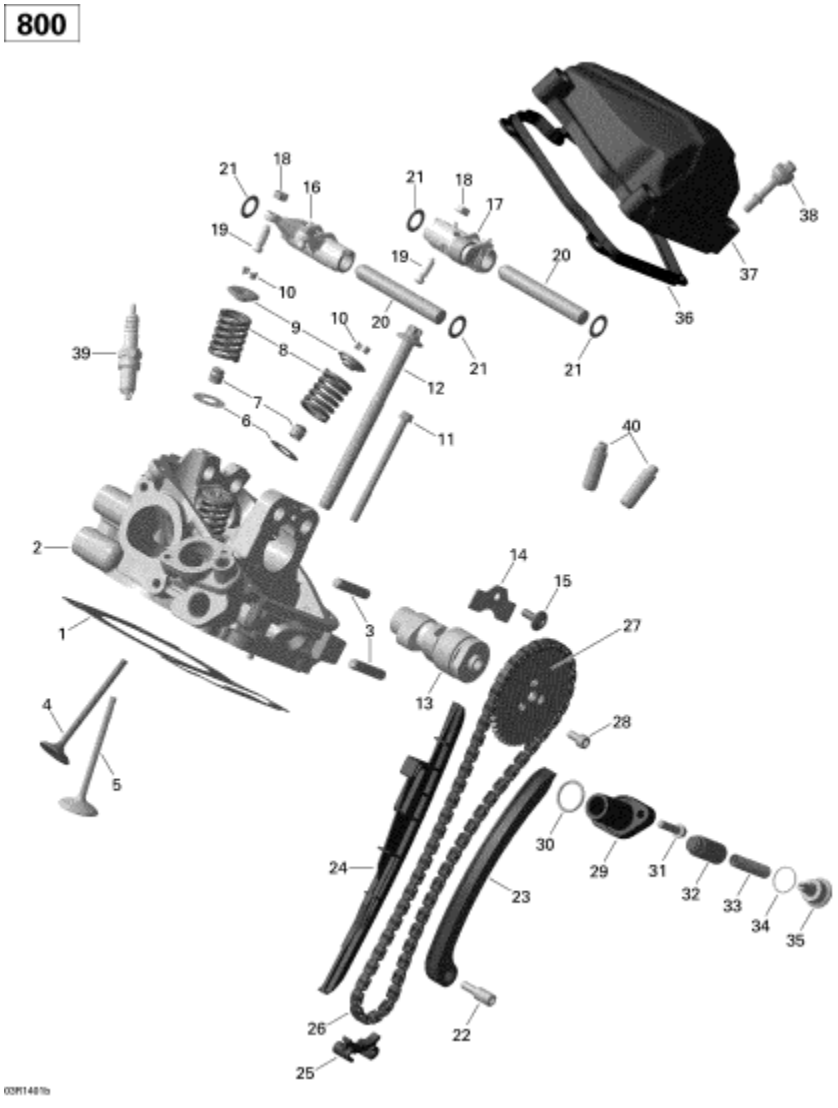


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420630195	Cylinder Head Gasket	57.49		1	1
2	420623941	Cylinder Front Ass'y. Includes 2 to 3	455.49		1	1
2	420623941	Cylinder Front Ass'y. Includes 2 to 3	499.99		1	1
3	420941014	Stud M8 x 26	9.49		2	2
3	420941014	Stud M8 x 26	9.99		2	2
4	420254361	Exhaust Valve, 27 mm	47.49		2	2
5	420254351	Intake Valve, 31 mm	31.99		2	2
6	420627770	Thrust Washer	1.49		4	4
6	420627770	Thrust Washer	1.56		4	4
7	420230515	Valve Stem Seal	5.99		4	

					4
7	420230515	Valve Stem Seal	6.29	4	4
8	420239295	Valve Spring	9.99	4	4
8	420239295	Valve Spring	10.99	4	4
9	420254132	Valve Spring Retainer	9.99	4	4
9	420254132	Valve Spring Retainer	10.99	4	4
10	420254120	Cotter Valve	3.49	8	8
10	420254120	Cotter Valve	3.66	8	8
11	420641228	Flanged Torx Screw M6 X 85	5.99	2	2
11	420641228	Flanged Torx Screw M6 X 85	6.29	2	2
12	420641550	Torx Screw M10 X 140	9.99	4	4
12	420641550	Torx Screw M10 X 140	10.99	4	4
13	420620866	Camshaft	135.99	1	1
14	420627743	Holding Strip	13.49	1	1
14	420627743	Holding Strip	14.99	1	1
15	420241525	Torx Screw M6 X 16	2.49	1	1
15	420241525	Torx Screw M6 X 16	2.99	1	1
16	420254905	Rocker Arm Inlet	113.49	1	1
17	420254915	Rocker Arm Exhaust	112.49	1	1
18	420242910	Hex. Nut M6	1.49	4	4
18	420242910	Hex. Nut M6	1.99	4	4
19	420241335	Adjustment Screw M6 X 0.75	13.49	4	4
19	420241335	Adjustment Screw M6 X 0.75	14.16	4	4
20	420229712	Pin #12, Small, M6 X 90	11.99	2	2
20	420229712	Pin #12, Small, M6 X 90	12.99	2	2
21	420944382	Shim	3.49	4	4
21	420944382	Shim	3.66	4	4
22	420240941	Bearing Screw M6	9.49	1	1
22	420240941	Bearing Screw M6	9.99	1	1
23	420436015	Chain Tension Guide	14.49	1	1
23	420436015	Chain Tension Guide	15.99	1	1
24	420236582	Chain Guide	4.99	1	1
24	420236582	Chain Guide	5.99	1	1
25	420236350	Chain Guide	9.99	1	1
25	420236350	Chain Guide	10.99	1	1
26	420297063	Silent Chain	69.99	1	1
27	420254435	Camshaft Sprocket, 42 Teeth	12.49	1	1
27	420254435	Camshaft Sprocket, 42 Teeth	13.99	1	

					1
28	420840031	Screw M6 X 12	3.49	3	3
28	420840031	Screw M6 X 12	3.66	3	3
29	420236510	Chain Tensioner Housing	8.99	1	1
29	420236510	Chain Tensioner Housing	9.44	1	1
30	420430370	O-Ring	5.99	1	1
30	420430370	O-Ring	6.99	1	1
31	420641238	Flanged Torx Screw M6 X 25	2.99	2	2
31	420641238	Flanged Torx Screw M6 X 25	3.14	2	2
32	420236520	Chain Tensioner Plunger	9.99	1	1
32	420236520	Chain Tensioner Plunger	10.99	1	1
33	420238120	Spring	5.99	1	1
33	420238120	Spring	6.29	1	1
34	420250890	O-Ring	4.49	1	1
34	420250890	O-Ring	4.99	1	1
35	420641150	Plug Screw	5.99	1	1
35	420641150	Plug Screw	6.29	1	1
36	420630260	Gasket	12.49	1	1
37	420610395	Valve Cover	13.49	1	1
37	420610395	Valve Cover	14.99	1	1
38	420440567	Hex. Distance Screw M6 X 30.5	5.73	4	4
38	420440567	Hex. Distance Screw M6 X 30.5	6.99	4	4
39	707000246	Spark Plug, NGK DCP-R8E	3.66	1	1
39	707000246	Spark Plug, NGK DCP-R8E	3.80	1	1
40	420254374	Valve Guide	18.99	4	4
40	420254374	Valve Guide	19.99	4	4

Commander 800 STD, DPS, XT, 2014: 01- Cylinder Head, Rear

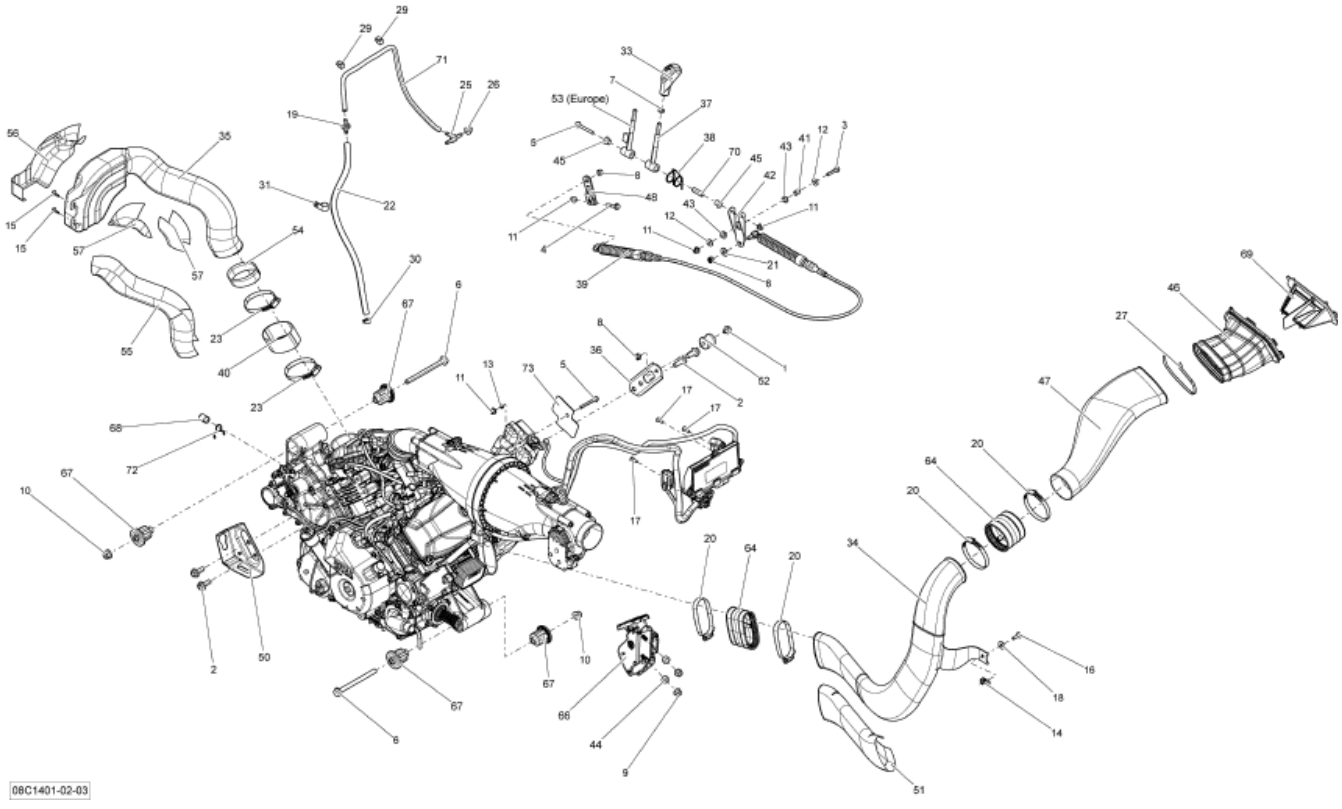


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420630195	Cylinder Head Gasket	57.49		1	1
2	420613532	Cylinder Head Ass'y. Includes 2 to 3	499.99		1	1
2	420613532	Cylinder Head Ass'y. Includes 2 to 3	531.49		1	1
3	420941014	Stud M8 x 26	9.49		2	2
3	420941014	Stud M8 x 26	9.99		2	2
4	420254361	Exhaust Valve, 27 mm	47.49		2	2
5	420254351	Intake Valve, 31 mm	31.99		2	2
6	420627770	Thrust Washer	1.49		4	4
6	420627770	Thrust Washer	1.56		4	4
7	420230515	Valve Stem Seal	5.99		4	

					4
7	420230515	Valve Stem Seal	6.29	4	4
8	420239295	Valve Spring	9.99	4	4
8	420239295	Valve Spring	10.99	4	4
9	420254132	Valve Spring Retainer	9.99	4	4
9	420254132	Valve Spring Retainer	10.99	4	4
10	420254120	Cotter Valve	3.49	8	8
10	420254120	Cotter Valve	3.66	8	8
11	420641228	Flanged Torx Screw M6 X 85	5.99	2	2
11	420641228	Flanged Torx Screw M6 X 85	6.29	2	2
12	420641550	Torx Screw M10 X 140	9.99	4	4
12	420641550	Torx Screw M10 X 140	10.99	4	4
13	420620868	Camshaft	135.99	1	1
14	420627743	Holding Strip	13.49	1	1
14	420627743	Holding Strip	14.99	1	1
15	420241525	Torx Screw M6 X 16	2.49	1	1
15	420241525	Torx Screw M6 X 16	2.99	1	1
16	420254905	Rocker Arm Inlet	113.49	1	1
17	420254915	Rocker Arm Exhaust	112.49	1	1
18	420242910	Hex. Nut M6	1.49	4	4
18	420242910	Hex. Nut M6	1.99	4	4
19	420241335	Adjustment Screw M6 X 0.75	13.49	4	4
19	420241335	Adjustment Screw M6 X 0.75	14.16	4	4
20	420229712	Pin #12, Small, M6 X 90	11.99	2	2
20	420229712	Pin #12, Small, M6 X 90	12.99	2	2
21	420944382	Shim	3.49	4	4
21	420944382	Shim	3.66	4	4
22	420240941	Bearing Screw M6	9.49	1	1
22	420240941	Bearing Screw M6	9.99	1	1
23	420436015	Chain Tension Guide	14.49	1	1
23	420436015	Chain Tension Guide	15.99	1	1
24	420236582	Chain Guide	4.99	1	1
24	420236582	Chain Guide	5.99	1	1
25	420236350	Chain Guide	9.99	1	1
25	420236350	Chain Guide	10.99	1	1
26	420297063	Silent Chain	69.99	1	1
27	420254435	Camshaft Sprocket, 42 Teeth	12.49	1	1
27	420254435	Camshaft Sprocket, 42 Teeth	13.99	1	

					1
28	420840031	Screw M6 X 12	3.49	3	3
28	420840031	Screw M6 X 12	3.66	3	3
29	420236510	Chain Tensioner Housing	8.99	1	1
29	420236510	Chain Tensioner Housing	9.44	1	1
30	420430370	O-Ring	5.99	1	1
30	420430370	O-Ring	6.99	1	1
31	420641238	Flanged Torx Screw M6 X 25	2.99	2	2
31	420641238	Flanged Torx Screw M6 X 25	3.14	2	2
32	420236520	Chain Tensioner Plunger	9.99	1	1
32	420236520	Chain Tensioner Plunger	10.99	1	1
33	420238120	Spring	5.99	1	1
33	420238120	Spring	6.29	1	1
34	420250890	O-Ring	4.49	1	1
34	420250890	O-Ring	4.99	1	1
35	420641150	Plug Screw	5.99	1	1
35	420641150	Plug Screw	6.29	1	1
36	420630260	Gasket	12.49	1	1
37	420610395	Valve Cover	13.49	1	1
37	420610395	Valve Cover	14.99	1	1
38	420440567	Hex. Distance Screw M6 X 30.5	5.73	4	4
38	420440567	Hex. Distance Screw M6 X 30.5	6.99	4	4
39	707000246	Spark Plug, NGK DCP-R8E	3.66	1	1
39	707000246	Spark Plug, NGK DCP-R8E	3.80	1	1
40	420254374	Valve Guide	18.99	4	4
40	420254374	Valve Guide	19.99	4	4

Commander 800 STD, DPS, XT, 2014: 01- Engine



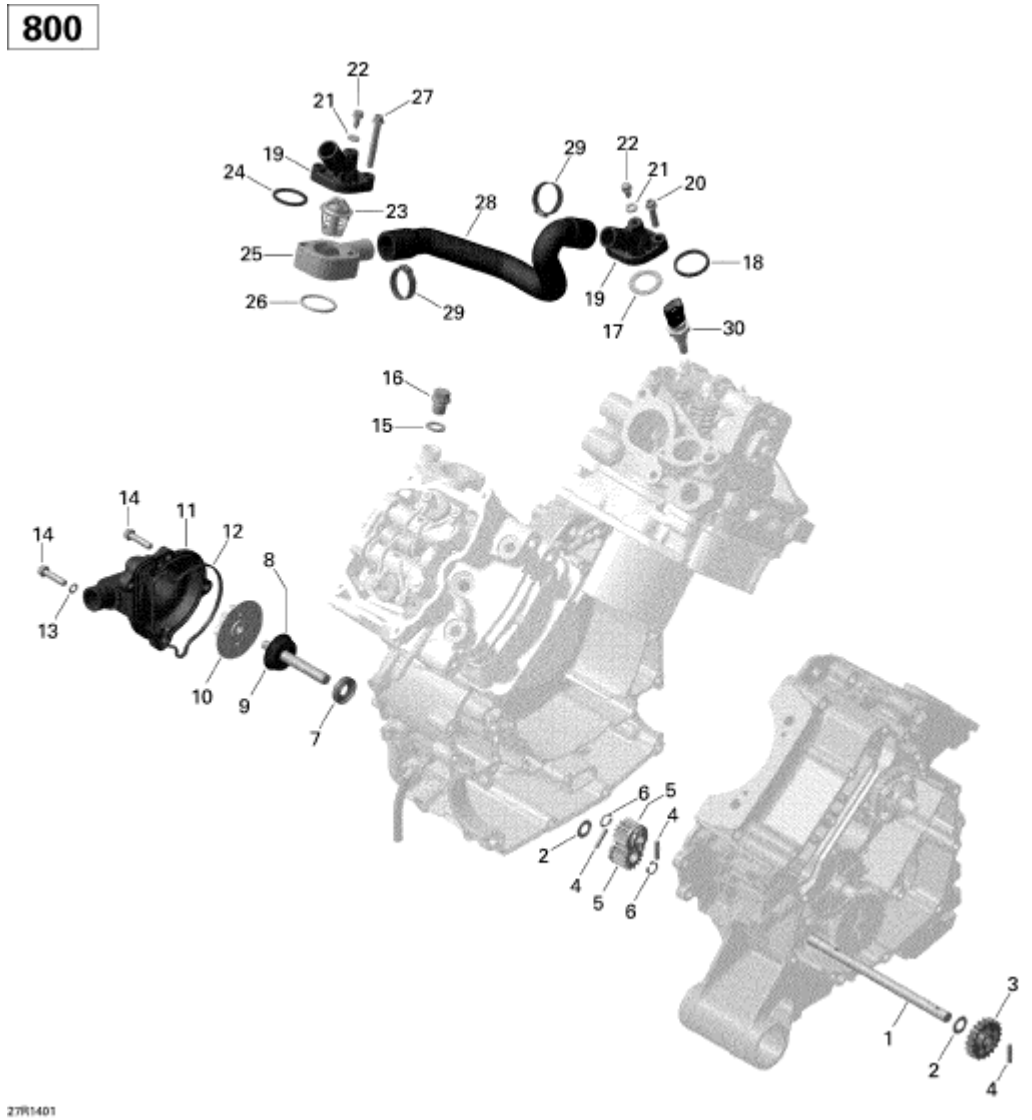
08C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207581046	Flanged Screw M8 x 10, Scotch Grip	3.70		1	1
2	207602544	Hex. Flanged Screw M10 X 25	1.33		4	4
3	207663034	Hex. Flanged Screw M6 X 30	1.99		1	1
4	207663544	Hex. Flanged Screw M6 X 35	0.72		1	1
5	207665044	Hex. Flanged Screw M6 X 50	3.13		2	2
6	230602546	Hex. Flanged Screw M10 X 125	5.73		2	2
7	232180491	Hex. Jam Nut M8	5.99		1	1
8	232581414	Hex. Elastic Stop Nut M8	0.47		3	3
9	233081416	Hex. Flanged Nut M8	0.87		2	2
10	233201436	Flanged Elastic Nut M10	1.99		2	2
11	233261414	Hex. Flanged Elastic Nut M6	1.05		4	4
12	234062410	Flat Washer 6 mm	0.62		2	2
13	234461608	External Serrated Lock Washer 6 mm	0.87		1	1
14	250000048	Pannel Nut M6 X 1.0	1.35		1	1
15	250000113	Screw M4 X 16, Type K-40	3.13		2	2
16	250000128	Torx Truss Screw M6 X 20	1.30		1	1
17	250000146	Truss Head Torx Screw K50 X 16	1.17		3	3
18	250200082	Flat Washer	1.99		1	1
19	275500398	Check Valve	7.49		1	1
19	275500398	Check Valve	7.99		1	1
20	293650091	Norma Clamp	7.49		4	4

20	293650091	Norma Clamp	7.99	4	4
21	234001410	Flat Washer 10 mm	0.90	1	1
22	415079800	Hose 1/4"	18.49	@	1
23	293650118	Norma Gear Clamp	7.99	2	2
23	293650118	Norma Gear Clamp	8.99	2	2
25	293710059	Y-Fitting	6.99	1	1
25	293710059	Y-Fitting	7.99	1	1
26	293720029	Grommet	1.05	1	1
26	293720029	Grommet	4.49	1	1
27	293750008	Tie-Rap 350 mm	0.49	1	1
27	293750008	Tie-Rap 350 mm	0.99	1	1
29	414227300	Clip	1.15	2	2
30	414415200	Spring Clamp	0.72	1	1
31	518321570	Open Clamp	4.49	1	1
31	518321570	Open Clamp	4.99	1	1
33	707000284	Lever Handle	10.80	1	1
33	707000284	Lever Handle	11.99	1	1
34	707000639	Air Inlet	12.49	1	1
35	707000640	CVT Air Outlet	12.49	1	1
36	707000707	Upper Engine Bracket	4.49	1	1
37	707000711	Upper Lever Arm. Except Europe	20.99	1	1
38	707000750	Lever Arm Spring	2.49	1	1
39	707000775	Shifting Cable	42.49	1	1
40	707000789	Adaptor	6.99	1	1
40	707000789	Adaptor	7.99	1	1
41	707000801	Bushing	2.49	1	1
42	707000828	Lower Lever Arm	12.49	1	1
43	707000847	Flanged Bushing	0.99	2	2
44	707000848	Bushing	0.99	2	2
45	707000869	Flanged Bushing	1.99	2	2
46	707000908	Adaptor	19.99	1	1
47	707000909	Primary Air Intake	13.49	1	1
48	707000911	Lever	10.99	1	1
48	707000911	Lever	11.99	1	1
50	707000921	Cable Support	10.99	1	1
51	707000924	Reflective Sheet	19.99	1	1
52	707000949	Rubber Isolator	6.99	1	1
52	707000949	Rubber Isolator	7.99	1	1
53	707000978	Upper Lever Arm. Europe	52.49	1	1
54	707000988	Reflector	3.49	1	1
55	707000989	Reflective Sheet	16.99	1	1
56	707000990	Reflective Sheet	9.99	1	1
57	707000991	Reflector	5.99	2	2
64	707001043	Flexible Adaptor	8.49	2	2
64	707001043	Flexible Adaptor	9.99	2	2
66	707001166	Accelerator Pedal	188.99	1	1
67	707001169	Damper	20.99	4	4
68	707001185	Plug	0.99	1	1

68	707001185	Plug	1.99	1	1
69	707001344	CVT Filter		1	1
70	707001376	Bushing	3.99	1	1
71	415080200	Hose, Polyurethane	4.99	@	1
71	415080200	Hose, Polyurethane	9.99	@	1
72	707800506	Retainer Clip	7.99	1	1
72	707800506	Retainer Clip	8.99	1	1
73	710000073	Insulator Pad	5.80	1	1
73	710000073	Insulator Pad	6.99	1	1

Commander 800 STD, DPS, XT, 2014: 01- Engine Cooling

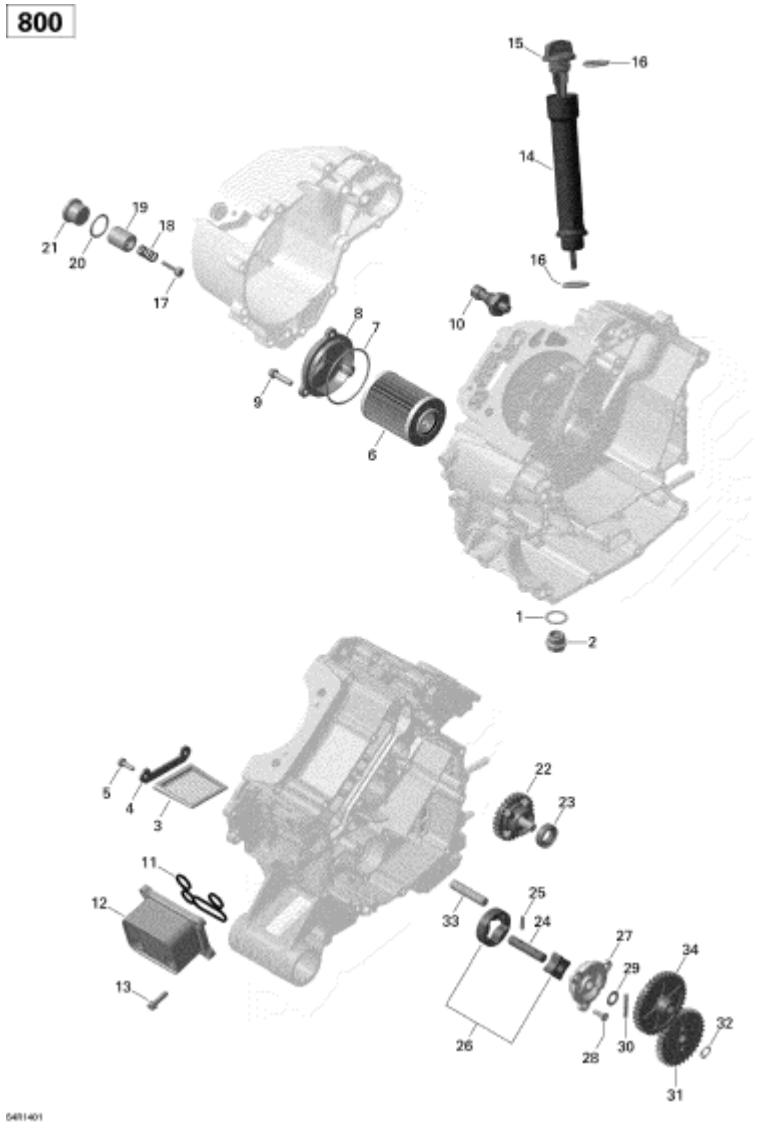


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420620500	Intermediate Shaft	26.99		1	1
2	420827590	Thrust Washer	3.49		2	2
2	420827590	Thrust Washer	3.66		2	2
3	420434330	Water Pump Gear	8.99		1	1
3	420434330	Water Pump Gear	9.44		1	1
4	420232420	Needle Pin	3.49		3	3
4	420232420	Needle Pin	3.66		3	3
5	420234627	Pump Gear, 15 Teeth	8.99		2	2
5	420234627	Pump Gear, 15 Teeth	9.44		2	2
6	504152282	Circlip	1.99		2	2

6	504152282	Circlip	2.99	2	2
7	420650310	Oil Seal	10.99	1	1
7	420650310	Oil Seal	11.54	1	1
8	420620175	Water Pump Shaft Ass'y. Includes 8 to 9	74.49	1	1
9	420650370	Rotary Seal	21.99	1	1
10	420222505	Water Impeller	14.49	1	1
10	420222505	Water Impeller	15.21	1	1
11	420222785	Water Pump Housing	36.99	1	1
12	420651190	Gasket	5.99	1	1
12	420651190	Gasket	6.29	1	1
13	420230415	Seal Washer	1.49	1	1
13	420230415	Seal Washer	1.56	1	1
14	420641238	Flanged Torx Screw M6 X 25	2.99	4	4
14	420641238	Flanged Torx Screw M6 X 25	3.14	4	4
15	420250640	Copper Washer	0.61	1	1
15	420250640	Copper Washer	0.99	1	1
16	420841921	Plug Screw M12 X 1.5	9.99	1	1
16	420841921	Plug Screw M12 X 1.5	10.99	1	1
17	420927837	Spacer Ass'y. Includes 17 to 18	5.99	1	1
17	420927837	Spacer Ass'y. Includes 17 to 18	6.29	1	1
18	420650300	Thermostat Gasket	5.99	1	1
18	420650300	Thermostat Gasket	6.29	1	1
19	420222691	Thermostat Cover	1.99	2	2
19	420222691	Thermostat Cover	2.99	2	2
20	420641238	Flanged Torx Screw M6 X 25	2.99	2	2
20	420641238	Flanged Torx Screw M6 X 25	3.14	2	2
21	420650255	Gasket Ring	3.49	2	2
21	420650255	Gasket Ring	3.66	2	2
22	420441621	Screw M5 X 16	1.99	2	2
22	420441621	Screw M5 X 16	2.99	2	2
23	420222494	Thermostat 65° With Gasket Ass'y. Includes 23 to 24	28.49	1	1
24	420650300	Thermostat Gasket	5.99	1	1
24	420650300	Thermostat Gasket	6.29	1	1
25	420222890	Connection Socket	30.99	1	1
26	420631300	O-Ring	5.99	1	1
26	420631300	O-Ring	6.99	1	1
27	420641198	Flanged Torx Screw M6 X 45	3.49	2	2
27	420641198	Flanged Torx Screw M6 X 45	3.66	2	

					2
28	420822352	Water Tube	13.49	1	1
28	420822352	Water Tube	14.99	1	1
29	420251573	Gear Clamp	5.99	2	2
29	420251573	Gear Clamp	6.29	2	2
30	278001016	Temperature Sensor	72.49	1	1

Commander 800 STD, DPS, XT, 2014: 01- Engine Lubrication

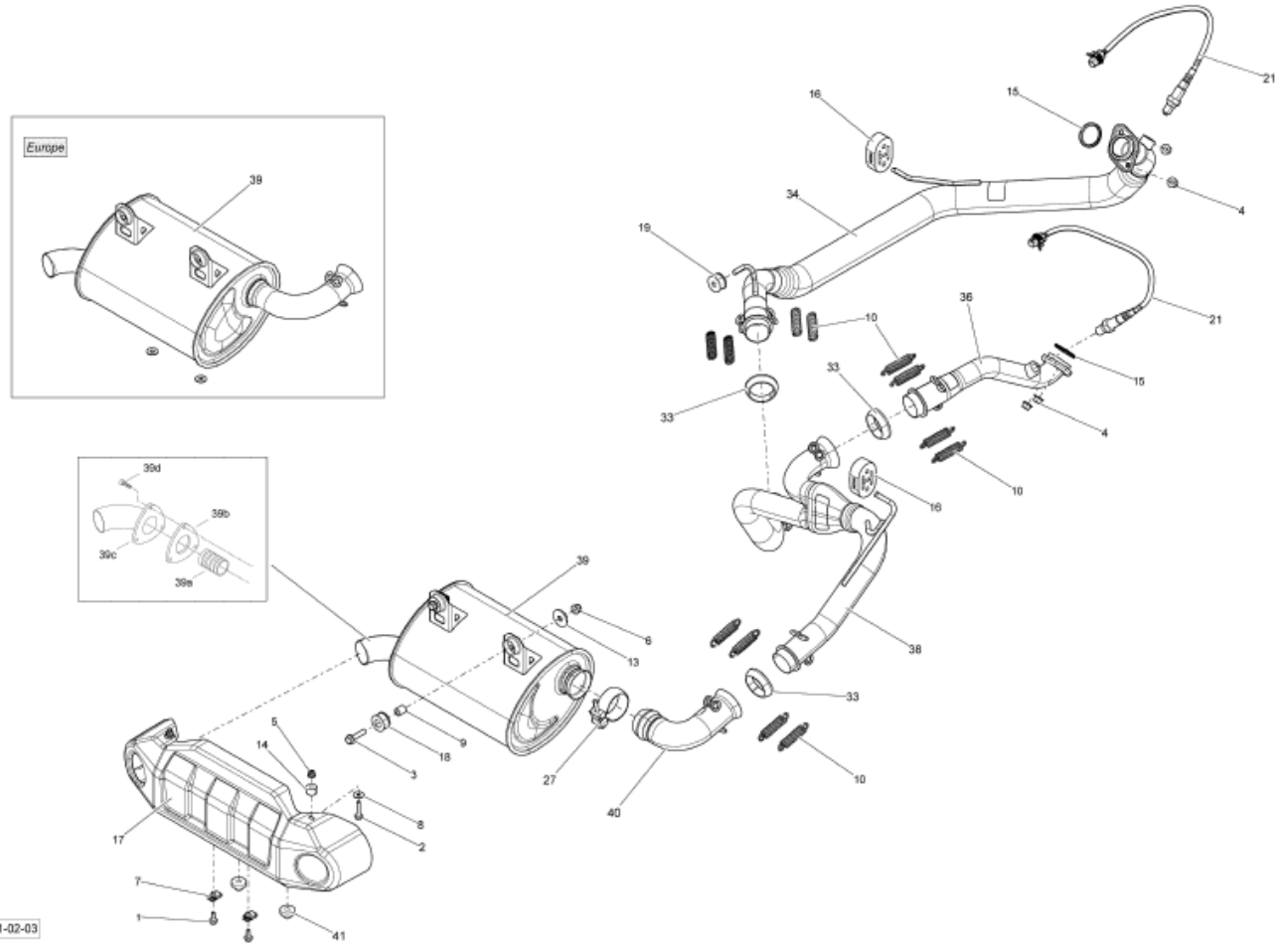


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420552280	O-Ring	3.30		1	1
2	420840277	Drain Plug M18 X 1.5	14.97		1	1
2	420840277	Drain Plug M18 X 1.5	15.99		1	1
3	420256322	Oil Sieve	20.99		1	1
4	420612070	Cover Sieve	2.49		1	1
4	420612070	Cover Sieve	2.99		1	1
5	420941925	Tapping Screw M5 X 16	1.49		2	2
5	420941925	Tapping Screw M5 X 16	1.56		2	2
6	420256188	Oil Filter	14.99		1	1

7	420230920	O-Ring	7.49		1	1
7	420230920	O-Ring	7.99		1	1
8	420210418	Oil Filter Cover	21.99		1	1
9	420641238	Flanged Torx Screw M6 X 25	2.99		3	3
9	420641238	Flanged Torx Screw M6 X 25	3.14		3	3
10	420256915	Oil Pressure Switch	34.49		1	1
11	420430325	Oil Seal	5.99		1	1
11	420430325	Oil Seal	6.99		1	1
12	420890180	Oil Radiator	63.99		1	1
13	420641048	Flanged Torx Screw M6 X 16	2.49		4	4
13	420641048	Flanged Torx Screw M6 X 16	2.61		4	4
14	420856922	Oil Lever Tube	37.49		1	1
15	420856810	Oil Dipstick	3.49		1	1
16	420631640	O-Ring	1.49		2	2
16	420631640	O-Ring	1.99		2	2
17	420656370	Pressure Relief Valve	13.49		1	1
17	420656370	Pressure Relief Valve	14.16		1	1
18	420939485	Compression Spring	7.49		1	1
18	420939485	Compression Spring	7.99		1	1
19	420256486	Housing Valve	5.99		1	1
19	420256486	Housing Valve	6.29		1	1
20	420650465	Gasket Ring	8.99		1	1
20	420650465	Gasket Ring	9.44		1	1
21	420640270	Screw Plug	10.99		1	1
21	420640270	Screw Plug	11.54		1	1
22	420434307	Idle Gear Ass'y, 28 Teeth. Includes 22 to 23	69.49		1	1
23	420430555	Oil Seal	12.49		1	1
23	420430555	Oil Seal	13.99		1	1
24	420237059	Oil Pump Shaft	21.99		1	1
25	420232730	Needle Pin	3.49		1	1
25	420232730	Needle Pin	3.66		1	1
26	420256348	Oil Pump Rotor	54.49		1	1
27	420210641	Oil Pump Cover	36.99		1	1
28	420640821	Torx Screw M5 X 16	1.49		3	3
28	420640821	Torx Screw M5 X 16	1.56		3	3
29	420827590	Thrust Washer	3.49		1	1
29	420827590	Thrust Washer	3.66		1	1
30	420232430	Needle Pin	3.99	420232431	1	

					1
31	420434320	Oil Pump Gear, 33 Teeth	10.99	1	1
31	420434320	Oil Pump Gear, 33 Teeth	11.54	1	1
32	504152282	Circlip	1.99	1	1
32	504152282	Circlip	2.99	1	1
33	420229302	Location Pin	1.99	1	1
33	420229302	Location Pin	2.99	1	1
34	420434300	Idle Gear, 38 Teeth	10.99	1	1
34	420434300	Idle Gear, 38 Teeth	11.54	1	1

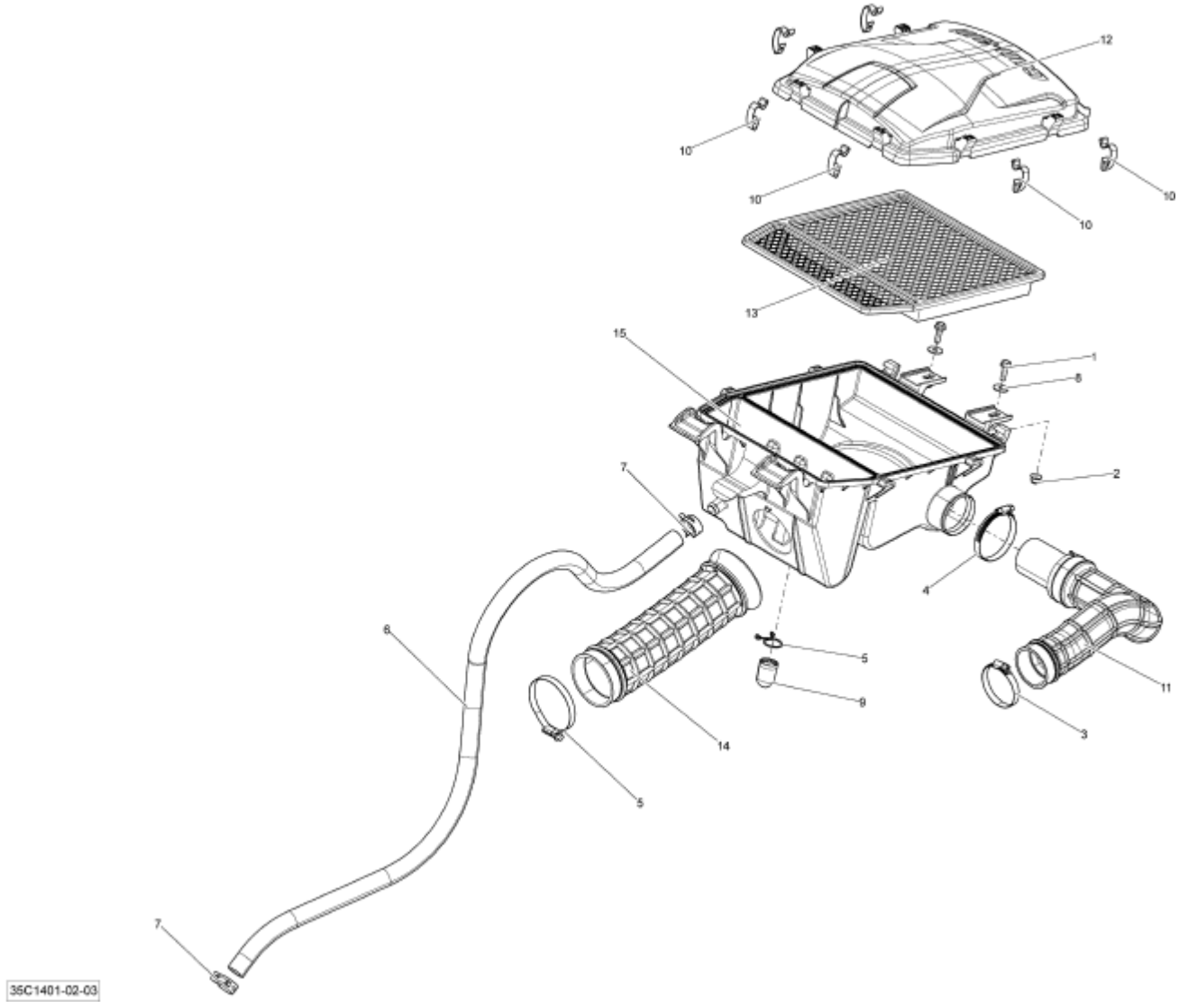
Commander 800 STD, DPS, XT, 2014: 01- Exhaust System



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207661644	Hex. Flanged Screw M6 X 16	0.58		2	2
2	207663034	Hex. Flanged Screw M6 X 30	1.99		2	2
3	207683544	Hex. Flanged Screw M8 X 35	1.30		2	2
4	233081416	Hex. Flanged Nut M8	0.87		4	4
5	233261414	Hex. Flanged Elastic Nut M6	1.05		2	2
6	233281414	Hex. Flanged Elastic Nut M8	1.05		2	2
7	250000048	Pannel Nut M6 X 1.0	1.35		2	2
8	250200082	Flat Washer	1.99		2	2
9	293900106	Bushing	3.49		2	2
9	293900106	Bushing	3.99		2	2
10	415107100	Spring. Europe	4.49		8	8
10	415107100	Spring. Europe	4.99		8	8
10	415107100	Spring. Except Europe	4.49		12	12
10	415107100	Spring. Except Europe	4.99		12	12
13	503032900	Washer	2.49		2	2
13	503032900	Washer	2.61		2	2
14	707000882	Bushing	2.49		2	2

15	707600317	Gasket	7.99	2	2
15	707600317	Gasket	6.99	2	2
16	707600638	Rubber Bumper	10.99	1	1
16	707600638	Rubber Bumper	11.99	1	1
17	707600675	Deflector	29.99	1	1
18	707600701	Anti-Vibration Rubber	8.49	2	2
18	707600701	Anti-Vibration Rubber	8.99	2	2
19	707600702	Anti-Vibration Rubber	4.99	1	1
19	707600702	Anti-Vibration Rubber	5.99	1	1
21	707600872	Oxygen Sensor	92.49	2	2
27	707600980	Exhaust Clamp	19.99	1	1
33	707601033	Exhaust Gasket	5.99	3	3
34	707601015	Front Head Pipe. Europe	216.99	1	1
34	707601203	Front Head Pipe. Except Europe		1	1
36	707601018	Rear Head Pipe. Europe	124.99	1	1
36	707601205	Rear Head Pipe. Except Europe		1	1
38	707601020	Link Head Pipe. Europe	216.99	1	1
38	707601207	Link Head Pipe. Except Europe		1	1
39	707601245	Muffler Ass'y. Except Europe, Includes 39a To 39d		1	1
39	707600753	Muffler Ass'y. Europe, Includes 39a To 39d	589.49	1	1
39a	715900089	Spark Arrestor	82.49	1	1
39b	715900090	Gasket	6.99	1	1
39b	715900090	Gasket	7.99	1	1
39c	715900091	Muffler Outlet End Piece	82.49	1	1
39d	205062060	Socket Head Screw M6 X 20	1.82	3	3
40	707601327	Link Head Pipe		1	1
41	709200285	Grommet	5.99	2	2
41	709200285	Grommet	6.99	2	2

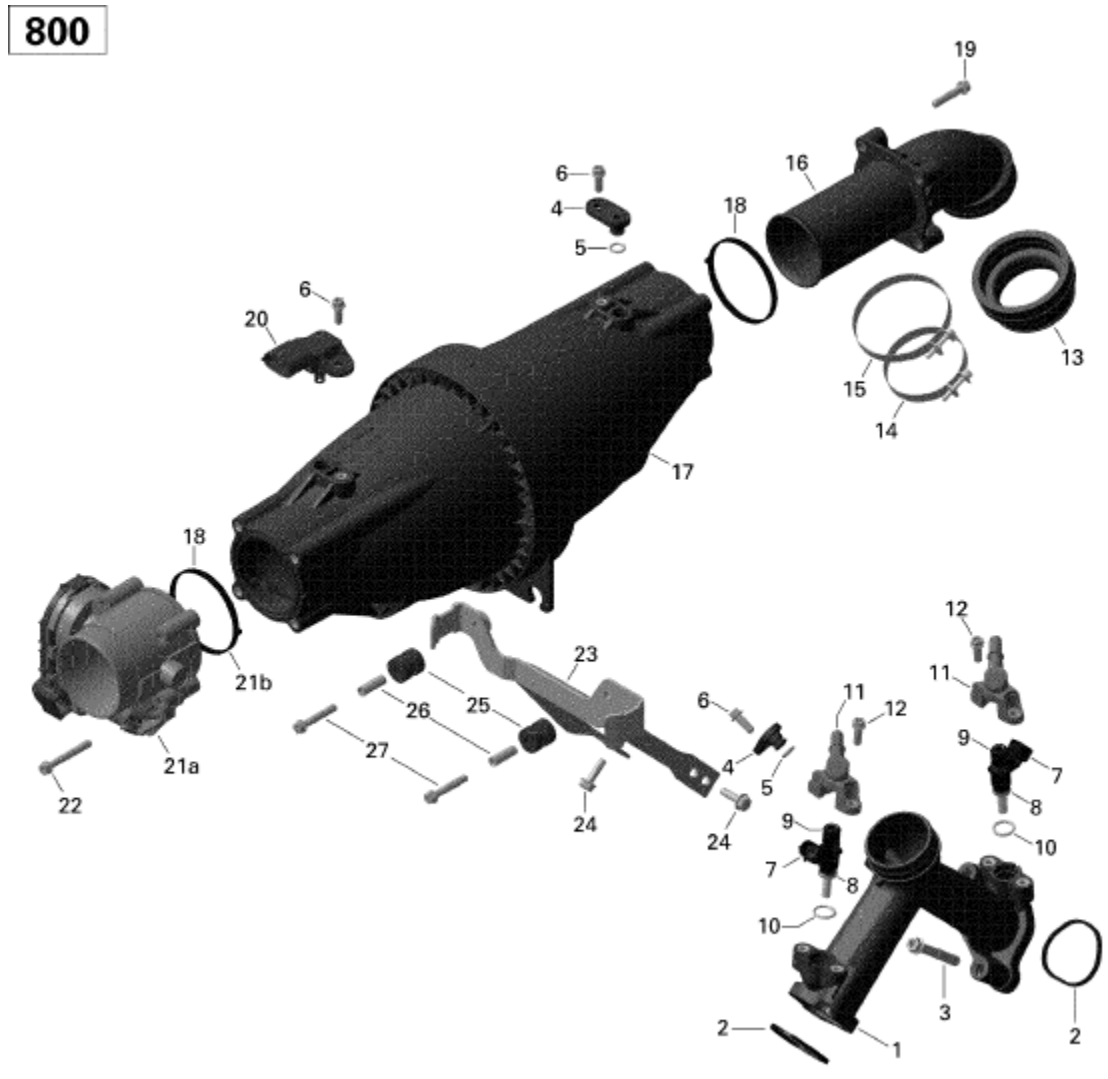
Commander 800 STD, DPS, XT, 2014: 02- Air Intake



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207662044	Hex. Flanged Screw M6 X 20	1.99		2	2
2	233261414	Hex. Flanged Elastic Nut M6	1.05		2	2
3	293650078	Norma Clamp	9.99		1	1
3	293650078	Norma Clamp	10.99		1	1
4	293650079	Norma Clamp	6.99		1	1
4	293650079	Norma Clamp	7.99		1	1
5	293650091	Norma Clamp	7.49		2	2
5	293650091	Norma Clamp	7.99		2	2
6	707800411	Hose 15.88 mm	8.49		@	1
7	293650213	Norma Spring Clamp	2.49		2	2

8	250200082	Flat Washer	1.99	2	2
9	707800080	Drain Tube	4.99	1	1
9	707800080	Drain Tube	5.99	1	1
10	707800249	Cover Bracket	5.99	6	6
10	707800249	Cover Bracket	6.99	6	6
11	707800322	Intake Adaptor	37.49	1	1
12	707800326	Air Intake Silencer Cover	18.49	1	1
13	707800327	Air Filter	38.49	1	1
14	707800329	Intake Adaptor	29.49	1	1
15	707800517	Air Intake Silencer Base		1	1

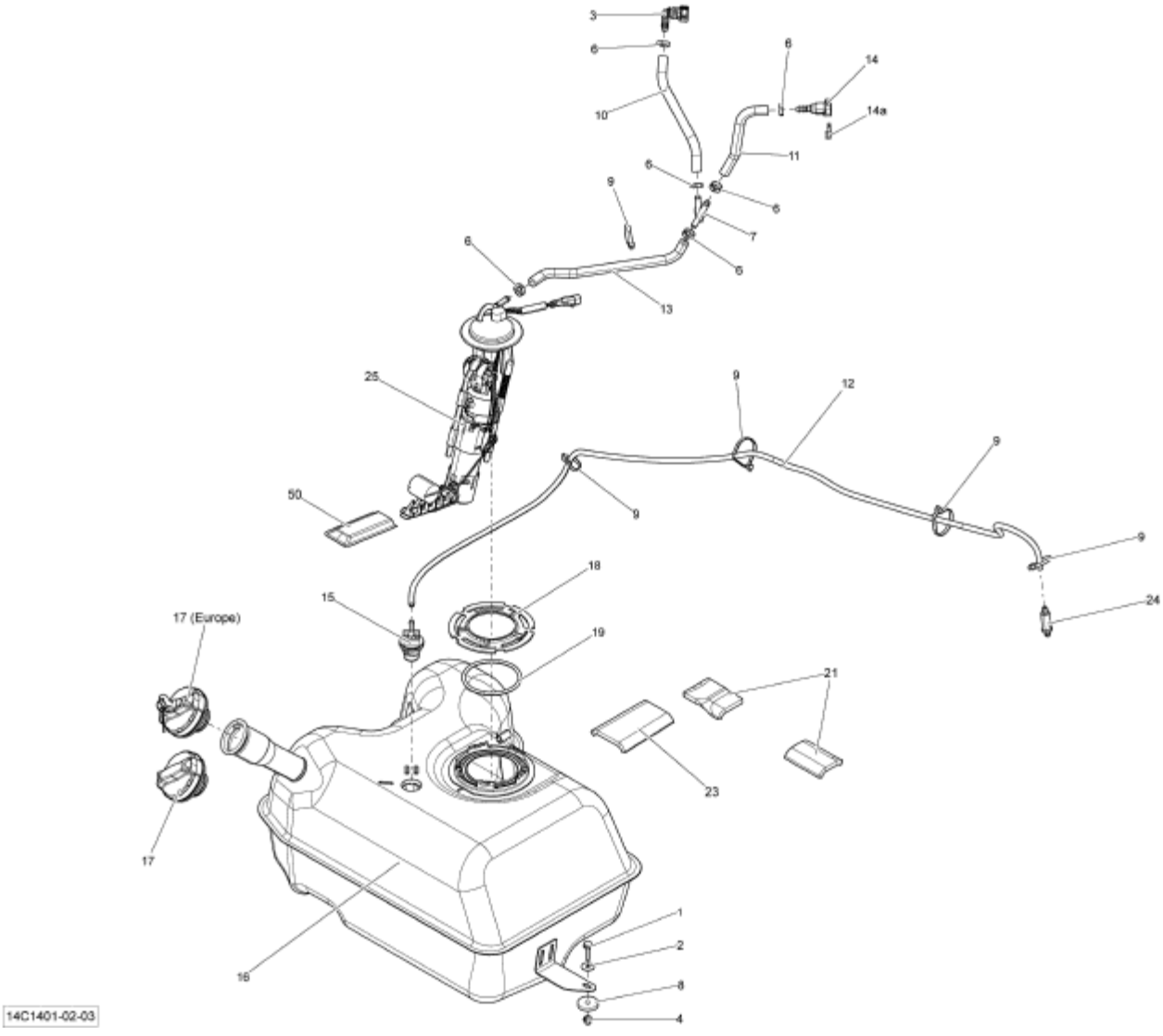
Commander 800 STD, DPS, XT, 2014: 02- Air Intake Manifold And Throttle Body



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420667581	Air Intake Manifold	114.99		1	1
2	420630642	Gasket	3.49		2	2
2	420630642	Gasket	4.99		2	2
3	420641213	Flanged Torx Screw M8 X 55	5.99		4	4
3	420641213	Flanged Torx Screw M8 X 55	6.29		4	4
4	420460980	Cover	2.49		2	2
5	420230461	O-Ring	1.99		2	2
6	420440149	Flanged Hex. Screw M6 X 12			3	3
7	420874839	Injection Valve Ass'y. Includes 7 to 9	91.99		2	2

8	420431890	O-Ring	4.49	2	2
8	420431890	O-Ring	4.99	2	2
9	420631220	O-Ring	9.49	2	2
9	420631220	O-Ring	9.99	2	2
10	420631295	O-Ring	1.49	2	2
10	420631295	O-Ring	1.99	2	2
11	420874901	Fuel Rail	15.99	2	2
11	420874901	Fuel Rail	16.99	2	2
12	420641048	Flanged Torx Screw M6 X 16	2.49	4	4
12	420641048	Flanged Torx Screw M6 X 16	2.61	4	4
13	420267045	Intake Neck	6.99	1	1
13	420267045	Intake Neck	7.99	1	1
14	420251480	Clamp	9.99	1	1
14	420251480	Clamp	10.99	1	1
15	420251209	Clamp	5.99	1	1
15	420251209	Clamp	6.99	1	1
16	420667522	Air Inlet Manifold	21.99	1	1
17	420667526	Air Inlet Manifold Ass'y. Includes 17 to 18	144.99	1	1
18	420431900	Gasket	4.99	2	2
19	420241947	Hex. Screw M6 X 30	3.49	4	4
19	420241947	Hex. Screw M6 X 30	3.99	4	4
20	707000564	Pressure And Temperature Sensor	153.49	1	1
21a	420892595	Throttle Body. Includes 21a to 21b	329.49	1	1
21b	420431900	Gasket	4.99	1	1
22	420641198	Flanged Torx Screw M6 X 45	3.49	4	4
22	420641198	Flanged Torx Screw M6 X 45	3.66	4	4
23	420651520	Support	49.49	1	1
24	420441311	Hex.Screw M6 X 20	3.49	2	2
24	420441311	Hex.Screw M6 X 20	3.99	2	2
25	420660090	Rubber Bracket	3.49	2	2
26	420847971	Spacer	5.99	2	2
27	420441457	Hex. Screw M6 X 35	2.49	2	2
27	420441457	Hex. Screw M6 X 35	2.99	2	2

Commander 800 STD, DPS, XT, 2014: 02- Fuel System

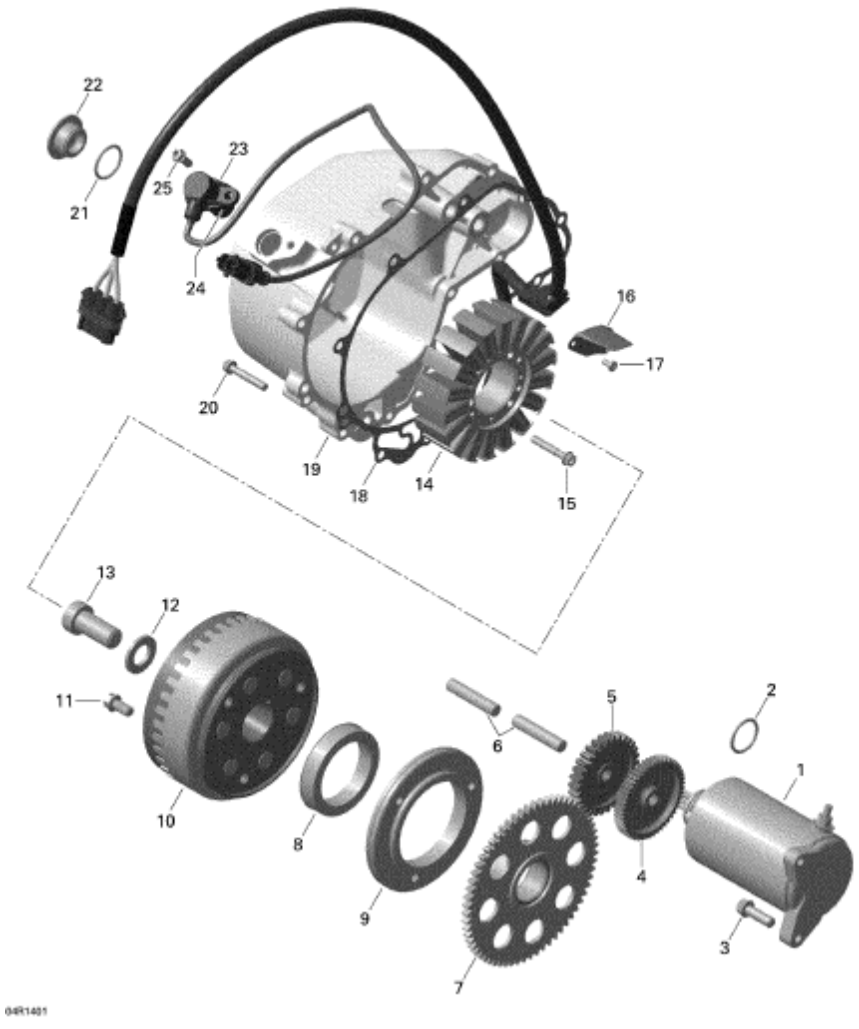


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207662544	Hex. Flanged Screw M6 X 25	0.52		2	2
2	224060201	Flat Washer	0.90		2	2
3	275500700	Quick Attach 90°	10.99		1	1
3	275500700	Quick Attach 90°	11.99		1	1
4	293450274	Insert	4.97		2	2
4	293450274	Insert	5.99		2	2
6	293650046	Oetiker Clamp	2.32		6	6
7	293710136	Y-Fitting, 5/16"	3.99		1	1
7	293710136	Y-Fitting, 5/16"	4.99		1	1
8	293830037	Rubber Washer	2.68		2	2

9	414115200	Tie-Rap 180 mm	0.49	5	5
10	709000393	Fuel Line	18.99	@	1
10	709000393	Fuel Line	19.99	@	1
11	709000393	Fuel Line	18.99	@	1
11	709000393	Fuel Line	19.99	@	1
12	415080200	Hose, Polyurethane	4.99	@	1
12	415080200	Hose, Polyurethane	9.99	@	1
13	709000393	Fuel Line	18.99	@	1
13	709000393	Fuel Line	19.99	@	1
14	709000125	Female Quick Fitting Ass'y	9.99	1	1
14	709000125	Female Quick Fitting Ass'y	10.99	1	1
15	709000127	Rollover Valve	34.49	1	1
16	709000467	Fuel Tank		1	1
17	709000268	Cap. Except Europe	19.99	1	1
17	715001124	Fuel Cap Kit. Europe	44.99	1	1
18	709000274	Ring	9.99	1	1
18	709000274	Ring	10.99	1	1
19	709000275	O-Ring	10.99	1	1
19	709000275	O-Ring	11.99	1	1
21	709000288	Neoprene Pad	9.99	2	2
23	709000289	Neoprene Pad	9.99	1	1
24	709000330	Filter	4.99	1	1
25	709000362	Fuel Pump	401.99	1	1
50	709000389	Fuel Pre-Filter Kit	50.99	1	1
14a	513033135	Locking Clip	3.49	1	1
14a	513033135	Locking Clip	3.99	1	1

Commander 800 STD, DPS, XT, 2014: 03- Magneto And Electric Starter

800

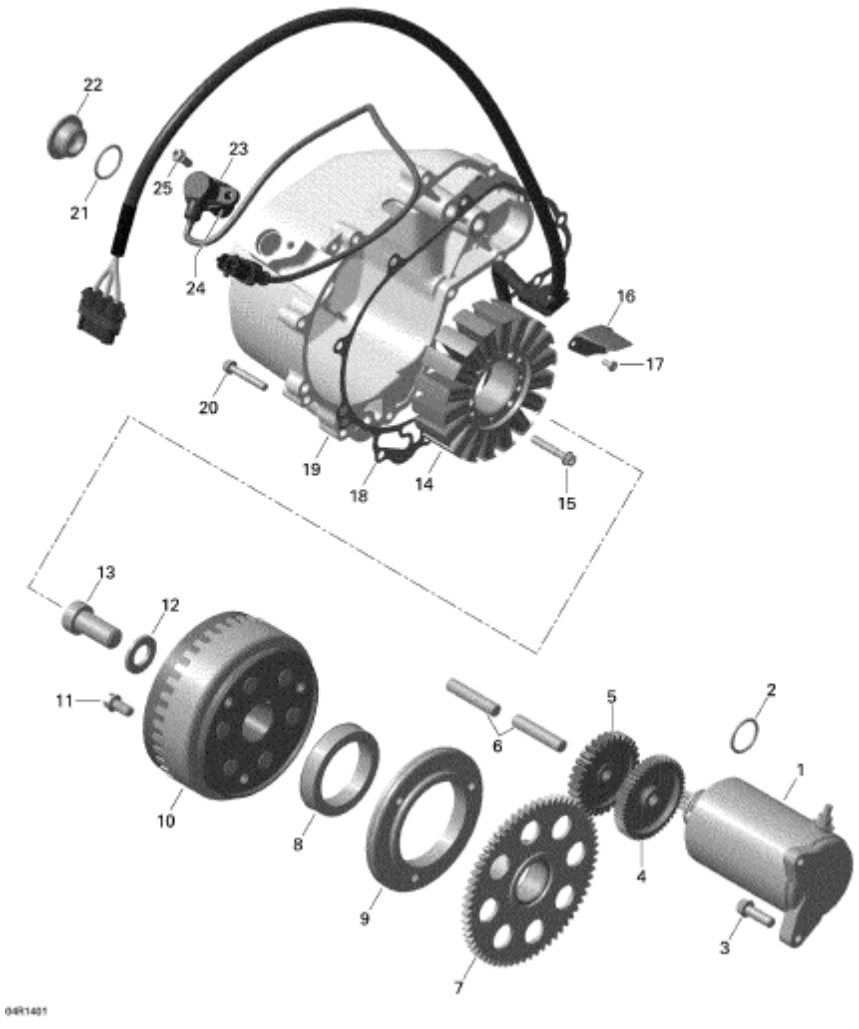


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420684560	Starter Ass'y. Includes 1 to 2	435.99	420684562	1	1
1	420684560	Starter Ass'y. Includes 1 to 2	544.99	420684562	1	1
2	420250140	O-Ring	5.99		1	1
2	420250140	O-Ring	6.29		1	1
3	420440372	Flanged Torx Screw M8 X 25	3.49		1	1
3	420440372	Flanged Torx Screw M8 X 25	3.66		1	1
4	420634741	Double Gear	146.99		1	1
5	420634605	Gear, 30 Teeth	61.99		1	1
6	420229302	Location Pin	1.99		2	2
6	420229302	Location Pin	2.99		2	

					2
7	420434235	Free Wheel Gear, 64 Teeth	139.99	1	1
8	420659112	Sprag Clutch	190.99	1	1
9	420659261	Sprag Clutch Housing	114.49	1	1
10	420685649	Flywheel	559.99	1	1
11	420440852	Flanged Torx Screw M8 X 16	3.49	3	3
11	420440852	Flanged Torx Screw M8 X 16	3.66	3	3
12	420627270	Shim	3.49	1	1
12	420627270	Shim	3.66	1	1
13	420241549	Socket Head Screw M16 X 35	5.99	1	1
13	420241549	Socket Head Screw M16 X 35	6.99	1	1
14	420685632	Stator Plate	273.49	1	1
15	420440274	Flanged Torx Screw M6 X 35	1.99	3	3
16	420251880	Cable Inner Cover	9.99	1	1
16	420251880	Cable Inner Cover	10.99	1	1
17	420240195	Tapping Screw M4 X 8	1.49	2	2
17	420240195	Tapping Screw M4 X 8	1.56	2	2
18	420651200	Gasket	18.49	1	1
18	420651200	Gasket	19.99	1	1
19	420611132	Cover	129.49	1	1
20	420440274	Flanged Torx Screw M6 X 35	1.99	11	11
21	420430782	O-Ring	3.49	1	1
21	420430782	O-Ring	3.99	1	1
22	420241630	Screw Plug	5.99	1	1
22	420241630	Screw Plug	6.29	1	1
23	420966570	Crankshaft Position Sensor Ass'y. Includes 23 to 24	76.99	1	1
24	420431580	O-Ring	9.99	1	1
24	420431580	O-Ring	10.99	1	1
25	420641048	Flanged Torx Screw M6 X 16	2.49	1	1
25	420641048	Flanged Torx Screw M6 X 16	2.61	1	1

Commander 800 STD, DPS, XT, 2014: 03- Magneto And Electric Starter

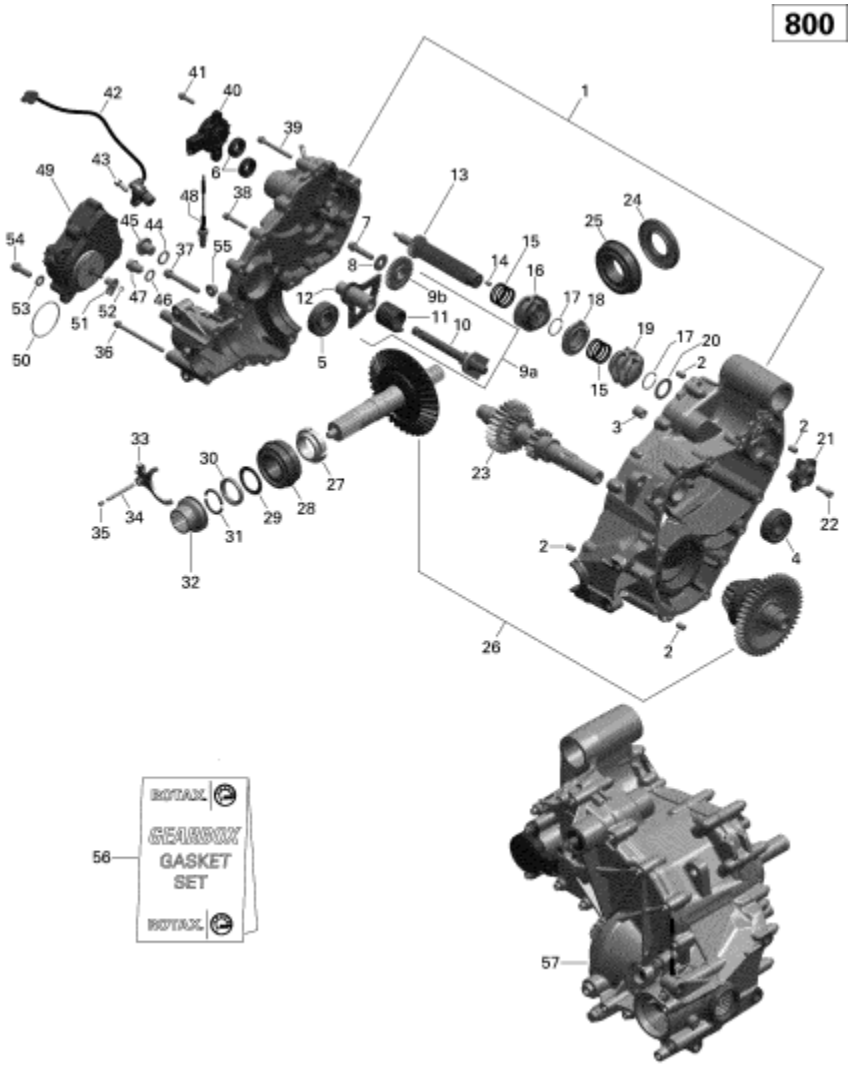
800



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420684560	Starter Ass'y. Includes 1 to 2	435.99	420684562	1	1
1	420684560	Starter Ass'y. Includes 1 to 2	544.99	420684562	1	1
2	420250140	O-Ring	5.99		1	1
2	420250140	O-Ring	6.29		1	1
3	420440372	Flanged Torx Screw M8 X 25	3.49		1	1
3	420440372	Flanged Torx Screw M8 X 25	3.66		1	1
4	420634741	Double Gear	146.99		1	1
5	420634605	Gear, 30 Teeth	61.99		1	1
6	420229302	Location Pin	1.99		2	2
6	420229302	Location Pin	2.99		2	

					2
7	420434235	Free Wheel Gear, 64 Teeth	139.99	1	1
8	420659112	Sprag Clutch	190.99	1	1
9	420659261	Sprag Clutch Housing	114.49	1	1
10	420685649	Flywheel	559.99	1	1
11	420440852	Flanged Torx Screw M8 X 16	3.49	3	3
11	420440852	Flanged Torx Screw M8 X 16	3.66	3	3
12	420627270	Shim	3.49	1	1
12	420627270	Shim	3.66	1	1
13	420241549	Socket Head Screw M16 X 35	5.99	1	1
13	420241549	Socket Head Screw M16 X 35	6.99	1	1
14	420685632	Stator Plate	273.49	1	1
15	420440274	Flanged Torx Screw M6 X 35	1.99	3	3
16	420251880	Cable Inner Cover	9.99	1	1
16	420251880	Cable Inner Cover	10.99	1	1
17	420240195	Tapping Screw M4 X 8	1.49	2	2
17	420240195	Tapping Screw M4 X 8	1.56	2	2
18	420651200	Gasket	18.49	1	1
18	420651200	Gasket	19.99	1	1
19	420611132	Cover	129.49	1	1
20	420440274	Flanged Torx Screw M6 X 35	1.99	11	11
21	420430782	O-Ring	3.49	1	1
21	420430782	O-Ring	3.99	1	1
22	420241630	Screw Plug	5.99	1	1
22	420241630	Screw Plug	6.29	1	1
23	420966570	Crankshaft Position Sensor Ass'y. Includes 23 to 24	76.99	1	1
24	420431580	O-Ring	9.99	1	1
24	420431580	O-Ring	10.99	1	1
25	420641048	Flanged Torx Screw M6 X 16	2.49	1	1
25	420641048	Flanged Torx Screw M6 X 16	2.61	1	1

Commander 800 STD, DPS, XT, 2014: 05- Gear Box 1



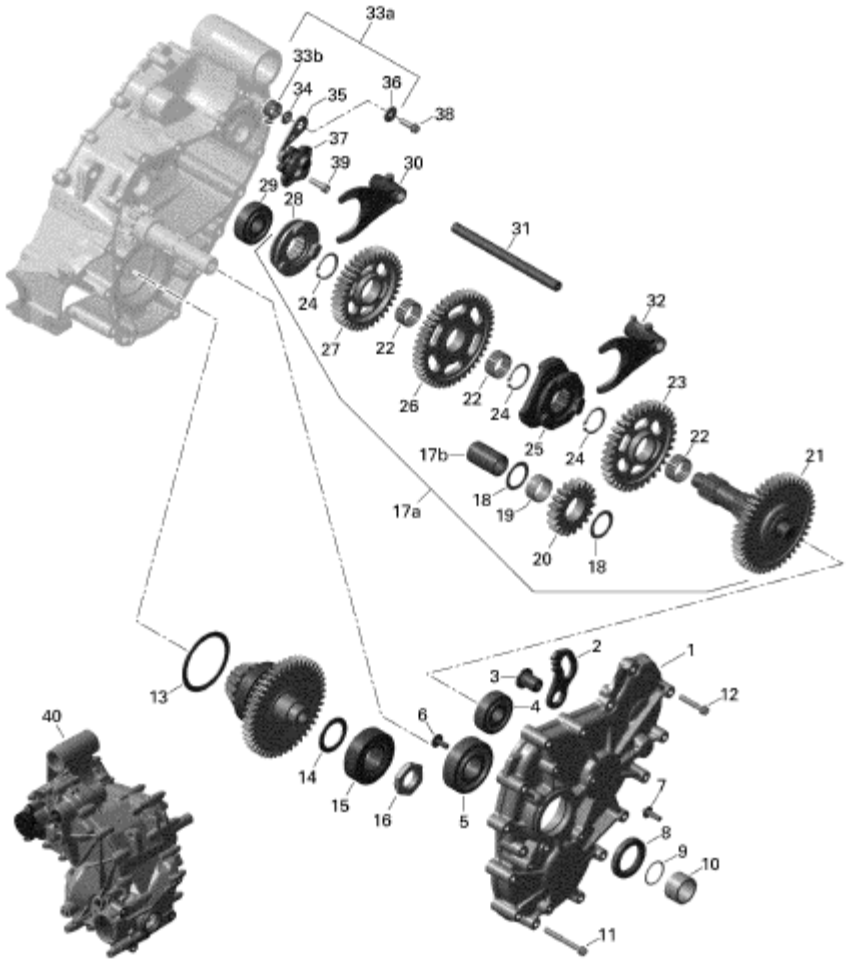
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	XXX	Gear Housing Ass'y. See Item 57, Gear Box. Includes 1 to 6			1	
2	420632010	Center Pin 8 X 12	3.49		2	2
2	420632010	Center Pin 8 X 12	3.66		2	2
3	XXX	Dowel. See Item 57, Gear Box			1	
4	420932815	Ball Bearing 6303E	19.99		1	1
4	420932815	Ball Bearing 6303E	20.99		1	1
5	420932433	Ball Bearing 6204	15.99		1	1
5	420932433	Ball Bearing 6204	16.99		1	1
6	420250450	Oil Seal	14.49		2	2
6	420250450	Oil Seal	15.99		2	2
7	420641188	Flanged Torx Screw M8 X 35	5.99		1	

						1
7	420641188	Flanged Torx Screw M8 X 35	6.29		1	1
8	420227937	Plain Washer	8.49		1	1
8	420227937	Plain Washer	8.99		1	1
9a	420620929	Shift Shaft Ass'y. Includes 9a to 12	48.49		1	1
9b	XXX	Intermediate Gear, 30 Teeth			1	
10	XXX	Shift Shaft			1	
11	XXX	Spring			1	
12	XXX	Tooth Segment			1	
13	420657230	Shift Drum Ass'y. Includes 13 to 20	198.49		1	1
14	XXX	Needle Pin			1	
15	XXX	Compression Spring			2	
16	XXX	Gear Shifting Gate			1	
17	XXX	Retaining Ring			2	
18	XXX	Disengagement Gate			1	
19	XXX	Gear Shifting Gate			1	
20	XXX	Thrust Washer			1	
21	XXX	Index Washer			1	
22	420241932	Allen Screw M6 X 20	0.99	420241939	1	1
22	420241932	Allen Screw M6 X 20	1.99	420241939	1	1
23	420620896	Countershaft	266.99		1	1
24	420831955	Oil Seal	17.49		1	1
24	420831955	Oil Seal	18.99		1	1
25	XXX	Ball Bearing. See Item 57, Gear Box			1	
26	XXX	Drive Axle Set. See Item 57, Gear Box			1	
27	XXX	Groove Nut. See Item 57, Gear Box			1	
28	XXX	Ball Bearing. See Item 57, Gear Box			1	
29	XXX	Shim Set. See Item 57, Gear Box			1	
30	XXX	Angular Ring. See Item 57, Gear Box			1	
31	XXX	Half Ring. See Item 57, Gear Box			2	
32	420257676	Shifting Sleeve Kit. Includes 32 to 35	85.99		1	1
33	XXX	Shifting Fork			1	
34	XXX	Needle Pin			1	
35	420841771	Set Screw M6 X 8	3.49		1	1
35	420841771	Set Screw M6 X 8	3.66		1	1
36	420641228	Flanged Torx Screw M6 X 85	5.99		2	2
36	420641228	Flanged Torx Screw M6 X 85	6.29		2	2
37	420641213	Flanged Torx Screw M8 X 55	5.99		5	5
37	420641213	Flanged Torx Screw M8 X 55	6.29		5	5
38	420440274	Flanged Torx Screw M6 X 35	1.99		8	8
39	420440702	Flanged Torx Screw M6 X 55	1.99		2	2
39	420440702	Flanged Torx Screw M6 X 55	2.99		2	2
40	420266168	Angle Rotation Sensor	134.99		1	1

41	420641048	Flanged Torx Screw M6 X 16	2.49		2	2
41	420641048	Flanged Torx Screw M6 X 16	2.61		2	2
42	420265626	Speed Sensor	109.49		1	1
43	420641048	Flanged Torx Screw M6 X 16	2.49		1	1
43	420641048	Flanged Torx Screw M6 X 16	2.61		1	1
44	420650350	O-Ring	7.49		1	1
44	420650350	O-Ring	7.99		1	1
45	420241660	Plug Screw M14 X 1.5	11.99		1	1
45	420241660	Plug Screw M14 X 1.5	12.99		1	1
46	420250640	Copper Washer	0.61		1	1
46	420250640	Copper Washer	0.99		1	1
47	420241786	Magnetic Drain Plug	13.99		1	1
47	420241786	Magnetic Drain Plug	14.69		1	1
48	420640192	Position Switch	22.49		1	1
49	415129174	Actuator Ass'y. Includes 49 to 52	209.49		1	1
50	293300117	O-Ring	2.99		1	1
50	293300117	O-Ring	3.99		1	1
51	415129175	Shifting Fork	11.99		1	1
51	415129175	Shifting Fork	12.99		1	1
52	415129176	Circlip	1.63	293370042	1	1
52	415129176	Circlip	1.99	293370042	1	1
53	420250311	Flat Washer 8.4 mm	0.99		3	3
53	420250311	Flat Washer 8.4 mm	1.04		3	3
54	420440372	Flanged Torx Screw M8 X 25	3.49		3	3
54	420440372	Flanged Torx Screw M8 X 25	3.66		3	3
55	420842619	Hex. Nut M8	1.99		4	4
55	420842619	Hex. Nut M8	2.99		4	4
56	420684139	Gasket Set	65.99		1	1
57	420684786	Gear Box	1944.99		1	1

Commander 800 STD, DPS, XT, 2014: 05- Gear Box 2

800



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	XXX	LH Gear Housing Ass'y. See Item 40, Gear Box. Includes 1 to 8			1	
2	420257658	Parking Lock Lever	49.99		1	1
2	420257658	Parking Lock Lever	124.49		1	1
3	420647120	Collar Sleeve	23.99	420647122	1	1
4	420932815	Ball Bearing 6303E	19.99		1	1
4	420932815	Ball Bearing 6303E	20.99		1	1
5	420932825	Ball Bearing	24.49		1	1
6	420241529	Torx Screw M6 X 16	5.99		1	1
6	420241529	Torx Screw M6 X 16	6.99		1	1
7	420441430	Distance Screw M6	2.49		1	1
7	420441430	Distance Screw M6	2.99		1	

						1
8	420950087	Oil Seal	14.99		1	1
8	420950087	Oil Seal	15.99		1	1
9	420631610	O-Ring	3.49		1	1
9	420631610	O-Ring	3.99		1	1
10	420647251	Distance Ring	28.99		1	1
11	420440702	Flanged Torx Screw M6 X 55	1.99		13	13
11	420440702	Flanged Torx Screw M6 X 55	2.99		13	13
12	420440274	Flanged Torx Screw M6 X 35	1.99		3	3
13	XXX	Shim Set. See Item 40, Gear Box			1	
14	XXX	Shim Set. See Item 40, Gear Box			1	
15	XXX	Roller Bearing. See Item 40, Gear Box			1	
16	XXX	Hex. Nut M24 X 1.5. See Item 40, Gear Box			1	
17a	420281270	Gear Set. Includes 17a to 28			1	1
17b	XXX	Intermediate Gear Shaft			1	
18	420944476	Thrust Washer	6.99		2	2
18	420944476	Thrust Washer	7.99		2	2
19	420932930	Needle Bearing	16.99		1	1
19	420932930	Needle Bearing	17.99		1	1
20	XXX	Intermediate Gear, 19 Teeth			1	
21	XXX	Main Shaft			1	
22	420632070	Needle Bearing	11.99		3	3
22	420632070	Needle Bearing	12.99		3	3
23	420434873	Gear Pinion, 34 Teeth	69.99		1	1
24	420845771	Retaining Ring	8.49		3	3
24	420845771	Retaining Ring	8.99		3	3
25	420257951	Shifting Sleeve	62.49		1	1
26	420434861	Gear Pinion, 44 Teeth		...	1	1
27	420434857	Gear Pinion, 36 Teeth	65.99		1	1
28	420257942	Shifting Sleeve	67.99		1	1
28	420257942	Shifting Sleeve	80.99		1	1
29	420932815	Ball Bearing 6303E	19.99		1	1
29	420932815	Ball Bearing 6303E	20.99		1	1
30	420257628	Shift Fork	94.99		1	1
31	420258386	Fork Spindle	15.99		1	1
31	420258386	Fork Spindle	16.99		1	1
32	420257618	Shift Fork	142.49		1	1
33a	420248532	Index Lever Ass'y. Includes 33a to 37	29.49		1	1
33b	XXX	Index Spring			1	
34	XXX	Step Ring			1	

35	XXX	Index Lever		1	
36	XXX	Washer		1	
37	XXX	Index Washer		1	
38	420440207	Flanged Torx Screw M6 X 20	1.99	1	1
38	420440207	Flanged Torx Screw M6 X 20	2.99	1	1
39	420241939	Allen Screw M6 X 20	0.99	1	1
39	420241939	Allen Screw M6 X 20	1.99	1	1
40	420684786	Gear Box	1944.99	1	1

Commander 800 STD, DPS, XT, 2014: 05- Transmission

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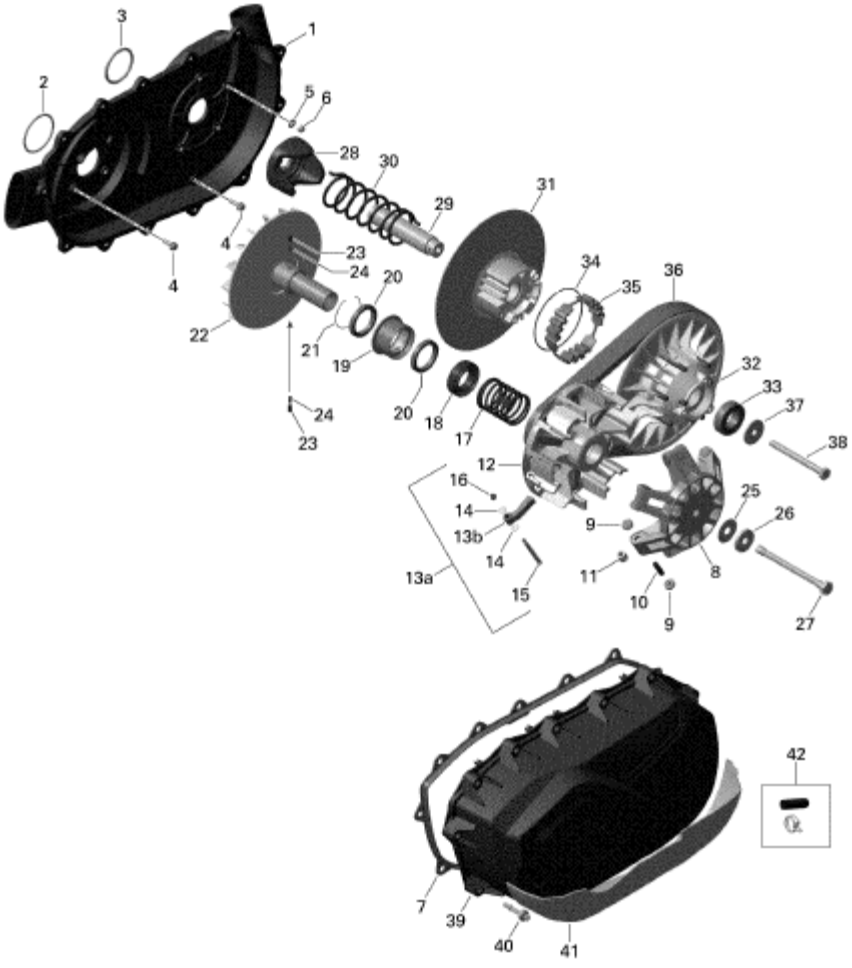


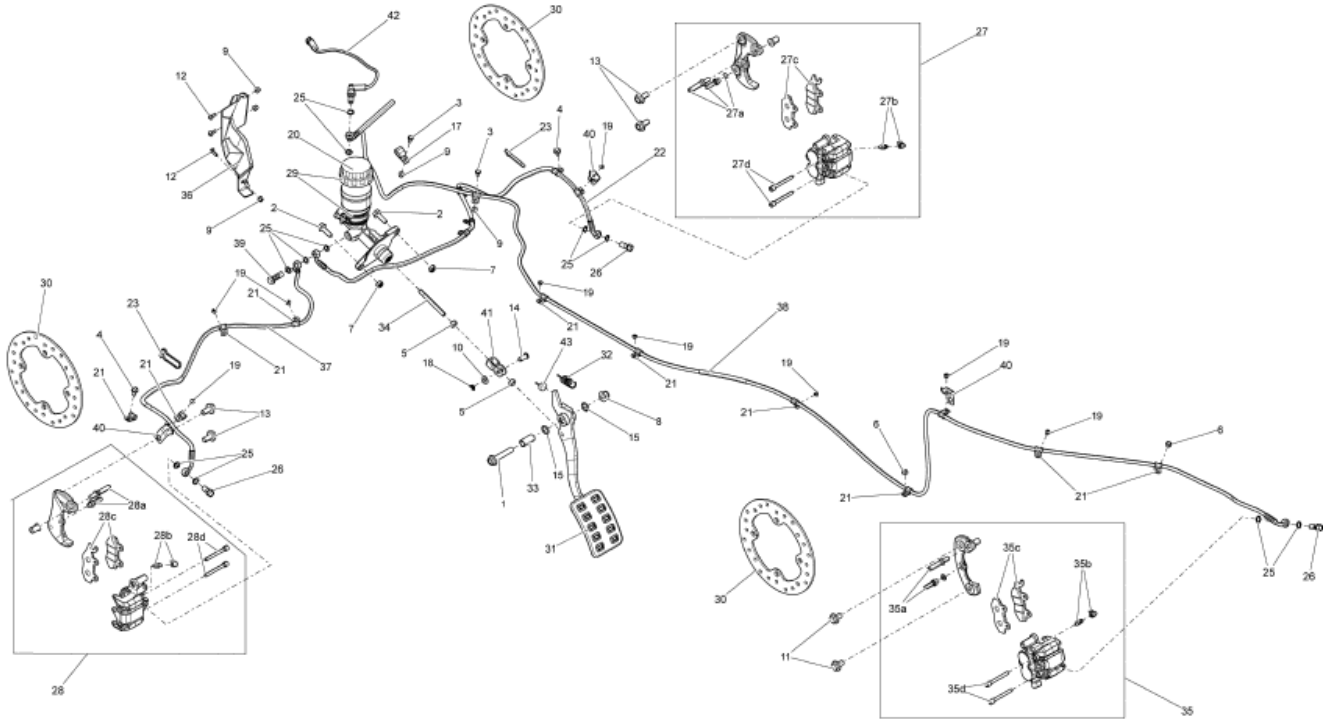
19R1401

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420611408	CVT Air Guide	44.49		1	1
2	420430408	O-Ring	4.49		1	1
2	420430408	O-Ring	4.99		1	1
3	420631088	O-Ring	4.49		1	1
3	420631088	O-Ring	4.99		1	1
4	420441311	Hex.Screw M6 X 20	3.49		8	8
4	420441311	Hex.Screw M6 X 20	3.99		8	8
5	224061121	Flat Washer	0.43		1	1
6	232561414	Elastic Stop Nut M6	1.99	232561434	1	1
7	420430126	Gasket	28.49		1	1
8	420280522	Governor Cup Ass'y. Includes 8 to 11	318.99		1	1

9	420281296	Slider Shoe Set	49.99		1	1
10	417223257	Roller Axle	5.99		6	6
10	417223257	Roller Axle	6.99		6	6
11	417223387	Roller	7.49	417223767	6	6
11	417223387	Roller	7.99	417223767	6	6
12	420280467	Outher Haft	194.49		1	1
12	420280467	Outher Haft	239.99		1	1
13a	420248607	Centrifugal Lever Set. Includes 13a to 16	131.99		6	6
13b	XXX	Lever			6	
14	XXX	Thrust Washer			12	
15	XXX	Screw			6	
16	XXX	Lock Nut M5			6	
17	420238615	Compression Spring, Drive Pulley	19.49		1	1
18	420627577	Spring Seat	20.99		1	1
19	420257195	Drive Pulley Clutch	96.49		1	1
20	420632377	Ball Bearing	47.49		2	2
21	420245951	Retaining Ring	13.99		1	1
21	420245951	Retaining Ring	14.99		1	1
22	420280374	Inner Half	275.99		1	1
23	420229577	Spring Sleeve	21.99		2	2
24	420239134	Spring	1.99		2	2
24	420239134	Spring	2.99		2	2
25	420627920	Thrust Washer	4.99		1	1
25	420627920	Thrust Washer	5.99		1	1
26	420627765	Spring Washer	13.49		1	1
26	420627765	Spring Washer	14.99		1	1
27	420641855	Hex. Screw M12 X 135	19.99		1	1
27	420641855	Hex. Screw M12 X 135	20.99		1	1
28	420280472	Cam	75.99		1	1
29	420220914	Driven Pulley Shaft	94.49		1	1
30	420638040	Compression Spring	32.99		1	1
31	420280499	Inner Half Ass'y	220.99		1	1
32	420280178	Outer Half Pulley Ass'y. Includes 32 to 35	239.99		1	1
32	420280178	Outer Half Pulley Ass'y. Includes 32 to 35	249.99		1	1
33	420932421	Ball Bearing	16.99		1	1
33	420932421	Ball Bearing	17.99		1	1
34	420245910	Retaining Ring	10.99		1	1
34	420245910	Retaining Ring	11.99		1	1
35	420660124	Torque Gear	15.99		1	

					1
35	420660124	Torque Gear	16.99	1	1
36	715000302	V-Belt	129.99	1	1
37	420627590	Thrust Washer	10.99	1	1
37	420627590	Thrust Washer	11.99	1	1
38	420441485	Hex. Screw M10 X 110	10.99	1	1
39	420611395	Variator Cover	109.49	1	1
40	420440567	Hex. Distance Screw M6 X 30.5	5.73	7	7
40	420440567	Hex. Distance Screw M6 X 30.5	6.99	7	7
41	715900200	Heat Protection Mat	30.99	1	1
42	707001179	Drain Plug Kit	9.49	1	1

Commander 800 STD, DPS, XT, 2014: 06- Brakes



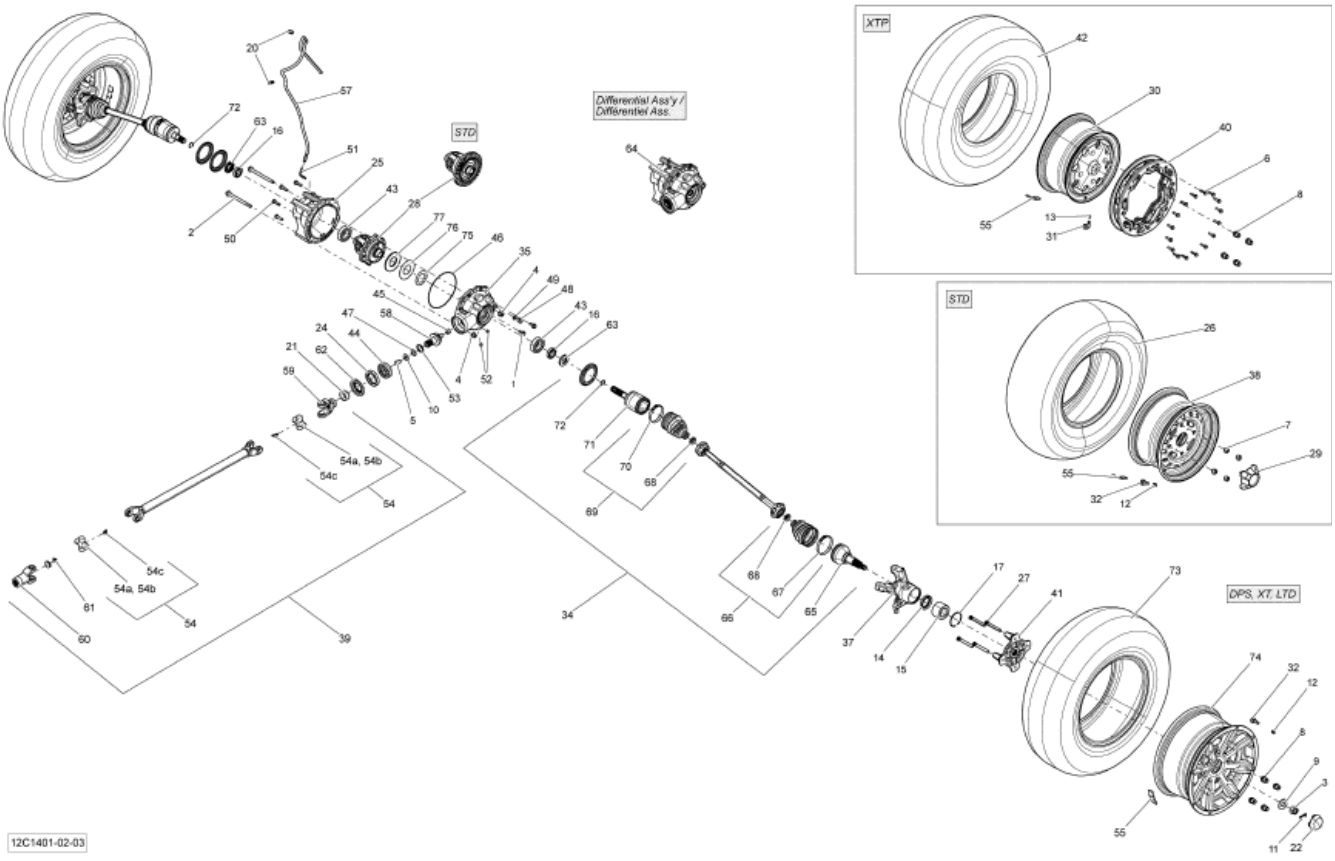
22C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207605544	Hex. Flanged Screw M10 X 55	2.62		1	1
2	207682544	Hex. Flanged Screw M8 X 25	1.99	207682534	2	2
3	210251680	Hex. Forming Screw M5 X 16	0.87		2	2
4	210261040	Hex. Flanged Screw M6 X 10	1.17		2	2
5	232081414	Hex. Nut M8	0.58		2	2
6	232561414	Elastic Stop Nut M6	1.99	232561434	2	2
7	232581414	Hex. Elastic Stop Nut M8	0.47		2	2
8	233201414	Hex. Flanged Elastic Nut M10	1.18		1	1
9	233251494	Elastic Flanged Nut M5	1.99		5	5
10	234081430	Flat Washer M8	1.99		1	1
11	250000060	Flanged Screw M10 X 16, Scotch Grip	2.88		2	2
12	250000145	Torx Screw M5 X 14	1.17		3	3
13	250000601	Hex. Flanged Screw M10 X 20, Scotch Grip	3.99		4	4
14	250400058	Pin	5.99		1	1
15	293300144	O-Ring	1.99		2	2
15	293300144	O-Ring	2.99		2	2
17	293650220	Clamp	0.99		1	1
17	293650220	Clamp	1.99		1	1
18	371800700	Cotter Pin	0.99		1	1
19	390402200	Pop Rivet 3/16"	0.28		12	12
20	715500332	Diaphragm Cap Kit	17.49		1	1

20	715500332	Diaphragm Cap Kit	18.99	1	1
21	705600459	Clamp	3.49	@	1
21	705600459	Clamp	3.99	@	1
22	705601265	RH Front Hose		1	1
23	414115200	Tie-Rap 180 mm	0.49	@	1
25	705600310	Copper Washer	1.99	11	11
25	705600310	Copper Washer	2.99	11	11
26	705600609	Banjo Bolt	0.90	3	3
27	705600678	RH Caliper	212.49	1	1
27a	715500333	Spring Boot Kit	12.49	1	1
27a	715500333	Spring Boot Kit	13.99	1	1
27b	705600080	Bleeding Screw	10.99	1	1
27b	705600080	Bleeding Screw	11.99	1	1
27c	715500336	Brake Pad Kit	39.99	1	1
27d	715500337	Pin Set	12.49	1	1
27d	715500337	Pin Set	13.99	1	1
28	705600679	LH Caliper	212.49	1	1
28a	715500333	Spring Boot Kit	12.49	1	1
28a	715500333	Spring Boot Kit	13.99	1	1
28b	705600080	Bleeding Screw	10.99	1	1
28b	705600080	Bleeding Screw	11.99	1	1
28c	715500335	Brake Pad Kit	39.99	1	1
28d	715500337	Pin Set	12.49	1	1
28d	715500337	Pin Set	13.99	1	1
29	705600681	Master Cylinder Ass'y	158.49	1	1
30	705600684	Brake Disc	29.49	3	3
31	705600724	Brake Pedal	36.99	1	1
32	705600792	Brake Pedal Spring	5.99	1	1
32	705600792	Brake Pedal Spring	6.99	1	1
33	705600815	Inner Spacer	7.99	1	1
33	705600815	Inner Spacer	8.99	1	1
34	705600833	Master Cylinder Rod	158.49	1	1
35	705600872	Rear Caliper	208.49	1	1
35a	715500333	Spring Boot Kit	12.49	1	1
35a	715500333	Spring Boot Kit	13.99	1	1
35b	705600080	Bleeding Screw	10.99	1	1
35b	705600080	Bleeding Screw	11.99	1	1
35c	715500336	Brake Pad Kit	39.99	1	1
35d	715500337	Pin Set	12.49	1	1
35d	715500337	Pin Set	13.99	1	1
36	705600917	LH Front Deflector	4.99	1	1
37	705600943	LH Front Hose	56.99	1	1
38	705600945	Rear Flexible Hose	105.99	1	1
39	705600958	Banjo Bolt	4.49	1	1
39	705600958	Banjo Bolt	4.99	1	1
40	705601088	Bracket	1.99	3	3
41	705601142	Yoke		1	1
42	705601250	Brake Switch	33.99	1	1

43	708000759	Rubber Stopper	2.49	1	1
43	708000759	Rubber Stopper	2.99	1	1

Commander 800 STD, DPS, XT, 2014: 07- Drive System, Front

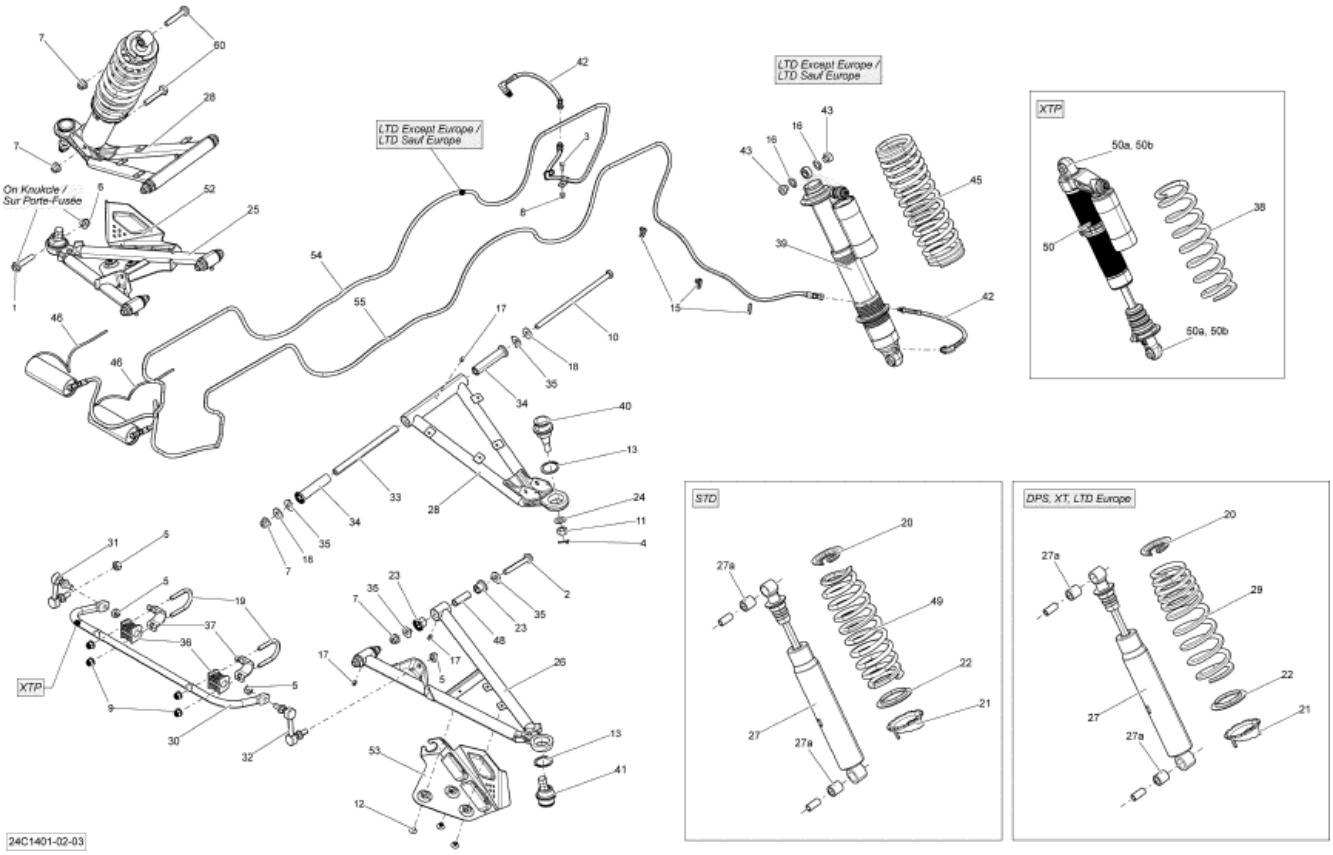


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207582044	Hex. Flanged Screw M8 X 20, Scotch Grip	1.30		2	2
2	230602546	Hex. Flanged Screw M10 X 125	5.73		2	2
3	250100047	Hex. Castellated Nut M18	7.07		2	2
3	250100047	Hex. Castellated Nut M18	8.99		2	2
4	233201436	Flanged Elastic Nut M10	1.99		2	2
5	250000378	Hex Flanged Screw M12 X 16, Scotch Grip	3.49		1	1
6	N/A	Not available for this vehicle			16	
7	250100042	Wheel Nut	5.80		8	8
8	250100082	Chrome Wheel Nut M10 X 1.25. XT Except Camo	4.97		8	8
8	250100082	Chrome Wheel Nut M10 X 1.25. DPS	4.97		8	8
8	250100100	Black Wheel Nut M10 X 1.25. XT Camo	6.99		8	8
9	250200049	Spring Washer	3.30		2	2
9	250200049	Spring Washer	3.99		2	2
10	250200102	Flat Washer M12	1.99		1	1
11	250400036	Cotter Pin	1.99		2	2
12	293000110	Valve Cap	0.99		2	2
12	293000110	Valve Cap	1.99		2	2
13	N/A	Not available for this vehicle			2	
14	293250246	O-Ring	5.99		2	2
15	293350040	Cone Bearing	69.49		2	2
16	293350044	Ball Bearing	19.99		2	2
16	293350044	Ball Bearing	20.99		2	2

17	293370019	Circlip	2.49	2	2
17	293370019	Circlip	2.99	2	2
20	293750002	Tie-Rap 142 mm	0.99	2	2
20	293750002	Tie-Rap 142 mm	1.99	2	2
21	705400036	Wear Ring	18.49	1	1
22	705400504	Wheel Cap. XT Camo	7.49	2	2
22	705400504	Wheel Cap. XT Camo	7.99	2	2
22	705400520	Wheel Cap. XT Except Camo	7.49	2	2
22	705400520	Wheel Cap. XT Except Camo	7.99	2	2
22	705400520	Wheel Cap. DPS	7.49	2	2
22	705400520	Wheel Cap. DPS	7.99	2	2
24	705400661	Nut	27.49	1	1
25	705400762	Front Cover	239.99	1	1
26	705400781	Front Tire. STD Except Europe	89.99	2	2
26	705401046	Front Tire. STD Europe	261.99	2	2
27	705400791	Wheel Stud	9.49	8	8
28	705400645	Differential. STD	595.49	1	1
28	705400822	Differential. Except STD	719.99	1	1
28	705400822	Differential. Except STD	1199.99	1	1
29	705400921	Wheel Cap	2.49	2	2
30	N/A	Not available for this vehicle		1	
31	N/A	Not available for this vehicle		1	
32	705400193	Rim Valve With Cap	4.99	1	1
32	705400193	Rim Valve With Cap	5.99	1	1
34	705401105	LH Half Shaft	398.99	1	1
34	705401106	RH Half Shaft	398.99	1	1
35	705401136	Front Gear Cover	149.99	1	1
37	705401204	LH Front Knuckle	70.99	1	1
37	705401205	RH Front Knuckle	70.99	1	1
38	705401217	Front Rim	75.99	2	2
39	705401239	Axle Drive Ass'y		1	1
40	N/A	Not available for this vehicle		1	
41	705401314	Wheel Hub	39.99	2	2
41	705401314	Wheel Hub	79.99	2	2
42	N/A	Not available for this vehicle		1	
43	705500259	Ball Bearing	34.99	2	2
44	705500260	Ball Bearing	19.99	1	1
44	705500260	Ball Bearing	20.99	1	1
45	705500261	Needle Bearing	11.63	1	1
45	705500261	Needle Bearing	12.99	1	1
46	705500265	Seal	10.80	1	1
46	705500265	Seal	11.99	1	1
47	705500267	O-Ring	3.30	1	1
47	705500267	O-Ring	3.99	1	1
48	705500504	Fill Level Plug	6.99	1	1
48	705500504	Fill Level Plug	7.99	1	1
49	705500506	Copper Washer	0.32	1	1
50	705500892	Screw	6.99	6	6
50	705500892	Screw	7.99	6	6
51	705500893	Vent Valve	11.99	1	1

51	705500893	Vent Valve	12.99	1	1
52	705500894	Drain Plug	6.99	2	2
52	705500894	Drain Plug	7.99	2	2
53	705501162	Pinion Gear Shim	9.99	1	1
53	705501162	Pinion Gear Shim	10.99	1	1
54	703500814	Unit Pack Kit	66.99	2	2
54a	715900183	U-Joint	20.99	2	2
54b	715900117	Snap Ring	2.99	8	8
54c	703500813	Grease Fitting	2.99	2	2
55	705501385	1/2 OZ Weight	3.49	@	1
55	705501385	1/2 OZ Weight	3.99	@	1
57	415080200	Hose, Polyurethane	4.99	1	1
57	415080200	Hose, Polyurethane	9.99	1	1
58	705501588	10 Teeth Pinion	141.99	1	1
59	715900231	Yoke Joint	21.99	1	1
60	715900232	Yoke Joint	19.99	1	1
61	703500815	Grease Fitting	2.99	1	1
62	705401481	Oil Seal	18.99	1	1
63	705401486	Oil Seal	9.99	2	2
64	705401487	Front Differential Ass'y. STD	1199.99	1	1
64	705401488	Front Differential Ass'y. Except STD		1	1
65	705401353	CV Joint	156.99	2	2
66	705401354	Wheel Side Boot Kit	42.99	2	2
67	715900260	Oetiker Clamp, Large	7.99	2	2
68	715900261	Oetiker Clamp, Small	4.99	4	4
69	705401355	Differential Side Boot Kit	42.99	2	2
70	715900262	Oetiker Clamp, Large Dif.Side	7.99	2	2
71	705401357	RH Plunging Joint	194.99	1	1
71	705401359	LH Plunging Joint	194.99	1	1
72	705401349	Circlip Joint	2.99	2	2
72	705401349	Circlip Joint	3.99	2	2
73	705400961	Front Tire. XT Europe	119.99	2	2
73	705401377	Front Tire. Except XT Europe	195.99	2	2
74	705401378	Front Rim. Except XT Camo	135.99	2	2
74	705401379	Front Rim. XT Camo	135.99	2	2
75	703500049	Pinion Shim Kit	49.99	1	1
76	703500288	Differential Shim Kit	52.49	1	1
77	703500050	Differential Shim Kit	84.49	1	1

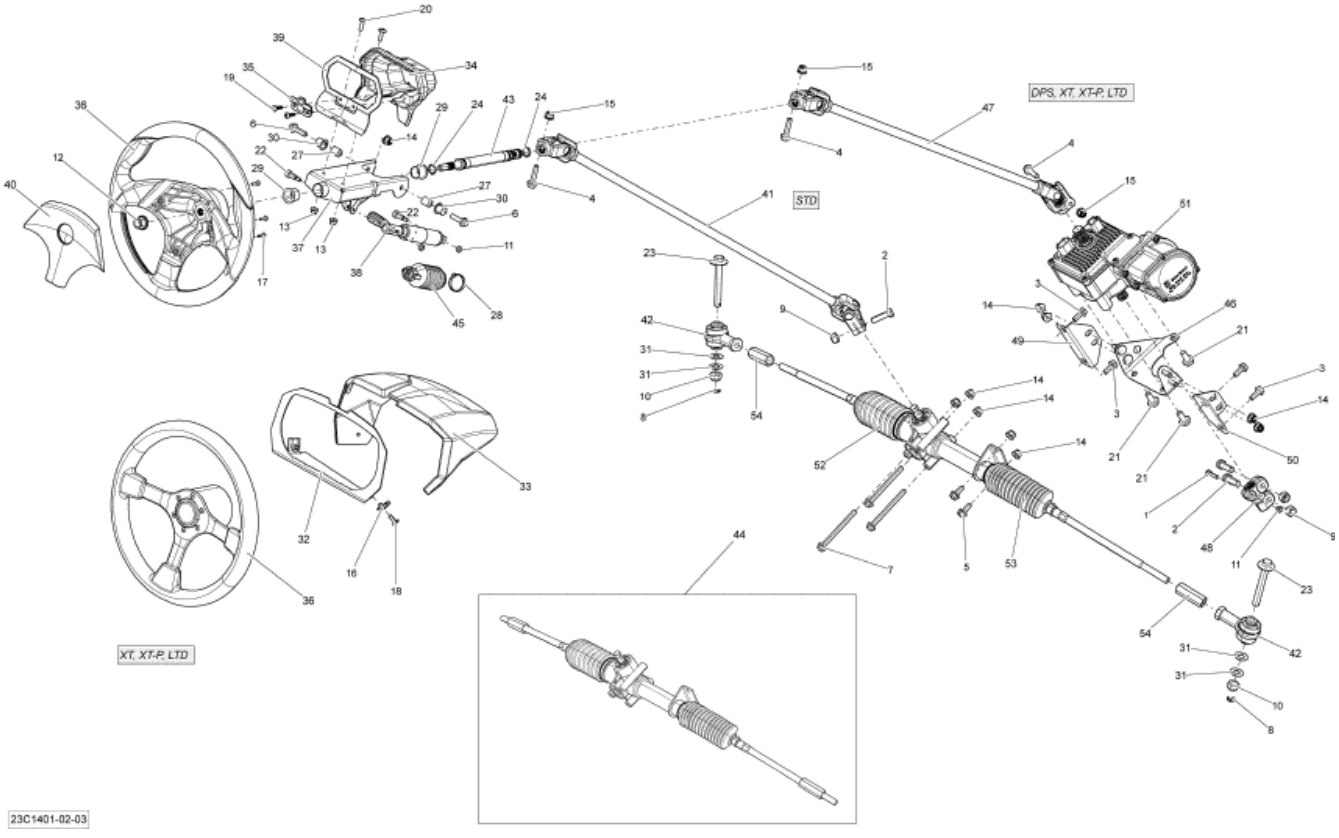
Commander 800 STD, DPS, XT, 2014: 07- Front Suspension



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207605044	Hex. Flanged Screw M10 X 50	4.07		2	2
2	207607046	Hex. Flanged Screw M10 X 70	2.32		4	4
3	N/A	Not available for this vehicle			1	
4	211400017	Cotter Pin	0.27		2	2
5	N/A	Not available for this vehicle			4	
6	233201414	Hex. Flanged Elastic Nut M10	1.18		2	2
7	233201436	Flanged Elastic Nut M10	1.99		6	6
8	N/A	Not available for this vehicle			1	
9	N/A	Not available for this vehicle			4	
10	250000510	Hex. Cap Screw M10 X 225	9.99		2	2
11	250100099	Nut M12	1.99		2	2
12	293150104	Pop Rivet 3/16"	0.47		6	6
13	293370035	Circlip	4.97		4	4
15	N/A	Not available for this vehicle			4	
16	N/A	Not available for this vehicle			4	
17	408200700	Grease Fitting	2.99		6	6
17	408200700	Grease Fitting	6.99		6	6
18	503190439	Washer	4.49		4	4
18	503190439	Washer	4.71		4	4
19	N/A	Not available for this vehicle			2	
20	706000567	Spring Stopper	9.99		2	2
20	706000567	Spring Stopper	10.99		2	2
21	706000910	Adjustable Ring	9.99		2	2
22	706000911	Protector Ring	8.49		2	

					2
23	706200181	Cushion	1.99	8	8
23	706200181	Cushion	7.49	8	8
24	250200086	Flat Washer	3.49	2	2
24	250200086	Flat Washer	3.99	2	2
25	706200742	LH Lower Suspension Arm	74.99	1	1
26	706200744	RH Lower Suspension Arm	74.99	1	1
27	706200782	Front Shock. DPS, XT	99.99	2	2
27	706200780	Front Shock. STD	99.99	2	2
27a	715900122	Bushing	4.99	4	4
27a	715900122	Bushing	5.99	4	4
28	706200796	Suspension Upper Arm	69.49	2	2
29	706200860	Front Spring, Green-Black-Black. DPS	42.49	2	2
29	706200860	Front Spring, Green-Black-Black. XT Yellow	42.49	2	2
29	706201367	Front Spring, Gold-Yellow. XT Red	105.99	2	2
29	706201369	Front Spring, Red-Yellow. XT Magnesium	105.99	2	2
29	706201369	Front Spring, Red-Yellow. XT Camo	105.99	2	2
30	N/A	Not available for this vehicle		1	
31	N/A	Not available for this vehicle		1	
32	N/A	Not available for this vehicle		1	
33	706201061	Inner Bushing	12.49	2	2
34	706201062	Cushion	1.99	4	4
35	706201063	Wear Plate	0.99	12	12
35	706201063	Wear Plate	1.99	12	12
36	N/A	Not available for this vehicle		2	
37	N/A	Not available for this vehicle		2	
38	N/A	Not available for this vehicle		1	
39	N/A	Not available for this vehicle		2	
40	706201370	Upper Ball Joint	39.99	2	2
41	706201371	Upper Ball Joint	39.99	2	2
42	N/A	Not available for this vehicle		2	
43	N/A	Not available for this vehicle		4	
45	N/A	Not available for this vehicle		2	
46	N/A	Not available for this vehicle		1	
48	706201587	Inner Bushing	2.99	4	4
49	706201631	Front Spring, Silver-Yellow	44.99	2	2
50	N/A	Not available for this vehicle		2	
50a	N/A	Not available for this vehicle		8	
50b	N/A	Not available for this vehicle		8	
52	706201669	LH Protector	12.99	1	1
52	706201669	LH Protector	13.99	1	1
53	706201670	RH Protector	12.99	1	1
53	706201670	RH Protector	13.99	1	1
54	N/A	Not available for this vehicle		1	
55	N/A	Not available for this vehicle		1	
60	207605544	Hex. Flanged Screw M10 X 55	2.62	4	4

Commander 800 STD, DPS, XT, 2014: 07- Steering



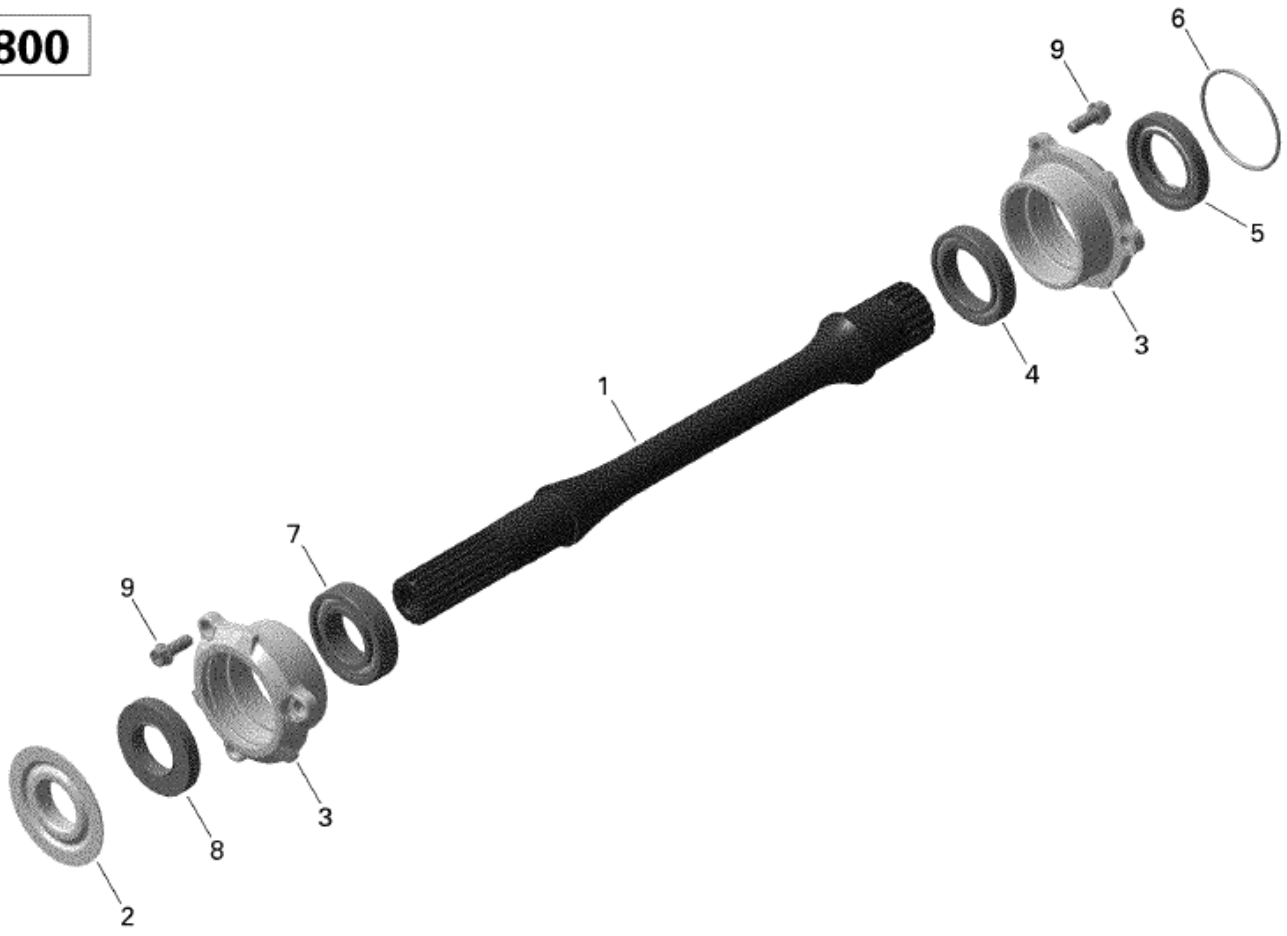
23C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207063044	Hex. Screw M6 X 30	0.90		1	1
2	207103586	Hex. Screw M10 X 35	1.99		@	1
3	207582044	Hex. Flanged Screw M8 X 20, Scotch Grip	1.30		4	4
4	207583586	Hex. Flanged Screw M8 X 35, Scotch Grip	1.99		@	1
5	207682044	Hex. Flanged Screw M8 X 20	0.87		2	2
6	207683044	Hex. Flanged Screw M8 X 30	1.30		2	2
7	207689534	Hex. Flanged Scew M8 X 95	3.99		3	3
8	211400017	Cotter Pin	0.27		2	2
9	232500416	Elastic Stop Nut M10	1.47		@	1
10	232521416	Elastic Flanged Stop Nut M12	1.33		2	2
11	232561414	Elastic Stop Nut M6	1.99	232561434	@	1
12	233221414	Hex. Flanged Elastic Nut M12	5.12		1	1
13	233261414	Hex. Flanged Elastic Nut M6	1.05		2	2
14	233281414	Hex. Flanged Elastic Nut M8	1.05		@	1
15	233281416	Hex. Elastic Flanged Nut M8	1.17		@	1
16	250000048	Pannel Nut M6 X 1.0	1.35		2	2
17	250000084	Phillips Screw K40 X 16	2.00		3	3
18	250000129	Torx Screw M6 X 16	0.97		2	2
19	250000297	Truss Head Torx Screw K50 X 20	1.99		2	2
20	250000350	Torx Truss Screw M6 X 20	4.99		2	2
21	250000601	Hex. Flanged Screw M10 X 20, Scotch Grip	3.99		3	3

22	250000649	Socket Head Screw M6 X 16	5.99	2	2
23	250000657	Hexagonal Screw M12 X 88	5.99	2	2
24	293300144	O-Ring	1.99	2	2
24	293300144	O-Ring	2.99	2	2
27	293900106	Bushing	3.49	2	2
27	293900106	Bushing	3.99	2	2
28	414115200	Tie-Rap 180 mm	0.49	1	1
29	415108000	Cushion	10.99	2	2
29	415108000	Cushion	11.54	2	2
30	705600799	Bushing	3.49	2	2
31	250200086	Flat Washer	3.49	4	4
31	250200086	Flat Washer	3.99	4	4
32	707900013	Cluster Support	9.99	1	1
33	707900124	Upper Cluster Cover	9.99	1	1
34	709400514	Speedometer Cover	9.99	1	1
34	709400514	Speedometer Cover	10.99	1	1
35	709400573	Latch Indicator Cover	5.99	1	1
35	709400573	Latch Indicator Cover	6.99	1	1
36	709400650	Steering Wheel. STD, DPS	55.99	1	1
36	715001134	Steering Wheel Kit. XT, XTP, LTD	149.99	1	1
37	709400655	Steering Support	49.49	1	1
38	709400656	Adjustment Cylinder	37.49	1	1
39	709400760	Cluster Support	14.49	1	1
40	709400780	Steering Center	6.99	1	1
41	709401389	Steering Column		1	1
42	709401134	Ball Joint	33.99	2	2
43	709401167	Steering Shaft	35.99	1	1
44	709401185	Steering Ass'y		1	1
45	709401232	Boot Kit, Tube Side		1	1
46	709401296	Support		1	1
47	709401326	Steering Column		1	1
48	709401328	Coupling		1	1
49	709401336	LH DPS Support		1	1
50	709401337	RH DPS Support		1	1
51	709401406	Power Steering Ass'y		1	1
52	715900235	Boot Kit, Pinion Side		1	1
53	715900236	Boot Kit, Tube Side		1	1
54	715900237	Nut Tie Rod End		2	2

Commander 800 STD, DPS, XT, 2014: 08- Drive Shaft

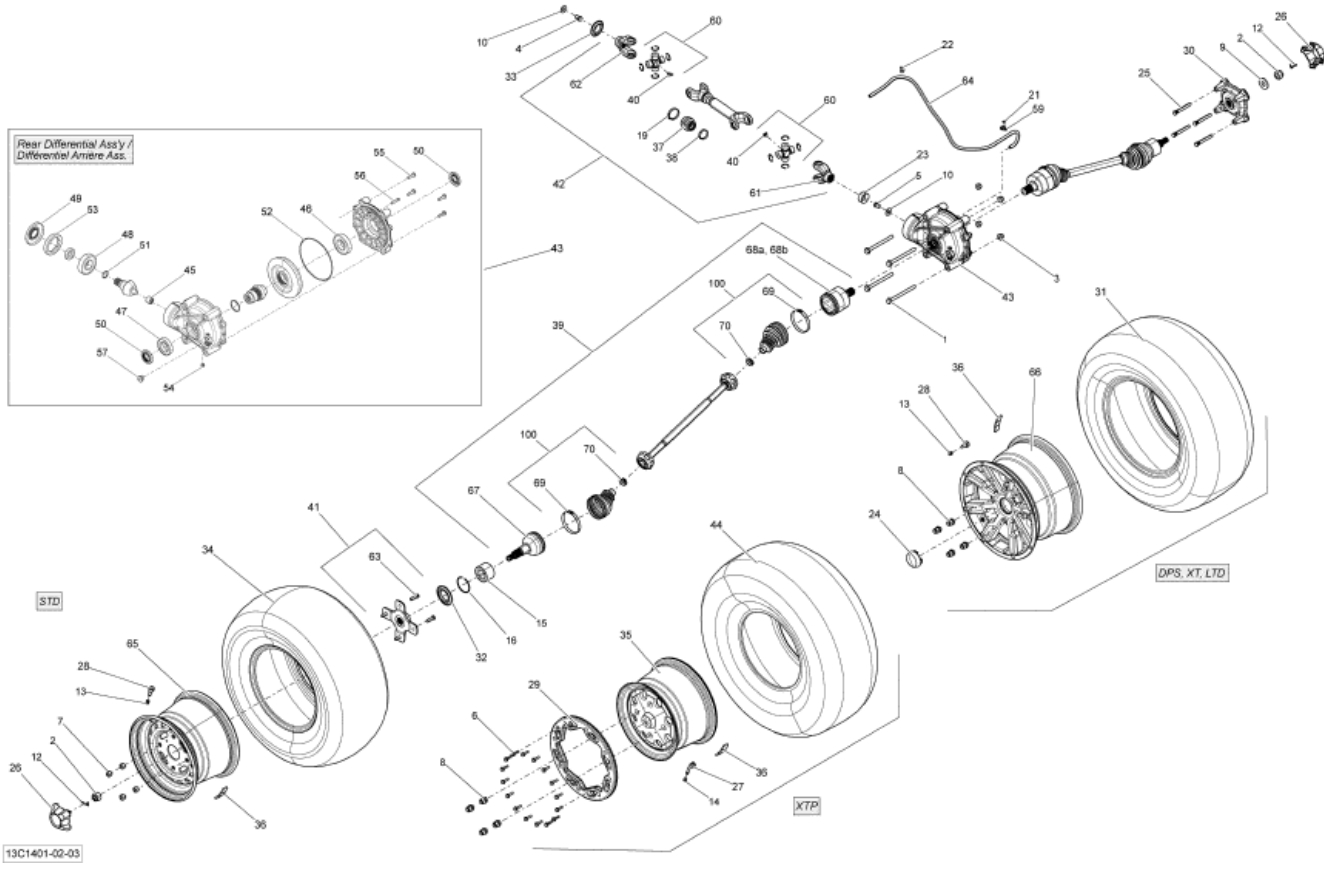
800



56R1401

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420620513	Shaft			1	1
2	420626990	Cover			1	1
3	420611221	Bearing Cover	20.99		2	2
4	420632275	Ball Bearing	26.99		1	1
5	420850055	Oil Seal	12.49		1	1
5	420850055	Oil Seal	13.11		1	1
6	420230305	O-Ring	7.49		1	1
6	420230305	O-Ring	7.99		1	1
7	420232341	Ball Bearing	16.99		1	1
7	420232341	Ball Bearing	17.99		1	1
8	420430589	Oil Seal	18.49		1	1
8	420430589	Oil Seal	19.99		1	1
9	420641048	Flanged Torx Screw M6 X 16	2.49		6	6
9	420641048	Flanged Torx Screw M6 X 16	2.61		6	6

Commander 800 STD, DPS, XT, 2014: 08- Drive System, Rear

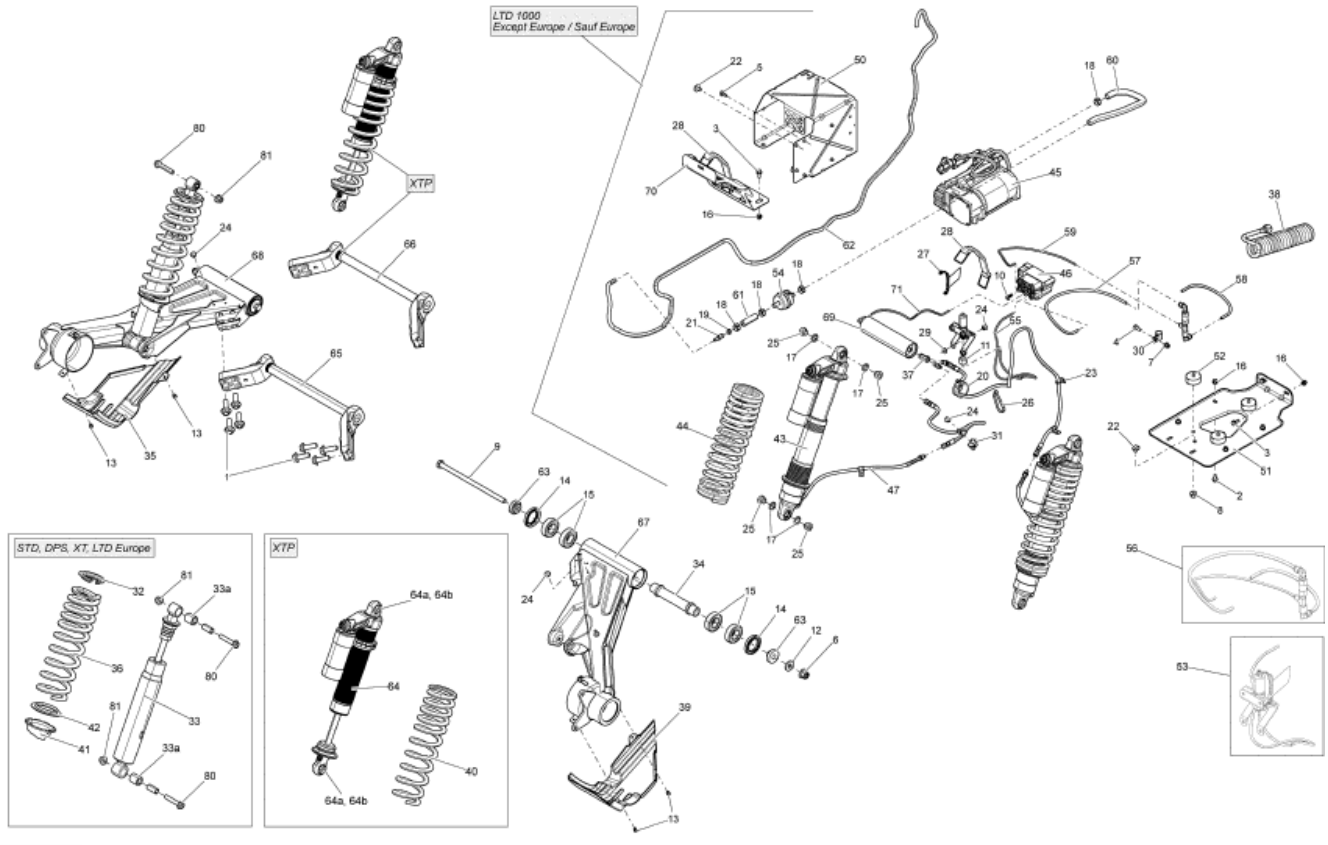


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	230602546	Hex. Flanged Screw M10 X 125	5.73		4	4
2	250100047	Hex. Castellated Nut M18	7.07		2	2
2	250100047	Hex. Castellated Nut M18	8.99		2	2
3	233201436	Flanged Elastic Nut M10	1.99		4	4
4	250000359	Hex Flanged Screw M12 x 16	3.99		1	1
5	250000615	Hex Flanged Screwv M10 X 16	3.99		1	1
6	N/A	Not available for this vehicle			16	
7	250100042	Wheel Nut	5.80		8	8
8	250100082	Chrome Wheel Nut M10 X 1.25. XT Except Camo	4.97		8	8
8	250100082	Chrome Wheel Nut M10 X 1.25. DPS	4.97		8	8
8	250100100	Black Wheel Nut M10 X 1.25. XT Camo	6.99		8	8
9	250200049	Spring Washer	3.30		2	2
9	250200049	Spring Washer	3.99		2	2
10	250200014	Flat Washer M10	1.17		2	2
12	250400036	Cotter Pin	1.99		2	2
13	293000110	Valve Cap	0.99		2	2
13	293000110	Valve Cap	1.99		2	2
14	N/A	Not available for this vehicle			2	
15	293350040	Cone Bearing	69.49		2	2
16	293370019	Circlip	2.49		2	2
16	293370019	Circlip	2.99		2	2
19	293650138	Oetiker Gear Clamp	3.30		1	1

19	293650138	Oetiker Gear Clamp	3.99	1	1
21	390402200	Pop Rivet 3/16"	0.28	1	1
22	414227300	Clip	1.15	1	1
23	705400036	Wear Ring	18.49	1	1
24	705400504	Wheel Cap. XT Camo	7.49	2	2
24	705400504	Wheel Cap. XT Camo	7.99	2	2
24	705400520	Wheel Cap. XT Except Camo	7.49	2	2
24	705400520	Wheel Cap. XT Except Camo	7.99	2	2
24	705400520	Wheel Cap. DPS	7.49	2	2
24	705400520	Wheel Cap. DPS	7.99	2	2
25	705400791	Wheel Stud	9.49	4	4
26	705400921	Wheel Cap	2.49	2	2
27	N/A	Not available for this vehicle		1	
28	705400193	Rim Valve With Cap	4.99	1	1
28	705400193	Rim Valve With Cap	5.99	1	1
29	N/A	Not available for this vehicle		1	
30	705401314	Wheel Hub	39.99	1	1
30	705401314	Wheel Hub	79.99	1	1
31	705502019	Rear Tire	209.99	2	2
32	705501121	Wear Sleeve	5.99	2	2
33	705501123	Protector	4.49	1	1
33	705501123	Protector	4.99	1	1
34	705501129	Rear Tire. STD Except Europe	94.99	2	2
34	705501434	Rear Tire. STD Europe	327.49	2	2
35	N/A	Not available for this vehicle		1	
36	705501385	1/2 OZ Weight	3.49	@	1
36	705501385	1/2 OZ Weight	3.99	@	1
37	715900118	Rubber Boot	12.99	1	1
38	509000045	Oetiker Gear Clamp	5.99	1	1
38	509000045	Oetiker Gear Clamp	6.99	1	1
39	705501481	Half Shaft	199.99	2	2
40	715900184	Grease Fitting	1.99	1	1
40	715900184	Grease Fitting	2.99	1	1
41	705501713	Wheel Hub Ass'y	79.99	1	1
41	705501713	Wheel Hub Ass'y	99.99	1	1
42	705501803	Axle Ass'y		1	1
43	705501804	Rear Differential Ass'y		1	1
44	N/A	Not available for this vehicle		2	
45	705501874	Needle Bearing		1	1
46	705501875	Ball Bearing		1	1
47	705501876	Ball Bearing		1	1
48	705501877	Ball Bearing		1	1
49	705501878	Oil Seal		1	1
50	705501879	Oil Seal		2	2
51	705501880	Oil Seal		1	1
52	705501881	Oil Seal		1	1
53	705501882	Nut		1	1
54	705501885	Drain Plug		1	1
55	705501886	Screw		4	4
56	705501887	Vent Valve		1	1

57	705501889	Fill Level Plug			1	1
59	705600459	Clamp	3.49		1	1
59	705600459	Clamp	3.99		1	1
60	715500371	Universal Joint	54.99		2	2
61	715900233	Fixed Yoke	19.99		1	1
62	715900234	Fixe Joint	19.99		1	1
63	250300055	Wheel Stud	3.99		4	4
64	415080200	Hose, Polyurethane	4.99		@	1
64	415080200	Hose, Polyurethane	9.99		@	1
65	705501623	Rear Rim, Black. STD Except Europe	134.99		2	2
65	705501623	Rear Rim, Black. STD Europe	134.99		2	2
66	705501812	Rear Rim. XT Except Camo			2	2
66	705501812	Rear Rim. DPS			2	2
66	705501814	Rear Rim. XT Camo	139.99		2	2
67	705501776	CV Joint	156.99		2	2
68a	705501780	Plunging Joint	194.99		2	2
68b	705501781	Circlip	2.99		2	2
68b	705501781	Circlip	3.99		2	2
69	715900241	Oetiker Clamp, 82.1 mm	7.99		2	2
70	715900242	Oetiker Clamp, 27.3 mm	7.99		2	2
100	705501777	Rubber Boot Kit	42.99	705501864	4	4

Commander 800 STD, DPS, XT, 2014: 08- Rear Suspension

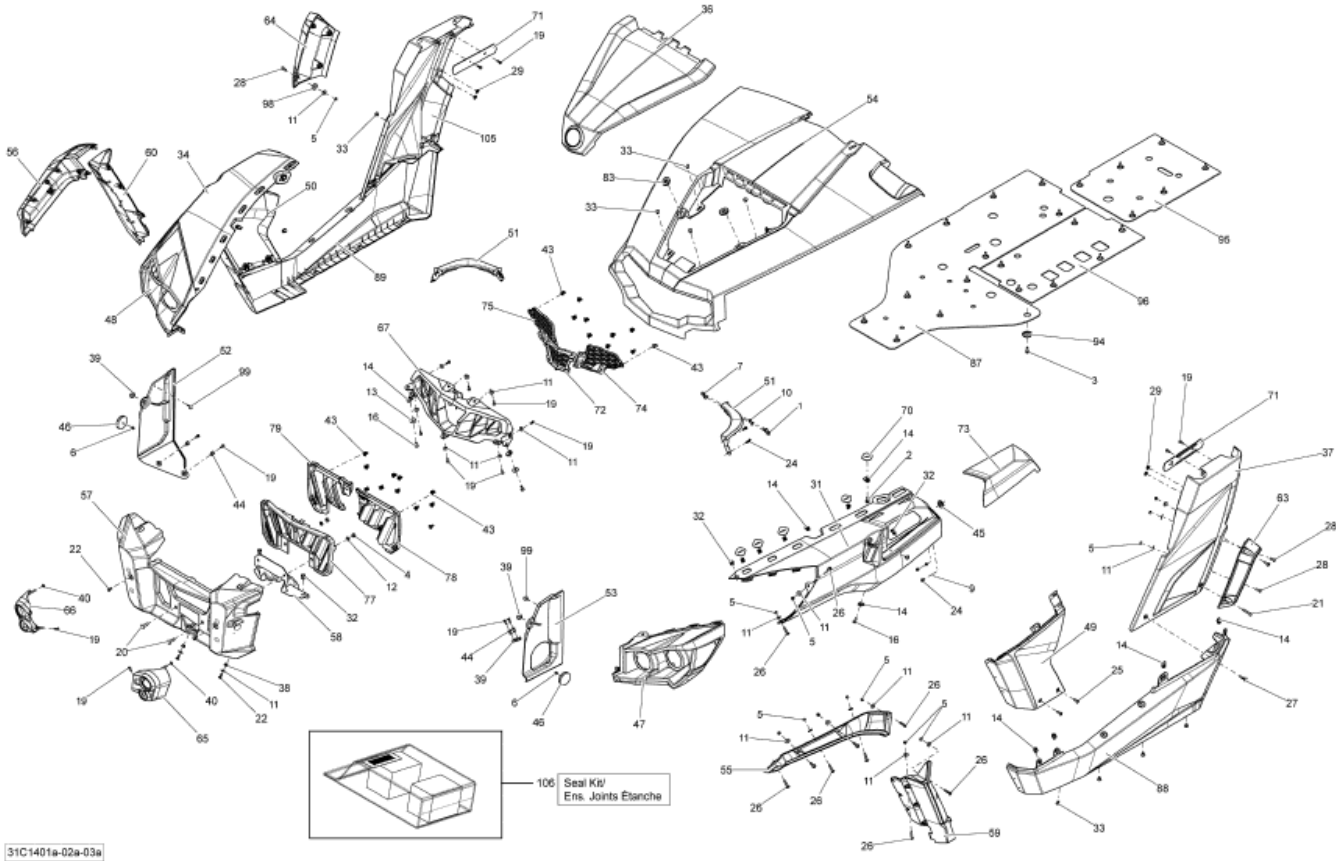


26C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207523544	Hex. Flanged Screw M12 X 35, Scotch Grip	3.99		8	8
2	N/A	Not available for this vehicle			4	
3	N/A	Not available for this vehicle			4	
4	N/A	Not available for this vehicle			2	
5	N/A	Not available for this vehicle			4	
6	233221416	Elastic Flange Nut M12	2.32		2	2
7	N/A	Not available for this vehicle			2	
8	N/A	Not available for this vehicle			3	
9	250000515	Hex. Cap Screw M12 X 241	3.49		2	2
10	N/A	Not available for this vehicle			2	
11	N/A	Not available for this vehicle			1	
12	250200120	Flat Washer M12	1.99		2	2
13	293150104	Pop Rivet 3/16"	0.47		4	4
14	293200094	Seal	6.99		4	4
14	293200094	Seal	7.99		4	4
15	293350055	Ball Bearing	8.49		8	8
15	293350055	Ball Bearing	8.99		8	8
16	N/A	Not available for this vehicle			4	
17	N/A	Not available for this vehicle			4	
18	N/A	Not available for this vehicle			4	
19	N/A	Not available for this vehicle			1	
20	N/A	Not available for this vehicle			1	
21	N/A	Not available for this vehicle			1	
22	N/A	Not available for this vehicle			3	
23	N/A	Not available for this vehicle			1	

24	N/A	Not available for this vehicle			4	
25	N/A	Not available for this vehicle			4	
26	N/A	Not available for this vehicle			1	
27	N/A	Not available for this vehicle			1	
28	N/A	Not available for this vehicle			2	
29	N/A	Not available for this vehicle			4	
30	N/A	Not available for this vehicle			2	
31	N/A	Not available for this vehicle			1	
32	706000567	Spring Stopper	9.99		1	1
32	706000567	Spring Stopper	10.99		1	1
33	706000615	Rear Shock Ass'y. Includes 33a	74.49		1	1
33a	715900122	Bushing	4.99		2	2
33a	715900122	Bushing	5.99		2	2
34	706000616	Pivot Bushing	19.49		2	2
34	706000616	Pivot Bushing	20.99		2	2
35	706000630	LH Joint Protector	5.99		1	1
36	706000667	Rear Spring, Blue-Gold. XT Yellow, DPS	44.49		1	1
36	706001043	Rear Spring, Blue-Yellow. XT Red, STD	96.99		1	1
36	706001045	Rear Spring, Green-Yellow. XT Magnesium, XT Camo	105.99		1	1
37	N/A	Not available for this vehicle			1	
38	N/A	Not available for this vehicle			1	
39	706000814	RH Joint Protector	5.99		1	1
40	N/A	Not available for this vehicle			1	
41	706000910	Adjustable Ring	9.99		1	1
42	706000911	Protector Ring	8.49		1	1
43	N/A	Not available for this vehicle			1	
44	N/A	Not available for this vehicle			1	
45	N/A	Not available for this vehicle			1	
46	N/A	Not available for this vehicle			1	
47	N/A	Not available for this vehicle			1	
50	N/A	Not available for this vehicle			1	
51	N/A	Not available for this vehicle			1	
52	N/A	Not available for this vehicle			3	
53	N/A	Not available for this vehicle			1	
54	N/A	Not available for this vehicle			1	
55	N/A	Not available for this vehicle			1	
56	N/A	Not available for this vehicle			1	
57	N/A	Not available for this vehicle			1	
58	N/A	Not available for this vehicle			1	
59	N/A	Not available for this vehicle			1	
60	N/A	Not available for this vehicle			1	
61	N/A	Not available for this vehicle			1	
62	N/A	Not available for this vehicle			1	
63	706001350	Spacer			4	4
64	N/A	Not available for this vehicle			1	
64a	N/A	Not available for this vehicle			4	
64b	N/A	Not available for this vehicle			4	
65	706001500	Sway Bar Ass'y			1	1
66	N/A	Not available for this vehicle			1	
67	706001513	RH Swing Arm			1	1
68	706001514	LH Swing Arm			1	1
69	N/A	Not available for this vehicle			1	
70	N/A	Not available for this vehicle			1	
71	N/A	Not available for this vehicle			1	
80	207605544	Hex. Flanged Screw M10 X 55	2.62		4	4
81	233201416	Hex. Flanged Elastic Nut M10	1.99	233201436	4	4

Commander 800 STD, DPS, XT, 2014: 09- Body And Accessories



31C1401a-02a-03a

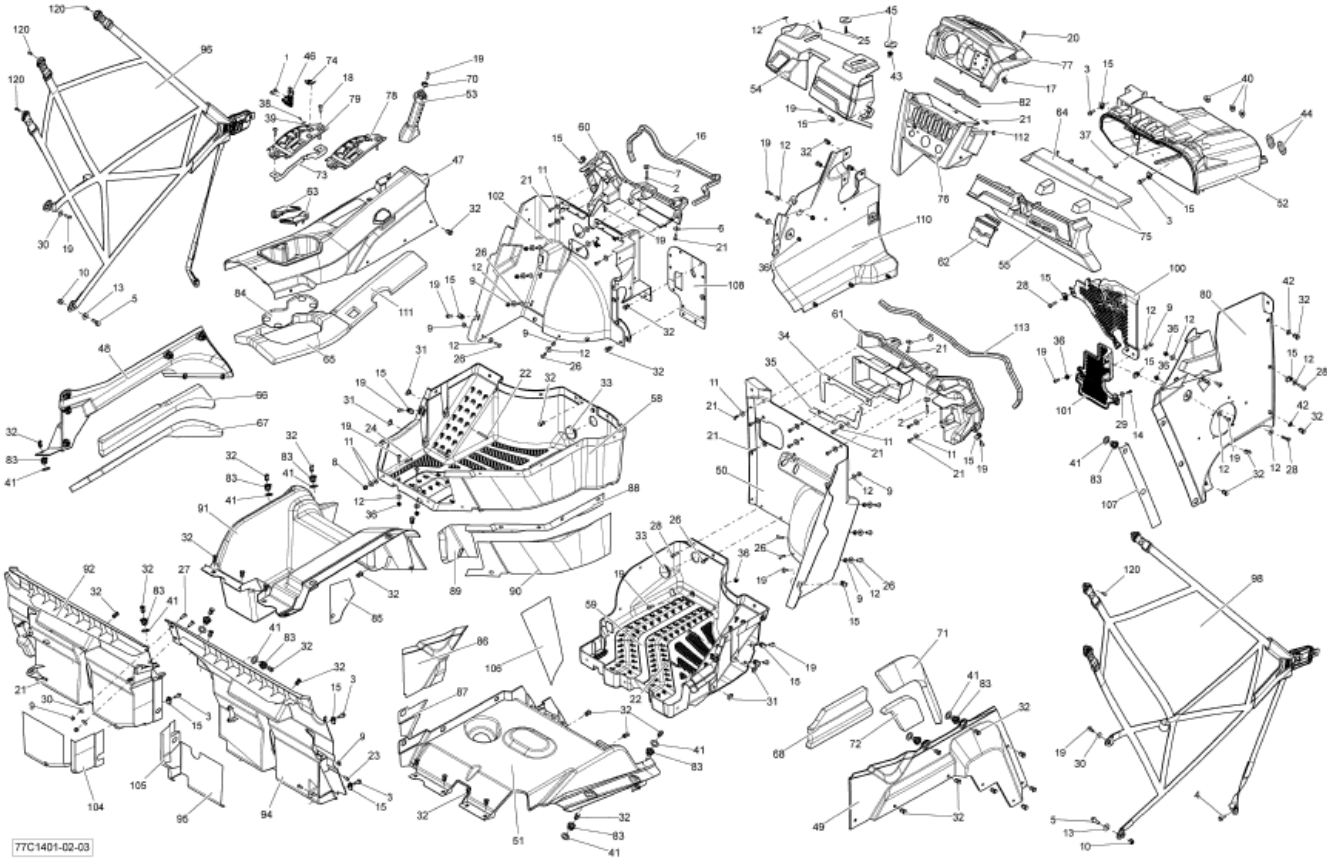
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207661644	Hex. Flanged Screw M6 X 16	0.58		4	4
2	207662044	Hex. Flanged Screw M6 X 20	1.99		2	2
3	210262080	Hex. Forming Screw M6 X 20	1.05		24	24
4	232081414	Hex. Nut M8	0.58		2	2
5	232561434	Elastic Stop Nut M6	1.99		@	1
6	233251414	Hex. Flanged Elastic Nut M5	1.99	233251434	2	2
7	233261414	Hex. Flanged Elastic Nut M6	1.05		4	4
9	234051410	Flat Washer M5	0.43		4	4
10	234061600	Flat Washer M6, Stainless	0.27		4	4
11	234062670	Flat Washer	1.99		@	1
12	234081410	Flat Washer 8 mm	0.68		2	2
13	234082410	Flat Washer 8 mm	1.05		2	2
14	250000048	Pannel Nut M6 X 1.0	1.35		15	15
16	250000128	Torx Truss Screw M6 X 20	1.30		4	4
19	250000146	Truss Head Torx Screw K50 X 16	1.17		@	1
20	250000197	Torx Truss Screw M8 X 30	2.40		2	2
21	250000215	Torx Screw M6 X 45	1.47		1	1
22	250000261	Torx Screw M6 X 16	0.72		4	4
24	250000297	Truss Head Torx Screw K50 X 20	1.99		8	8
25	250000350	Torx Truss Screw M6 X 20	4.99		@	1
26	250000371	Torx Screw M6 X 30 Stainless	1.99		@	1

27	250000398	Stainless Torx Screw,Nylon Patch,M6 X 30	1.99	2	2
28	250000488	Torx Truss Screw M6 X 20. XT Except Europe, LTD	1.99	7	7
31	705006754	LH Front Fender, Yellow. DPS		1	1
31	705006756	LH Front Fender, Red. STD		1	1
31	705006754	LH Front Fender, Yellow. XT Yellow Model		1	1
31	705006768	LH Front Fender, Camo. Camo Model		1	1
31	705006772	LH Front Fender, Magnesium. Magnesium Model		1	1
32	293150089	Tuflok Plastic Rivet	0.87	@	1
33	293150104	Pop Rivet 3/16"	0.47	14	14
34	705006755	RH Front Fender, Yellow. DPS		1	1
34	705006757	RH Front Fender, Red. STD		1	1
34	705006755	RH Front Fender, Yellow. XT Yellow Model		1	1
34	705006769	RH Front Fender, Camo. Camo Model		1	1
34	705006773	RH Front Fender, Magnesium. Magnesium Model		1	1
36	705007072	Removable Hood, Yellow. Yellow Model		1	1
36	705007073	Removable Hood, Red. Red Model		1	1
36	705007075	Removable Hood, Camo. Camo Model		1	1
36	705007076	Removable Hood, Magnesium. Magnesium Model	337.99	1	1
37	705006112	LH Rear Lateral Pannel, Yellow. DPS		1	1
37	705006112	LH Rear Lateral Pannel, Yellow. XT Yellow Model		1	1
37	705006122	LH Rear Lateral Pannel, Camo. Camo Model		1	1
37	705006126	LH Rear Lateral Pannel, Magnesium. Magnesium Model		1	1
37	705006742	LH Rear Lateral Pannel, Red. STD		1	1
38	293450274	Insert	4.97	2	2
38	293450274	Insert	5.99	2	2
39	293720053	Grommet	2.49	6	6
39	293720053	Grommet	2.99	6	6
40	389804300	Push Nut	0.43	2	2
43	517302785	Clip	0.62	31	31
43	517302785	Clip	0.79	31	31
44	517303439	Knob	2.49	4	4
44	517303439	Knob	2.99	4	4
45	517303756	Grommet	3.49	1	1
45	517303756	Grommet	3.99	1	1
46	705002409	Reflector, Amber	7.49	2	2
46	705002409	Reflector, Amber	7.99	2	2
47	705002885	LH Front Facia	41.99	1	1
48	705002886	RH Front Facia	41.99	1	1
49	705002887	LH Front Lateral Pannel, Yellow. DPS	25.99	1	1
49	705002887	LH Front Lateral Pannel, Yellow. XT Yellow Model	25.99	1	1
49	705005559	LH Front Lateral Pannel, Red. STD	25.99	1	1
49	705006378	LH Front Lateral Pannel, CAMO. Camo Model		1	1
49	705006382	LH Front Lateral Pannel, Magnesium. Magnesium Model	237.99	1	1
50	705002888	RH Front Lateral Pannel, Yellow. DPS	25.99	1	1
50	705002888	RH Front Lateral Pannel, Yellow. XT Yellow Model	25.99	1	1
50	705005558	RH Front Lateral Pannel, Red. STD	25.99	1	1
50	705006379	RH Front Lateral Pannel, CAMO. Camo Model	242.99	1	1
50	705006383	RH Front Lateral Pannel, Magnesium. Magnesium Model	188.99	1	1

51	705002891	Facia Front Support	19.99	2	2
52	705002894	RH Deflector	10.99	1	1
52	705002894	RH Deflector	11.99	1	1
53	705002895	LH Deflector. STD, DPS	10.99	1	1
53	705002895	LH Deflector. STD, DPS	11.99	1	1
53	705005113	LH Deflector. XT	10.99	1	1
54	705002915	Fixed Hood, Yellow. Yellow Model	549.99	1	1
54	705004379	Fixed Hood, Red. Red Model	549.99	1	1
54	705004380	Fixed Hood, Camo. Camo Model	645.99	1	1
54	705005289	Fixed Hood, Magnesium. Magnesium Model	1037.49	1	1
55	705003058	LH Upper Front Mudguards	24.99	1	1
56	705003059	RH Upper Front Mudguards	24.99	1	1
57	705003306	Front Facia. STD Except Europe, DPS	54.49	1	1
57	705003306	Front Facia. XT Except Europe	54.49	1	1
57	705003306	Front Facia. STD Europe	54.49	1	1
58	705003399	Bottom Deflector	8.49	1	1
58	705003399	Bottom Deflector	8.99	1	1
59	705003601	LH Lower Front Mudguards	24.99	1	1
60	705003602	RH Lower Front Mudguards	24.99	1	1
63	705003605	LH Lower Rear Mudguards	24.99	1	1
64	705003606	RH Lower Rear Mudguards	24.99	1	1
65	705003627	LH Flasher Cap	8.49	1	1
66	705003628	RH Flasher Cap	8.49	1	1
67	705003629	Upper Facia, Black	13.49	1	1
70	705003841	Support Plate	0.99	12	12
71	705004261	Support Plate	1.99	2	2
72	705004336	Center Upper Facia Protector	2.49	1	1
73	705004337	CVT Inlet Cover, Yellow. Yellow Model	7.49	1	1
73	705004381	CVT Inlet Cover, Red. Red Model	10.99	1	1
73	705004382	CVT Inlet Cover, Camo. Camo Model	10.99	1	1
73	705005287	CVT Inlet Cover, Magnesium. Magnesium Model	119.99	1	1
74	705004350	LH Upper Facia Protector	2.49	1	1
75	705004351	RH Upper Facia Protector	2.49	1	1
77	705004755	Lower Front Facia Protector	11.99	1	1
78	705004819	LH Lower Rear Facia Protector	11.99	1	1
79	705004820	RH Lower Rear Facia Protector	11.99	1	1
83	705005156	Oval Washer	2.49	2	2
83	705005156	Oval Washer	2.99	2	2
87	705006075	RH Protector Plate	50.99	1	1
88	705006991	LH Lateral Middle Panel. STD, DPS	44.99	1	1
88	705006993	LH Middle Side Pannel. XT	30.99	1	1
89	705006992	RH Lateral Middle Panel. STD, DPS	30.99	1	1
89	705006994	RH Middle Side Pannel. XT	30.99	1	1
94	705007171	Cup	5.99	24	24
95	705007227	Rear Protector Plate		1	1
96	705007883	LH Protector Plate		1	1
98	250200086	Flat Washer	3.49	1	1
98	250200086	Flat Washer	3.99	1	1

99	708000759	Rubber Stopper	2.49	2	2
99	708000759	Rubber Stopper	2.99	2	2
105	705006113	RH Rear Lateral Pannel, Yellow. DPS		1	1
105	705006113	RH Rear Lateral Pannel, Yellow. XT Yellow Model		1	1
105	705006123	RH Rear Lateral Pannel, Camo. Camo Model		1	1
105	705006127	RH Rear Lateral Pannel, Magnesium. Magnesium Model		1	1
105	705006743	RH Rear Lateral Pannel, Red. STD		1	1
106	293250318	Seal		2	2

Commander 800 STD, DPS, XT, 2014: 09- Cab Interior



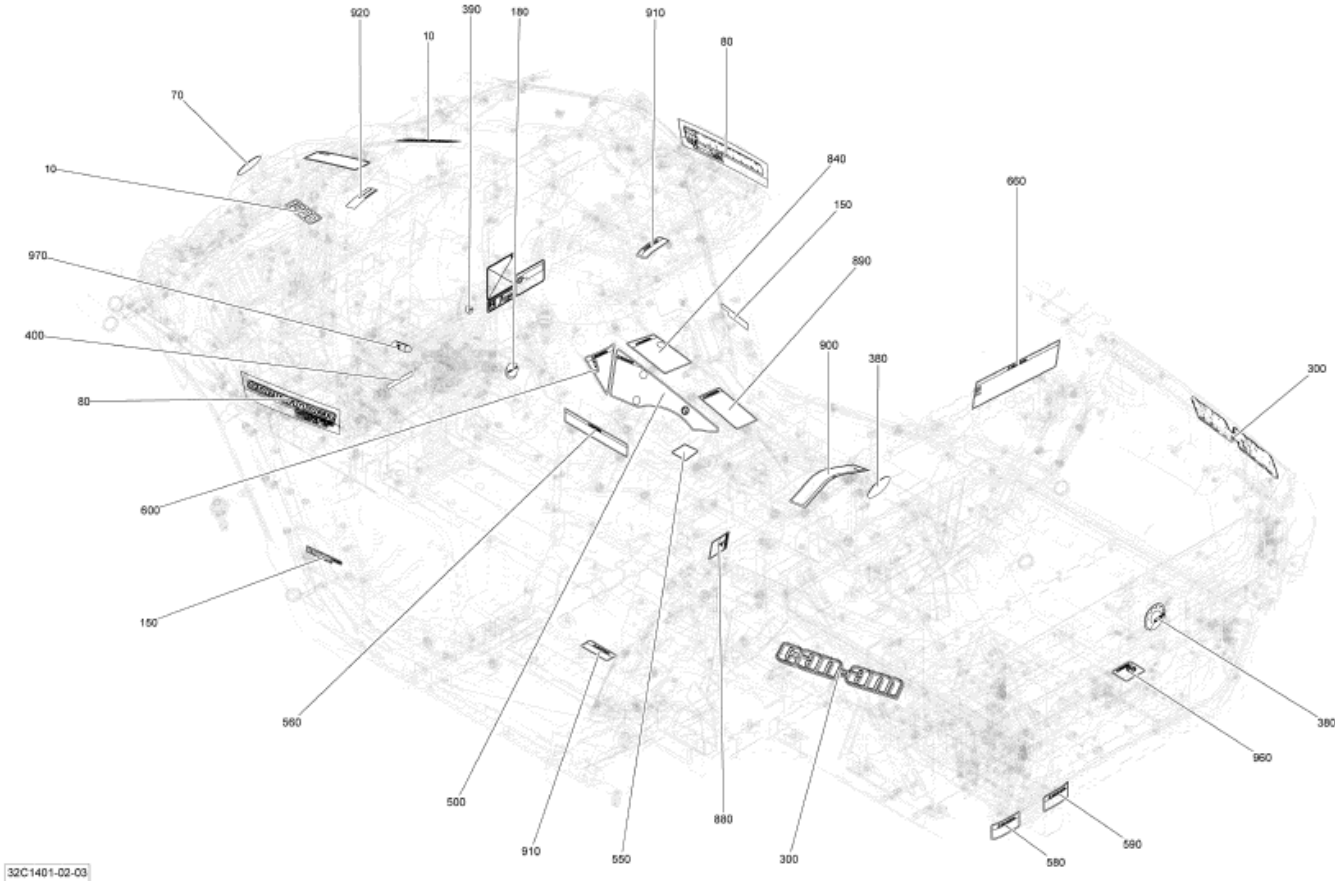
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	205951046	Socket Head Screw M5 X 10	1.99		2	2
2	207162544	Hex. Screw M6 X 25	0.87		2	2
3	207662034	Hex. Flanged Screw M6 X 20	1.99		6	6
4	207662044	Hex. Flanged Screw M6 X 20	1.99		1	1
5	207682544	Hex. Flanged Screw M8 X 25	1.99	207682534	2	2
6	224060201	Flat Washer	0.90		2	2
7	224061201	Flat Washer	1.00		2	2
8	233261414	Hex. Flanged Elastic Nut M6	1.05		2	2
9	233261494	Hex. Elastic Flanged Nut M6	0.72		19	19
10	233281414	Hex. Flanged Elastic Nut M8	1.05		@	1
11	234062410	Flat Washer 6 mm	0.62		18	18
12	234062670	Flat Washer	1.99		29	29
13	234082410	Flat Washer 8 mm	1.05		2	2
14	241151640	Hex. Flanged Screw K50 X 16	1.17		1	1
15	250000048	Pannel Nut M6 X 1.0	1.35		20	20
16	293200093	Neoprene Seal	11.99		@	1
16	293200093	Neoprene Seal	12.99		@	1
17	250000079	Panel Nut M5 X 0.8	2.97		2	2
18	250000081	Torx Screw M6 X 25	3.13		2	2
19	250000128	Torx Truss Screw M6 X 20	1.30		23	23
20	250000130	Torx Screw M5 X 20	1.30		2	2
21	250000146	Truss Head Torx Screw K50 X 16	1.17		@	1

22	250000215	Torx Screw M6 X 45	1.47		4	4
23	250000261	Torx Screw M6 X 16	0.72		1	1
24	250000284	Torx Screw M6 x 25	1.99		1	1
25	250000297	Truss Head Torx Screw K50 X 20	1.99		2	2
26	250000335	Socket Head Screw M6 X 20	1.99		15	15
27	250000350	Torx Truss Screw M6 X 20	4.99		2	2
28	250000398	Stainless Torx Screw,Nylon Patch,M6 X 30	1.99		4	4
29	250200025	Washer M5	0.58		1	1
30	250200040	Flat Washer	1.43		2	2
31	293100003	Nut M6	5.49		4	4
31	293100003	Nut M6	5.99		4	4
32	293150089	Tuflok Plastic Rivet	0.87		71	71
33	293250242	Rubber Cover	2.49		2	2
33	293250242	Rubber Cover	2.99		2	2
34	293250252	Upper Seal	1.99		1	1
35	293250253	Bottom Seal	1.99		1	1
36	293450274	Insert	4.97		11	11
36	293450274	Insert	5.99		11	11
37	293830005	Rubber Bumper	4.49		1	1
37	293830005	Rubber Bumper	4.99		1	1
38	390401400	Rivet		Obsolete	1	1
39	391301000	Washer	0.27		1	1
40	414859400	Cap	2.49		3	3
40	414859400	Cap	2.61		3	3
41	503189273	Washer	2.49		24	24
42	506151252	Washer	2.49		2	2
42	506151252	Washer	2.61		2	2
43	517302785	Clip	0.62		1	1
43	517302785	Clip	0.79		1	1
44	705003668	Oblong Grommet	3.99		4	4
44	705003668	Oblong Grommet	4.99		4	4
45	705003841	Support Plate	0.99		2	2
46	707000666	Lock	12.49		1	1
46	707000666	Lock	13.99		1	1
47	715001247	Central Console Ass'y. Except Europe	151.99		1	1
47	715001249	Central Console Ass'y. Europe	151.99		1	1
48	707900001	LH Side Console	20.99		1	1
49	707900002	RH Side Console	20.99		1	1
50	707900004	RH Front Floor	48.49		1	1
51	707900006	RH Under Cover Ass'y	69.49		1	1
52	707900009	Storage Bin. STD, DPS	68.49		1	1
52	707900046	Storage Bin. XT, XTP, LTD	68.49		1	1
53	707900011	Passenger Handle	9.49		1	1
54	715001250	Dashboard Ass'y	48.49		1	1
55	715001263	Bin Cover Ass'y		...	1	1
58	707900022	LH Lower Floor	122.49		1	1
59	707900023	RH Lower Floor	113.49		1	1
60	707900029	LH Floor Support	8.49		1	1
61	707900030	RH Floor Support	9.99		1	

					1
62	707900031	Latch	4.49	1	1
63	707900036	Cup Retainer	3.49	2	2
64	707900038	Trim Glove Box	6.99	1	1
65	707900042	Rear Central Console Foam	13.49	1	1
66	707900043	LH Upper Lateral Console Foam	9.99	1	1
67	707900044	LH Lower Lateral Console Foam	13.49	1	1
68	707900045	RH Lateral Console Foam	9.99	1	1
70	707900048	Connector Tube	4.99	1	1
71	707900055	RH Lateral Console Foam	9.99	1	1
72	707900056	RH Lateral Console Foam	9.99	1	1
73	707900058	Lock Support	14.49	1	1
74	707900060	Cap	3.99	1	1
75	707900062	Trim Glove Box	12.49	1	1
76	715001265	Central Dashboard Ass'y. Except Europe	35.99	1	1
76	715900108	Central Dashboard Ass'y. Europe	15.99	1	1
77	N/A	Not available for this vehicle		1	
78	707900070	Lever Indicator	9.49	1	1
79	707900071	Lever Indicator	9.99	1	1
80	707900021	RH Fixe Side Console	47.49	1	1
82	271000110	Protection Trim	10.99	@	1
82	271000110	Protection Trim	11.99	@	1
83	707900133	Insert		24	24
84	707900145	Heat Sheet		1	1
85	707900146	Heat Sheet		1	1
86	707900147	Heat Sheet		1	1
87	707900148	Heat Sheet		1	1
88	707900149	Heat Sheet		1	1
89	707900150	Heat Sheet		1	1
90	707900151	Heat Sheet		1	1
91	715001982	Plaque Inférieur De Siège Ass. GA		1	1
92	707900164	LH Rear Deflector. STD, DPS, XTP		1	1
92	707900164	LH Rear Deflector. XT		1	1
94	707900166	RH Rear Deflector		1	1
95	707900167	Heat Shield		1	1
96	707900171	LH Safety Net		1	1
98	707900172	RH Safety Net		1	1
100	707900178	Grill		1	1
101	707900180	Grill		1	1
102	707900181	LH Front Floor		1	1
103	707900182	Heat Shield		1	1
104	707900183	Heat Shield		1	1
105	707900184	Heat Shield		1	1
106	707900190	Heat Sheet		1	1
107	707900191	Heat Sheet		1	1
108	707900108	Deflector. STD	10.99	1	1
108	707900192	Deflector. Except STD		1	1
110	707900193	Front Side Dash Panel		1	1
111	707900214	Front Central Console Foam		1	1

112	N/A	Not available for this vehicle		3	
113	293200093	Neoprene Seal	11.99	@	1
113	293200093	Neoprene Seal	12.99	@	1
120	250000145	Torx Screw M5 X 14	1.17	6	6

Commander 800 STD, DPS, XT, 2014: 09- Decals

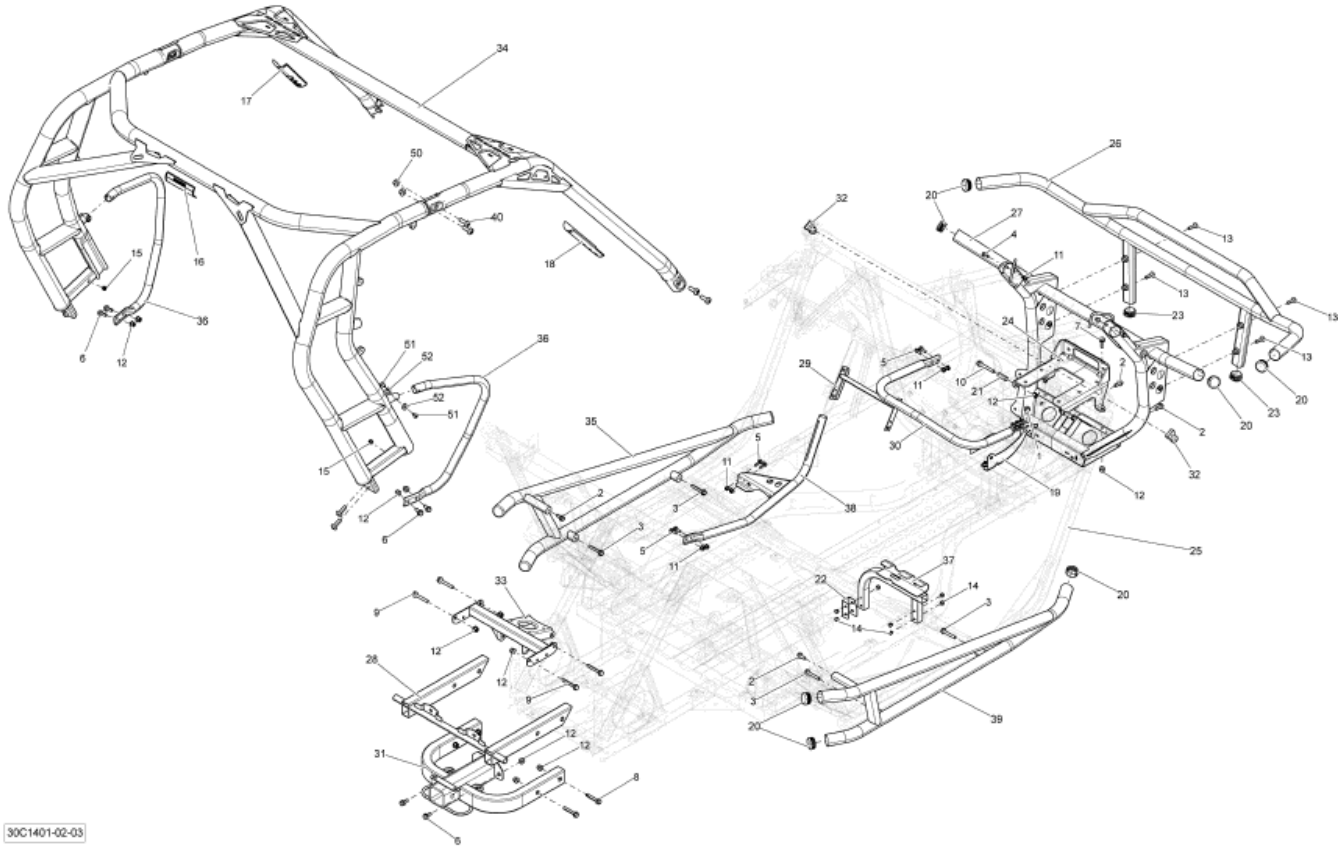


32C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
10	704903751	Hood Decal, Rotax 800. Red Model			2	2
10	704903752	Hood Decal, Rotax 800. Yellow Model			2	2
10	704903753	Hood Decal, Rotax 800. Magnesium Model			2	2
10	704903754	Hood Decal, Rotax 800. Camo Model			2	2
70	219902469	Logo BRP, 68 mm	12.99		1	1
70	219902469	Logo BRP, 68 mm	29.49		1	1
80	704902310	Lateral Decal, Commander. DPS	12.49		2	2
80	704902311	Lateral Decal, Commander XT. XT Yellow Model	12.49		2	2
80	704902509	Lateral Decal, Commander XT. XT Camo Model	16.99		2	2
80	704902716	Lateral Decal, Commander XT. XT Magnesium Model	16.99		2	2
80	704902999	Lateral Decal, Commander. STD	16.99		2	2
150	704903587	Decal ROTAX POWER. Yellow Model			2	2
150	704903766	Decal ROTAX POWER. Magnesium Model			2	2
150	704903767	Decal ROTAX POWER. XT Camo Model			2	2
150	704903804	Decal ROTAX POWER. Red Model			2	2
180	704902065	Logo Can-Am, 35 mm	8.49		1	1
300	704902320	Decal, Can-Am. Yellow Model	13.49		2	2
300	704902321	Decal, Can-Am. Red Model	12.49		2	2
300	704902508	Decal, Can-Am. Camo Model	16.99		2	2

300	704902717	Decal, Can-Am. Magnesium Model	12.49	2	2
380	219902469	Logo BRP, 68 mm	12.99	1	1
380	219902469	Logo BRP, 68 mm	29.49	1	1
390	219902677	Logo BRP, 20 mm. XT Model	9.49	1	1
400	704901558	Decal, Dynamic Power Steering. Except STD	7.49	1	1
400	704901558	Decal, Dynamic Power Steering. Except STD	7.99	1	1
500	704903671	Warning Decal, Death And Injuries. Except Europe		1	1
500	704903672	Warning Decal, Death And Injuries. Europe		1	1
550	704902407	Decal, Public Roads Use. Except Europe	0.01	1	1
560	704903809	Warning Decal, Tire Pressure		1	1
580	704902336	Warning Decal, Towing. Except Europe	0.01	1	1
580	704902436	Warning Decal, Towing. Europe	16.99	1	1
590	704902345	Warning Decal, Trailer	0.01	1	1
600	704903692	Warning Label "Speed Selector"		1	1
660	704903894	Warning Decal, Cargo Box		1	1
840	704903676	Warning Label "Passenger"		1	1
880	704902350	Warning Decal, Injury	0.01	2	2
890	704902491	Warning Decal, Road Usage. Europe	32.49	1	1
900	704903808	Int'l Label Multi Language. Except North America		1	1
910	704902434	Caution Decal, Maximum Load. Except LTD	8.49	2	2
920	707800373	Decal, Air Filter Maintenance	0.01	1	1
960	704902420	Warning Decal, MAX 100 kg/222 lb	0.01	1	1
970	704903434	Notice Decal, Steering. Except STD	0.01	1	1

Commander 800 STD, DPS, XT, 2014: 09- Frame

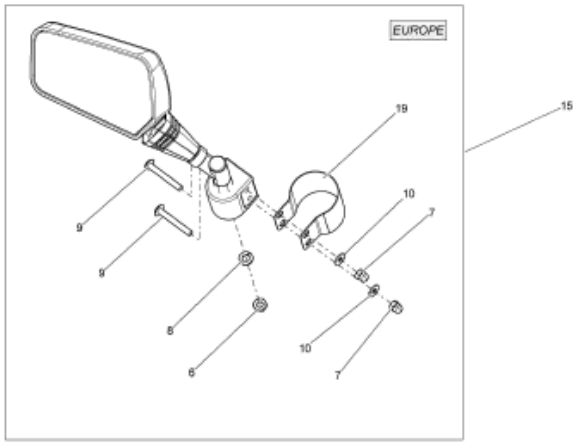


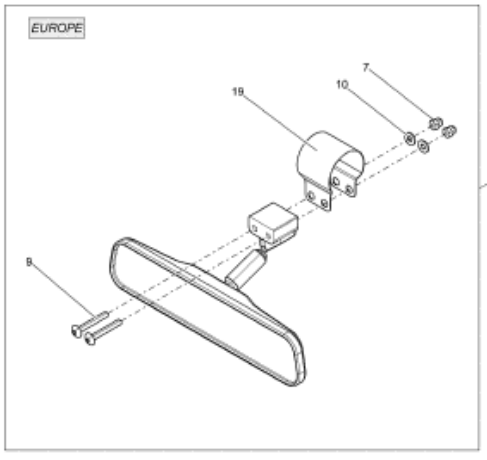
30C1401-02-03

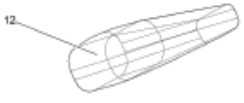
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207581644	Hex. Flanged Screw M8 X 16, Scotch Grip	4.33		1	1
2	207582044	Hex. Flanged Screw M8 X 20, Scotch Grip	1.30		2	2
3	N/A	Not available for this vehicle			2	
4	207661644	Hex. Flanged Screw M6 X 16	0.58		2	2
5	207662044	Hex. Flanged Screw M6 X 20	1.99		8	8
6	207682044	Hex. Flanged Screw M8 X 20	0.87		2	2
7	207682544	Hex. Flanged Screw M8 X 25	1.99	207682534	2	2
8	207685044	Hex. Flanged Screw M8 X 50	1.30		4	4
9	207685544	Hex. Flanged Screw M8 X 55	4.49		4	4
10	207686044	Hex. Flanged Screw M8 x 60	2.38		2	2
11	233261414	Hex. Flanged Elastic Nut M6	1.05		12	12
12	233281414	Hex. Flanged Elastic Nut M8	1.05		@	1
13	250000197	Torx Truss Screw M8 X 30	2.40		4	4
14	293150096	Hemlock Rivet, 6.5 mm	2.62		7	7
15	293450274	Insert	4.97		2	2
15	293450274	Insert	5.99		2	2
16	704903492	Warning Label			1	1
17	704903679	Warning Label			1	1
18	704903680	Warning Label			1	1
19	705201721	Front Differential Support	14.99		1	1
20	705202455	Cap	1.99		@	1

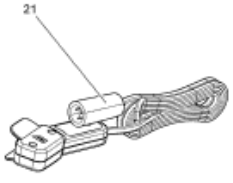
20	705202455	Cap	2.99	@	1
21	705202499	Bushing	2.49	2	2
21	705202499	Bushing	2.99	2	2
22	705202602	Seat Support	2.49	1	1
23	N/A	Not available for this vehicle		2	
24	715000704	Winch Plate	89.99	1	1
25	715002077	Frame Ass'y		1	1
26	715000958	Front Bumper, XT, X	219.99	1	1
27	705202995	Front Bumper	219.99	1	1
28	705203325	Box Holder	119.99	1	1
29	705203330	Reinforcement Panel	95.99	1	1
30	705203332	Handle	89.99	1	1
31	715001251	Trailer Hitch Ass'y	255.99	1	1
32	705203415	Binding Block		2	2
33	705203538	Differential Holder		1	1
34	705203579	Cage Kit, Front And Rear Section		1	1
35	N/A	Not available for this vehicle		1	
36	705203640	Side Protector Tube. Right		1	1
36	705203637	Side Protector Tube. Left		1	1
37	705203720	Seat Holder		1	1
38	705203828	Handle		1	1
39	N/A	Not available for this vehicle		1	
40	250000624	Screw Torx M10 X 30	1.99	12	12
50	233101464	Hex. Elastic Flange Nut , M10 X 1.5	1.99	4	4
51	250000439	Torx Truss Screw M6 X 14	4.49	4	4
52	705202223	Offset Washer	2.49	4	4

Commander 800 STD, DPS, XT, 2014: 09- Mirrors And Tools





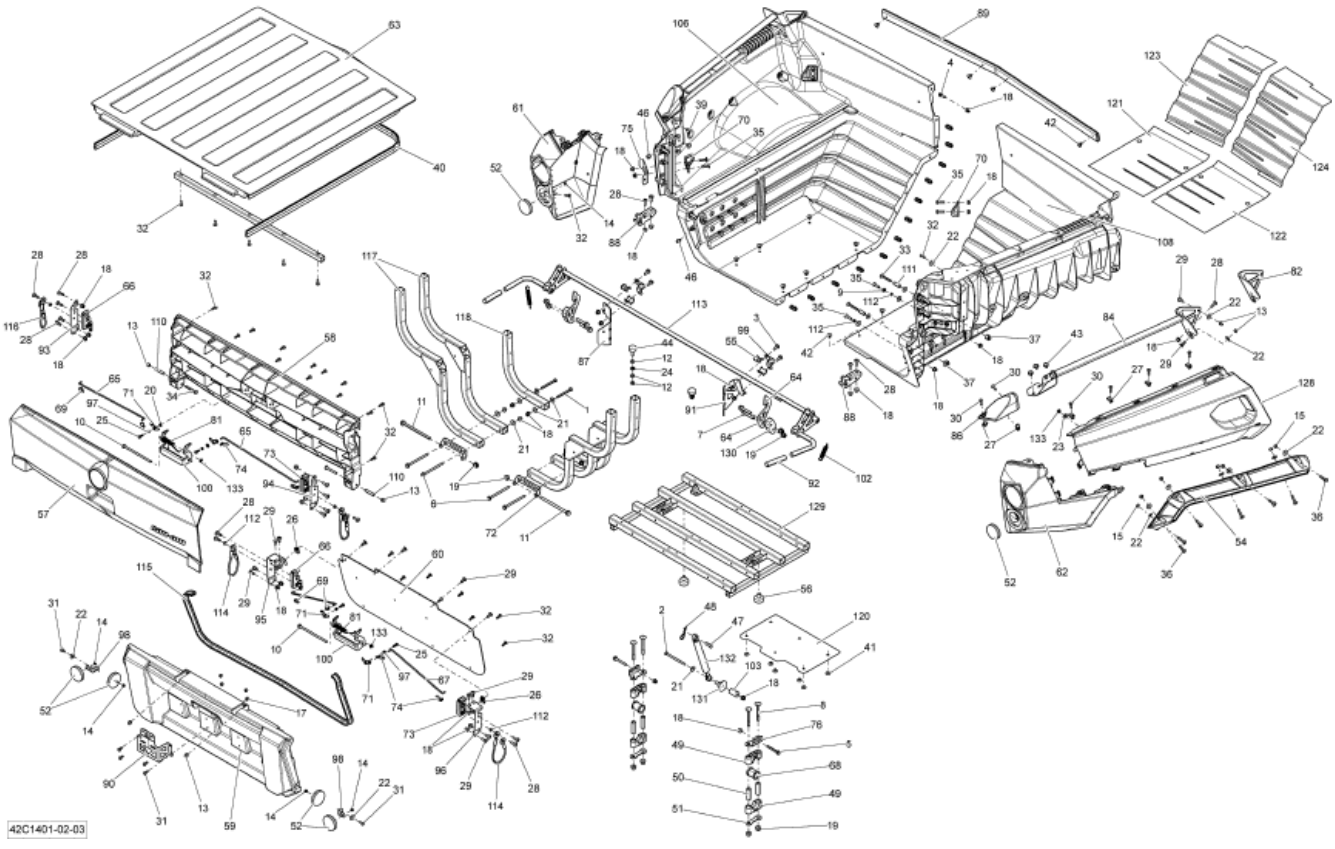




67C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
6	232180600	Hex. Jam Nut M8	0.52		1	1
7	232361493	Domed Nut M6	1.65		4	4
8	234181401	Lock Washer 8 mm	0.75		1	1
9	250000215	Torx Screw M6 X 45	1.47		4	4
10	250200039	Flat Washer	0.58		4	4
11	529000057	Adjustment Wrench	5.99		1	1
12	704700148	Tool Kit	38.99		1	1
12	704700148	Tool Kit	44.99		1	1
14	704902319	Cage Decal	8.49		1	1
14	704902319	Cage Decal	8.99		1	1
15	708200182	Left Mirror Kit	89.99	715001192	1	1
16	710000817	Key, Electronic. Europe	34.99		1	1
16	710002183	Key, Electronic	18.49		1	1
16	710002183	Key, Electronic	19.99		1	1
17	715001191	Central Mirror Kit	89.99		1	1
19	708200185	Mirror Clamp			2	2
21	710001002	Remote Control	81.99		1	1

Commander 800 STD, DPS, XT, 2014: 09- Rear Cargo Box



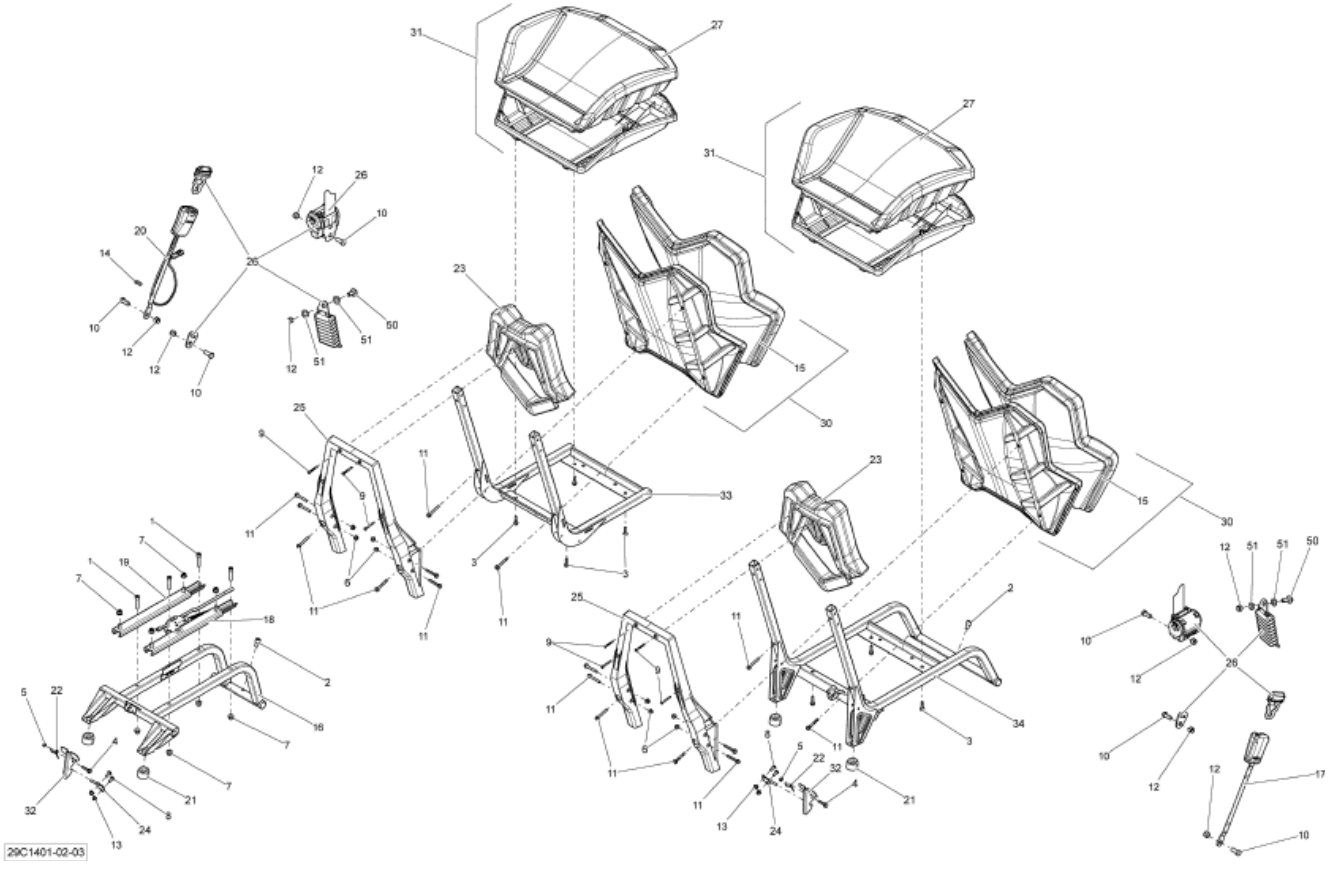
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207066544	Hex. Screw M6 X 65	0.37		4	4
2	207069044	Hex. Screw M6 X 90	3.70		1	1
3	207661644	Hex. Flanged Screw M6 X 16	0.58		4	4
4	207662044	Hex. Flanged Screw M6 X 20	1.99		13	13
5	207665044	Hex. Flanged Screw M6 X 50	3.13		2	2
6	207669584	Hex. Flanged Screw M6 X 95	2.62		4	4
7	207684586	Hex. Flanged Screw M8 X 45, Scotch Grip	2.99		4	4
8	207787044	Carriage Bolt M8 X 70	1.00		4	4
9	224061121	Flat Washer	0.43		2	2
10	230663084	Hex. Flanged Screw M6 X 130	2.62		2	2
11	230683034	Hex. Flanged Screw M8 X 130	5.99		2	2
12	232180600	Hex. Jam Nut M8	0.52		6	6
13	232361493	Domed Nut M6	1.65		8	8
14	232551414	Elastic Stop Nut M5	0.72		4	4
15	232561434	Elastic Stop Nut M6	1.99		14	14
17	233251414	Hex. Flanged Elastic Nut M5	1.99	233251434	8	8
18	233261414	Hex. Flanged Elastic Nut M6	1.05		60	60
19	233281414	Hex. Flanged Elastic Nut M8	1.05		10	10
20	234061410	Flat Washer 6 mm	1.00		4	4
21	234062410	Flat Washer 6 mm	0.62		13	13
22	234062670	Flat Washer	1.99		@	1
23	234081100	Flat Washer 8 mm, Nylon	0.87		2	2

24	234181401	Lock Washer 8 mm	0.75	2	2
25	241151640	Hex. Flanged Screw K50 X 16	1.17	4	4
26	250000048	Pannel Nut M6 X 1.0	1.35	2	2
27	250000079	Panel Nut M5 X 0.8	2.97	12	12
28	250000128	Torx Truss Screw M6 X 20	1.30	20	20
29	250000129	Torx Screw M6 X 16	0.97	16	16
30	250000130	Torx Screw M5 X 20	1.30	12	12
31	250000145	Torx Screw M5 X 14	1.17	10	10
32	250000146	Truss Head Torx Screw K50 X 16	1.17	36	36
33	250000215	Torx Screw M6 X 45	1.47	4	4
34	250000239	Torx Truss Screw M6 X 50	2.17	2	2
35	250000284	Torx Screw M6 x 25	1.99	12	12
36	250000371	Torx Screw M6 X 30 Stainless	1.99	14	14
37	269500725	Nut Housing Ass'y	3.49	4	4
37	269500725	Nut Housing Ass'y	3.99	4	4
39	293150100	Pop Rivet 3/16"	0.85	20	20
40	293250240	Neoprene Seal	10.99	@	1
41	293150103	Pop Rivet 3/16"	0.47	6	6
42	293150104	Pop Rivet 3/16"	0.47	16	16
43	293150190	Pop Rivet 3/16	4.49	6	6
44	293720091	Frame Rubber Bumper	4.99	2	2
46	293830005	Rubber Bumper	4.49	4	4
46	293830005	Rubber Bumper	4.99	4	4
47	414079100	Pin	1.99	1	1
48	414575600	Hair Pin	1.58	1	1
49	506150400	Housing Half	5.99	4	4
49	506150400	Housing Half	6.29	4	4
50	506150500	Housing Bushing	5.99	4	4
50	506150500	Housing Bushing	6.29	4	4
51	506150600	Stopper Plate	3.49	2	2
51	506150600	Stopper Plate	3.66	2	2
52	705002408	Reflector, Red. Except Europe	7.49	4	4
52	705002408	Reflector, Red. Except Europe	7.99	4	4
52	705002408	Reflector, Red. Europe	7.49	2	2
52	705002408	Reflector, Red. Europe	7.99	2	2
54	705003603	LH Upper Rear Mudguards	24.99	1	1
54	705003604	RH Upper Rear Mudguards	24.99	1	1
55	705500033	Half Ring	2.47	4	4
55	705500033	Half Ring	2.99	4	4
56	708000884	Rubber Stopper	5.99	2	2
57	708300052	Outside Top Pannel, Yellow. DPS	83.99	1	1
57	708300441	Outside Top Pannel, Red. Red Model	83.99	1	1
57	708300442	Outside Top Pannel, Camo. Camo Model	189.99	1	1
57	708300552	Outside Top Pannel, Magnesium. Magnesium Model	299.99	1	1
58	708300053	Inside Top Pannel	89.49	1	1
59	715001255	Lower Panel Ass'y. Except Europe	99.99	1	1
59	715001255	Lower Panel Ass'y. Europe	99.99	1	1
60	708300073	Inside Bottom Pannel	10.99	1	1
61	708300103	LH Rear Facia. DPS	13.49	1	1

61	708300103	LH Rear Facia. STD Except Europe	13.49	1	1
61	708300103	LH Rear Facia. XT Except Europe	13.49	1	1
61	708300559	LH Rear Facia. STD Europe	13.49	1	1
62	708300104	RH Rear Facia. DPS	13.49	1	1
62	708300104	RH Rear Facia. STD Except Europe	13.49	1	1
62	708300104	RH Rear Facia. XT Except Europe	13.49	1	1
62	708300560	RH Rear Facia. STD Europe	13.49	1	1
63	708300131	Separator Pannel Ass'y	209.49	1	1
64	708300136	Box Retainer	4.99	2	2
65	708300160	Top Rod	1.99	2	2
66	708300162	LH Latch	12.49	2	2
67	708300164	Lower Bottom Rod	1.99	2	2
68	708300172	Pivot Bushing	2.49	2	2
69	708300182	LH Tie Rod Clip	0.99	4	4
69	708300182	LH Tie Rod Clip	1.99	4	4
70	708300183	Retaining Plate	5.99	4	4
71	708300184	Activator	5.99	4	4
72	708300185	Bracket Pivot	2.49	2	2
73	708300201	RH Latch	12.49	2	2
74	708300202	RH Tie Rod Clip	0.99	4	4
74	708300202	RH Tie Rod Clip	1.99	4	4
75	708300206	Retaining Plate Support	2.49	2	2
76	708300210	Adjustable Stopper Plate	2.49	2	2
81	708300219	Spring	2.49	2	2
82	708300333	LH Painted Rail Cap	10.99	1	1
82	708300334	RH Painted Rail Cap	10.99	1	1
84	708300231	LH Welded Rail	49.99	1	1
84	708300232	RH Welded Rail	49.99	1	1
86	708300233	LH Rail Cover	0.99	1	1
86	708300234	RH Rail Cover	3.49	1	1
87	708300278	LH Latch Lever Support	4.99	1	1
88	708300345	Upper Pivot Support	2.49	2	2
89	708300346	Front Support	19.49	1	1
90	708300349	Plate Support	24.99	2	2
91	708300351	RH Latch Lever Support	4.99	1	1
92	708300358	Cap Latch Lever	3.49	2	2
93	708300359	LH Upper Support	4.49	1	1
94	708300360	RH Upper Support	4.49	1	1
95	708300361	LH Lower Support	5.99	1	1
96	708300362	RH Lower Support	5.99	1	1
97	708300365	Bushing	4.49	4	4
98	708300367	Reflector Support	1.99	2	2
99	708300392	Clamp Reatiner	1.99	2	2
100	708300398	Handle	9.49	2	2
102	708300454	Spring	2.49	2	2
103	708300470	Spacer	5.99	1	1
106	715001259	LH Box Ass'y. STD, DPS	84.99	1	1
106	715001259	LH Box Ass'y. XT	84.99	1	1
108	715001257	RH Box Ass'y. STD, DPS	76.99	1	1

108	715001257	RH Box Ass'y. XT	76.99	1	1
110	708300735	Bushing	7.99	2	2
111	708300736	Spacer	5.99	4	4
112	708300737	Bushing	3.99	8	8
113	708300751	Cargo Handle Ass'y	47.99	1	1
114	708300762	Lower Retainer Cable	10.99	2	2
115	293250240	Neoprene Seal	10.99	@	1
116	708300763	Upper Retainer Cable	19.99	2	2
116	708300763	Upper Retainer Cable	20.99	2	2
117	708300879	Welded Lateral Support, Black	270.99	4	4
118	708300877	Lateral Support, Black	124.99	2	2
120	708300780	Heat Deflector	9.99	1	1
121	708300809	Heat Deflector Sheet	5.99	1	1
122	708300810	Heat Deflector Sheet	5.99	1	1
123	708300811	Heat Deflector Sheet	5.99	1	1
124	708300812	Heat Deflector Sheet	5.99	1	1
128	708300820	LH Rear Fender, Yellow. DPS		1	1
128	708300822	LH Rear Fender, Red. STD		1	1
128	708300820	LH Rear Fender, Yellow. XT Yellow Model		1	1
128	708300834	LH Rear Fender, Camo. XT Camo Model	530.99	1	1
128	708300838	LH Rear Fender, Magnesium. Magnesium Model		1	1
128	708300821	RH Rear Fender, Yellow. DPS	84.99	1	1
128	708300823	RH Rear Fender, Red. STD		1	1
128	708300821	RH Rear Fender, Yellow. XT Yellow Model	84.99	1	1
128	708300835	RH Rear Fender, Camo. XT Camo Model		1	1
128	708300839	RH Rear Fender, Magnesium. Magnesium Model	530.99	1	1
129	708300875	Box Support, Black	222.49	1	1
130	708300902	Spacer		2	2
131	708301059	Spacer		1	1
132	708301136	Gaz Shock		1	1
133	732610072	Push Nut	1.18	4	4

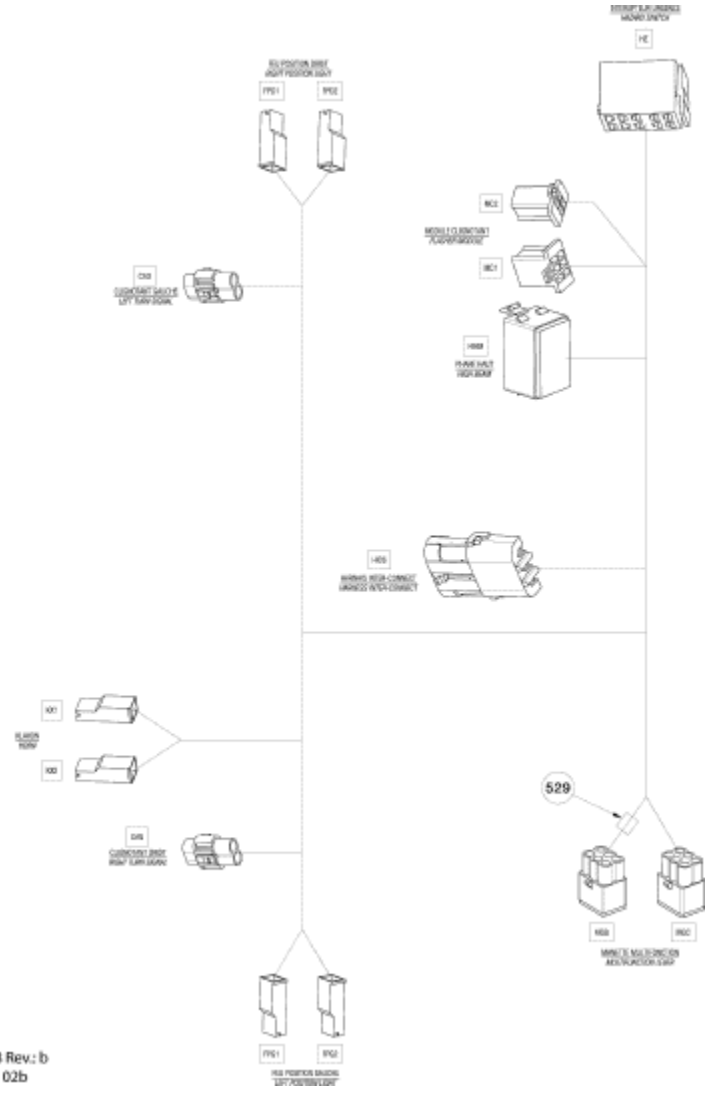
Commander 800 STD, DPS, XT, 2014: 09- Seat



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	205084044	Socket Head Screw M8 X 40	2.32		4	4
2	205501644	Socket Screw M10 X 16	3.49		2	2
3	207562544	Hex. Flanged Screw M6 X 25, Scotch Grip	1.30		8	8
4	207663034	Hex. Flanged Screw M6 X 30	1.99		2	2
5	232561600	Hex. Elastic Stop Nut M6	0.87		2	2
6	233161464	Hex. Elastic Flange Nut M6	0.99		8	8
7	233281414	Hex. Flanged Elastic Nut M8	1.05		8	8
8	250000223	Torx Screw M6 X 16	1.99		4	4
9	250000490	Hex. Washer Head Screw PT K50 X 40	5.99		8	8
10	250000521	Hex. Cap Screw 7/16"X 1"	1.99		6	6
11	250000672	Hex. Flange Screw M6	1.99		16	16
12	250100135	Nylon Insert Hex. Lock Nut 7/16-20	5.99		6	6
13	293450274	Insert	4.97		4	4
13	293450274	Insert	5.99		4	4
14	293750008	Tie-Rap 350 mm	0.49		1	1
14	293750008	Tie-Rap 350 mm	0.99		1	1
15	708000675	Backrest Cover	79.99		2	2
16	708000667	Seat Member	41.99		1	1
17	708000844	Passenger Buckle Side. Except Europe	37.99		1	1
17	708000857	Passenger Buckle Side, Europe. Europe	65.49		1	1
18	708000846	RH Rail	23.49		1	1

19	708000848	LH Rail	34.99	1	1
20	708000856	Driver Buckle Side, Europe. Europe	101.49	1	1
20	708000987	Driver Buckle Side. Except Europe	58.99	1	1
21	708000899	Rubber Bumper	0.99	4	4
22	708000921	Spring	0.99	2	2
23	708001074	Head Rest		2	2
24	708001238	Retaining Rod	5.99	2	2
25	708001245	Seat Support		2	2
26	708001130	Safety Belt. Europe	193.99	2	2
26	708001302	Safety Belt. Except Europe		2	2
27	708001103	Cover Seat	54.99	2	2
30	708001316	Backrest Ass'y		2	2
31	708001318	Cushion Ass'y		2	2
32	708001355	Seat Latch		2	2
33	708001356	Operator Frame		1	1
34	708001357	Seat Frame		1	1
50	708000890	Safety Belt Screw	3.49	2	2
51	708000891	Position Washer	0.99	4	4

Commander 800 STD, DPS, XT, 2014: 10- Electrical Harness Cablage Europe



710003008 Rev.: b
15C1401b, 02b

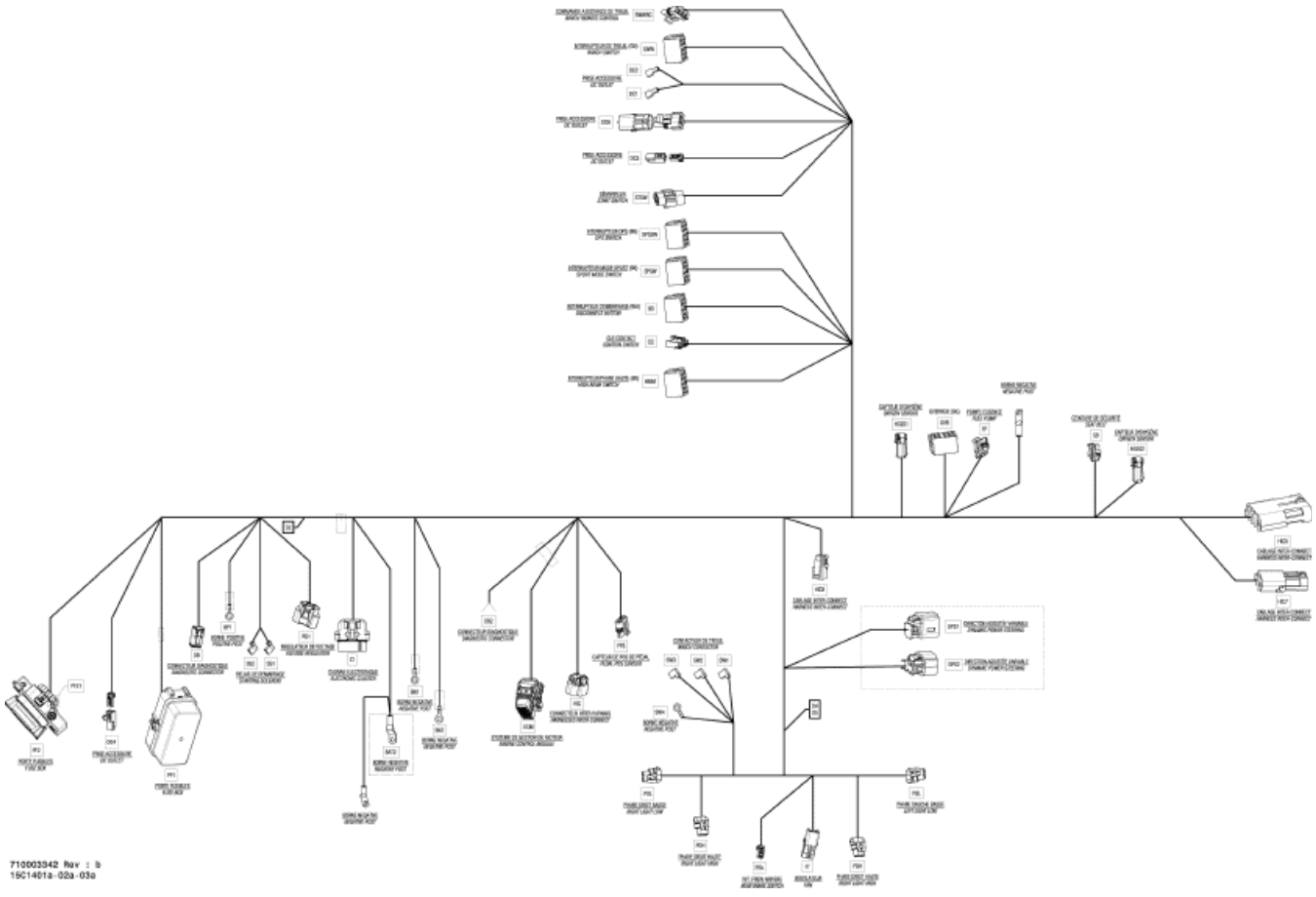
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710003008	Harness Ass'y. EUR	270.99		1	1
CAD	409012100	Female Terminal	2.49		@	1
CAD	409012100	Female Terminal	2.99		@	1
CAD	409012300	Seal	2.49		@	1
CAD	409012300	Seal	2.99		@	1
CAD	XXX	Female Housing, 2 Circuits			@	
CAG	409012100	Female Terminal	2.49		@	1
CAG	409012100	Female Terminal	2.99		@	1
CAG	409012300	Seal	2.49		@	1
CAG	409012300	Seal	2.99		@	1

CAG	409209200	Housing			@	1
D3	409012700	Diode	7.49		@	1
D3	409012700	Diode	7.99		@	1
D4	409012700	Diode	7.49		@	1
D4	409012700	Diode	7.99		@	1
FPD1	293550006	Female Terminal			@	1
FPD1	409010100	Female Terminal	4.49		@	1
FPD1	409010100	Female Terminal	4.71		@	1
FPD1	409010400	Female Terminal Housing, 1 Circuit	4.99		@	1
FPD1	409010400	Female Terminal Housing, 1 Circuit	5.99		@	1
FPD1	710000751	Shrink Tubing	1.49		@	1
FPD2	293550006	Female Terminal			@	1
FPD2	409010100	Female Terminal	4.49		@	1
FPD2	409010100	Female Terminal	4.71		@	1
FPD2	409010400	Female Terminal Housing, 1 Circuit	4.99		@	1
FPD2	409010400	Female Terminal Housing, 1 Circuit	5.99		@	1
FPD2	710000751	Shrink Tubing	1.49		@	1
FPG1	293550006	Female Terminal			@	1
FPG1	409010100	Female Terminal	4.49		@	1
FPG1	409010100	Female Terminal	4.71		@	1
FPG1	409010400	Female Terminal Housing, 1 Circuit	4.99		@	1
FPG1	409010400	Female Terminal Housing, 1 Circuit	5.99		@	1
FPG1	710000751	Shrink Tubing	1.49		@	1
FPG2	293550006	Female Terminal			@	1
FPG2	409010100	Female Terminal	4.49		@	1
FPG2	409010100	Female Terminal	4.71		@	1
FPG2	409010400	Female Terminal Housing, 1 Circuit	4.99		@	1
FPG2	409010400	Female Terminal Housing, 1 Circuit	5.99		@	1
FPG2	710000751	Shrink Tubing	1.49		@	1
HIBM	293550006	Female Terminal			@	1
HIBM	710002407	Housing			@	1
HIBM	710002863	Terminal			@	1
HIC6	278000222	Male Terminal	2.49		@	1
HIC6	278000222	Male Terminal	2.99		@	1
HIC6	278000281	Female Terminal Housing, 3 Circuits	6.99		@	1
HIC6	278000281	Female Terminal Housing, 3 Circuits	7.99		@	1
HIC6	278000585	Wire Seal (20 Gauge) (Purple)(Packard)	4.49	278001065	@	1
HIC6	278000585	Wire Seal (20 Gauge) (Purple)(Packard)	4.99	278001065	@	

					1
HIC6	710000992	Clip	3.49	@	1
HZ	293550006	Female Terminal		@	1
HZ	710001931	Terminal	1.99	@	1
HZ	710002000	Housing	5.99	@	1
KX1	293550006	Female Terminal		@	1
KX1	409010100	Female Terminal	4.49	@	1
KX1	409010100	Female Terminal	4.71	@	1
KX1	409010400	Female Terminal Housing, 1 Circuit	4.99	@	1
KX1	409010400	Female Terminal Housing, 1 Circuit	5.99	@	1
KX1	710000751	Shrink Tubing	1.49	@	1
KX2	293550006	Female Terminal		@	1
KX2	409010100	Female Terminal	4.49	@	1
KX2	409010100	Female Terminal	4.71	@	1
KX2	409010400	Female Terminal Housing, 1 Circuit	4.99	@	1
KX2	409010400	Female Terminal Housing, 1 Circuit	5.99	@	1
KX2	710000751	Shrink Tubing	1.49	@	1
MC1	293550006	Female Terminal		@	1
MC1	710002314	Housing	12.49	@	1
MC1	710002314	Housing	13.99	@	1
MC1	710002315	Terminal	2.49	@	1
MC1	710002315	Terminal	2.99	@	1
MC2	293550006	Female Terminal		@	1
MC2	710002313	Housing	14.49	@	1
MC2	710002313	Housing	15.99	@	1
MC2	710002315	Terminal	2.49	@	1
MC2	710002315	Terminal	2.99	@	1
MGB	409012100	Female Terminal	2.49	@	1
MGB	409012100	Female Terminal	2.99	@	1
MGB	409012300	Seal	2.49	@	1
MGB	409012300	Seal	2.99	@	1
MGB	710000080	Cap	4.49	@	1
MGB	710000080	Cap	4.99	@	1
MGB	710000081	Female Housing, 6 Circuits	5.80	@	1
MGB	710000081	Female Housing, 6 Circuits	6.99	@	1
MGC	409012100	Female Terminal	2.49	@	1
MGC	409012100	Female Terminal	2.99	@	1
MGC	409012300	Seal	2.49	@	

					1
MGC	409012300	Seal	2.99	@	1
MGC	710000080	Cap	4.49	@	1
MGC	710000080	Cap	4.99	@	1
MGC	710000081	Female Housing, 6 Circuits	5.80	@	1
MGC	710000081	Female Housing, 6 Circuits	6.99	@	1

Commander 800 STD, DPS, XT, 2014: 10- Electrical Harness Main Harness



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710003342	Main Harness Ass'y			1	1
BAT2	710000519	Open Barrel	6.99		@	1
BAT2	710000519	Open Barrel	7.99		@	1
BD	710002001	Housing Connector	9.99		@	1
BD	710003047	Terminal	3.99		@	1
BN1	710000913	Terminal	4.99		@	1
BN1	710000913	Terminal	5.99		@	1
BN2	278001392	Open Barrel	2.49		@	1
BN2	278001392	Open Barrel	2.99		@	1
BP1	710000913	Terminal	4.99		@	1
BP1	710000913	Terminal	5.99		@	1
CC	710000849	Male Housing, 6 Circuits	7.49		@	1
CC	710000849	Male Housing, 6 Circuits	7.99		@	1
CC	710000848	Lock	1.63		@	1
CC	710000848	Lock	1.99		@	1
CC	710001635	Terminal	1.99		@	1
CC	710001635	Terminal	2.99		@	1
CI	515175801	Female Housing, 24 Circuits	8.49		@	1
CI	515175801	Female Housing, 24 Circuits	8.99		@	

					1
CI	515175802	Retainer Block	7.49	@	1
CI	515175802	Retainer Block	7.99	@	1
CI	515175812	Plug	4.49	@	1
CI	515175812	Plug	4.99	@	1
CI	710000399	Female Housing	10.99	@	1
CI	710000399	Female Housing	11.99	@	1
CI	515175803	Wire Seal	12.49	@	1
CI	515175803	Wire Seal	13.99	@	1
CI	710001131	Female Terminal	4.99	@	1
CI	710001131	Female Terminal	5.99	@	1
D2	409012700	Diode	7.49	@	1
D2	409012700	Diode	7.99	@	1
D4	409012700	Diode	7.49	@	1
D4	409012700	Diode	7.99	@	1
D5	409012700	Diode	7.49	@	1
D5	409012700	Diode	7.99	@	1
DB	278002896	Housing, 6 Circuits	11.99	@	1
DB	515175678	Male Wedge, 6 Circuits	4.49	@	1
DB	515175678	Male Wedge, 6 Circuits	4.99	@	1
DB	278001665	Female Terminal	4.49	@	1
DB	278001665	Female Terminal	4.99	@	1
DB2	278001665	Female Terminal	4.49	@	1
DB2	278001665	Female Terminal	4.99	@	1
DC1	409010800	Female Terminal	0.99	@	1
DC1	409010800	Female Terminal	1.04	@	1
DC2	409010800	Female Terminal	0.99	@	1
DC2	409010800	Female Terminal	1.04	@	1
DC3	515175658	Female Housing, 2 Circuits	11.99	@	1
DC3	515175658	Female Housing, 2 Circuits	12.99	@	1
DC3	710000667	Male Housing, 2 Circuits	4.99	@	1
DC3	710000667	Male Housing, 2 Circuits	5.99	@	1
DC3	515175231	Female Terminal	2.49	@	1
DC3	515175231	Female Terminal	2.99	@	1
DC4	515175658	Female Housing, 2 Circuits	11.99	@	1
DC4	515175658	Female Housing, 2 Circuits	12.99	@	1
DC4	710000667	Male Housing, 2 Circuits	4.99	@	1
DC4	710000667	Male Housing, 2 Circuits	5.99	@	1
DC4	515175231	Female Terminal	2.49	@	1
DC4	515175231	Female Terminal	2.99	@	1
DC6	710000992	Clip	3.49	@	1
DC6	278000217	Female Housing, 2 Circuits	6.99	@	1
DC6	278000217	Female Housing, 2 Circuits	7.99	@	1
DC6	278000220	Male Connector, 2 Circuits	9.99	@	1
DC6	278000220	Male Connector, 2 Circuits	10.99	@	1
DC6	278000216	Wire Seal	2.49	@	1
DC6	278000216	Wire Seal	2.99	@	1

DC6	278000218	Wire Seal	2.49	@	1
DC6	278000218	Wire Seal	2.99	@	1
DC6	409007300	Female Terminal	14.49	@	1
DC6	409007300	Female Terminal	15.99	@	1
DPS1	710001161	Housing	7.49	@	1
DPS1	710001161	Housing	7.99	@	1
DPS1	710001162	Lock	3.49	@	1
DPS1	710001162	Lock	3.99	@	1
DPS1	710001225	Cap	5.99	@	1
DPS1	710001225	Cap	6.99	@	1
DPS1	710001114	Cap	11.99	@	1
DPS1	710001114	Cap	12.99	@	1
DPS1	710001163	Wire Seal	4.49	@	1
DPS1	710001163	Wire Seal	4.99	@	1
DPS1	710001164	Female Terminal	4.99	@	1
DPS1	710001164	Female Terminal	5.99	@	1
DPS2	278001325	Fuse Holder	5.99	@	1
DPS2	278001325	Fuse Holder	6.99	@	1
DPS2	710000113	Female Terminal	4.49	@	1
DPS2	710000113	Female Terminal	4.99	@	1
DPSSW	710002000	Housing	5.99	@	1
DPSSW	710003047	Terminal	3.99	@	1
ECM	710001591	Cover	9.49	@	1
ECM	710001588	Female Terminal Housing, 48 Circuits	34.99	@	1
ECM	710001592	Plug	1.99	@	1
ECM	710001593	Plug	1.99	@	1
ECM	710001589	Female Terminal	1.99	@	1
ECM	710001727	Female Terminal	1.99	@	1
ECM	710001727	Female Terminal	2.99	@	1
FP	409209700	Female Housing, 4 Circuits	12.49	@	1
FP	409209700	Female Housing, 4 Circuits	13.11	@	1
FP	278001013	Wire Seal	2.49	@	1
FP	278001013	Wire Seal	2.99	@	1
FP	515176621	Wire Seal	4.99	@	1
FP	515176621	Wire Seal	5.99	@	1
FP	278001014	Female Terminal	1.99	@	1
FP	278001014	Female Terminal	2.99	@	1
FP	710001340	Female Terminal	3.49	@	1
FP	710001340	Female Terminal	3.99	@	1
FRA	515175658	Female Housing, 2 Circuits	11.99	@	1
FRA	515175658	Female Housing, 2 Circuits	12.99	@	1
FRA	515175231	Female Terminal	2.49	@	1
FRA	515175231	Female Terminal	2.99	@	1
FT	710000992	Clip	3.49	@	1
FT	278000217	Female Housing, 2 Circuits	6.99	@	1
FT	278000217	Female Housing, 2 Circuits	7.99	@	1
FT	278000218	Wire Seal	2.49	@	1

FT	278000218	Wire Seal	2.99	@	1
FT	409004300	Male Terminal	4.49	@	1
FT	409004300	Male Terminal	4.71	@	1
HIBM	710002000	Housing	5.99	@	1
HIBM	710003048	Terminal	3.99	@	1
HIBM	710003047	Terminal	3.99	@	1
HIC	710001928	Housing	10.99	@	1
HIC	710001928	Housing	11.99	@	1
HIC	710001221	Lock	7.49	@	1
HIC	710001221	Lock	7.99	@	1
HIC	710001225	Cap	5.99	@	1
HIC	710001225	Cap	6.99	@	1
HIC	710001230	Seal	1.99	@	1
HIC	710001230	Seal	2.99	@	1
HIC	710001233	Seal	1.99	@	1
HIC	710001233	Seal	2.99	@	1
HIC	710001229	Terminal	1.99	@	1
HIC	710001229	Terminal	2.99	@	1
HIC	710001228	Terminal	1.99	@	1
HIC	710001228	Terminal	2.99	@	1
HIC5	710000992	Clip	3.49	@	1
HIC5	278001065	Wire Seal	4.49	@	1
HIC5	278001065	Wire Seal	4.99	@	1
HIC5	278000222	Male Terminal	2.49	@	1
HIC5	278000222	Male Terminal	2.99	@	1
HIC7	710000992	Clip	3.49	@	1
HIC7	278000217	Female Housing, 2 Circuits	6.99	@	1
HIC7	278000217	Female Housing, 2 Circuits	7.99	@	1
HIC7	278000218	Wire Seal	2.49	@	1
HIC7	278000218	Wire Seal	2.99	@	1
HIC7	409004300	Male Terminal	4.49	@	1
HIC7	409004300	Male Terminal	4.71	@	1
HIC8	710003175	Housing		@	1
HIC8	710003177	Housing		@	1
HO2S1	710002466	Housing	2.99	@	1
HO2S1	710002469	Lock		@	1
HO2S1	278001482	Seal	2.49	@	1
HO2S1	278001482	Seal	2.99	@	1
HO2S1	710002597	Gold Terminal		@	1
HO2S2	710002466	Housing	2.99	@	1
HO2S2	710002469	Lock		@	1
HO2S2	278001482	Seal	2.49	@	1
HO2S2	278001482	Seal	2.99	@	1
HO2S2	710002597	Gold Terminal		@	1
OVR	710002000	Housing	5.99	@	1
OVR	710003047	Terminal	3.99	@	1
PDH	710002278	Housing		@	1

PDH	710002279	Lock	3.99	@	1
PDH	710001427	Wire Seal	1.99	@	1
PDH	710001427	Wire Seal	2.99	@	1
PDH	710000918	Female Terminal	4.49	@	1
PDH	710000918	Female Terminal	4.99	@	1
PDL	710002278	Housing		@	1
PDL	710002279	Lock	3.99	@	1
PDL	710001427	Wire Seal	1.99	@	1
PDL	710001427	Wire Seal	2.99	@	1
PDL	710000918	Female Terminal	4.49	@	1
PDL	710000918	Female Terminal	4.99	@	1
PF1	710000781	Fuse Puller	7.49	@	1
PF1	710001026	Fuse Cover	14.99	@	1
PF1	710001026	Fuse Cover	15.99	@	1
PF1	710002715	Logo Fuse Relay	4.99	@	1
PF1	278002172	Foam	3.49	@	1
PF1	278002172	Foam	3.99	@	1
PF1	710000660	Fuse Box Ass'y	27.49	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
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PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
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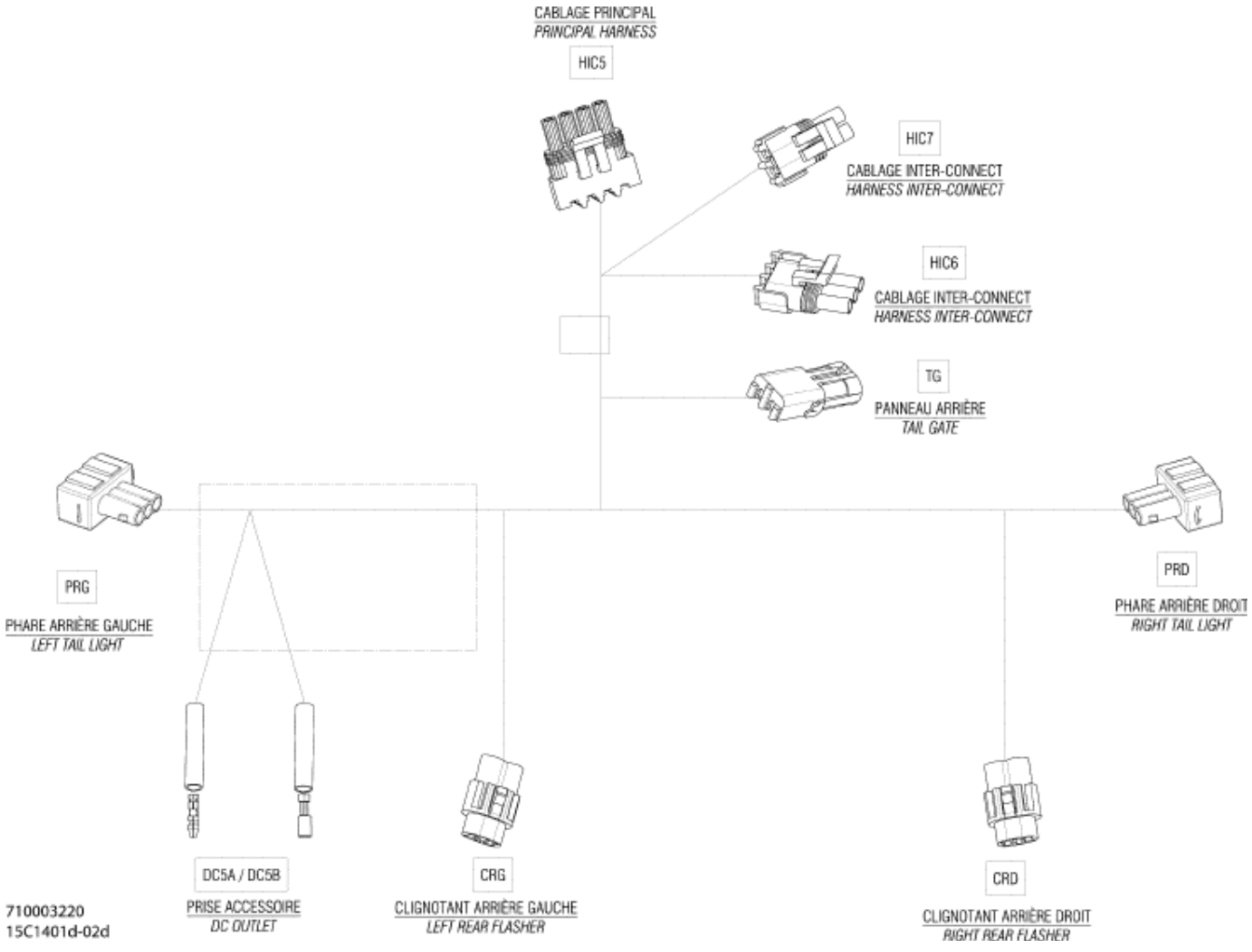
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000743	Little Fuse, 7.5 Amperes	5.99	@	1
PF1	710000743	Little Fuse, 7.5 Amperes	6.99	@	1
PF1	710000743	Little Fuse, 7.5 Amperes	5.99	@	1
PF1	710000743	Little Fuse, 7.5 Amperes	6.99	@	1
PF1	710000744	Little Fuse, 10 Amperes	5.99	@	1
PF1	710000744	Little Fuse, 10 Amperes	6.99	@	1
PF1	710000744	Little Fuse, 10 Amperes	5.99	@	1
PF1	710000744	Little Fuse, 10 Amperes	6.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	5.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	6.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	5.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	6.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	5.99	@	1

PF1	710000745	Little Fuse, 15 Amperes	6.99	@	1
PF1	710000747	Little Fuse, 30 Amperes	5.99	@	1
PF1	710000747	Little Fuse, 30 Amperes	6.99	@	1
PF1	710000747	Little Fuse, 30 Amperes	5.99	@	1
PF1	710000747	Little Fuse, 30 Amperes	6.99	@	1
PF1	710002590	Fuse, 25 Amps	19.49	@	1
PF1	710002590	Fuse, 25 Amps	20.99	@	1
PF1	710000840	Cap	3.49	@	1
PF1	710000840	Cap	3.99	@	1
PF1	515176774	Relay, 30 AMP	9.99	@	1
PF1	515176774	Relay, 30 AMP	10.99	@	1
PF1	515176774	Relay, 30 AMP	9.99	@	1
PF1	515176774	Relay, 30 AMP	10.99	@	1
PF1	710001778	Relay	9.99	@	1
PF1	710001778	Relay	10.99	@	1
PF1	710001778	Relay	9.99	@	1
PF1	710001778	Relay	10.99	@	1
PF1	710001778	Relay	9.99	@	1
PF1	710001778	Relay	10.99	@	1
PF1	278000999	Wire Seal	2.49	@	1
PF1	278000999	Wire Seal	2.99	@	1
PF1	415128501	Seal	1.49	@	1
PF1	415128501	Seal	1.56	@	1
PF1	710000836	Female Terminal	3.49	@	1
PF1	710000836	Female Terminal	3.99	@	1
PF1	710000837	Female Terminal	3.49	@	1
PF1	710000837	Female Terminal	3.99	@	1
PF2	710001048	Fuse, 50 AMP	4.49	@	1
PF2	710001048	Fuse, 50 AMP	4.49	@	1
PF2	710001047	Fuse, 40 AMP	6.49	@	1
PF2	710001047	Fuse, 40 AMP	6.99	@	1
PF2	710001996	Housing	29.99	@	1
PF2	710001633	Lock	5.99	@	1
PF2	710001633	Lock	6.99	@	1
PF2	233261494	Hex. Elastic Flanged Nut M6	0.72	@	1
PF2	710003134	Seal Joint		@	1
PF2	710001905	Terminal Joint	1.99	@	1
PF2	710001905	Terminal Joint	2.99	@	1
PF2	710001636	Terminal	1.99	@	1
PF2	710001636	Terminal	2.99	@	1
PF21	710000526	Protector Cap	7.49	@	1
PF21	710000526	Protector Cap	7.99	@	1
PF21	278001392	Open Barrel	2.49	@	1
PF21	278001392	Open Barrel	2.99	@	1
PGH	710002278	Housing		@	1
PGH	710002279	Lock	3.99	@	1
PGH	710001427	Wire Seal	1.99	@	1

PGH	710001427	Wire Seal	2.99	@	1
PGH	710000918	Female Terminal	4.49	@	1
PGH	710000918	Female Terminal	4.99	@	1
PGL	710002278	Housing		@	1
PGL	710002279	Lock	3.99	@	1
PGL	710001427	Wire Seal	1.99	@	1
PGL	710001427	Wire Seal	2.99	@	1
PGL	710000918	Female Terminal	4.49	@	1
PGL	710000918	Female Terminal	4.99	@	1
PPS	278002299	Female Terminal Housing, 6 Circuits	7.49	@	1
PPS	710001119	Female Terminal	4.49	@	1
RD1	710000879	Housing, 3 Circuits	17.49	@	1
RD1	710000879	Housing, 3 Circuits	18.99	@	1
RD1	710000882	Cap	7.49	@	1
RD1	710000882	Cap	7.99	@	1
RD1	710001932	Seal	1.99	@	1
RD1	710001932	Seal	2.99	@	1
RD1	710001934	Terminal	3.49	@	1
RD1	710001934	Terminal	3.99	@	1
SB	710002177	Housing	2.49	@	1
SB	710002043	Lock	0.99	@	1
SB	278001482	Seal	2.49	@	1
SB	278001482	Seal	2.99	@	1
SB	710001134	Female Terminal	4.99	@	1
SPSW	710002000	Housing	5.99	@	1
SPSW	710003047	Terminal	3.99	@	1
SS1	409010300	Female Terminal	3.49	@	1
SS1	409010300	Female Terminal	3.66	@	1
SS2	409010300	Female Terminal	3.49	@	1
SS2	409010300	Female Terminal	3.66	@	1
STSW	409012300	Seal	2.49	@	1
STSW	409012300	Seal	2.99	@	1
STSW	409012100	Female Terminal	2.49	@	1
STSW	409012100	Female Terminal	2.99	@	1
SW1	409010300	Female Terminal	3.49	@	1
SW1	409010300	Female Terminal	3.66	@	1
SW2	409010300	Female Terminal	3.49	@	1
SW2	409010300	Female Terminal	3.66	@	1
SW3	710000038	Female Terminal	3.49	@	1
SW3	710000038	Female Terminal	3.99	@	1
SW4	278000992	Open Barrel	1.49	@	1
SW4	278000992	Open Barrel	1.99	@	1
SWW	710002003	Housing Connector	9.99	@	1
SWW	710003047	Terminal	3.99	@	1
SWWRC	278000273	Male Housing, 3 Circuits	6.99	@	1
SWWRC	278000273	Male Housing, 3 Circuits	7.99	@	1
SWWRC	278001065	Wire Seal	4.49	@	1

SWWRC	278001065	Wire Seal	4.99	@	1
SWWRC	278000223	Female Terminal	2.49	@	1
SWWRC	278000223	Female Terminal	2.99	@	1

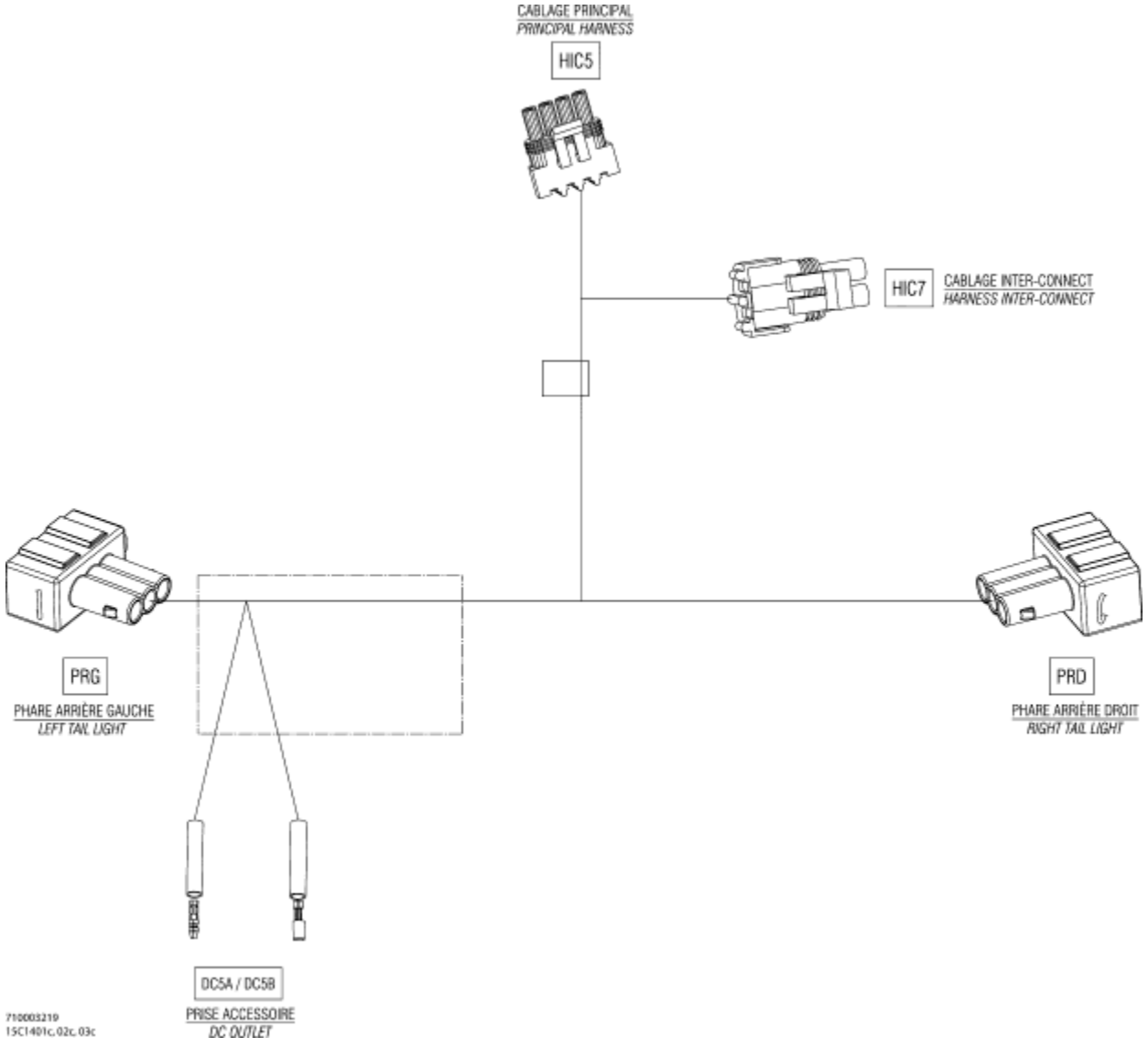
Commander 800 STD, DPS, XT, 2014: 10- Electrical Harness Rear, EUROPE



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710003220	Rear Harness. EUR	151.99		1	1
PRD	278000998	Female Terminal. EUR	2.49		6	6
PRD	278000998	Female Terminal. EUR	2.99		6	6
PRG	278000998	Female Terminal. EUR	2.49		6	6
PRG	278000998	Female Terminal. EUR	2.99		6	6
TG	278000222	Male Terminal. EUR	2.49		2	2
TG	278000222	Male Terminal. EUR	2.99		2	2
HIC7	409007300	Female Terminal. EUR	14.49		2	2
HIC7	409007300	Female Terminal. EUR	15.99		2	2
HIC5	278000223	Female Terminal. EUR	2.49		7	7
HIC5	278000223	Female Terminal. EUR	2.99		7	7
HIC6	278000223	Female Terminal. EUR	2.49		7	7
HIC6	278000223	Female Terminal. EUR	2.99		7	7

TG	278000217	Female Housing, 2 Circuits. EUR	6.99	1	1
TG	278000217	Female Housing, 2 Circuits. EUR	7.99	1	1
HIC7	278000220	Male Connector, 2 Circuits. EUR	9.99	1	1
HIC7	278000220	Male Connector, 2 Circuits. EUR	10.99	1	1
HIC6	278000273	Male Housing, 3 Circuits. EUR	6.99	1	1
HIC6	278000273	Male Housing, 3 Circuits. EUR	7.99	1	1
HIC5	278000395	Male Housing, 4 Circuits. EUR	11.99	1	1
HIC5	278000395	Male Housing, 4 Circuits. EUR	12.99	1	1
HIC7	278000218	Wire Seal. EUR	2.49	2	2
HIC7	278000218	Wire Seal. EUR	2.99	2	2
CRD	409012100	Female Terminal. EUR	2.49	4	4
CRD	409012100	Female Terminal. EUR	2.99	4	4
CRG	409012100	Female Terminal. EUR	2.49	4	4
CRG	409012100	Female Terminal. EUR	2.99	4	4
CRD	XXX	Female Housing, 2 Circuits. EUR		2	
CRD	409012300	Seal. EUR	2.49	4	4
CRD	409012300	Seal. EUR	2.99	4	4
CRG	409012300	Seal. EUR	2.49	4	4
CRG	409012300	Seal. EUR	2.99	4	4
DC5A	278001008	Insulated Sheath. EUR	2.49	1	1
DC5A	278001008	Insulated Sheath. EUR	2.99	1	1
DC5B	278001007	Insulated Sheath. EUR	2.49	1	1
DC5B	278001007	Insulated Sheath. EUR	2.99	1	1
PRD	415128501	Seal. EUR	1.49	6	6
PRD	415128501	Seal. EUR	1.56	6	6
PRG	415128501	Seal. EUR	1.49	6	6
PRG	415128501	Seal. EUR	1.56	6	6
HIC5	278001065	Wire Seal. EUR	4.49	9	9
HIC5	278001065	Wire Seal. EUR	4.99	9	9
DC5B	710000421	Female Terminal. EUR	3.49	1	1
DC5B	710000421	Female Terminal. EUR	3.99	1	1
DC5A	278002261	Female Terminal. EUR	4.49	1	1
DC5A	278002261	Female Terminal. EUR	4.99	1	1

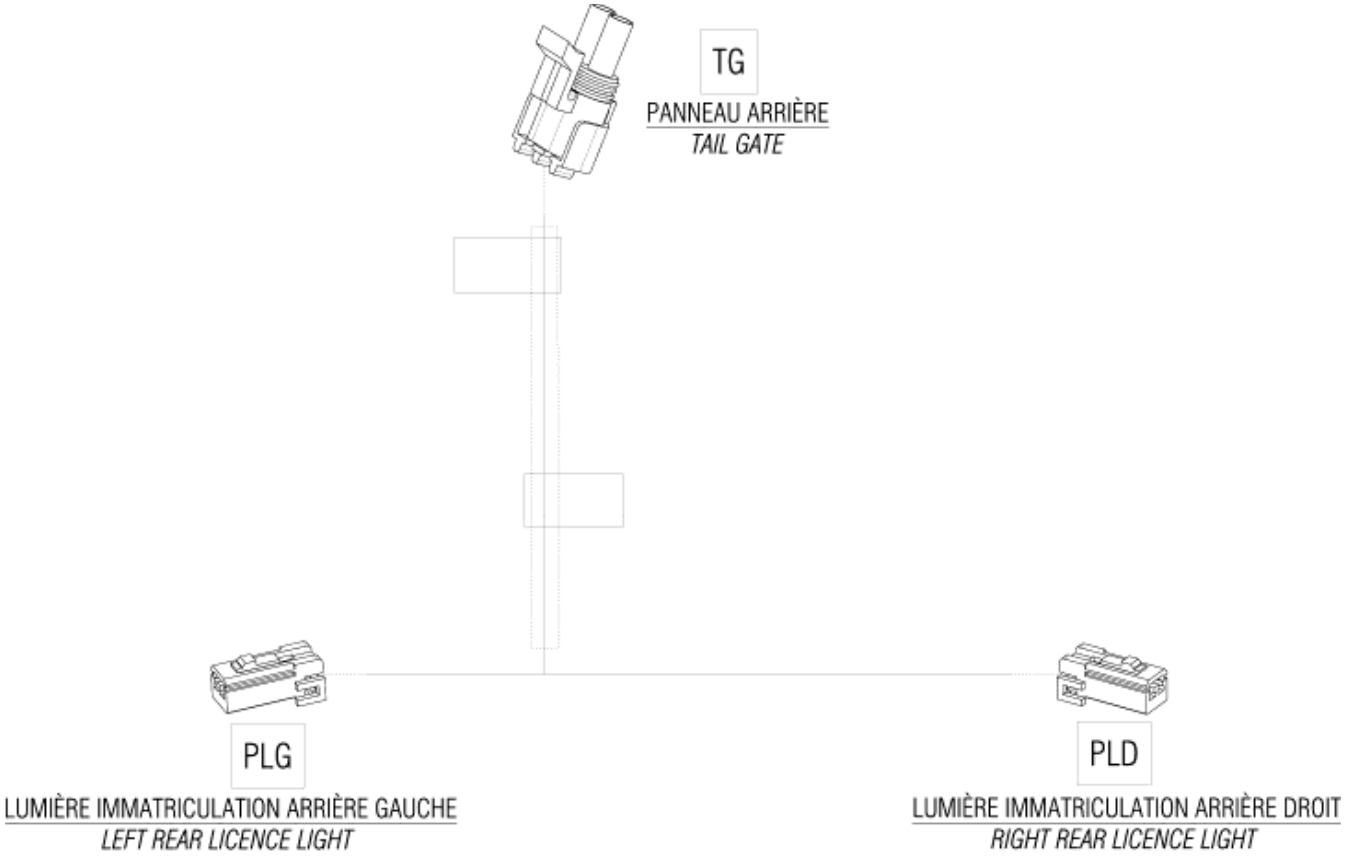
Commander 800 STD, DPS, XT, 2014: 10- Electrical Harness Rear, NA_Inter



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710003219	Rear Harness. North America, Inter	102.99		1	1
504	278001065	Wire Seal. North America, Inter	4.49		4	4
504	278001065	Wire Seal. North America, Inter	4.99		4	4
DC5A	278001008	Insulated Sheath. North America, Inter	2.49		1	1
DC5A	278001008	Insulated Sheath. North America, Inter	2.99		1	1
DC5A	278002261	Female Terminal. North America, Inter	4.49		1	1
DC5A	278002261	Female Terminal. North America, Inter	4.99		1	1
DC5B	278001007	Insulated Sheath. North America, Inter	2.49		1	1
DC5B	278001007	Insulated Sheath. North America, Inter	2.99		1	1

DC5B	710000421	Female Terminal. North America, Inter	3.49		1	1
DC5B	710000421	Female Terminal. North America, Inter	3.99		1	1
DC5B	293550006	Female Terminal. North America, Inter				1
HIC5	278000223	Female Terminal. North America, Inter	2.49		4	4
HIC5	278000223	Female Terminal. North America, Inter	2.99		4	4
HIC5	278000395	Male Housing, 4 Circuits. North America, Inter	11.99		1	1
HIC5	278000395	Male Housing, 4 Circuits. North America, Inter	12.99		1	1
HIC5	278000585	Wire Seal (20 Gauge) (Purple)(Packard). North America, Inter	4.49	278001065		1
HIC5	278000585	Wire Seal (20 Gauge) (Purple)(Packard). North America, Inter	4.99	278001065		1
HIC7	409007300	Female Terminal. North America, Inter	14.49		2	2
HIC7	409007300	Female Terminal. North America, Inter	15.99		2	2
HIC7	278000220	Male Connector, 2 Circuits. North America, Inter	9.99		1	1
HIC7	278000220	Male Connector, 2 Circuits. North America, Inter	10.99		1	1
HIC7	278000218	Wire Seal. North America, Inter	2.49		2	2
HIC7	278000218	Wire Seal. North America, Inter	2.99		2	2
PRD	278000998	Female Terminal. North America, Inter	2.49		6	6
PRD	278000998	Female Terminal. North America, Inter	2.99		6	6
PRD	415128501	Seal. North America, Inter	1.49		6	6
PRD	415128501	Seal. North America, Inter	1.56		6	6
PRD	XXX	Housing. North America, Inter				
PRG	278000998	Female Terminal. North America, Inter	2.49		6	6
PRG	278000998	Female Terminal. North America, Inter	2.99		6	6
PRG	XXX	Housing. North America, Inter				

Commander 800 STD, DPS, XT, 2014: 10- Electrical Harness Tail Gate, EUROPE

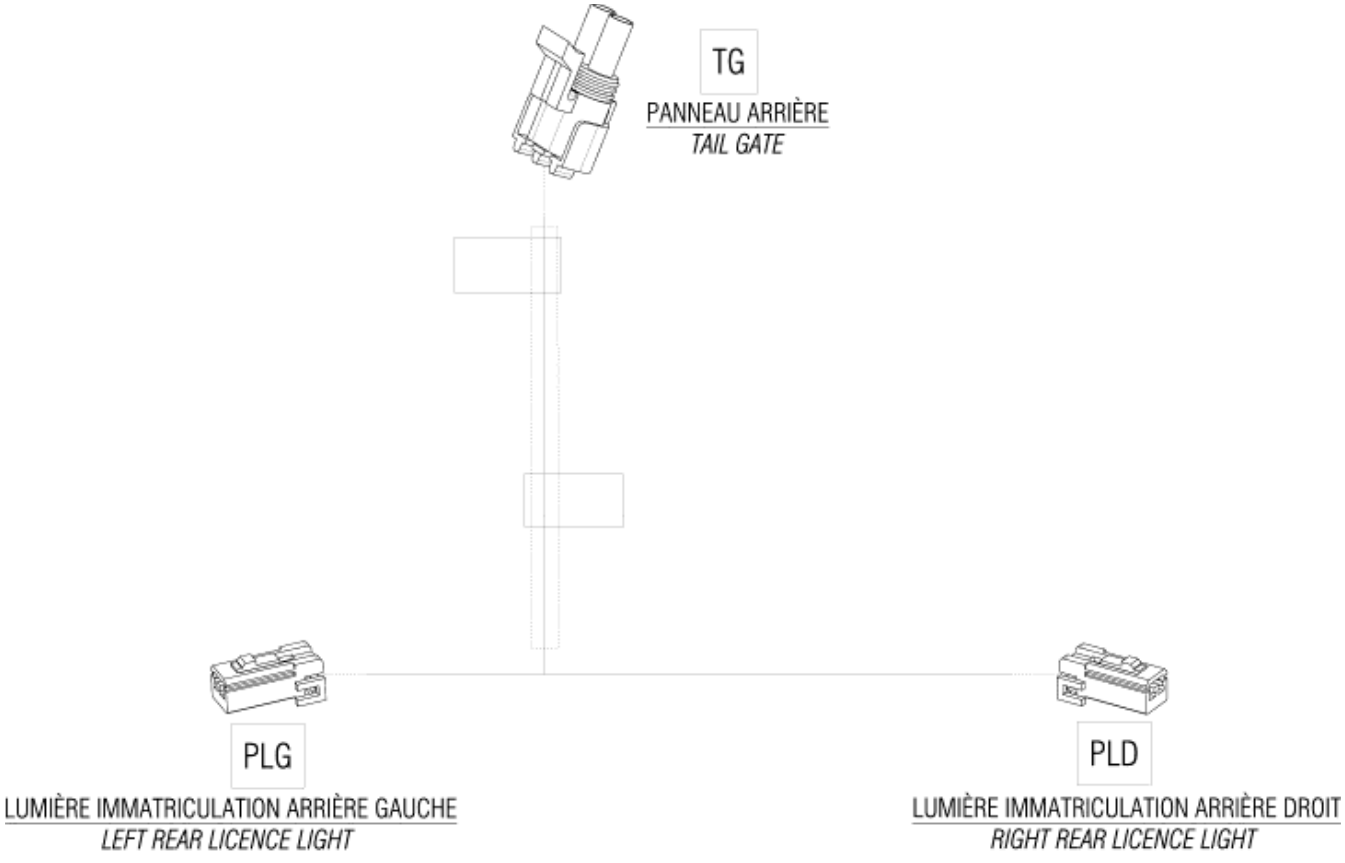


710002220
15C1401e-02e

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710002220	Tail Gate Harness Ass'y. EUR	99.49		1	1
PLD	515175231	Female Terminal. EUR	2.49		4	4
PLD	515175231	Female Terminal. EUR	2.99		4	4
PLD	515175658	Female Housing, 2 Circuits. EUR	11.99		2	2
PLD	515175658	Female Housing, 2 Circuits. EUR	12.99		2	2
PLG	515175231	Female Terminal. EUR	2.49		4	4
PLG	515175231	Female Terminal. EUR	2.99		4	4
PLG	515175658	Female Housing, 2 Circuits. EUR	11.99		2	2
PLG	515175658	Female Housing, 2 Circuits. EUR	12.99		2	2
TG	278000223	Female Terminal. EUR	2.49		2	2
TG	278000223	Female Terminal. EUR	2.99		2	2
TG	278000220	Male Connector, 2 Circuits. EUR	9.99		1	1

TG	278000220	Male Connector, 2 Circuits. EUR	10.99	1	1
TG	278001065	Wire Seal. EUR	4.49	2	2
TG	278001065	Wire Seal. EUR	4.99	2	2

Commander 800 STD, DPS, XT, 2014: 10- Electrical Harness Tail Gate, EUROPE

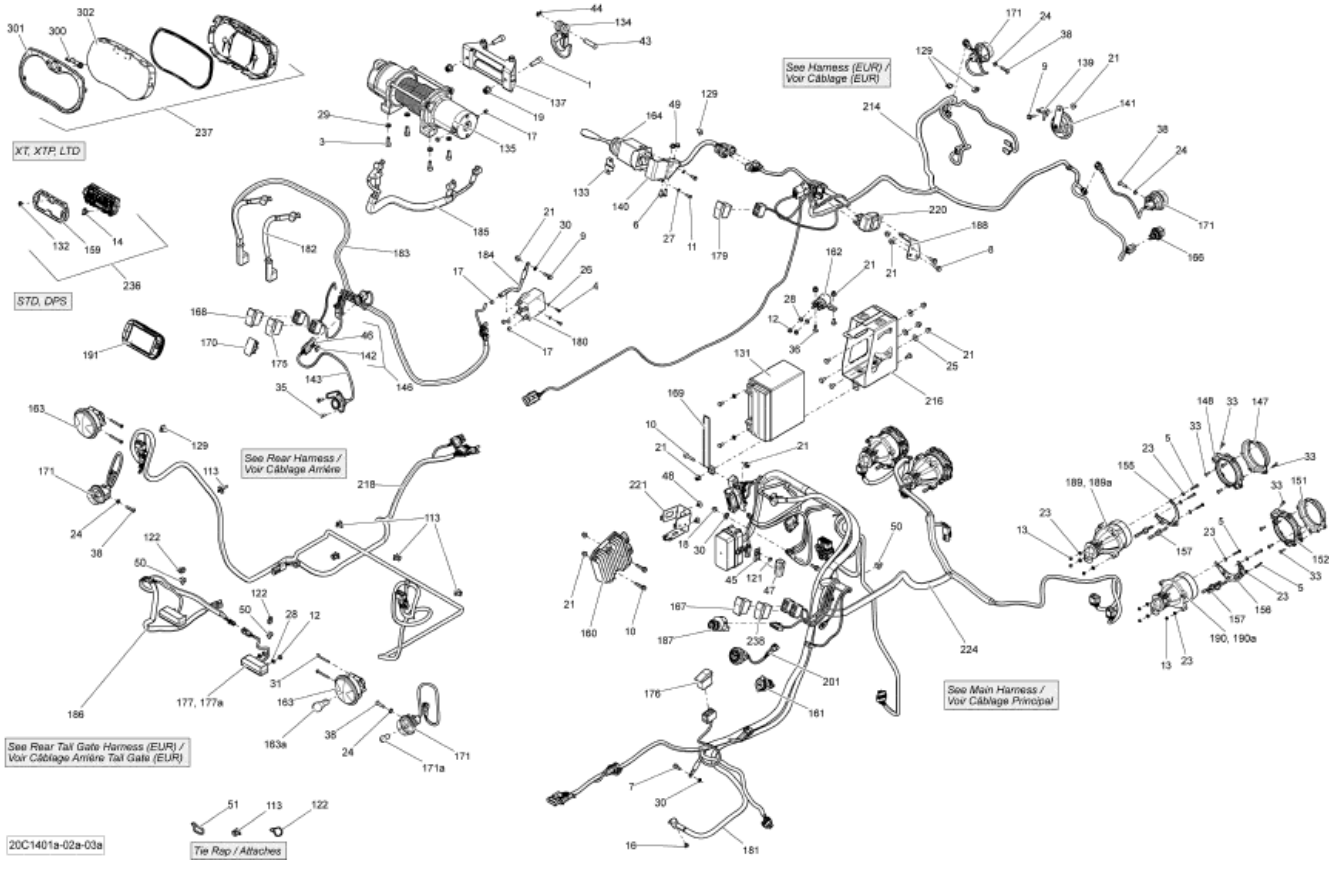


710002220
15C1401e-02e

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710002220	Tail Gate Harness Ass'y. EUR	99.49		1	1
PLD	515175231	Female Terminal. EUR	2.49		4	4
PLD	515175231	Female Terminal. EUR	2.99		4	4
PLD	515175658	Female Housing, 2 Circuits. EUR	11.99		2	2
PLD	515175658	Female Housing, 2 Circuits. EUR	12.99		2	2
PLG	515175231	Female Terminal. EUR	2.49		4	4
PLG	515175231	Female Terminal. EUR	2.99		4	4
PLG	515175658	Female Housing, 2 Circuits. EUR	11.99		2	2
PLG	515175658	Female Housing, 2 Circuits. EUR	12.99		2	2
TG	278000223	Female Terminal. EUR	2.49		2	2
TG	278000223	Female Terminal. EUR	2.99		2	2
TG	278000220	Male Connector, 2 Circuits. EUR	9.99		1	1

TG	278000220	Male Connector, 2 Circuits. EUR	10.99	1	1
TG	278001065	Wire Seal. EUR	4.49	2	2
TG	278001065	Wire Seal. EUR	4.99	2	2

Commander 800 STD, DPS, XT, 2014: 10- Electrical System All Models



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	205003044	Socket Screw M10 x 30	2.99		2	2
3	205082044	Socket Head Screw M8 X 20	0.87		4	4
4	207141044	Hex. Screw M4 X 10	0.87		2	2
5	207142544	Hex. Screw M4 X 25	1.53		12	12
6	207361644	Hex. Screw M6 X 16, Scotch Grip	0.70		2	2
7	207561644	Hex. Flanged Screw M6 X 16, Scotch Grip	1.47		1	1
8	207661644	Hex. Flanged Screw M6 X 16	0.58		2	2
9	207662044	Hex. Flanged Screw M6 X 20	1.99		@	1
10	207663034	Hex. Flanged Screw M6 X 30	1.99		3	3
11	210251680	Hex. Forming Screw M5 X 16	0.87		2	2
12	232061600	Hex. Nut M6	0.87		@	1
13	232541414	Elastic Stop Nut M4	0.47		12	12
14	715900265	Button	9.99		1	1
16	232561414	Elastic Stop Nut M6	1.99	232561434	1	1
17	232561434	Elastic Stop Nut M6	1.99		6	6
18	233061414	Hex. Flanged Nut M6	1.30		1	1
19	233201414	Hex. Flanged Elastic Nut M10	1.18		2	2
21	233261414	Hex. Flanged Elastic Nut M6	1.05		@	1
23	234051410	Flat Washer M5	0.43		24	24
24	234061410	Flat Washer 6 mm	1.00		4	4
25	234062410	Flat Washer 6 mm	0.62		5	5
26	234141601	Lock Washer 4 mm	0.87		2	2

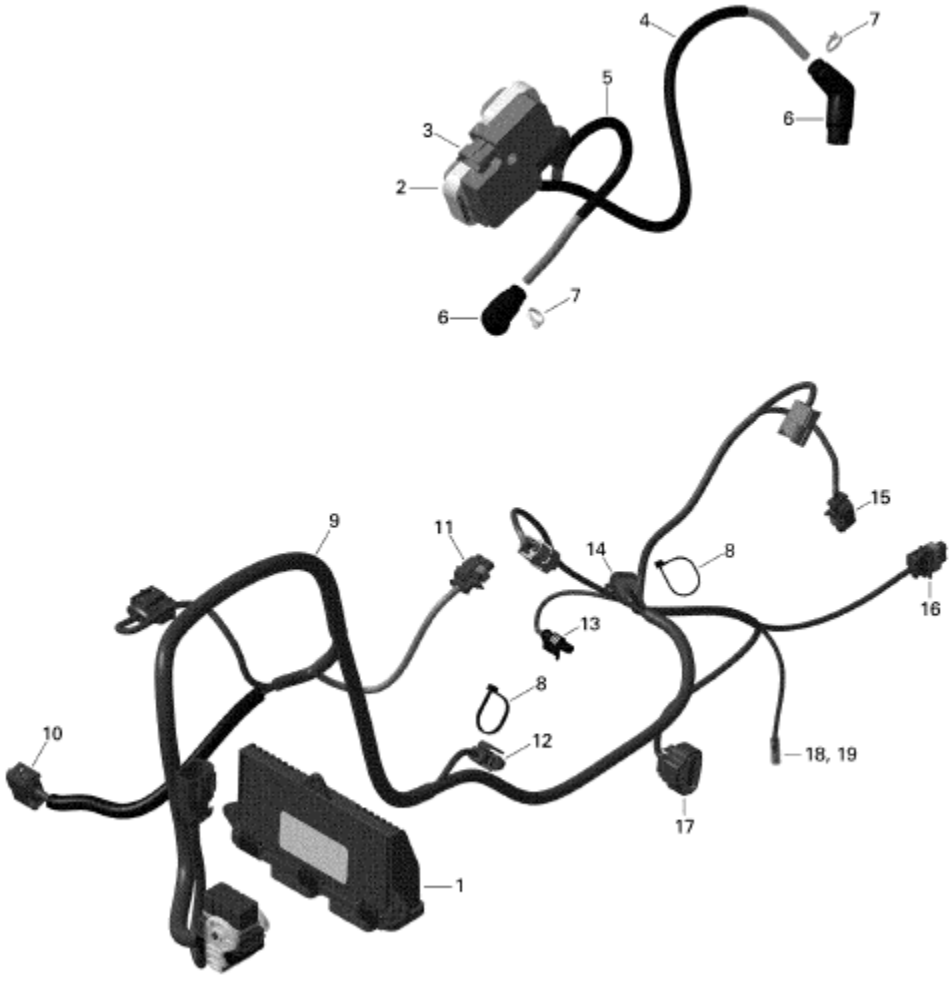
27	234151401	Lock Washer 5 mm	0.43	2	2
28	234161601	Lock Washer Helical M6	0.87	6	6
29	234181401	Lock Washer 8 mm	0.75	4	4
30	234461608	External Serrated Lock Washer 6 mm	0.87	@	1
31	241154540	Hex. Screw K50 X 45	1.99	4	4
33	250000084	Phillips Screw K40 X 16	2.00	22	22
35	250000146	Truss Head Torx Screw K50 X 16	1.17	2	2
36	250000223	Torx Screw M6 X 16	1.99	1	1
38	250000284	Torx Screw M6 x 25	1.99	4	4
43	250400021	Clevis Pin	8.99	1	1
43	250400021	Clevis Pin	9.99	1	1
44	250400022	Cotter Pin	4.49	1	1
44	250400022	Cotter Pin	4.99	1	1
45	270000141	Clip	7.49	1	1
45	270000141	Clip	7.99	1	1
46	278000281	Female Terminal Housing, 3 Circuits	6.99	1	1
46	278000281	Female Terminal Housing, 3 Circuits	7.99	1	1
47	278002704	Diagnostic Connector	14.99	1	1
47	278002704	Diagnostic Connector	15.99	1	1
48	293150103	Pop Rivet 3/16"	0.47	2	2
49	293450274	Insert	4.97	2	2
49	293450274	Insert	5.99	2	2
50	293730040	Mount Dart	0.99	@	1
50	293730040	Mount Dart	1.99	@	1
51	293750008	Tie-Rap 350 mm	0.49	@	1
51	293750008	Tie-Rap 350 mm	0.99	@	1
113	293750009	Tie-Rap 173 mm	0.99	@	1
113	293750009	Tie-Rap 173 mm	1.99	@	1
121	390402400	Pop Rivet 3/16"	0.28	1	1
122	414115200	Tie-Rap 180 mm	0.49	@	1
129	414227300	Clip	1.15	@	1
131	410301203	Battery Ass'y, 18 Amperes	112.99	1	1
132	704901270	BRP Logo, 13 mm	8.49	1	1
132	704901270	BRP Logo, 13 mm	8.99	1	1
133	704902614	Fasher Decal	12.49	1	1
134	705002329	Hook	26.99	1	1
135	705003944	Winch	524.99	1	1
137	715001119	Winch Cable Guide	51.99	1	1
139	709200284	Support	3.49	1	1
139	709200284	Support	3.99	1	1
140	709400810	Flasher Arm Support	19.99	1	1
141	710000983	Horn	26.99	1	1
142	710000992	Clip	3.49	1	1
143	710001023	Winch Connector	39.99	1	1
146	710001059	Connector Ass'y	5.99	1	1
146	710001059	Connector Ass'y	6.99	1	1
147	710001081	RH Low Front Housing	9.99	1	1
147	710001081	RH Low Front Housing	10.99	1	1
147	710001083	LH Low Front Housing	9.99	1	1

147	710001083	LH Low Front Housing	10.99	1	1
148	710001082	RH Low Rear Housing	5.99	1	1
148	710001082	RH Low Rear Housing	6.99	1	1
148	710001084	LH Low Rear Housing	5.99	1	1
148	710001084	LH Low Rear Housing	6.99	1	1
151	710001085	RH High Front Housing	9.99	1	1
151	710001085	RH High Front Housing	10.99	1	1
151	710001087	LH High Front Housing	9.99	1	1
151	710001087	LH High Front Housing	10.99	1	1
152	710001086	RH High Rear Housing	5.99	1	1
152	710001086	RH High Rear Housing	6.99	1	1
152	710001088	LH High Rear Housing	5.99	1	1
152	710001088	LH High Rear Housing	6.99	1	1
155	710001094	RH Low Light Support	2.49	1	1
155	710001094	RH Low Light Support	2.99	1	1
155	710001037	LH Low Light Support	2.49	1	1
155	710001037	LH Low Light Support	2.99	1	1
156	710001115	RH High Light Support	2.49	1	1
156	710001115	RH High Light Support	2.99	1	1
156	710001036	LH High Light Support	2.49	1	1
156	710001036	LH High Light Support	2.99	1	1
157	710001147	Setting Screw	9.49	8	8
157	710001147	Setting Screw	9.99	8	8
159	710001183	Trim Ring Ass'y	11.99	1	1
159	710001183	Trim Ring Ass'y	12.99	1	1
160	710001191	Voltage Regulator	128.49	1	1
161	710001248	Outlet DC	26.99	1	1
162	710001364	Starter Relay	41.99	1	1
163	710001645	Tail Light. Includes 163a	41.99	2	2
163a	520000758	Bulb	9.99	1	1
164	710001721	Turn Signal	120.99	1	1
166	710001726	Day Light	56.99	2	2
166	710001726	Day Light	74.99	2	2
167	710001737	Switch	22.49	1	1
168	710001781	Switch DPS		1	1
169	710001916	Battery Holder	4.49	1	1
170	710001999	Plug Carling. DPS	5.99	2	2
170	710001999	Plug Carling. DPS	6.99	2	2
170	710001999	Plug Carling. XT	5.99	1	1
170	710001999	Plug Carling. XT	6.99	1	1
170	710001999	Plug Carling. STD	5.99	3	3
170	710001999	Plug Carling. STD	6.99	3	3
171	710002047	Flasher	18.49	4	4
171	710002047	Flasher	19.99	4	4
175	710002052	Switch	15.99	1	1
176	710002053	Switch	15.99	1	1
177	710002055	License Light. Includes 177a	41.99	2	2
177a	219800128	Bulb	2.49	1	1
179	710001725	Hi/Low Switch. Except Europe	18.49	1	1

179	710002076	Switch. Europe	14.99	1	1
180	710002112	Solenoid	120.99	1	1
181	710002146	Positive Cable	21.99	1	1
182	710002148	Positive Cable. DPS, STD	20.99	1	1
183	710002159	Positive Cable. XT	44.99	1	1
184	710002214	Negative Cable	11.99	1	1
185	710002216	Electrical Winch Cable	32.49	1	1
186	710002220	Tail Gate Harness Ass'y	99.49	1	1
187	710002327	Ignition Switch	54.49	1	1
188	710002408	Support	4.99	1	1
188	710002408	Support	5.99	1	1
189	710002524	Low Beam Ass'y. Includes 189a	83.49	2	2
189a	415129249	Halogen Bulb	28.49	1	1
190	710002525	High Beam Ass'y. Includes 190a	83.49	2	2
190a	415129249	Halogen Bulb	28.49	1	1
191	N/A	Not available for this vehicle		1	
201	710002594	Engine START Button	44.99	1	1
214	710003008	Harness Ass'y	270.99	1	1
216	710003129	Battery Support	29.99	1	1
218	710003219	Rear Harness. Except Europe	102.99	1	1
218	710003220	Rear Harness. Europe	151.99	1	1
220	710003239	Flasher Unit	62.99	1	1
221	710003335	Fuse Holder	5.99	1	1
224	710003342	Main Harness Ass'y		1	1
236	710003851	Speedometer	268.99	1	1
237	710003532	Speedometer		1	1
238	710003541	Switch PPS Sport		1	1
300	415129355	Speedometer Button	9.99	1	1
300	415129355	Speedometer Button	10.99	1	1
301	415129348	Gauge Ring	8.49	1	1
301	415129348	Gauge Ring	8.99	1	1
302	415129349	Lens	15.99	1	1
302	415129349	Lens	16.99	1	1

Commander 800 STD, DPS, XT, 2014: 10- Engine Harness And Electronic Module

800



51R1401

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420266994	ECM Connector. Except Europe			1	1
1	XXX	ECM Connector. Europe				
2	278001546	Ignition Coil. Includes 2 to 3	168.49		1	1
3	710000568	Housing	7.49		1	1
3	710000568	Housing	7.99		1	1
4	420665330	Spark Plug Cable, 610 mm, PTO Side	64.49		1	1
5	420664300	Spark Plug Cable, 365 mm, MAG Side	46.99		1	1
6	420265248	Spark Plug Connector	24.49		2	2
7	420866710	Tie Rap	4.49		2	2

7	420866710	Tie Rap	4.71		2	2
8	420866714	Tie Rap	1.49		@	1
9	420666332	Engine Wiring Harness. Includes 9 to 17	421.99		1	1
10	710001872	Housing, 6 Positions	9.99		1	1
11	278000997	Male Housing, 3 Circuits	13.49		1	1
11	278000997	Male Housing, 3 Circuits	14.99		1	1
12	278001005	Male Housing, 2 Circuits	14.49		1	1
12	278001005	Male Housing, 2 Circuits	15.99		1	1
13	278001012	Male Housing, 1 Circuit	10.99		1	1
13	278001012	Male Housing, 1 Circuit	11.99		1	1
14	409207000	Male Housing, 3 Circuits	9.99	278002378	1	1
15	278001005	Male Housing, 2 Circuits	14.49		1	1
15	278001005	Male Housing, 2 Circuits	15.99		1	1
16	278000997	Male Housing, 3 Circuits	13.49		1	1
16	278000997	Male Housing, 3 Circuits	14.99		1	1
17	710000329	Male Housing, 4 Circuits	10.80		1	1
17	710000329	Male Housing, 4 Circuits	11.99		1	1
18	278001009	Female Terminal	2.49		1	1
18	278001009	Female Terminal	2.99		1	1
19	278001007	Insulated Sheath	2.49		1	1
19	278001007	Insulated Sheath	2.99		1	1

Commander 1000 STD, DPS, XT, XT-P, 2014: 00- Model Numbers

The illustrations figuring in this parts catalog show typical construction of the different assemblies and, in all cases, may not reproduce the full detail or exact shape of the parts shown. However, they represent parts which have the same or similar function.

Les illustrations contenues dans ce catalogue indiquent la disposition des pièces les unes par rapport aux autres. Il est donc possible qu'elles ne rendent pas compte de la forme exacte de ces pièces ainsi que de leurs détails de fabrication. Ces illustrations ont pour but d'identifier des pièces qui remplissent la même fonction ou une fonction identique.

SYMBOLS USED IN THIS CATALOG

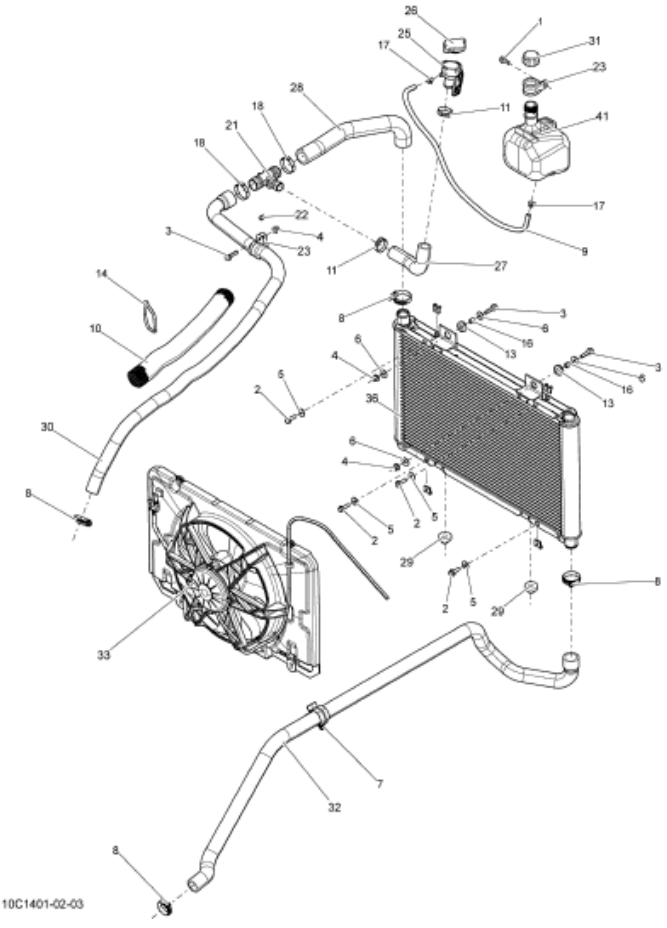
@	In «Quantity» column means «Use as Required».
Opt	In «Quantity» column means «Optional».
XXX	Parts marked with «XXX» are not available as spare parts.

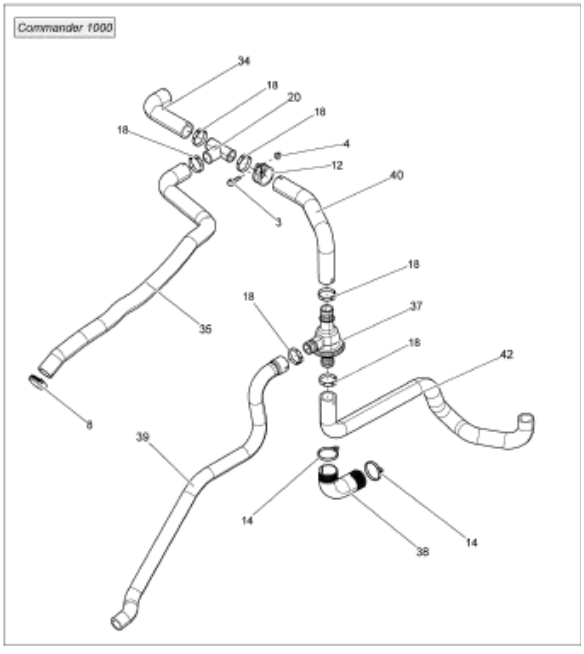
SYMBOLES UTILISÉS DANS CE CATALOGUE

@	Dans la colonne «Quantité» signifie «Au besoin».
Opt	Dans la colonne «Quantité» signifie «En option».
XXX	Les articles marqués d'un «XXX» ne sont pas disponibles comme pièces de remplacement.

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	6AEA	COMMANDER, 4X4 STD, 1000 EFI CVT, Red. North America				1
2	6AEB	COMMANDER, 4X4 STD, 1000 EFI CVT, Red. International				1
3	6PEA	COMMANDER, 4X4 DPS, 1000 EFI CVT, Yellow. North America				1
4	6BEA	COMMANDER, 4X4 XT, 1000 EFI CVT, Yellow. North America				1
5	6BEB	COMMANDER, 4X4 XT, 1000 EFI CVT, Magnesium. North America				1
6	6BED	COMMANDER, 4X4 XT, 1000 EFI CVT, Magnesium. Europe				1
7	6BEE	COMMANDER, 4X4 XT, 1000 EFI CVT, Red. North America				1
8	6BEF	COMMANDER, 4X4 XT, 1000 EFI CVT, Camo. North America				1
9	6BEG	COMMANDER, 4X4 XT, 1000 EFI CVT, Camo. International				1
10	6BEH	COMMANDER, 4X4 XT, 1000 EFI CVT, Magnesium. International				1
11	6EEA	COMMANDER, 4X4 XTP, 1000 EFI CVT, Black. North America				1
12	6EEB	COMMANDER, 4X4 XTP, 1000 EFI CVT, Black. International				1
13	6EEC	COMMANDER, 4X4 XTP, 1000 EFI CVT, Black. Europe				1

Commander 1000 STD, DPS, XT, XT-P, 2014: 01- Cooling System

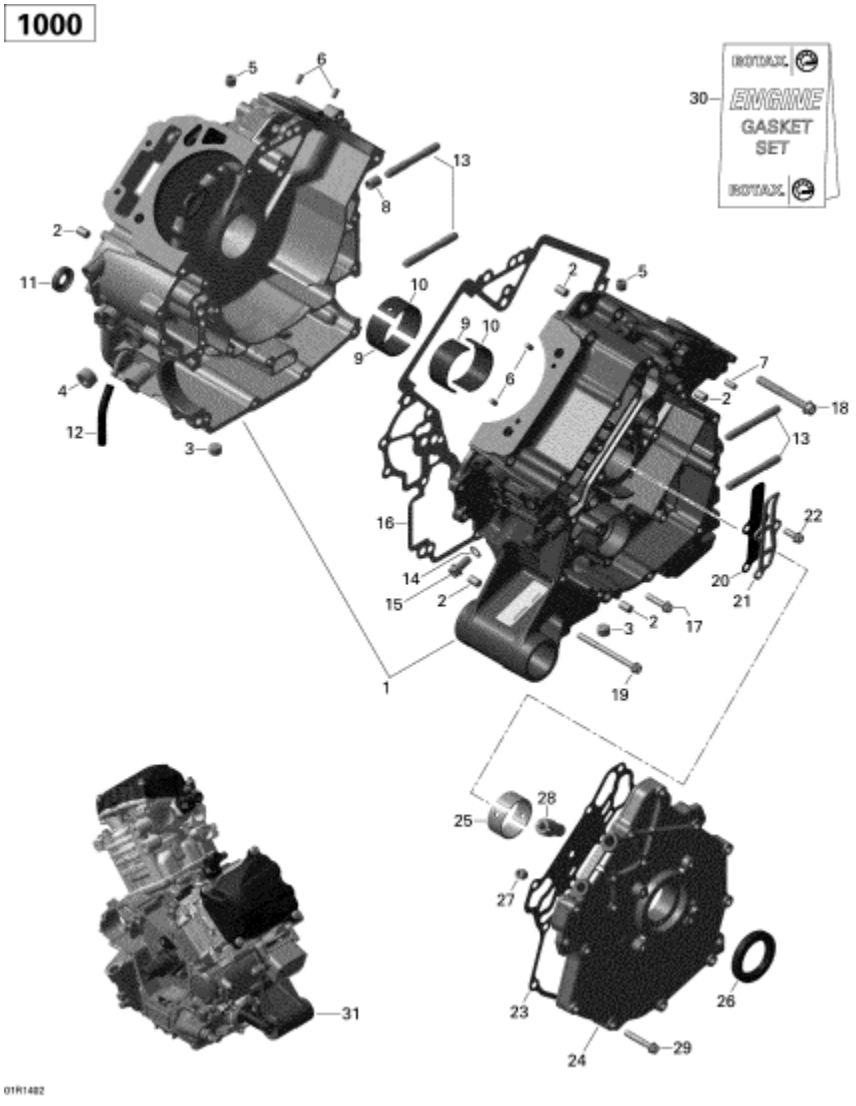




#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207661644	Hex. Flanged Screw M6 X 16	0.58		1	1
2	207662044	Hex. Flanged Screw M6 X 20	1.99		4	4
3	207662534	Hex. Flanged Screw	1.99		4	4
4	233261434	Flanged Elastic Nut M6	3.99		4	4
5	234062410	Flat Washer 6 mm	0.62		4	4
6	250200082	Flat Washer	1.99		4	4
7	275500590	Retainer	4.99		1	1
7	275500590	Retainer	5.99		1	1
8	293650098	Norma Gear Clamp	3.49		6	6
8	293650098	Norma Gear Clamp	3.99		6	6
9	415110000	Polyurethane Hose 5.2 mm	9.99		@	1
10	515176260	Tubing 35mm	7.49		@	1
10	515176260	Tubing 35mm	7.99		@	1
11	293650099	Crimp Clamp	3.49		2	2
11	293650099	Crimp Clamp	3.99		2	2
12	293650218	Hose Retainer	6.99		1	1
13	293720053	Grommet	2.49		2	2
13	293720053	Grommet	2.99		2	

					2
14	293750008	Tie-Rap 350 mm	0.49	3	3
14	293750008	Tie-Rap 350 mm	0.99	3	3
16	293900105	Bushing	4.49	2	2
16	293900105	Bushing	4.99	2	2
17	414554800	Spring Clamp	0.72	2	2
18	509000162	Gear Clamp	4.99	8	8
18	509000162	Gear Clamp	5.99	8	8
20	509000219	T-Fitting	11.99	1	1
20	509000219	T-Fitting	12.99	1	1
21	509000372	T-Fitting	6.99	1	1
21	509000372	T-Fitting	7.99	1	1
22	N/A	Not available for this vehicle		1	
23	709200036	Hose Anchor	6.63	1	1
23	709200036	Hose Anchor	6.99	1	1
25	709200179	Filler Neck	10.99	1	1
25	709200179	Filler Neck	11.99	1	1
26	709200207	Pressure Cap	14.49	1	1
26	709200207	Pressure Cap	15.99	1	1
27	709200264	Filler Neck Hose	6.99	1	1
28	709200265	Radiator Outlet Hose	7.49	1	1
29	709200285	Grommet	5.99	2	2
29	709200285	Grommet	6.99	2	2
30	N/A	Not available for this vehicle		1	
31	709200328	Tank Cap	2.49	1	1
31	709200328	Tank Cap	2.99	1	1
32	N/A	Not available for this vehicle		1	
33	709200375	Fan Ass'y	190.99	1	1
34	709200380	Intermediate Hose	10.99	1	1
35	709200382	Intermediate Hose	16.49	1	1
36	709200395	Radiator	176.99	1	1
37	709200406	Thermostat	63.49	1	1
38	515176260	Tubing 35mm	7.49	1	1
38	515176260	Tubing 35mm	7.99	1	1
39	709200441	Pump Hose	16.99	1	1
40	709200447	Hose	15.99	1	1
41	709200504	Coolant Tank	9.99	1	1
42	709200513	Radiator Inlet Hose		1	1

Commander 1000 STD, DPS, XT, XT-P, 2014: 01- Crankcase



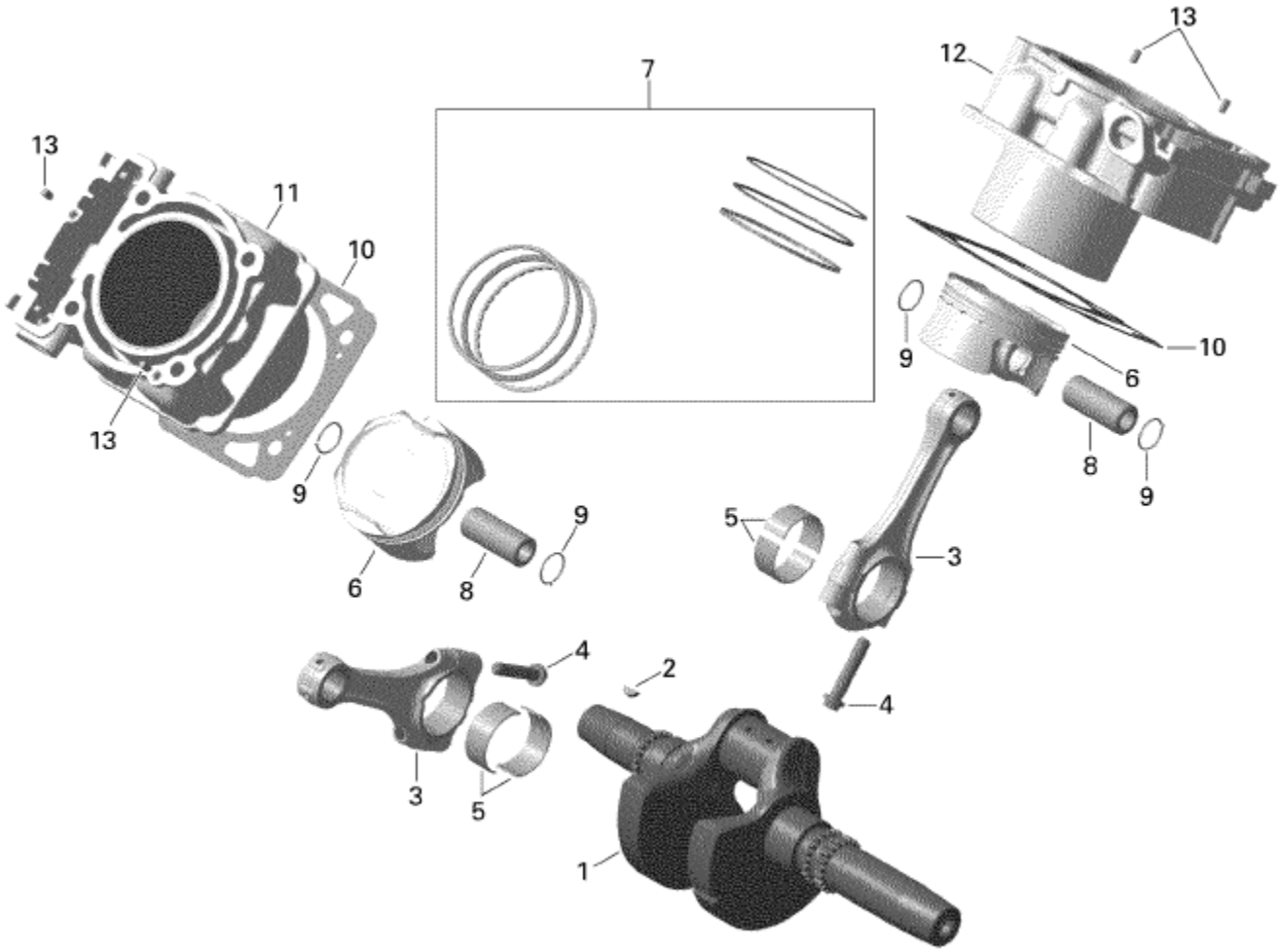
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420685253	Crankcase Ass'y. Includes 1 to 12	999.99		1	1
1	420685253	Crankcase Ass'y. Includes 1 to 12	1332.99		1	1
2	420632010	Center Pin 8 X 12	3.49		5	5
2	420632010	Center Pin 8 X 12	3.66		5	5
3	420840657	Plug Screw M12 X 1.5	5.99		2	2
3	420840657	Plug Screw M12 X 1.5	6.99		2	2
4	420240170	Plug Screw M18 X 1.5	5.99		1	1
4	420240170	Plug Screw M18 X 1.5	6.29		1	1
5	420641323	Plug Screw M10 X 1	9.99		2	2
5	420641323	Plug Screw M10 X 1	10.99		2	

						2
6	420929650	Drive Pin 5 X 10	1.49		4	4
6	420929650	Drive Pin 5 X 10	1.56		4	4
7	420932780	Needle Pin	5.99		1	1
7	420932780	Needle Pin	6.29		1	1
8	420929670	Dowel Pin 10 X 13	7.49		1	1
8	420929670	Dowel Pin 10 X 13	7.99		1	1
9	420233960	Plain Bearing	22.49		2	2
10	420233965	Plain Bearing	22.49		2	2
11	420650310	Oil Seal	10.99		1	1
11	420650310	Oil Seal	11.54		1	1
12	415110000	Polyurethane Hose 5.2 mm	9.99		1	1
13	420240814	Stud	4.99		4	4
13	420240814	Stud	5.99		4	4
14	420950141	Sealing Ring	1.99		1	1
14	420950141	Sealing Ring	2.09		1	1
15	420440852	Flanged Torx Screw M8 X 16	3.49		1	1
15	420440852	Flanged Torx Screw M8 X 16	3.66		1	1
16	420651225	Gasket	23.49		1	1
17	420641238	Flanged Torx Screw M6 X 25	2.99		2	2
17	420641238	Flanged Torx Screw M6 X 25	3.14		2	2
18	420440402	Flanged Torx Screw M8 X 65	5.99		4	4
18	420440402	Flanged Torx Screw M8 X 65	6.29		4	4
19	420440657	Flanged Torx Screw M6 X 75	2.49		13	13
19	420440657	Flanged Torx Screw M6 X 75	2.99		13	13
20	420224720	Valve Plate	13.49		1	1
20	420224720	Valve Plate	14.16		1	1
21	420224725	Reed Valve Stop	8.99		1	1
21	420224725	Reed Valve Stop	9.44		1	1
22	420641048	Flanged Torx Screw M6 X 16	2.49		3	3
22	420641048	Flanged Torx Screw M6 X 16	2.61		3	3
23	420651211	Gasket	19.99		1	1
23	420651211	Gasket	20.99		1	1
24	420612128	PTO Cover Ass'y. Includes 24 to 27	187.49		1	1
25	420233995	Bearing Sleeve	18.49		2	2
25	420233995	Bearing Sleeve	19.99		2	2
26	420631933	Oil Seal	18.49	420631932	1	1
26	420631933	Oil Seal	19.99	420631932	1	

					1
27	420641323	Plug Screw M10 X 1	9.99	1	1
27	420641323	Plug Screw M10 X 1	10.99	1	1
28	420256334	Hose Nipple M12 X 1.5	5.49	1	1
28	420256334	Hose Nipple M12 X 1.5	5.99	1	1
29	420440274	Flanged Torx Screw M6 X 35	1.99	14	14
30	420684150	Gasket Kit, Engine	379.49	1	1
31	420101002	Long Block, 1000	4985.99	1	1

Commander 1000 STD, DPS, XT, XT-P, 2014: 01- Crankshaft, Piston And Cylinder

1000



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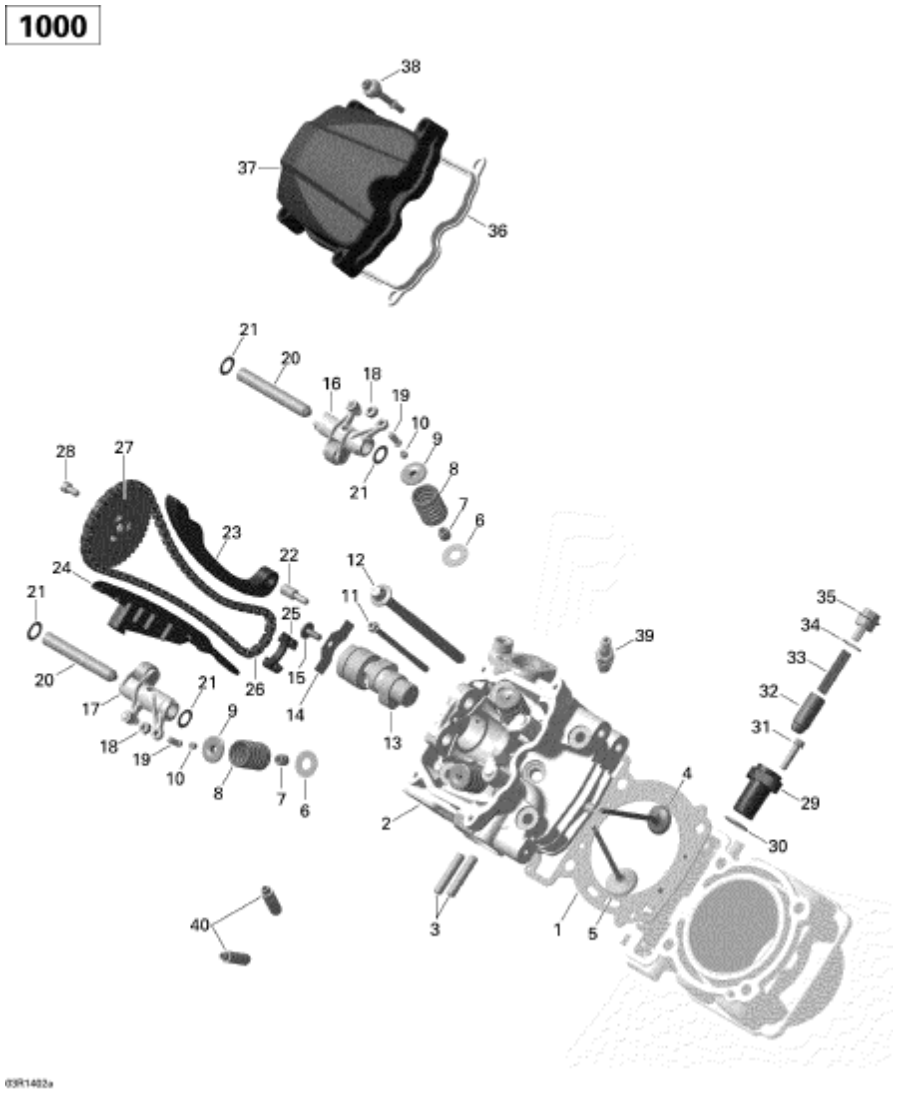
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420219736	Crankshaft	901.99		1	1
2	420246570	Woodruff Key 4 X 5	2.99		1	1
2	420246570	Woodruff Key 4 X 5	3.14		1	1
3	420217556	Connecting Rod Ass'y. Includes 3 to 4	176.99		2	2
4	420641475	Connecting Rod Screw M9 X 1	12.49		4	4
4	420641475	Connecting Rod Screw M9 X 1	13.99		4	4
5	420233726	Plain Bearing	14.99		4	4
5	420233726	Plain Bearing	15.99		4	4
6	420685242	Piston Ass'y, 90.955 mm. Includes 6 to 7	98.49		2	2

7	420296774	Piston Ring Set	79.49	2	2
8	420216351	Piston Pin	5.99	2	2
9	420245436	Piston Circlip	3.49	4	4
9	420245436	Piston Circlip	3.99	4	4
10	420630210	Gasket	10.99	2	2
10	420630210	Gasket	11.54	2	2
11	420623566	Cylinder With Sleeve, Front	182.64	1	1
11	420623566	Cylinder With Sleeve, Front	305.99	1	1
12	420623568	Cylinder With Sleeve, Rear	305.99	1	1
13	420929650	Drive Pin 5 X 10	1.49	4	4
13	420929650	Drive Pin 5 X 10	1.56	4	4

Commander 1000 STD, DPS, XT, XT-P, 2014: 01- Cylinder Head, Front



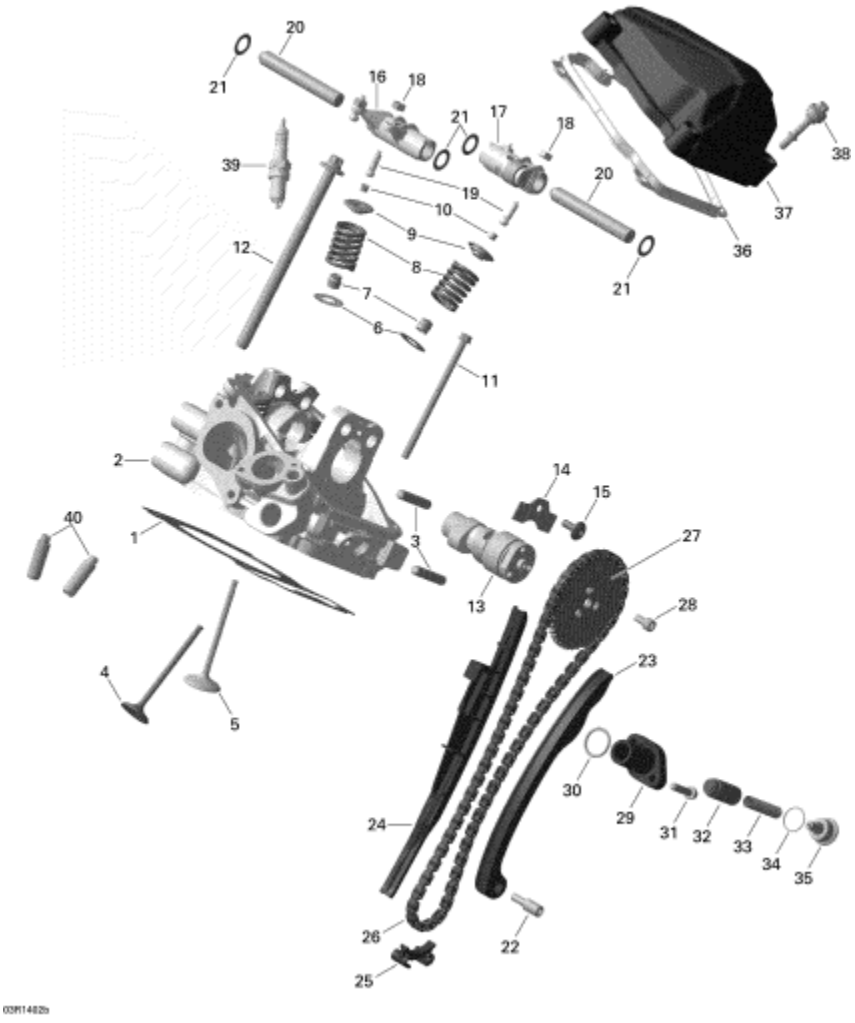
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420630195	Cylinder Head Gasket	57.49		1	1
2	420623064	Cylinder Front Ass'y. Includes 2 to 3	460.99		1	1
2	420623064	Cylinder Front Ass'y. Includes 2 to 3	499.99		1	1
3	420941014	Stud M8 x 26	9.49		2	2
3	420941014	Stud M8 x 26	9.99		2	2
4	420254361	Exhaust Valve, 27 mm	47.49		2	2
5	420254351	Intake Valve, 31 mm	31.99		2	2
6	420627770	Thrust Washer	1.49		4	4
6	420627770	Thrust Washer	1.56		4	4
7	420230515	Valve Stem Seal	5.99		4	

					4
7	420230515	Valve Stem Seal	6.29	4	4
8	420239295	Valve Spring	9.99	4	4
8	420239295	Valve Spring	10.99	4	4
9	420254132	Valve Spring Retainer	9.99	4	4
9	420254132	Valve Spring Retainer	10.99	4	4
10	420254120	Cotter Valve	3.49	8	8
10	420254120	Cotter Valve	3.66	8	8
11	420440612	Flanged Torx Screw M6 X 105	5.99	2	2
11	420440612	Flanged Torx Screw M6 X 105	6.29	2	2
12	420441284	Torx Screw M10 X 159	9.99	4	4
12	420441284	Torx Screw M10 X 159	10.99	4	4
13	420637410	Camshaft	274.99	1	1
14	420627743	Holding Strip	13.49	1	1
14	420627743	Holding Strip	14.99	1	1
15	420241525	Torx Screw M6 X 16	2.49	1	1
15	420241525	Torx Screw M6 X 16	2.99	1	1
16	420254905	Rocker Arm Inlet	113.49	1	1
²	420254915	Rocker Arm Exhaust	112.49	1	1
18	420242910	Hex. Nut M6	1.49	4	4
18	420242910	Hex. Nut M6	1.99	4	4
19	420241335	Adjustment Screw M6 X 0.75	13.49	4	4
19	420241335	Adjustment Screw M6 X 0.75	14.16	4	4
20	420229712	Pin #12, Small, M6 X 90	11.99	2	2
20	420229712	Pin #12, Small, M6 X 90	12.99	2	2
21	420944382	Shim	3.49	4	4
21	420944382	Shim	3.66	4	4
22	420240941	Bearing Screw M6	9.49	1	1
22	420240941	Bearing Screw M6	9.99	1	1
23	420436017	Chain Tension Guide	39.49	1	1
24	420236583	Chain Guide	4.99	1	1
24	420236583	Chain Guide	5.99	1	1
25	420236350	Chain Guide	9.99	1	1
25	420236350	Chain Guide	10.99	1	1
26	420297067	Silent Chain	69.99	1	1
27	420254435	Camshaft Sprocket, 42 Teeth	12.49	1	1
27	420254435	Camshaft Sprocket, 42 Teeth	13.99	1	1
28	420840031	Screw M6 X 12	3.49	3	

					3
28	420840031	Screw M6 X 12	3.66	3	3
29	420236510	Chain Tensioner Housing	8.99	1	1
29	420236510	Chain Tensioner Housing	9.44	1	1
30	420430370	O-Ring	5.99	1	1
30	420430370	O-Ring	6.99	1	1
31	420641238	Flanged Torx Screw M6 X 25	2.99	2	2
31	420641238	Flanged Torx Screw M6 X 25	3.14	2	2
32	420236520	Chain Tensioner Plunger	9.99	1	1
32	420236520	Chain Tensioner Plunger	10.99	1	1
33	420238120	Spring	5.99	1	1
33	420238120	Spring	6.29	1	1
34	420250890	O-Ring	4.49	1	1
34	420250890	O-Ring	4.99	1	1
35	420641150	Plug Screw	5.99	1	1
35	420641150	Plug Screw	6.29	1	1
36	420630260	Gasket	12.49	1	1
37	420610395	Valve Cover	13.49	1	1
37	420610395	Valve Cover	14.99	1	1
38	420440567	Hex. Distance Screw M6 X 30.5	5.73	4	4
38	420440567	Hex. Distance Screw M6 X 30.5	6.99	4	4
39	707000246	Spark Plug, NGK DCP-R8E	3.66	1	1
39	707000246	Spark Plug, NGK DCP-R8E	3.80	1	1
40	420254374	Valve Guide	18.99	4	4
40	420254374	Valve Guide	19.99	4	4

Commander 1000 STD, DPS, XT, XT-P, 2014: 01- Cylinder Head, Rear

1000

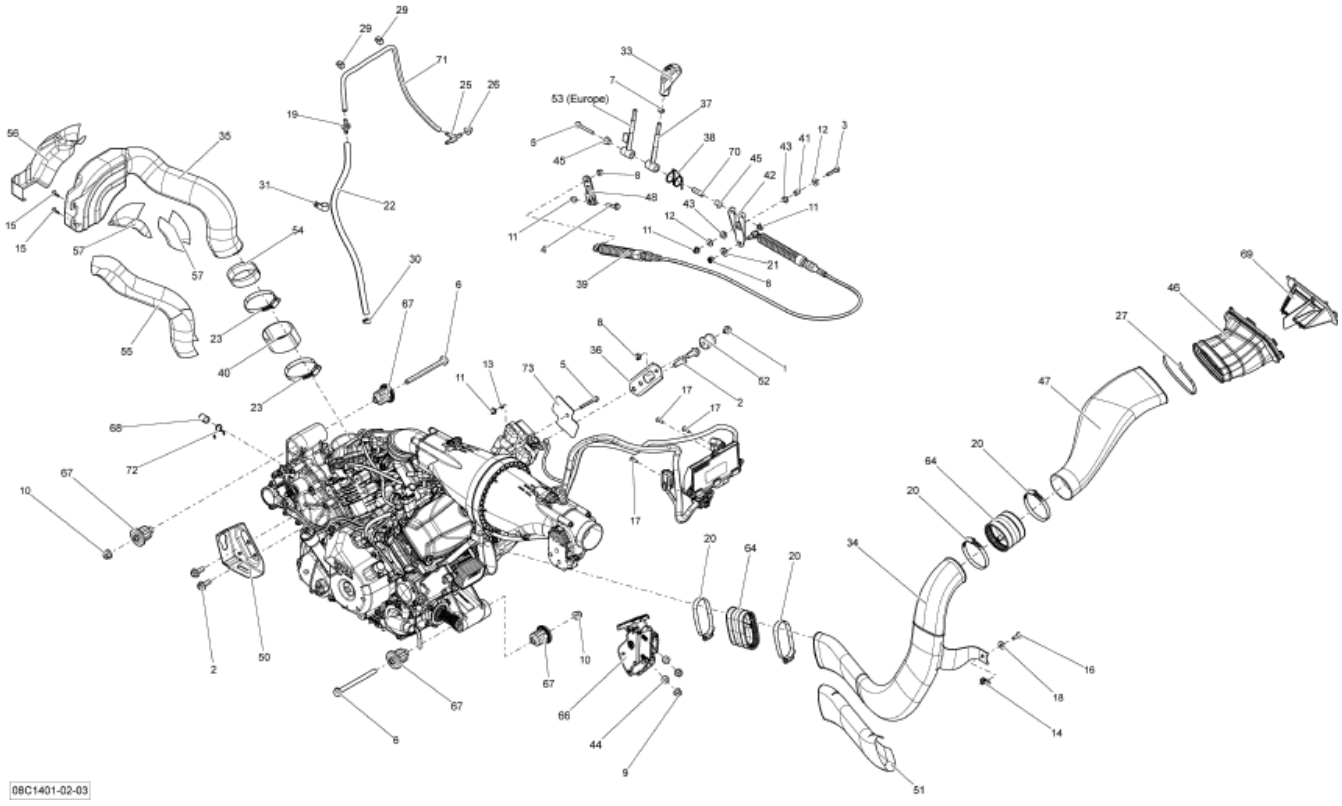


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420630195	Cylinder Head Gasket	57.49		1	1
2	420623064	Cylinder Front Ass'y. Includes 2 to 3	460.99		1	1
2	420623064	Cylinder Front Ass'y. Includes 2 to 3	499.99		1	1
3	420941014	Stud M8 x 26	9.49		2	2
3	420941014	Stud M8 x 26	9.99		2	2
4	420254361	Exhaust Valve, 27 mm	47.49		2	2
5	420254351	Intake Valve, 31 mm	31.99		2	2
6	420627770	Thrust Washer	1.49		4	4
6	420627770	Thrust Washer	1.56		4	4
7	420230515	Valve Stem Seal	5.99		4	

					4
7	420230515	Valve Stem Seal	6.29	4	4
8	420239295	Valve Spring	9.99	4	4
8	420239295	Valve Spring	10.99	4	4
9	420254132	Valve Spring Retainer	9.99	4	4
9	420254132	Valve Spring Retainer	10.99	4	4
10	420254120	Cotter Valve	3.49	8	8
10	420254120	Cotter Valve	3.66	8	8
11	420440612	Flanged Torx Screw M6 X 105	5.99	2	2
11	420440612	Flanged Torx Screw M6 X 105	6.29	2	2
12	420441284	Torx Screw M10 X 159	9.99	4	4
12	420441284	Torx Screw M10 X 159	10.99	4	4
13	420637412	Camshaft		1	1
14	420627743	Holding Strip	13.49	1	1
14	420627743	Holding Strip	14.99	1	1
15	420241525	Torx Screw M6 X 16	2.49	1	1
15	420241525	Torx Screw M6 X 16	2.99	1	1
16	420254905	Rocker Arm Inlet	113.49	1	1
17	420254915	Rocker Arm Exhaust	112.49	1	1
18	420242910	Hex. Nut M6	1.49	4	4
18	420242910	Hex. Nut M6	1.99	4	4
19	420241335	Adjustment Screw M6 X 0.75	13.49	4	4
19	420241335	Adjustment Screw M6 X 0.75	14.16	4	4
20	420229712	Pin #12, Small, M6 X 90	11.99	2	2
20	420229712	Pin #12, Small, M6 X 90	12.99	2	2
21	420944382	Shim	3.49	4	4
21	420944382	Shim	3.66	4	4
22	420240941	Bearing Screw M6	9.49	1	1
22	420240941	Bearing Screw M6	9.99	1	1
23	420436017	Chain Tension Guide	39.49	1	1
24	420236583	Chain Guide	4.99	1	1
24	420236583	Chain Guide	5.99	1	1
25	420236350	Chain Guide	9.99	1	1
25	420236350	Chain Guide	10.99	1	1
26	420297067	Silent Chain	69.99	1	1
27	420254435	Camshaft Sprocket, 42 Teeth	12.49	1	1
27	420254435	Camshaft Sprocket, 42 Teeth	13.99	1	1
28	420840031	Screw M6 X 12	3.49	3	

					3
28	420840031	Screw M6 X 12	3.66	3	3
29	420236510	Chain Tensioner Housing	8.99	1	1
29	420236510	Chain Tensioner Housing	9.44	1	1
30	420430370	O-Ring	5.99	1	1
30	420430370	O-Ring	6.99	1	1
31	420641238	Flanged Torx Screw M6 X 25	2.99	2	2
31	420641238	Flanged Torx Screw M6 X 25	3.14	2	2
32	420236520	Chain Tensioner Plunger	9.99	1	1
32	420236520	Chain Tensioner Plunger	10.99	1	1
33	420238120	Spring	5.99	1	1
33	420238120	Spring	6.29	1	1
34	420250890	O-Ring	4.49	1	1
34	420250890	O-Ring	4.99	1	1
35	420641150	Plug Screw	5.99	1	1
35	420641150	Plug Screw	6.29	1	1
36	420630260	Gasket	12.49	1	1
37	420610395	Valve Cover	13.49	1	1
37	420610395	Valve Cover	14.99	1	1
38	420440567	Hex. Distance Screw M6 X 30.5	5.73	4	4
38	420440567	Hex. Distance Screw M6 X 30.5	6.99	4	4
39	707000246	Spark Plug, NGK DCP-R8E	3.66	1	1
39	707000246	Spark Plug, NGK DCP-R8E	3.80	1	1
40	420254374	Valve Guide	18.99	4	4
40	420254374	Valve Guide	19.99	4	4

Commander 1000 STD, DPS, XT, XT-P, 2014: 01- Engine

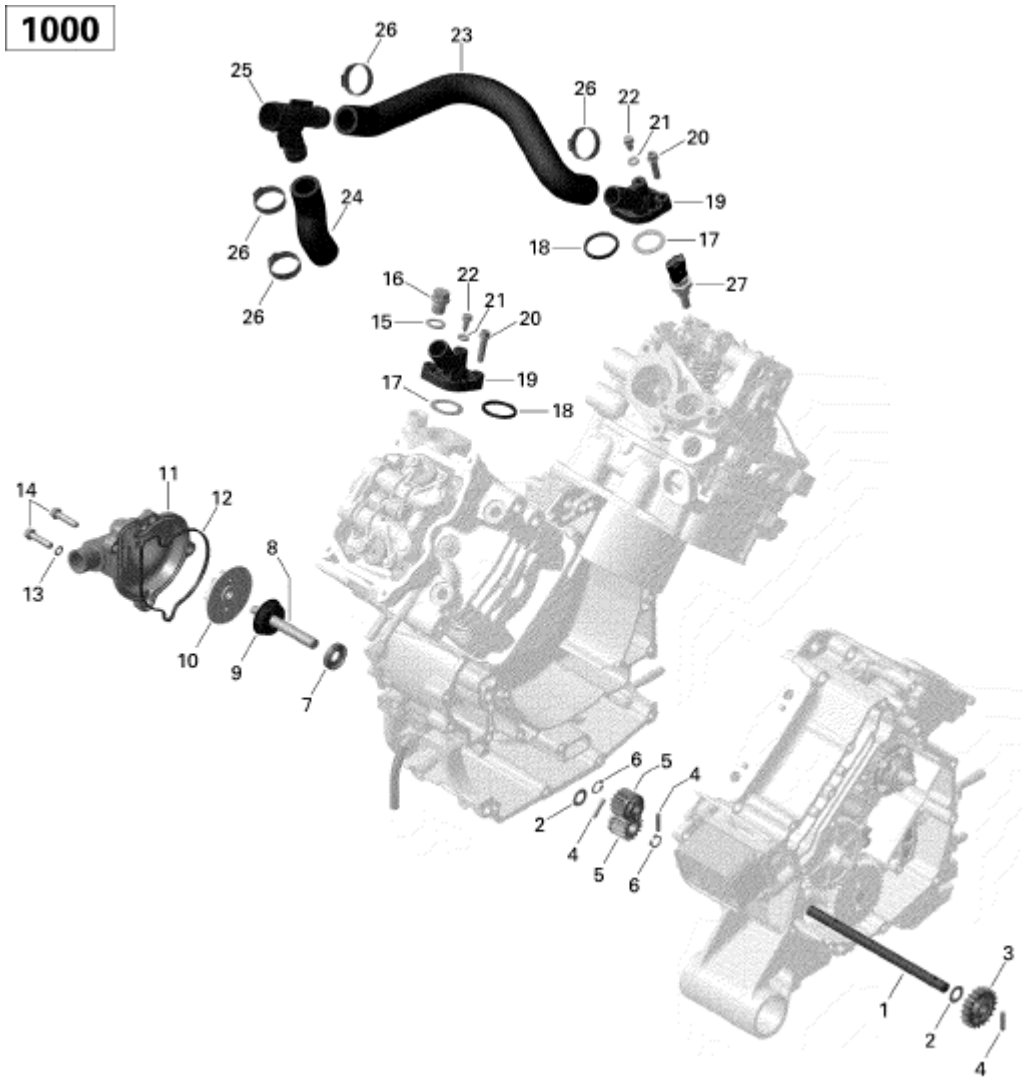


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207581046	Flanged Screw M8 x 10, Scotch Grip	3.70		1	1
2	207602544	Hex. Flanged Screw M10 X 25	1.33		4	4
3	207663034	Hex. Flanged Screw M6 X 30	1.99		1	1
4	207663544	Hex. Flanged Screw M6 X 35	0.72		1	1
5	207665044	Hex. Flanged Screw M6 X 50	3.13		2	2
6	230602546	Hex. Flanged Screw M10 X 125	5.73		2	2
7	232180491	Hex. Jam Nut M8	5.99		1	1
8	232581414	Hex. Elastic Stop Nut M8	0.47		3	3
9	233081416	Hex. Flanged Nut M8	0.87		2	2
10	233201436	Flanged Elastic Nut M10	1.99		2	2
11	233261414	Hex. Flanged Elastic Nut M6	1.05		4	4
12	234062410	Flat Washer 6 mm	0.62		2	2
13	234461608	External Serrated Lock Washer 6 mm	0.87		1	1
14	250000048	Pannel Nut M6 X 1.0	1.35		1	1
15	250000113	Screw M4 X 16, Type K-40	3.13		2	2
16	250000128	Torx Truss Screw M6 X 20	1.30		1	1
17	250000146	Truss Head Torx Screw K50 X 16	1.17		3	3
18	250200082	Flat Washer	1.99		1	1
19	275500398	Check Valve	7.49		1	1
19	275500398	Check Valve	7.99		1	1
20	293650091	Norma Clamp	7.49		4	4

20	293650091	Norma Clamp	7.99	4	4
21	234001410	Flat Washer 10 mm	0.90	1	1
22	415079800	Hose 1/4"	18.49	@	1
23	293650118	Norma Gear Clamp	7.99	2	2
23	293650118	Norma Gear Clamp	8.99	2	2
25	293710059	Y-Fitting	6.99	1	1
25	293710059	Y-Fitting	7.99	1	1
26	293720029	Grommet	1.05	1	1
26	293720029	Grommet	4.49	1	1
27	293750008	Tie-Rap 350 mm	0.49	1	1
27	293750008	Tie-Rap 350 mm	0.99	1	1
29	414227300	Clip	1.15	2	2
30	414415200	Spring Clamp	0.72	1	1
31	518321570	Open Clamp	4.49	1	1
31	518321570	Open Clamp	4.99	1	1
33	707000284	Lever Handle	10.80	1	1
33	707000284	Lever Handle	11.99	1	1
34	707000639	Air Inlet	12.49	1	1
35	707000640	CVT Air Outlet	12.49	1	1
36	707000707	Upper Engine Bracket	4.49	1	1
37	707000711	Upper Lever Arm. Except Europe	20.99	1	1
38	707000750	Lever Arm Spring	2.49	1	1
39	707000775	Shifting Cable	42.49	1	1
40	707000789	Adaptor	6.99	1	1
40	707000789	Adaptor	7.99	1	1
41	707000801	Bushing	2.49	1	1
42	707000828	Lower Lever Arm	12.49	1	1
43	707000847	Flanged Bushing	0.99	2	2
44	707000848	Bushing	0.99	2	2
45	707000869	Flanged Bushing	1.99	2	2
46	707000908	Adaptor	19.99	1	1
47	707000909	Primary Air Intake	13.49	1	1
48	707000911	Lever	10.99	1	1
48	707000911	Lever	11.99	1	1
50	707000919	Cable Support	10.99	1	1
51	707000924	Reflective Sheet	19.99	1	1
52	707000949	Rubber Isolator	6.99	1	1
52	707000949	Rubber Isolator	7.99	1	1
53	707000978	Upper Lever Arm. Europe	52.49	1	1
54	707000988	Reflector	3.49	1	1
55	707000989	Reflective Sheet	16.99	1	1
56	707000990	Reflective Sheet	9.99	1	1
57	707000991	Reflector	5.99	2	2
64	707001043	Flexible Adaptor	8.49	2	2
64	707001043	Flexible Adaptor	9.99	2	2
66	707001166	Accelerator Pedal	188.99	1	1
67	707001169	Damper	20.99	4	4
68	707001185	Plug	0.99	1	1

68	707001185	Plug	1.99	1	1
69	707001344	CVT Filter		1	1
70	707001376	Bushing	3.99	1	1
71	415080200	Hose, Polyurethane	4.99	@	1
71	415080200	Hose, Polyurethane	9.99	@	1
72	707800506	Retainer Clip	7.99	1	1
72	707800506	Retainer Clip	8.99	1	1
73	710000073	Insulator Pad	5.80	1	1
73	710000073	Insulator Pad	6.99	1	1

Commander 1000 STD, DPS, XT, XT-P, 2014: 01- Engine Cooling

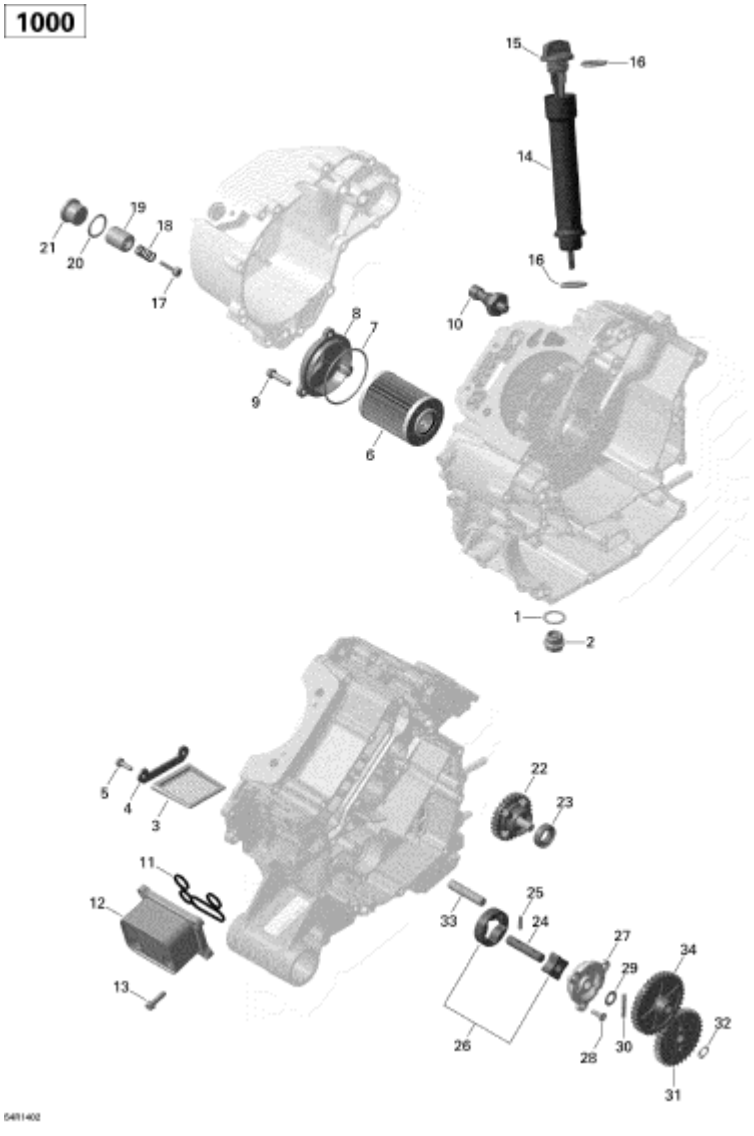


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420620500	Intermediate Shaft	26.99		1	1
2	420827590	Thrust Washer	3.49		2	2
2	420827590	Thrust Washer	3.66		2	2
3	420434330	Water Pump Gear	8.99		1	1
3	420434330	Water Pump Gear	9.44		1	1
4	420232420	Needle Pin	3.49		3	3
4	420232420	Needle Pin	3.66		3	3
5	420234627	Pump Gear, 15 Teeth	8.99		2	2
5	420234627	Pump Gear, 15 Teeth	9.44		2	2

6	504152282	Circlip	1.99	2	2
6	504152282	Circlip	2.99	2	2
7	420650310	Oil Seal	10.99	1	1
7	420650310	Oil Seal	11.54	1	1
8	420620175	Water Pump Shaft Ass'y. Includes 8 to 9	74.49	1	1
9	420650370	Rotary Seal	21.99	1	1
10	420222505	Water Impeller	14.49	1	1
10	420222505	Water Impeller	15.21	1	1
11	420222785	Water Pump Housing	36.99	1	1
12	420651190	Gasket	5.99	1	1
12	420651190	Gasket	6.29	1	1
13	420230415	Seal Washer	1.49	1	1
13	420230415	Seal Washer	1.56	1	1
14	420641238	Flanged Torx Screw M6 X 25	2.99	4	4
14	420641238	Flanged Torx Screw M6 X 25	3.14	4	4
15	420250640	Copper Washer	0.61	1	1
15	420250640	Copper Washer	0.99	1	1
16	420841921	Plug Screw M12 X 1.5	9.99	1	1
16	420841921	Plug Screw M12 X 1.5	10.99	1	1
17	420927837	Spacer Ass'y. Includes 17 to 18	5.99	2	2
17	420927837	Spacer Ass'y. Includes 17 to 18	6.29	2	2
18	420650300	Thermostat Gasket	5.99	2	2
18	420650300	Thermostat Gasket	6.29	2	2
19	420222691	Thermostat Cover	1.99	2	2
19	420222691	Thermostat Cover	2.99	2	2
20	420641238	Flanged Torx Screw M6 X 25	2.99	4	4
20	420641238	Flanged Torx Screw M6 X 25	3.14	4	4
21	420650255	Gasket Ring	3.49	2	2
21	420650255	Gasket Ring	3.66	2	2
22	420441621	Screw M5 X 16	1.99	2	2
22	420441621	Screw M5 X 16	2.99	2	2
23	420822690	Rear Head Hose	9.49	1	1
24	420822695	Front Head Hose	5.99	1	1
25	709200273	Y-Fitting	2.49	1	1
25	709200273	Y-Fitting	2.99	1	1
26	420251578	Clamp	5.99	4	4
26	420251578	Clamp	6.99	4	4
27	278001016	Temperature Sensor	72.49	1	

1

Commander 1000 STD, DPS, XT, XT-P, 2014: 01- Engine Lubrication

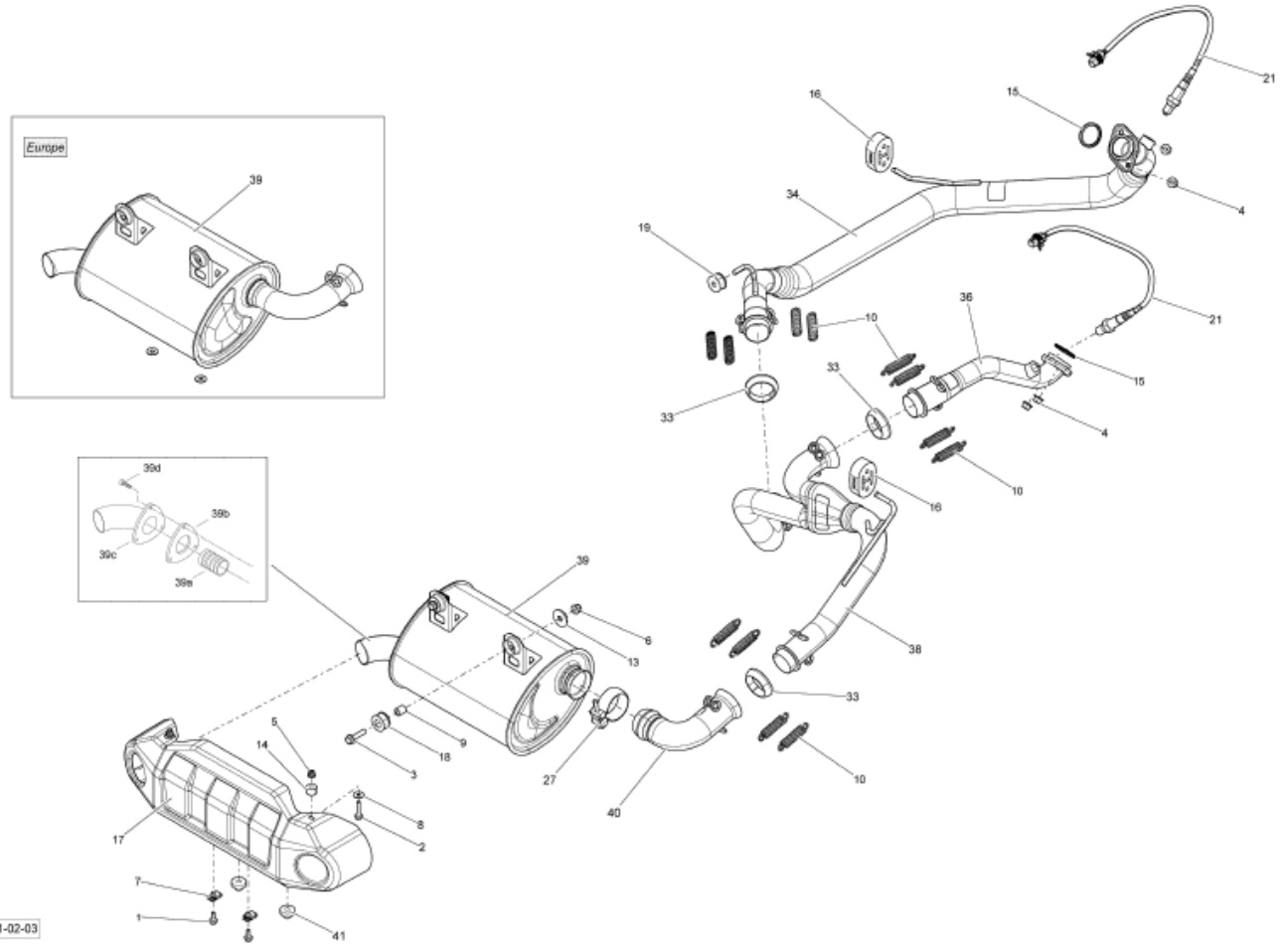


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420552280	O-Ring	3.30		1	1
2	420840277	Drain Plug M18 X 1.5	14.97		1	1
2	420840277	Drain Plug M18 X 1.5	15.99		1	1
3	420256322	Oil Sieve	20.99		1	1
4	420612070	Cover Sieve	2.49		1	1
4	420612070	Cover Sieve	2.99		1	1
5	420941925	Tapping Screw M5 X 16	1.49		2	2
5	420941925	Tapping Screw M5 X 16	1.56		2	2
6	420256188	Oil Filter	14.99		1	1

7	420230920	O-Ring	7.49		1	1
7	420230920	O-Ring	7.99		1	1
8	420210418	Oil Filter Cover	21.99		1	1
9	420641238	Flanged Torx Screw M6 X 25	2.99		3	3
9	420641238	Flanged Torx Screw M6 X 25	3.14		3	3
10	420256915	Oil Pressure Switch	34.49		1	1
11	420430325	Oil Seal	5.99		1	1
11	420430325	Oil Seal	6.99		1	1
12	420890180	Oil Radiator	63.99		1	1
13	420641048	Flanged Torx Screw M6 X 16	2.49		4	4
13	420641048	Flanged Torx Screw M6 X 16	2.61		4	4
14	420856922	Oil Lever Tube	37.49		1	1
15	420856810	Oil Dipstick	3.49		1	1
16	420631640	O-Ring	1.49		2	2
16	420631640	O-Ring	1.99		2	2
17	420656370	Pressure Relief Valve	13.49		1	1
17	420656370	Pressure Relief Valve	14.16		1	1
18	420939485	Compression Spring	7.49		1	1
18	420939485	Compression Spring	7.99		1	1
19	420256486	Housing Valve	5.99		1	1
19	420256486	Housing Valve	6.29		1	1
20	420650465	Gasket Ring	8.99		1	1
20	420650465	Gasket Ring	9.44		1	1
21	420640270	Screw Plug	10.99		1	1
21	420640270	Screw Plug	11.54		1	1
22	420434307	Idle Gear Ass'y, 28 Teeth. Includes 22 to 23	69.49		1	1
23	420430555	Oil Seal	12.49		1	1
23	420430555	Oil Seal	13.99		1	1
24	420237059	Oil Pump Shaft	21.99		1	1
25	420232730	Needle Pin	3.49		1	1
25	420232730	Needle Pin	3.66		1	1
26	420256348	Oil Pump Rotor	54.49		1	1
27	420210641	Oil Pump Cover	36.99		1	1
28	420640821	Torx Screw M5 X 16	1.49		3	3
28	420640821	Torx Screw M5 X 16	1.56		3	3
29	420827590	Thrust Washer	3.49		1	1
29	420827590	Thrust Washer	3.66		1	1
30	420232430	Needle Pin	3.99	420232431	1	

					1
31	420434320	Oil Pump Gear, 33 Teeth	10.99	1	1
31	420434320	Oil Pump Gear, 33 Teeth	11.54	1	1
32	504152282	Circlip	1.99	1	1
32	504152282	Circlip	2.99	1	1
33	420229302	Location Pin	1.99	1	1
33	420229302	Location Pin	2.99	1	1
34	420434300	Idle Gear, 38 Teeth	10.99	1	1
34	420434300	Idle Gear, 38 Teeth	11.54	1	1

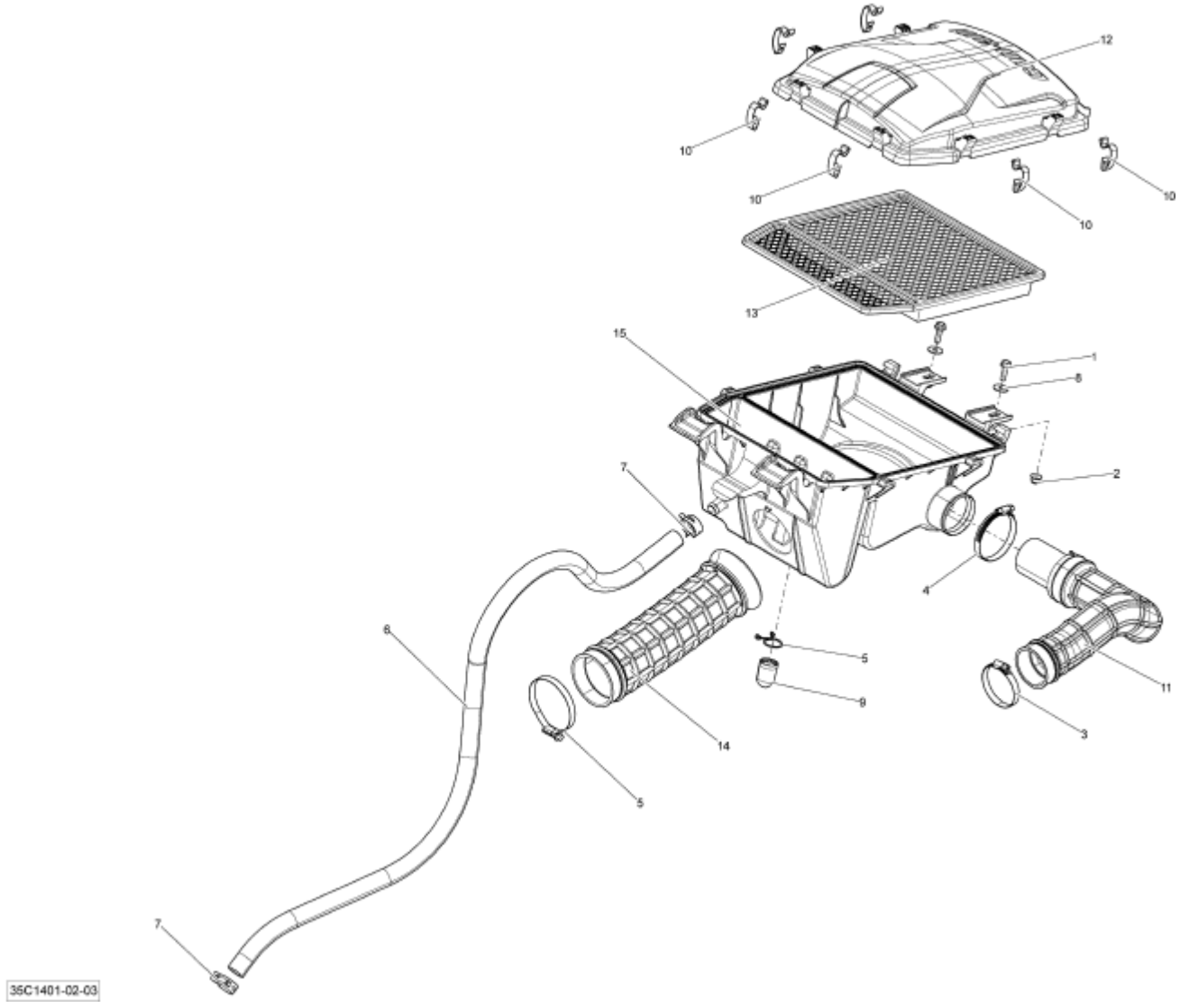
Commander 1000 STD, DPS, XT, XT-P, 2014: 01- Exhaust System



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207661644	Hex. Flanged Screw M6 X 16	0.58		2	2
2	207663034	Hex. Flanged Screw M6 X 30	1.99		2	2
3	207683544	Hex. Flanged Screw M8 X 35	1.30		2	2
4	233081416	Hex. Flanged Nut M8	0.87		4	4
5	233261414	Hex. Flanged Elastic Nut M6	1.05		2	2
6	233281414	Hex. Flanged Elastic Nut M8	1.05		2	2
7	250000048	Pannel Nut M6 X 1.0	1.35		2	2
8	250200082	Flat Washer	1.99		2	2
9	293900106	Bushing	3.49		2	2
9	293900106	Bushing	3.99		2	2
10	415107100	Spring. Europe	4.49		8	8
10	415107100	Spring. Europe	4.99		8	8
10	415107100	Spring. Except Europe	4.49		12	12
10	415107100	Spring. Except Europe	4.99		12	12
13	503032900	Washer	2.49		2	2
13	503032900	Washer	2.61		2	2
14	707000882	Bushing	2.49		2	2

15	707600317	Gasket	6.99	2	2
15	707600317	Gasket	7.99	2	2
16	707600638	Rubber Bumper	10.99	1	1
16	707600638	Rubber Bumper	11.99	1	1
17	707600675	Deflector	29.99	1	1
18	707600701	Anti-Vibration Rubber	8.49	2	2
18	707600701	Anti-Vibration Rubber	8.99	2	2
19	707600702	Anti-Vibration Rubber	4.99	1	1
19	707600702	Anti-Vibration Rubber	5.99	1	1
21	707600872	Oxygen Sensor	92.49	2	2
27	707600980	Exhaust Clamp	19.99	1	1
33	707601033	Exhaust Gasket	5.99	3	3
34	707601013	Front Head Pipe. Europe	216.99	1	1
34	707601204	Front Head Pipe. Except Europe		1	1
36	707601016	Rear Head Pipe. Europe	216.99	1	1
36	707601206	Rear Head Pipe. Except Europe		1	1
38	707601020	Link Head Pipe. Europe	216.99	1	1
38	707601207	Link Head Pipe. Except Europe		1	1
39	707601245	Muffler Ass'y. Except Europe, Includes 39a To 39d		1	1
39	707600753	Muffler Ass'y. Europe, Includes 39a To 39d	589.49	1	1
39a	715900089	Spark Arrestor	82.49	1	1
39b	715900090	Gasket	6.99	1	1
39b	715900090	Gasket	7.99	1	1
39c	715900091	Muffler Outlet End Piece	82.49	1	1
39d	205062060	Socket Head Screw M6 X 20	1.82	3	3
40	707601327	Link Head Pipe		1	1
41	709200285	Grommet	5.99	2	2
41	709200285	Grommet	6.99	2	2

Commander 1000 STD, DPS, XT, XT-P, 2014: 02- Air Intake



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207662044	Hex. Flanged Screw M6 X 20	1.99		2	2
2	233261414	Hex. Flanged Elastic Nut M6	1.05		2	2
3	293650078	Norma Clamp	9.99		1	1
3	293650078	Norma Clamp	10.99		1	1
4	293650079	Norma Clamp	6.99		1	1
4	293650079	Norma Clamp	7.99		1	1
5	293650091	Norma Clamp	7.49		2	2
5	293650091	Norma Clamp	7.99		2	2
6	707800411	Hose 15.88 mm	8.49		@	1
7	293650213	Norma Spring Clamp	2.49		2	2

8	250200082	Flat Washer	1.99	2	2
9	707800080	Drain Tube	4.99	1	1
9	707800080	Drain Tube	5.99	1	1
10	707800249	Cover Bracket	5.99	6	6
10	707800249	Cover Bracket	6.99	6	6
11	707800322	Intake Adaptor	37.49	1	1
12	707800326	Air Intake Silencer Cover	18.49	1	1
13	707800327	Air Filter	38.49	1	1
14	707800329	Intake Adaptor	29.49	1	1
15	707800517	Air Intake Silencer Base		1	1

Commander 1000 STD, DPS, XT, XT-P, 2014: 02- Air Intake Manifold And Throttle Body

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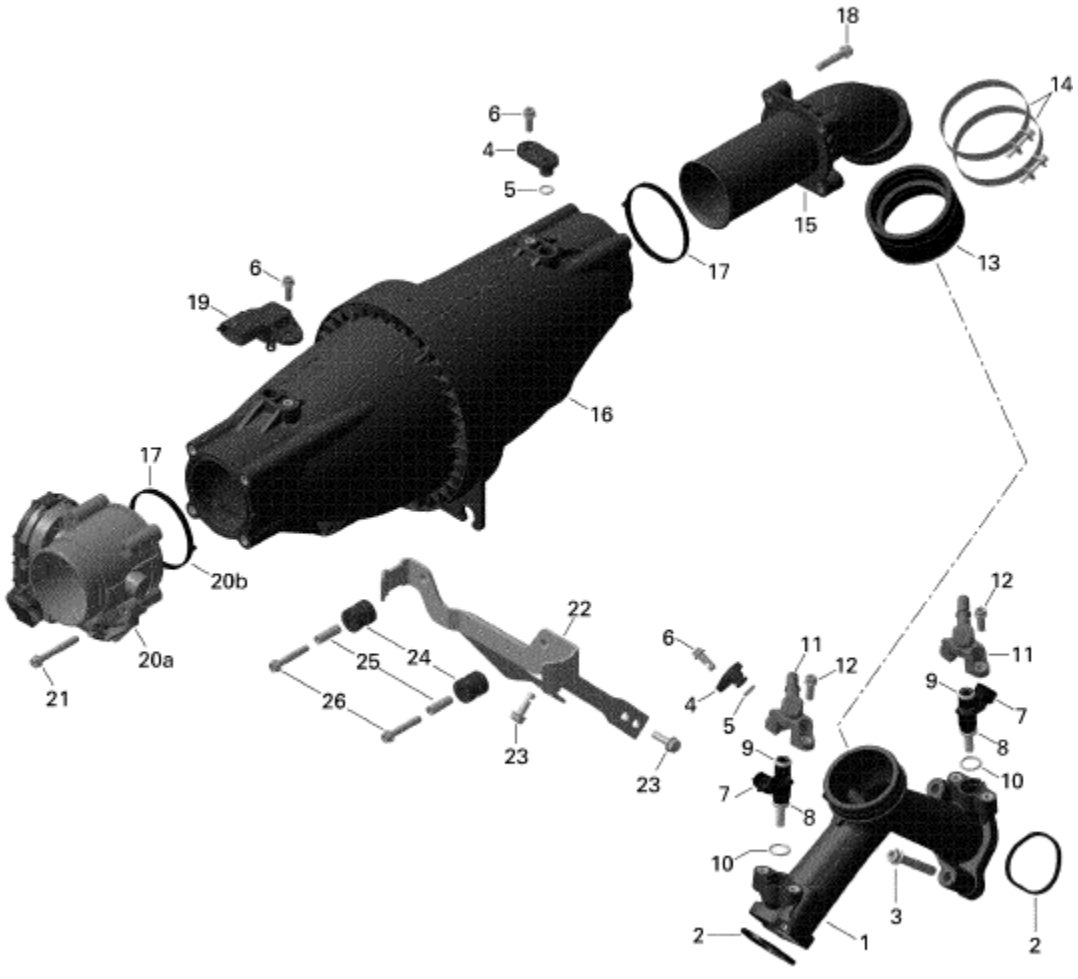

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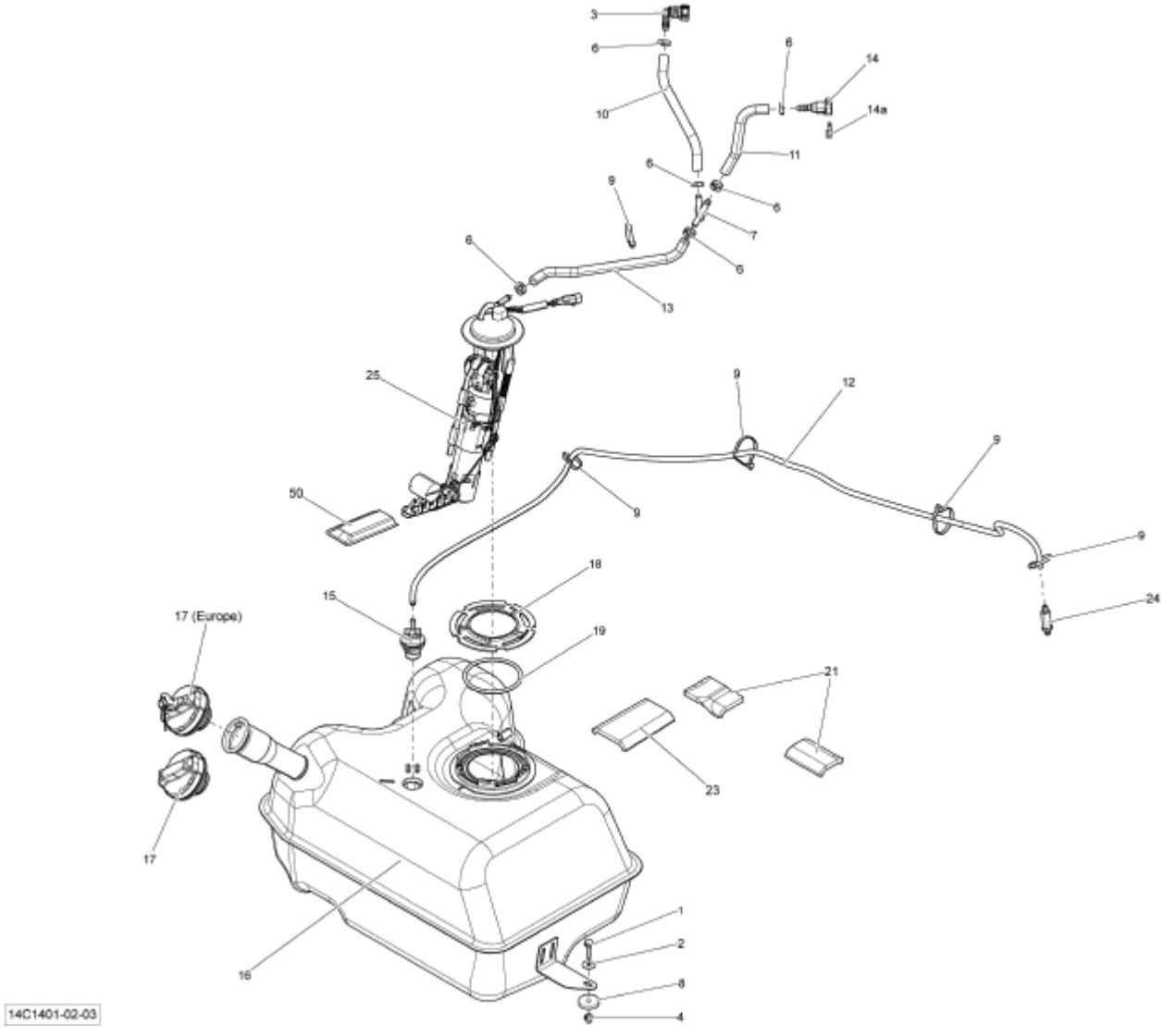
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420667520	Air Intake Manifold	55.99		1	1
2	420630642	Gasket	3.49		2	2
2	420630642	Gasket	4.99		2	2
3	420641213	Flanged Torx Screw M8 X 55	5.99		4	4
3	420641213	Flanged Torx Screw M8 X 55	6.29		4	4
4	420460980	Cover	2.49		2	2
5	420230461	O-Ring	1.99		2	2
6	420440147	Flanged Hex. Screw M6 X 12	1.99		3	3
7	420874830	Injection Valve Ass'y. Includes 7 to 9	123.49		2	2

8	420431890	O-Ring	4.49	2	2
8	420431890	O-Ring	4.99	2	2
9	420631220	O-Ring	9.49	2	2
9	420631220	O-Ring	9.99	2	2
10	420631295	O-Ring	1.49	2	2
10	420631295	O-Ring	1.99	2	2
11	420874901	Fuel Rail	15.99	2	2
11	420874901	Fuel Rail	16.99	2	2
12	420641048	Flanged Torx Screw M6 X 16	2.49	4	4
12	420641048	Flanged Torx Screw M6 X 16	2.61	4	4
13	420267040	Intake Neck	9.99	1	1
14	420251209	Clamp	5.99	2	2
14	420251209	Clamp	6.99	2	2
15	420667522	Air Inlet Manifold	21.99	1	1
16	420667526	Air Inlet Manifold Ass'y. Includes 16 to 17	144.99	1	1
17	420431900	Gasket	4.99	2	2
18	420241947	Hex. Screw M6 X 30	3.49	4	4
18	420241947	Hex. Screw M6 X 30	3.99	4	4
19	707000564	Pressure And Temperature Sensor	153.49	1	1
20a	420892595	Throttle Body. Includes 20a to 20b	329.49	1	1
20b	420431900	Gasket	4.99	1	1
21	420641198	Flanged Torx Screw M6 X 45	3.49	4	4
21	420641198	Flanged Torx Screw M6 X 45	3.66	4	4
22	420651520	Support	49.49	1	1
23	420441311	Hex.Screw M6 X 20	3.49	2	2
23	420441311	Hex.Screw M6 X 20	3.99	2	2
24	420660090	Rubber Bracket	3.49	2	2
25	420847971	Spacer	5.99	2	2
26	420441457	Hex. Screw M6 X 35	2.49	2	2
26	420441457	Hex. Screw M6 X 35	2.99	2	2

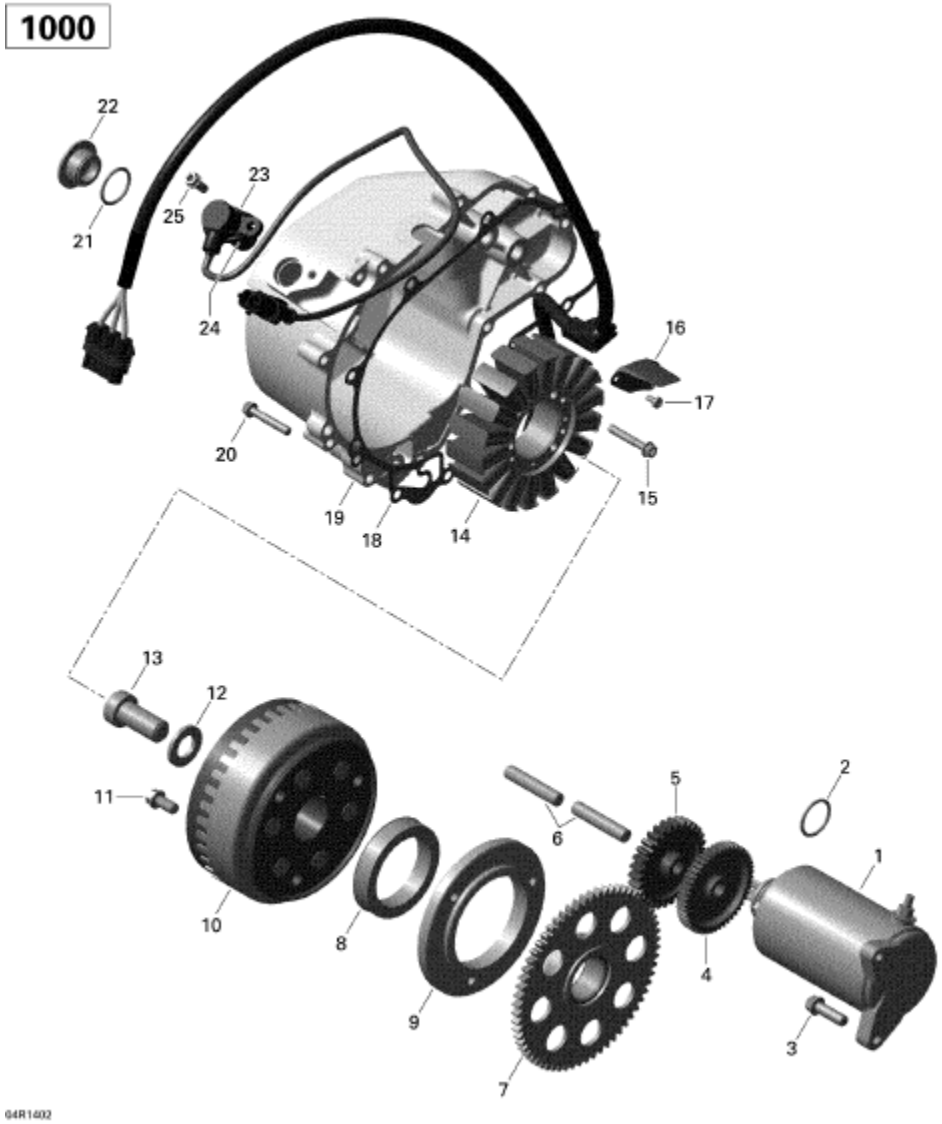
Commander 1000 STD, DPS, XT, XT-P, 2014: 02- Fuel System



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207662544	Hex. Flanged Screw M6 X 25	0.52		2	2
2	224060201	Flat Washer	0.90		2	2
3	275500700	Quick Attach 90°	10.99		1	1
3	275500700	Quick Attach 90°	11.99		1	1
4	293450274	Insert	4.97		2	2
4	293450274	Insert	5.99		2	2
6	293650046	Oetiker Clamp	2.32		6	6
7	293710136	Y-Fitting, 5/16"	3.99		1	1
7	293710136	Y-Fitting, 5/16"	4.99		1	1

8	293830037	Rubber Washer	2.68	2	2
9	414115200	Tie-Rap 180 mm	0.49	5	5
10	709000393	Fuel Line	18.99	@	1
10	709000393	Fuel Line	19.99	@	1
11	709000393	Fuel Line	18.99	@	1
11	709000393	Fuel Line	19.99	@	1
12	415080200	Hose, Polyurethane	4.99	@	1
12	415080200	Hose, Polyurethane	9.99	@	1
13	709000393	Fuel Line	18.99	@	1
13	709000393	Fuel Line	19.99	@	1
14	709000125	Female Quick Fitting Ass'y	9.99	1	1
14	709000125	Female Quick Fitting Ass'y	10.99	1	1
14a	513033135	Locking Clip	3.49	1	1
14a	513033135	Locking Clip	3.99	1	1
15	709000127	Rollover Valve	34.49	1	1
16	709000467	Fuel Tank		1	1
17	709000268	Cap. Except Europe	19.99	1	1
17	715001124	Fuel Cap Kit. Europe	44.99	1	1
18	709000274	Ring	9.99	1	1
18	709000274	Ring	10.99	1	1
19	709000275	O-Ring	10.99	1	1
19	709000275	O-Ring	11.99	1	1
21	709000288	Neoprene Pad	9.99	2	2
23	709000289	Neoprene Pad	9.99	1	1
24	709000330	Filter	4.99	1	1
25	709000362	Fuel Pump	401.99	1	1
50	709000389	Fuel Pre-Filter Kit	50.99	1	1

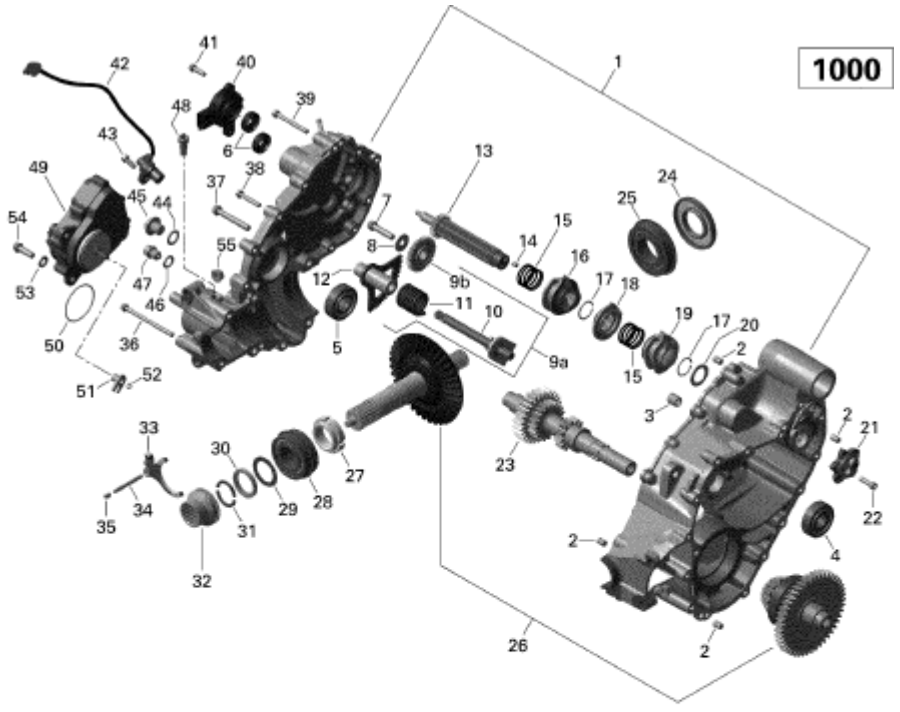
Commander 1000 STD, DPS, XT, XT-P, 2014: 03- Magneto And Electric Starter

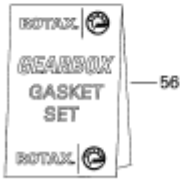


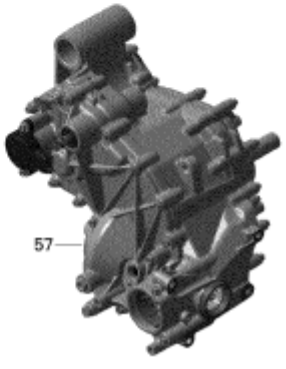
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420684562	Starter Ass'y. Includes 1 to 2	435.99		1	1
1	420684562	Starter Ass'y. Includes 1 to 2	544.99		1	1
2	420250140	O-Ring	5.99		1	1
2	420250140	O-Ring	6.29		1	1
3	420440372	Flanged Torx Screw M8 X 25	3.49		1	1
3	420440372	Flanged Torx Screw M8 X 25	3.66		1	1
4	420634741	Double Gear	146.99		1	1
5	420634605	Gear, 30 Teeth	61.99		1	1
6	420229302	Location Pin	1.99		2	2

6	420229302	Location Pin	2.99	2	2
7	420434235	Free Wheel Gear, 64 Teeth	139.99	1	1
8	420659112	Sprag Clutch	190.99	1	1
9	420659261	Sprag Clutch Housing	114.49	1	1
10	420685649	Flywheel	559.99	1	1
11	420440852	Flanged Torx Screw M8 X 16	3.49	3	3
11	420440852	Flanged Torx Screw M8 X 16	3.66	3	3
12	420627270	Shim	3.49	1	1
12	420627270	Shim	3.66	1	1
13	420241549	Socket Head Screw M16 X 35	5.99	1	1
13	420241549	Socket Head Screw M16 X 35	6.99	1	1
14	420685632	Stator Plate	273.49	1	1
15	420440274	Flanged Torx Screw M6 X 35	1.99	3	3
16	420251880	Cable Inner Cover	9.99	1	1
16	420251880	Cable Inner Cover	10.99	1	1
17	420240195	Tapping Screw M4 X 8	1.49	2	2
17	420240195	Tapping Screw M4 X 8	1.56	2	2
18	420651200	Gasket	18.49	1	1
18	420651200	Gasket	19.99	1	1
19	420611132	Cover	129.49	1	1
20	420440274	Flanged Torx Screw M6 X 35	1.99	11	11
21	420430782	O-Ring	3.49	1	1
21	420430782	O-Ring	3.99	1	1
22	420241630	Screw Plug	5.99	1	1
22	420241630	Screw Plug	6.29	1	1
23	420966570	Crankshaft Position Sensor Ass'y. Includes 23 to 24	76.99	1	1
24	420431580	O-Ring	9.99	1	1
24	420431580	O-Ring	10.99	1	1
25	420641048	Flanged Torx Screw M6 X 16	2.49	1	1
25	420641048	Flanged Torx Screw M6 X 16	2.61	1	1

Commander 1000 STD, DPS, XT, XT-P, 2014: 05- Gear Box 1







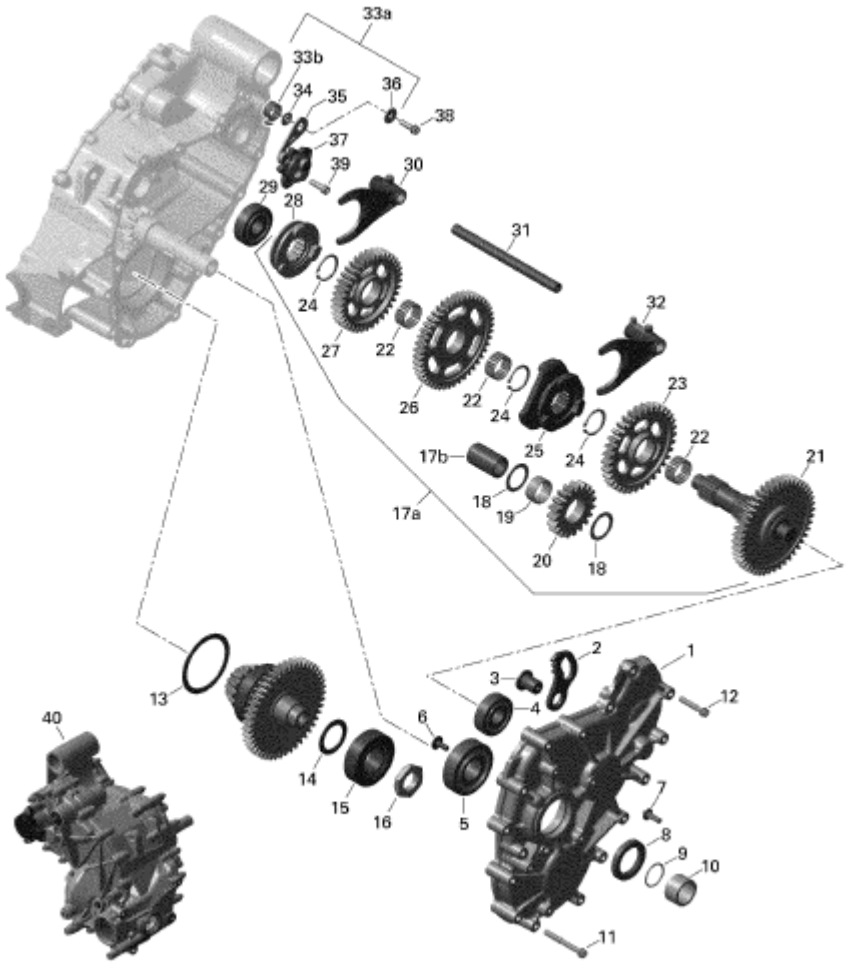
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	XXX	Gear Housing Ass'y. See Item 57, Gear Box. Includes 1 to 6			1	
2	420632010	Center Pin 8 X 12	3.49		2	2
2	420632010	Center Pin 8 X 12	3.66		2	2
3	XXX	Dowel. See Item 57, Gear Box			1	
4	420932815	Ball Bearing 6303E	19.99		1	1
4	420932815	Ball Bearing 6303E	20.99		1	1
5	420932433	Ball Bearing 6204	15.99		1	1
5	420932433	Ball Bearing 6204	16.99		1	1
6	420250450	Oil Seal	14.49		2	2

6	420250450	Oil Seal	15.99	2	2
7	420641188	Flanged Torx Screw M8 X 35	5.99	1	1
7	420641188	Flanged Torx Screw M8 X 35	6.29	1	1
8	420227937	Plain Washer	8.49	1	1
8	420227937	Plain Washer	8.99	1	1
9a	420620929	Shift Shaft Ass'y. Includes 9a to 12	48.49	1	1
9b	XXX	Intermediate Gear, 30 Teeth		1	
10	XXX	Shift Shaft		1	
11	XXX	Spring		1	
12	XXX	Tooth Segment		1	
13	420657230	Shift Drum Ass'y. Includes 13 to 20	198.49	1	1
14	XXX	Needle Pin		1	
15	XXX	Compression Spring		2	
16	XXX	Gear Shifting Gate		1	
17	XXX	Retaining Ring		2	
18	XXX	Disengagement Gate		1	
19	XXX	Gear Shifting Gate		1	
20	XXX	Thrust Washer		1	
21	XXX	Index Washer		1	
22	420241939	Allen Screw M6 X 20	0.99	1	1
22	420241939	Allen Screw M6 X 20	1.99	1	1
23	420620896	Countershaft	266.99	1	1
24	420831955	Oil Seal	17.49	1	1
24	420831955	Oil Seal	18.99	1	1
25	XXX	Ball Bearing. See Item 57, Gear Box		1	
26	XXX	Drive Axle Set. See Item 57, Gear Box		1	
27	XXX	Groove Nut. See Item 57, Gear Box		1	
28	XXX	Ball Bearing. See Item 57, Gear Box		1	
29	XXX	Shim Set. See Item 57, Gear Box		1	
30	XXX	Angular Ring. See Item 57, Gear Box		1	
31	XXX	Half Ring. See Item 57, Gear Box		2	
32	420257676	Shifting Sleeve Kit. Includes 32 to 35	85.99	1	1
33	XXX	Shifting Fork		1	
34	XXX	Needle Pin		1	
35	420841771	Set Screw M6 X 8	3.49	1	1
35	420841771	Set Screw M6 X 8	3.66	1	1
36	420641228	Flanged Torx Screw M6 X 85	5.99	2	2
36	420641228	Flanged Torx Screw M6 X 85	6.29	2	2
37	420641213	Flanged Torx Screw M8 X 55	5.99	5	5
37	420641213	Flanged Torx Screw M8 X 55	6.29	5	5
38	420440274	Flanged Torx Screw M6 X 35	1.99	8	8
39	420440702	Flanged Torx Screw M6 X 55	1.99	2	2
39	420440702	Flanged Torx Screw M6 X 55	2.99	2	

						2
40	420266168	Angle Rotation Sensor	134.99		1	1
41	420641048	Flanged Torx Screw M6 X 16	2.49		2	2
41	420641048	Flanged Torx Screw M6 X 16	2.61		2	2
42	420265626	Speed Sensor	109.49		1	1
43	420641048	Flanged Torx Screw M6 X 16	2.49		1	1
43	420641048	Flanged Torx Screw M6 X 16	2.61		1	1
44	420650350	O-Ring	7.49		1	1
44	420650350	O-Ring	7.99		1	1
45	420241660	Plug Screw M14 X 1.5	11.99		1	1
45	420241660	Plug Screw M14 X 1.5	12.99		1	1
46	420250640	Copper Washer	0.61		1	1
46	420250640	Copper Washer	0.99		1	1
47	420241786	Magnetic Drain Plug	13.99		1	1
47	420241786	Magnetic Drain Plug	14.69		1	1
48	420640192	Position Switch	22.49		1	1
49	415129174	Actuator Ass'y. Includes 49 to 52	209.49		1	1
50	293300117	O-Ring	2.99		1	1
50	293300117	O-Ring	3.99		1	1
51	415129175	Shifting Fork	11.99		1	1
51	415129175	Shifting Fork	12.99		1	1
52	415129176	Circlip	1.63	293370042	1	1
52	415129176	Circlip	1.99	293370042	1	1
53	420250311	Flat Washer 8.4 mm	0.99		3	3
53	420250311	Flat Washer 8.4 mm	1.04		3	3
54	420440372	Flanged Torx Screw M8 X 25	3.49		3	3
54	420440372	Flanged Torx Screw M8 X 25	3.66		3	3
55	420842619	Hex. Nut M8	1.99		4	4
55	420842619	Hex. Nut M8	2.99		4	4
56	420684139	Gasket Set	65.99		1	1
57	420684786	Gear Box	1944.99		1	1

Commander 1000 STD, DPS, XT, XT-P, 2014: 05- Gear Box 2

1000



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	XXX	LH Gear Housing Ass'y. See Item 40, Gear Box. Includes 1 to 8			1	
2	420257658	Parking Lock Lever	49.99		1	1
2	420257658	Parking Lock Lever	124.49		1	1
3	420647120	Collar Sleeve	23.99	420647122	1	1
4	420932815	Ball Bearing 6303E	19.99		1	1
4	420932815	Ball Bearing 6303E	20.99		1	1
5	420932825	Ball Bearing	24.49		1	1
6	420241529	Torx Screw M6 X 16	5.99		1	1
6	420241529	Torx Screw M6 X 16	6.99		1	1

7	420441430	Distance Screw M6	2.49		1	1
7	420441430	Distance Screw M6	2.99		1	1
8	420950087	Oil Seal	14.99		1	1
8	420950087	Oil Seal	15.99		1	1
9	420631610	O-Ring	3.49		1	1
9	420631610	O-Ring	3.99		1	1
10	420647251	Distance Ring	28.99		1	1
11	420440702	Flanged Torx Screw M6 X 55	1.99		13	13
11	420440702	Flanged Torx Screw M6 X 55	2.99		13	13
12	420440274	Flanged Torx Screw M6 X 35	1.99		3	3
13	XXX	Shim Set. See Item 40, Gear Box			1	
14	XXX	Shim Set. See Item 40, Gear Box			1	
15	XXX	Roller Bearing. See Item 40, Gear Box			1	
16	XXX	Hex. Nut M24 X 1.5. See Item 40, Gear Box			1	
17a	420281270	Gear Set. Includes 17a to 28			1	1
17b	XXX	Intermediate Gear Shaft			1	
18	420944476	Thrust Washer	6.99		2	2
18	420944476	Thrust Washer	7.99		2	2
19	420932930	Needle Bearing	16.99		1	1
19	420932930	Needle Bearing	17.99		1	1
20	XXX	Intermediate Gear, 19 Teeth			1	
21	XXX	Main Shaft			1	
22	420632070	Needle Bearing	11.99		3	3
22	420632070	Needle Bearing	12.99		3	3
23	420434873	Gear Pinion, 34 Teeth	69.99		1	1
24	420845771	Retaining Ring	8.49		3	3
24	420845771	Retaining Ring	8.99		3	3
25	420257951	Shifting Sleeve	62.49		1	1
26	420434861	Gear Pinion, 44 Teeth		...	1	1
27	420434857	Gear Pinion, 36 Teeth	65.99		1	1
28	420257942	Shifting Sleeve	67.99		1	1
28	420257942	Shifting Sleeve	80.99		1	1
29	420932815	Ball Bearing 6303E	19.99		1	1
29	420932815	Ball Bearing 6303E	20.99		1	1
30	420257628	Shift Fork	94.99		1	1
31	420258386	Fork Spindle	15.99		1	1
31	420258386	Fork Spindle	16.99		1	1
32	420257618	Shift Fork	142.49		1	1
33a	420248532	Index Lever Ass'y. Includes 33a to 37	29.49		1	1

33b	XXX	Index Spring		1	
34	XXX	Step Ring		1	
35	XXX	Index Lever		1	
36	XXX	Washer		1	
37	XXX	Index Washer		1	
38	420440207	Flanged Torx Screw M6 X 20	1.99	1	1
38	420440207	Flanged Torx Screw M6 X 20	2.99	1	1
39	420241939	Allen Screw M6 X 20	0.99	1	1
39	420241939	Allen Screw M6 X 20	1.99	1	1
40	420684786	Gear Box	1944.99	1	1

Commander 1000 STD, DPS, XT, XT-P, 2014: 05- Transmission

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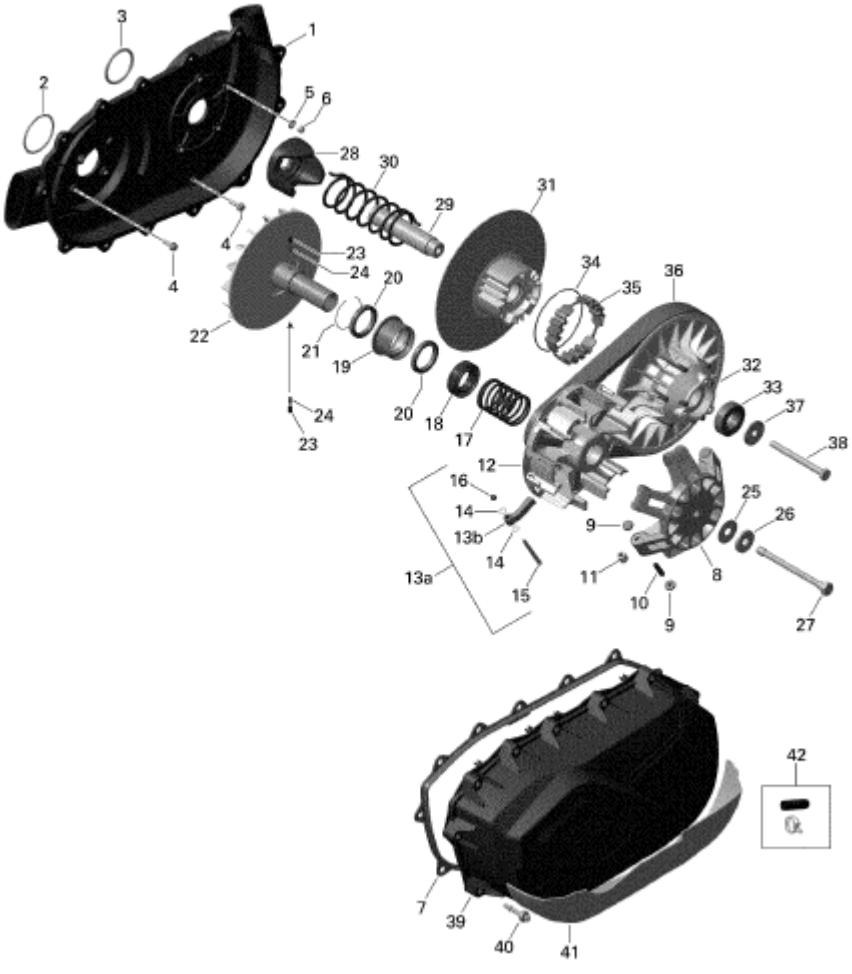


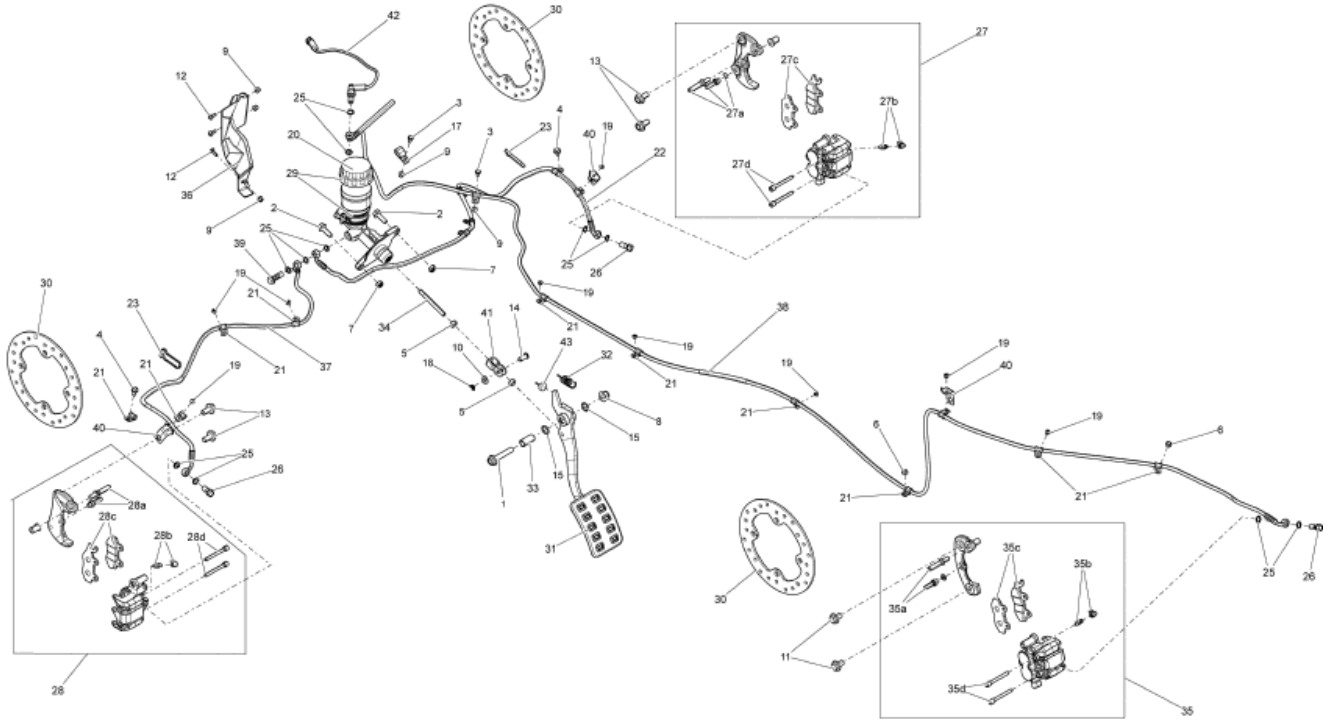
16R1402

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420611408	CVT Air Guide	44.49		1	1
2	420430408	O-Ring	4.49		1	1
2	420430408	O-Ring	4.99		1	1
3	420631088	O-Ring	4.49		1	1
3	420631088	O-Ring	4.99		1	1
4	420441311	Hex.Screw M6 X 20	3.49		8	8
4	420441311	Hex.Screw M6 X 20	3.99		8	8
5	224061121	Flat Washer	0.43		1	1
6	232561414	Elastic Stop Nut M6	1.99	232561434	1	1
7	420430126	Gasket	28.49		1	

						1
8	420280522	Governor Cup Ass'y. Includes 8 to 11	318.99		1	1
9	420281296	Slider Shoe Set	49.99		1	1
10	417223257	Roller Axle	5.99		6	6
10	417223257	Roller Axle	6.99		6	6
11	417223387	Roller	7.49	417223767	6	6
11	417223387	Roller	7.99	417223767	6	6
12	420280467	Outher Haft	194.49		1	1
12	420280467	Outher Haft	239.99		1	1
13a	420248496	Centrifugal Lever Kit. Includes 13a to 16	131.99		6	6
13b	XXX	Lever			6	
14	XXX	Thrust Washer			12	
15	XXX	Screw			6	
16	XXX	Lock Nut M5			6	
17	420238615	Compression Spring, Drive Pulley	19.49		1	1
18	420627577	Spring Seat	20.99		1	1
19	420257195	Drive Pulley Clutch	96.49		1	1
20	420632377	Ball Bearing	47.49		2	2
21	420245951	Retaining Ring	13.99		1	1
21	420245951	Retaining Ring	14.99		1	1
22	420280374	Inner Half	275.99		1	1
23	420229577	Spring Sleeve	21.99		2	2
24	420239134	Spring	1.99		2	2
24	420239134	Spring	2.99		2	2
25	420627920	Thrust Washer	4.99		1	1
25	420627920	Thrust Washer	5.99		1	1
26	420627765	Spring Washer	13.49		1	1
26	420627765	Spring Washer	14.99		1	1
27	420641855	Hex. Screw M12 X 135	19.99		1	1
27	420641855	Hex. Screw M12 X 135	20.99		1	1
28	420280472	Cam	75.99		1	1
29	420220914	Driven Pulley Shaft	94.49		1	1
30	420638040	Compression Spring	32.99		1	1
31	420280499	Inner Half Ass'y	220.99		1	1
32	420280178	Outer Half Pulley Ass'y. Includes 32 to 35	239.99		1	1
32	420280178	Outer Half Pulley Ass'y. Includes 32 to 35	249.99		1	1
33	420932421	Ball Bearing	16.99		1	1
33	420932421	Ball Bearing	17.99		1	1
34	420245910	Retaining Ring	10.99		1	

					1
34	420245910	Retaining Ring	11.99	1	1
35	420660124	Torque Gear	15.99	1	1
35	420660124	Torque Gear	16.99	1	1
36	715000302	V-Belt	129.99	1	1
37	420627590	Thrust Washer	10.99	1	1
37	420627590	Thrust Washer	11.99	1	1
38	420441485	Hex. Screw M10 X 110	10.99	1	1
39	420611395	Variator Cover	109.49	1	1
40	420440567	Hex. Distance Screw M6 X 30.5	5.73	13	13
40	420440567	Hex. Distance Screw M6 X 30.5	6.99	13	13
41	715900200	Heat Protection Mat	30.99	1	1
42	707001179	Drain Plug Kit	9.49	1	1

Commander 1000 STD, DPS, XT, XT-P, 2014: 06- Brakes



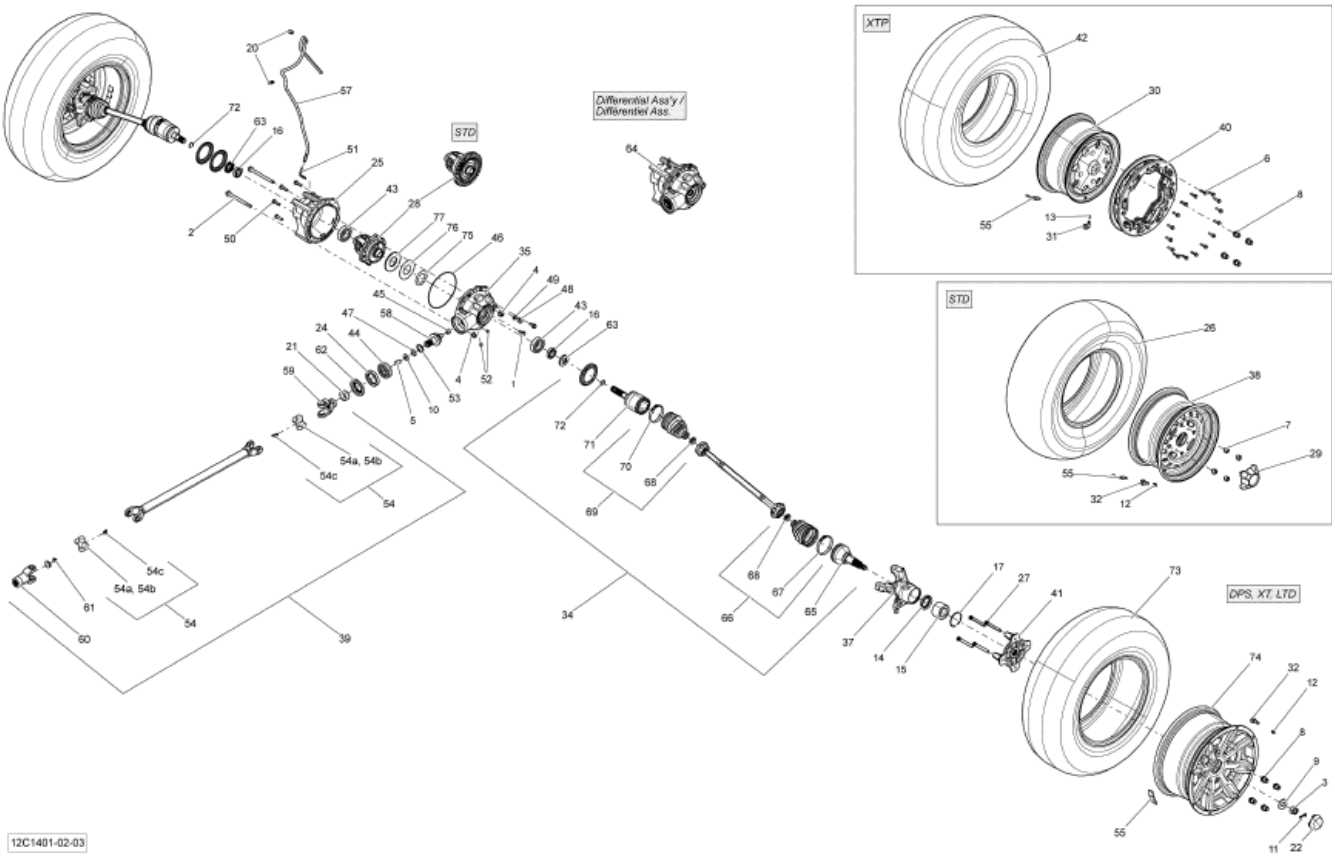
22C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207605544	Hex. Flanged Screw M10 X 55	2.62		1	1
2	207682544	Hex. Flanged Screw M8 X 25	1.99	207682534	2	2
3	210251680	Hex. Forming Screw M5 X 16	0.87		2	2
4	210261040	Hex. Flanged Screw M6 X 10	1.17		2	2
5	232081414	Hex. Nut M8	0.58		2	2
6	232561414	Elastic Stop Nut M6	1.99	232561434	2	2
7	232581414	Hex. Elastic Stop Nut M8	0.47		2	2
8	233201414	Hex. Flanged Elastic Nut M10	1.18		1	1
9	233251494	Elastic Flanged Nut M5	1.99		5	5
10	234081430	Flat Washer M8	1.99		1	1
11	250000060	Flanged Screw M10 X 16, Scotch Grip	2.88		2	2
12	250000145	Torx Screw M5 X 14	1.17		3	3
13	250000601	Hex. Flanged Screw M10 X 20, Scotch Grip	3.99		4	4
14	250400058	Pin	5.99		1	1
15	293300144	O-Ring	1.99		2	2
15	293300144	O-Ring	2.99		2	2
17	293650220	Clamp	0.99		1	1
17	293650220	Clamp	1.99		1	1
18	371800700	Cotter Pin	0.99		1	1
19	390402200	Pop Rivet 3/16"	0.28		12	12
20	715500332	Diaphragm Cap Kit	17.49		1	1

20	715500332	Diaphragm Cap Kit	18.99	1	1
21	705600459	Clamp	3.49	@	1
21	705600459	Clamp	3.99	@	1
22	705601265	RH Front Hose		1	1
23	414115200	Tie-Rap 180 mm	0.49	@	1
25	705600310	Copper Washer	1.99	11	11
25	705600310	Copper Washer	2.99	11	11
26	705600609	Banjo Bolt	0.90	3	3
27	705600678	RH Caliper	212.49	1	1
27a	715500333	Spring Boot Kit	12.49	1	1
27a	715500333	Spring Boot Kit	13.99	1	1
27b	705600080	Bleeding Screw	10.99	1	1
27b	705600080	Bleeding Screw	11.99	1	1
27c	715500336	Brake Pad Kit	39.99	1	1
27d	715500337	Pin Set	12.49	1	1
27d	715500337	Pin Set	13.99	1	1
28	705600679	LH Caliper	212.49	1	1
28a	715500333	Spring Boot Kit	12.49	1	1
28a	715500333	Spring Boot Kit	13.99	1	1
28b	705600080	Bleeding Screw	10.99	1	1
28b	705600080	Bleeding Screw	11.99	1	1
28c	715500335	Brake Pad Kit	39.99	1	1
28d	715500337	Pin Set	12.49	1	1
28d	715500337	Pin Set	13.99	1	1
29	705600681	Master Cylinder Ass'y	158.49	1	1
30	705600684	Brake Disc	29.49	3	3
31	705600724	Brake Pedal	36.99	1	1
32	705600792	Brake Pedal Spring	5.99	1	1
32	705600792	Brake Pedal Spring	6.99	1	1
33	705600815	Inner Spacer	7.99	1	1
33	705600815	Inner Spacer	8.99	1	1
34	705600833	Master Cylinder Rod	158.49	1	1
35	705600872	Rear Caliper	208.49	1	1
35a	715500333	Spring Boot Kit	12.49	1	1
35a	715500333	Spring Boot Kit	13.99	1	1
35b	705600080	Bleeding Screw	10.99	1	1
35b	705600080	Bleeding Screw	11.99	1	1
35c	715500336	Brake Pad Kit	39.99	1	1
35d	715500337	Pin Set	12.49	1	1
35d	715500337	Pin Set	13.99	1	1
36	705600917	LH Front Deflector	4.99	1	1
37	705600943	LH Front Hose	56.99	1	1
38	705600945	Rear Flexible Hose	105.99	1	1
39	705600958	Banjo Bolt	4.49	1	1
39	705600958	Banjo Bolt	4.99	1	1
40	705601088	Bracket	1.99	3	3
41	705601142	Yoke		1	1
42	705601250	Brake Switch	33.99	1	1

43	708000759	Rubber Stopper	2.49	1	1
43	708000759	Rubber Stopper	2.99	1	1

Commander 1000 STD, DPS, XT, XT-P, 2014: 07- Drive System, Front

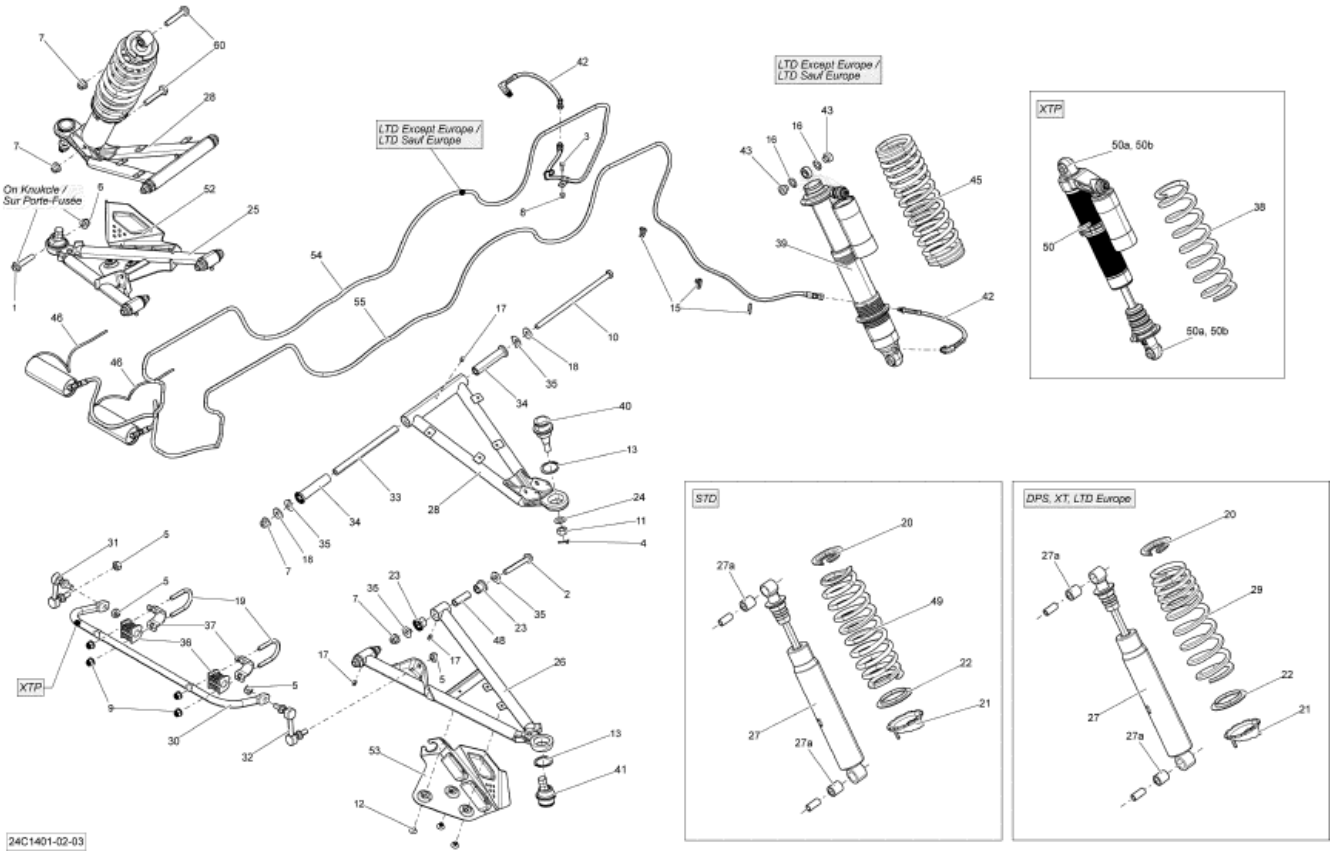


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207582044	Hex. Flanged Screw M8 X 20, Scotch Grip	1.30		2	2
2	230602546	Hex. Flanged Screw M10 X 125	5.73		2	2
3	250100047	Hex. Castellated Nut M18	7.07		2	2
3	250100047	Hex. Castellated Nut M18	8.99		2	2
4	233201436	Flanged Elastic Nut M10	1.99		2	2
5	250000378	Hex Flanged Screw M12 X 16, Scotch Grip	3.49		1	1
6	250000435	Hex. Flanged Screw M6 X 25	1.99		16	16
7	250100042	Wheel Nut	5.80		8	8
8	250100082	Chrome Wheel Nut M10 X 1.25. XT Except Camo	4.97		8	8
8	250100082	Chrome Wheel Nut M10 X 1.25. DPS	4.97		8	8
8	250100100	Black Wheel Nut M10 X 1.25. XT Camo	6.99		8	8
8	250100100	Black Wheel Nut M10 X 1.25. XTP	6.99		8	8
9	250200049	Spring Washer	3.30		2	2
9	250200049	Spring Washer	3.99		2	2
10	250200102	Flat Washer M12	1.99		1	1
11	250400036	Cotter Pin	1.99		2	2
12	293000110	Valve Cap	0.99		2	2
12	293000110	Valve Cap	1.99		2	2
13	293000111	Valve Cap	5.99		2	2
13	293000111	Valve Cap	6.99		2	2
14	293250246	O-Ring	5.99		2	2
15	293350040	Cone Bearing	69.49		2	2

16	293350044	Ball Bearing	19.99	2	2
16	293350044	Ball Bearing	20.99	2	2
17	293370019	Circlip	2.49	2	2
17	293370019	Circlip	2.99	2	2
20	293750002	Tie-Rap 142 mm	0.99	2	2
20	293750002	Tie-Rap 142 mm	1.99	2	2
21	705400036	Wear Ring	18.49	1	1
22	705400504	Wheel Cap. XT Camo	7.49	2	2
22	705400504	Wheel Cap. XT Camo	7.99	2	2
22	705400520	Wheel Cap. XT Except Camo	7.49	2	2
22	705400520	Wheel Cap. XT Except Camo	7.99	2	2
22	705400520	Wheel Cap. DPS	7.49	2	2
22	705400520	Wheel Cap. DPS	7.99	2	2
24	705400661	Nut	27.49	1	1
25	705400762	Front Cover	239.99	1	1
26	705400781	Front Tire. STD Except Europe	89.99	2	2
26	705401046	Front Tire. STD Europe	261.99	2	2
27	705400791	Wheel Stud	9.49	8	8
28	705400645	Differential. STD	595.49	1	1
28	705400822	Differential. Except STD	719.99	1	1
28	705400822	Differential. Except STD	1199.99	1	1
29	705400921	Wheel Cap	2.49	2	2
30	705400945	Front Rim	124.99	1	1
31	705400872	Rim Valve with Cap	7.49	1	1
31	705400872	Rim Valve with Cap	7.99	1	1
32	705400193	Rim Valve With Cap	4.99	1	1
32	705400193	Rim Valve With Cap	5.99	1	1
34	705401105	LH Half Shaft	398.99	1	1
34	705401106	RH Half Shaft	398.99	1	1
35	705401136	Front Gear Cover	149.99	1	1
37	705401204	LH Front Knuckle	70.99	1	1
37	705401205	RH Front Knuckle	70.99	1	1
38	705401217	Front Rim	75.99	2	2
39	705401239	Axle Drive Ass'y		1	1
40	705401248	Reinforcement Disc Plate	79.99	2	2
41	705401314	Wheel Hub	39.99	2	2
41	705401314	Wheel Hub	79.99	2	2
42	705401130	Front Tire. XTP Europe	169.99	1	1
42	705401385	Front Tire. XTP Except Europe	164.99	1	1
43	705500259	Ball Bearing	34.99	2	2
44	705500260	Ball Bearing	19.99	1	1
44	705500260	Ball Bearing	20.99	1	1
45	705500261	Needle Bearing	11.63	1	1
45	705500261	Needle Bearing	12.99	1	1
46	705500265	Seal	10.80	1	1
46	705500265	Seal	11.99	1	1
47	705500267	O-Ring	3.30	1	1
47	705500267	O-Ring	3.99	1	1
48	705500504	Fill Level Plug	6.99	1	1

48	705500504	Fill Level Plug	7.99	1	1
49	705500506	Copper Washer	0.32	1	1
50	705500892	Screw	6.99	6	6
50	705500892	Screw	7.99	6	6
51	705500893	Vent Valve	11.99	1	1
51	705500893	Vent Valve	12.99	1	1
52	705500894	Drain Plug	6.99	2	2
52	705500894	Drain Plug	7.99	2	2
53	705501162	Pinion Gear Shim	9.99	1	1
53	705501162	Pinion Gear Shim	10.99	1	1
54	703500814	Unit Pack Kit	66.99	2	2
54a	715900183	U-Joint	20.99	2	2
54b	715900117	Snap Ring	2.99	8	8
54c	703500813	Grease Fitting	2.99	2	2
55	705501385	1/2 OZ Weight	3.49	@	1
55	705501385	1/2 OZ Weight	3.99	@	1
57	415080200	Hose, Polyurethane	4.99	1	1
57	415080200	Hose, Polyurethane	9.99	1	1
58	705501588	10 Teeth Pinion	141.99	1	1
59	715900231	Yoke Joint	21.99	1	1
60	715900232	Yoke Joint	19.99	1	1
61	703500815	Grease Fitting	2.99	1	1
62	705401481	Oil Seal	18.99	1	1
63	705401486	Oil Seal	9.99	2	2
64	705401487	Front Differential Ass'y. STD	1199.99	1	1
64	705401488	Front Differential Ass'y. Except STD		1	1
65	705401353	CV Joint	156.99	2	2
66	705401354	Wheel Side Boot Kit	42.99	2	2
67	715900260	Oetiker Clamp, Large	7.99	2	2
68	715900261	Oetiker Clamp, Small	4.99	4	4
69	705401355	Differential Side Boot Kit	42.99	2	2
70	715900262	Oetiker Clamp, Large Dif.Side	7.99	2	2
71	705401357	RH Plunging Joint	194.99	1	1
71	705401359	LH Plunging Joint	194.99	1	1
72	705401349	Circlip Joint	2.99	2	2
72	705401349	Circlip Joint	3.99	2	2
73	705400961	Front Tire. XT Europe	119.99	2	2
73	705401377	Front Tire. Except XT Europe	195.99	2	2
74	705401378	Front Rim. Except XT Camo	135.99	2	2
74	705401379	Front Rim. XT Camo	135.99	2	2
75	703500049	Pinion Shim Kit	49.99	1	1
76	703500288	Differential Shim Kit	52.49	1	1
77	703500050	Differential Shim Kit	84.49	1	1

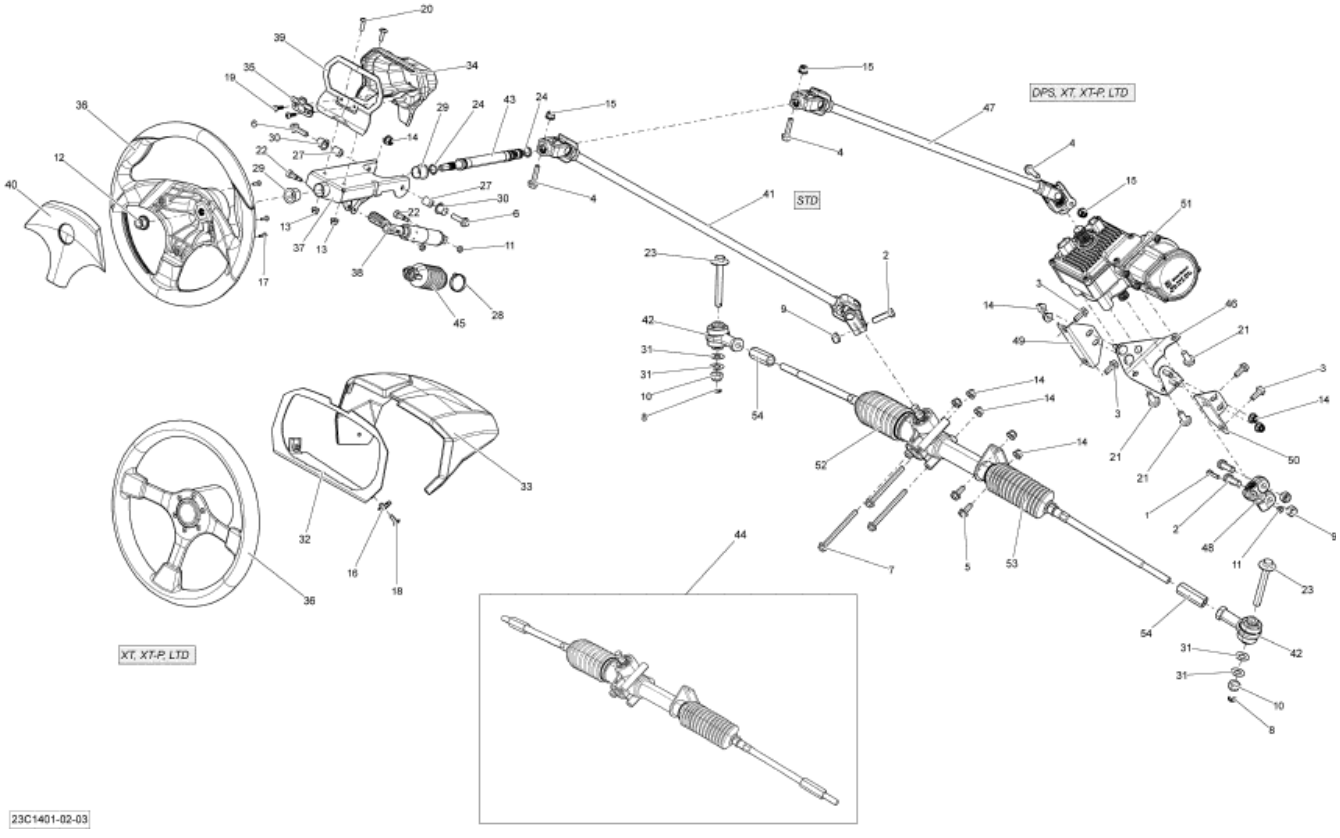
Commander 1000 STD, DPS, XT, XT-P, 2014: 07- Front Suspension



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207605044	Hex. Flanged Screw M10 X 50	4.07		2	2
2	207607046	Hex. Flanged Screw M10 X 70	2.32		4	4
3	N/A	Not available for this vehicle			1	
4	211400017	Cotter Pin	0.27		2	2
5	232501416	Elastic Flanged Nut M10	1.17		4	4
6	233201414	Hex. Flanged Elastic Nut M10	1.18		2	2
7	233201436	Flanged Elastic Nut M10	1.99		6	6
8	N/A	Not available for this vehicle			1	
9	233281414	Hex. Flanged Elastic Nut M8	1.05		4	4
10	250000510	Hex. Cap Screw M10 X 225	9.99		2	2
11	250100099	Nut M12	1.99		2	2
12	293150104	Pop Rivet 3/16"	0.47		6	6
13	293370035	Circlip	4.97		4	4
15	N/A	Not available for this vehicle			4	
16	N/A	Not available for this vehicle			4	
17	408200700	Grease Fitting	2.99		6	6
17	408200700	Grease Fitting	6.99		6	6
18	503190439	Washer	4.49		4	4
18	503190439	Washer	4.71		4	4
19	506060600	U-clamp	12.49		2	2
19	506060600	U-clamp	13.11		2	2
20	706000567	Spring Stopper	9.99		2	2
20	706000567	Spring Stopper	10.99		2	2

21	706000910	Adjustable Ring	9.99	2	2
22	706000911	Protector Ring	8.49	2	2
23	706200181	Cushion	1.99	8	8
23	706200181	Cushion	7.49	8	8
24	250200086	Flat Washer	3.49	2	2
24	250200086	Flat Washer	3.99	2	2
25	706200742	LH Lower Suspension Arm	74.99	1	1
26	706200744	RH Lower Suspension Arm	74.99	1	1
27	706200782	Front Shock. DPS, XT	99.99	2	2
27	706200780	Front Shock. STD	99.99	2	2
27a	715900122	Bushing	4.99	4	4
27a	715900122	Bushing	5.99	4	4
28	706200796	Suspension Upper Arm	69.49	2	2
29	706200860	Front Spring, Green-Black-Black. DPS	42.49	2	2
29	706200860	Front Spring, Green-Black-Black. XT Yellow	42.49	2	2
29	706201367	Front Spring, Gold-Yellow. XT Red	105.99	2	2
29	706201369	Front Spring, Red-Yellow. XT Magnesium	105.99	2	2
29	706201369	Front Spring, Red-Yellow. XT Camo	105.99	2	2
30	706200865	Sway Bar	64.99	1	1
31	706200894	LH Double Ball Joint	42.49	1	1
32	706201032	RH Double Ball Joint	42.49	1	1
33	706201061	Inner Bushing	12.49	2	2
34	706201062	Cushion	1.99	4	4
35	706201063	Wear Plate	0.99	12	12
35	706201063	Wear Plate	1.99	12	12
36	706201086	Stabilizer Bushing	4.49	2	2
37	706201087	Clamp	4.49	2	2
38	706201124	Front Spring, Green-Gold	44.99	2	2
39	N/A	Not available for this vehicle		2	
40	706201370	Upper Ball Joint	39.99	2	2
41	706201371	Upper Ball Joint	39.99	2	2
42	N/A	Not available for this vehicle		2	
43	N/A	Not available for this vehicle		4	
45	N/A	Not available for this vehicle		2	
46	N/A	Not available for this vehicle		1	
48	706201587	Inner Bushing	2.99	4	4
49	706201631	Front Spring, Silver-Yellow	44.99	2	2
50	706201658	Front Shock Ass'y	1068.99	2	2
50a	715900209	O-Ring Bushing	9.99	8	8
50b	715900210	Interior Bushing	9.99	8	8
50b	715900210	Interior Bushing	10.99	8	8
52	706201669	LH Protector	12.99	1	1
52	706201669	LH Protector	13.99	1	1
53	706201670	RH Protector	12.99	1	1
53	706201670	RH Protector	13.99	1	1
54	N/A	Not available for this vehicle		1	
55	N/A	Not available for this vehicle		1	
60	207605544	Hex. Flanged Screw M10 X 55	2.62	4	4

Commander 1000 STD, DPS, XT, XT-P, 2014: 07- Steering

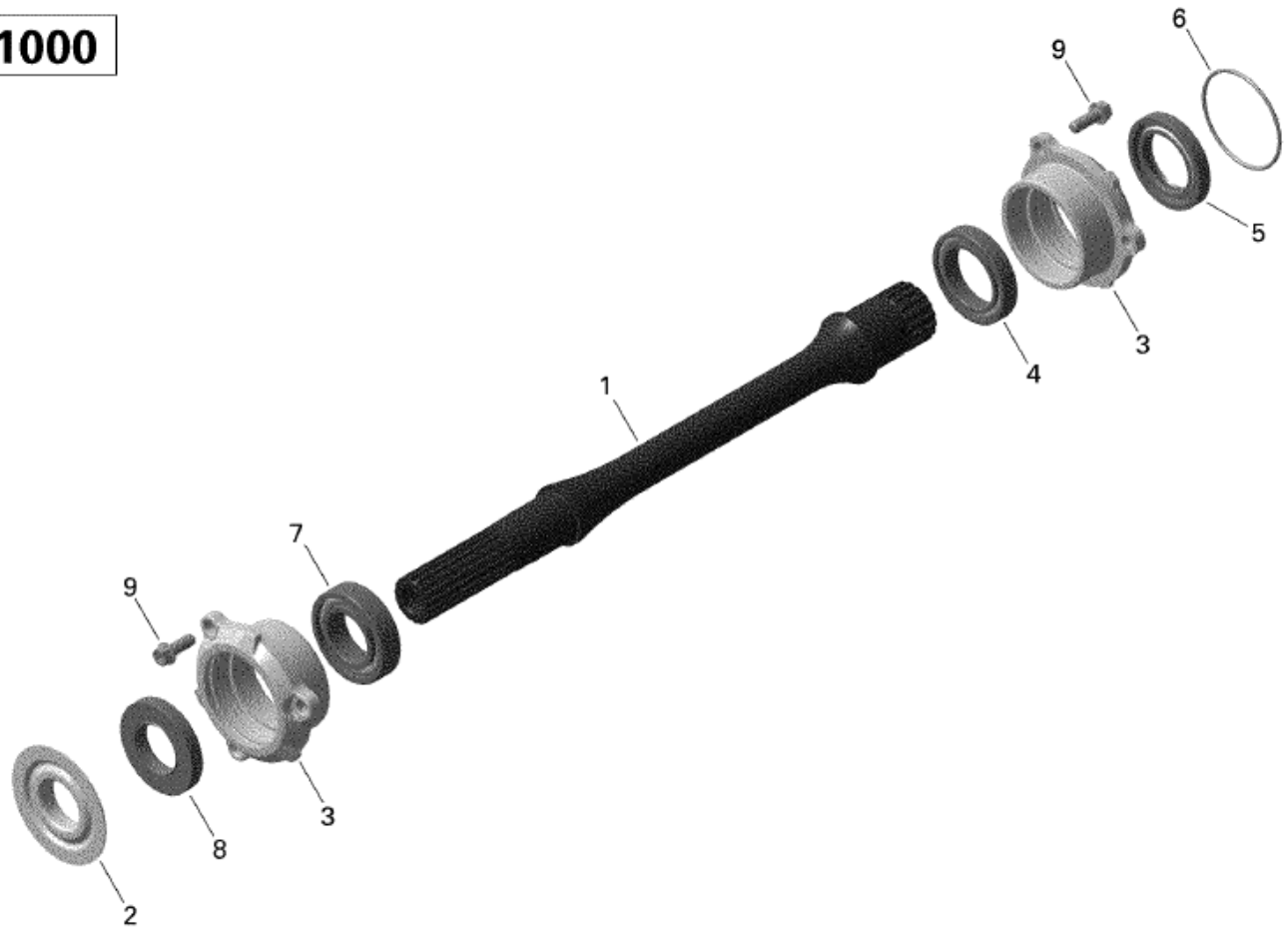


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207063044	Hex. Screw M6 X 30	0.90		1	1
2	207103586	Hex. Screw M10 X 35	1.99		@	1
3	207582044	Hex. Flanged Screw M8 X 20, Scotch Grip	1.30		4	4
4	207583586	Hex. Flanged Screw M8 X 35, Scotch Grip	1.99		@	1
5	207682044	Hex. Flanged Screw M8 X 20	0.87		2	2
6	207683044	Hex. Flanged Screw M8 X 30	1.30		2	2
7	207689534	Hex. Flanged Scew M8 X 95	3.99		3	3
8	211400017	Cotter Pin	0.27		2	2
9	232500416	Elastic Stop Nut M10	1.47		@	1
10	232521416	Elastic Flanged Stop Nut M12	1.33		2	2
11	232561414	Elastic Stop Nut M6	1.99	232561434	@	1
12	233221414	Hex. Flanged Elastic Nut M12	5.12		1	1
13	233261414	Hex. Flanged Elastic Nut M6	1.05		2	2
14	233281414	Hex. Flanged Elastic Nut M8	1.05		@	1
15	233281416	Hex. Elastic Flanged Nut M8	1.17		@	1
16	250000048	Pannel Nut M6 X 1.0	1.35		2	2
17	250000084	Phillips Screw K40 X 16	2.00		3	3
18	250000129	Torx Screw M6 X 16	0.97		2	2
19	250000297	Truss Head Torx Screw K50 X 20	1.99		2	2
20	250000350	Torx Truss Screw M6 X 20	4.99		2	2
21	250000601	Hex. Flanged Screw M10 X 20, Scotch Grip	3.99		3	3

22	250000649	Socket Head Screw M6 X 16	5.99	2	2
23	250000657	Hexagonal Screw M12 X 88	5.99	2	2
24	293300144	O-Ring	1.99	2	2
24	293300144	O-Ring	2.99	2	2
27	293900106	Bushing	3.49	2	2
27	293900106	Bushing	3.99	2	2
28	414115200	Tie-Rap 180 mm	0.49	1	1
29	415108000	Cushion	10.99	2	2
29	415108000	Cushion	11.54	2	2
30	705600799	Bushing	3.49	2	2
31	250200086	Flat Washer	3.49	4	4
31	250200086	Flat Washer	3.99	4	4
32	707900013	Cluster Support	9.99	1	1
33	707900124	Upper Cluster Cover	9.99	1	1
34	709400514	Speedometer Cover	9.99	1	1
34	709400514	Speedometer Cover	10.99	1	1
35	709400573	Latch Indicator Cover	5.99	1	1
35	709400573	Latch Indicator Cover	6.99	1	1
36	709400650	Steering Wheel. STD, DPS	55.99	1	1
36	715001134	Steering Wheel Kit. XT, XTP, LTD	149.99	1	1
37	709400655	Steering Support	49.49	1	1
38	709400656	Adjustment Cylinder	37.49	1	1
39	709400760	Cluster Support	14.49	1	1
40	709400780	Steering Center	6.99	1	1
41	709401389	Steering Column		1	1
42	709401134	Ball Joint	33.99	2	2
43	709401167	Steering Shaft	35.99	1	1
44	709401185	Steering Ass'y		1	1
45	709401232	Boot Kit, Tube Side		1	1
46	709401296	Support		1	1
47	709401326	Steering Column		1	1
48	709401328	Coupling		1	1
49	709401336	LH DPS Support		1	1
50	709401337	RH DPS Support		1	1
51	709401406	Power Steering Ass'y		1	1
52	715900235	Boot Kit, Pinion Side		1	1
53	715900236	Boot Kit, Tube Side		1	1
54	715900237	Nut Tie Rod End		2	2

Commander 1000 STD, DPS, XT, XT-P, 2014: 08- Drive Shaft

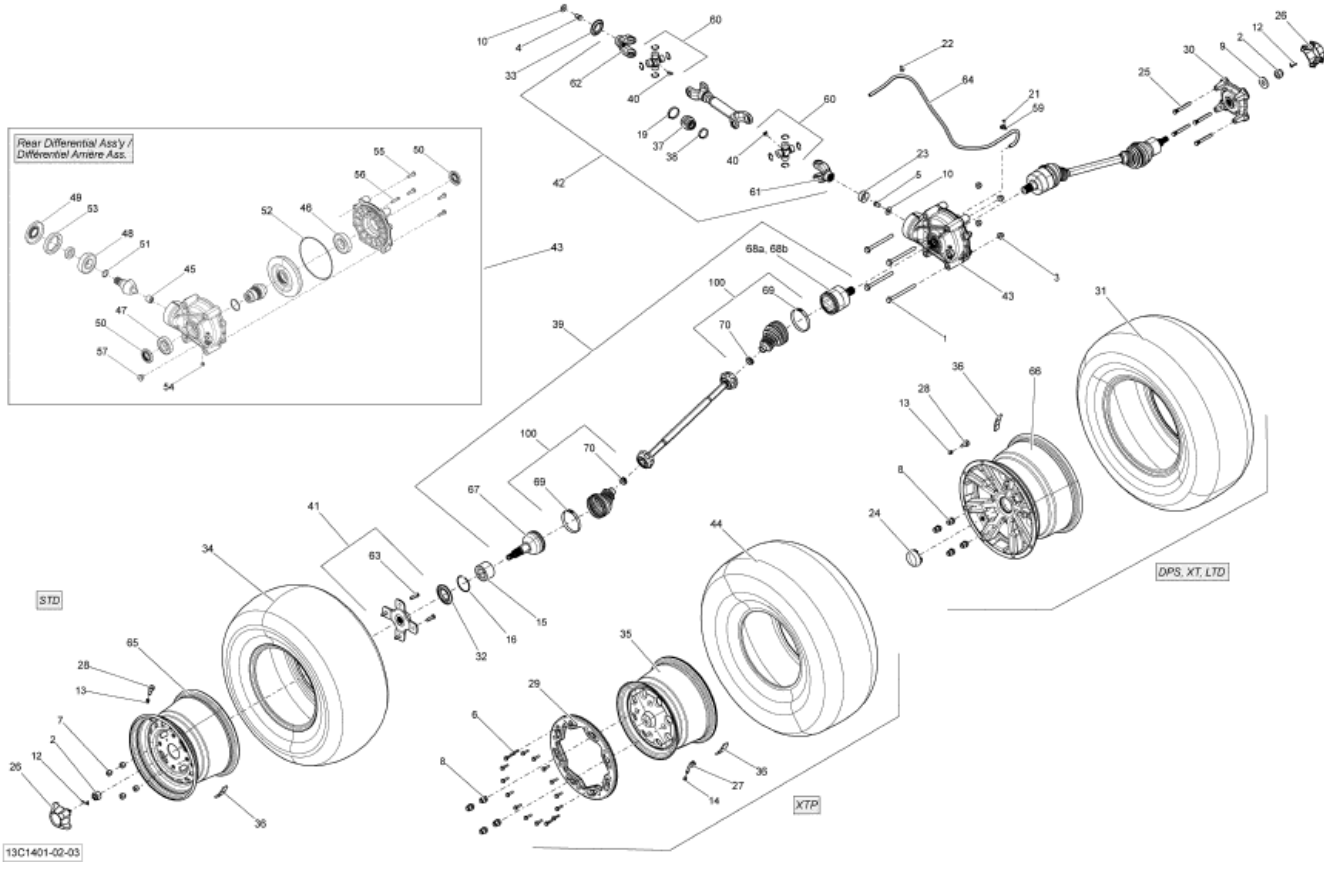
1000



56R1402

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420620514	Drive Shaft			1	1
2	420626990	Cover			1	1
3	420611221	Bearing Cover	20.99		2	2
4	420632275	Ball Bearing	26.99		1	1
5	420850055	Oil Seal	12.49		1	1
5	420850055	Oil Seal	13.11		1	1
6	420230305	O-Ring	7.49		1	1
6	420230305	O-Ring	7.99		1	1
7	420232341	Ball Bearing	16.99		1	1
7	420232341	Ball Bearing	17.99		1	1
8	420430589	Oil Seal	18.49		1	1
8	420430589	Oil Seal	19.99		1	1
9	420641048	Flanged Torx Screw M6 X 16	2.49		6	6
9	420641048	Flanged Torx Screw M6 X 16	2.61		6	6

Commander 1000 STD, DPS, XT, XT-P, 2014: 08- Drive System, Rear

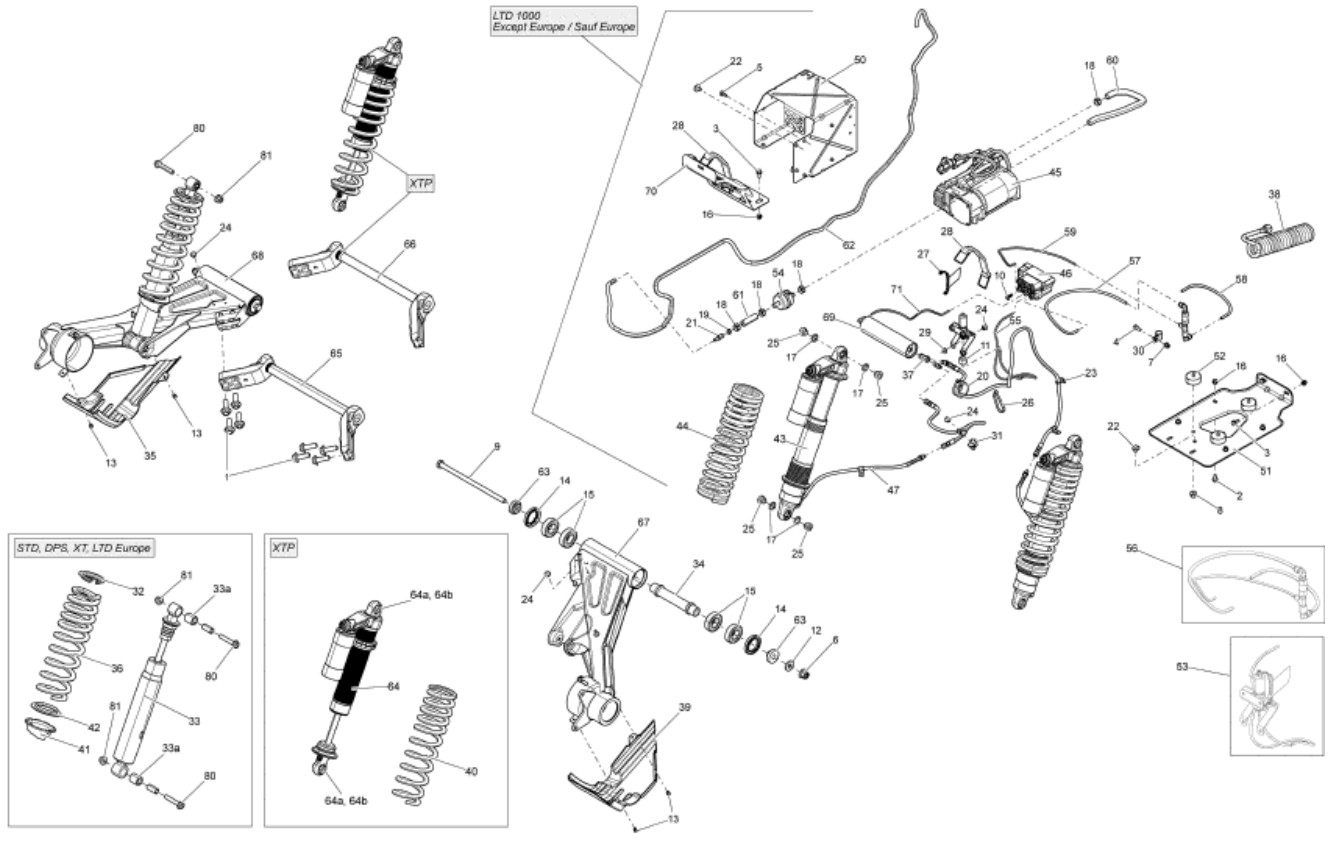


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	230602546	Hex. Flanged Screw M10 X 125	5.73		4	4
2	250100047	Hex. Castellated Nut M18	7.07		2	2
2	250100047	Hex. Castellated Nut M18	8.99		2	2
3	233201436	Flanged Elastic Nut M10	1.99		4	4
4	250000359	Hex Flanged Screw M12 x 16	3.99		1	1
5	250000615	Hex Flanged Screwv M10 X 16	3.99		1	1
6	250000435	Hex. Flanged Screw M6 X 25	1.99		16	16
7	250100042	Wheel Nut	5.80		8	8
8	250100082	Chrome Wheel Nut M10 X 1.25. XT Except Camo	4.97		8	8
8	250100082	Chrome Wheel Nut M10 X 1.25. DPS	4.97		8	8
8	250100100	Black Wheel Nut M10 X 1.25. XT Camo	6.99		8	8
8	250100100	Black Wheel Nut M10 X 1.25. XTP	6.99		8	8
9	250200049	Spring Washer	3.30		2	2
9	250200049	Spring Washer	3.99		2	2
10	250200014	Flat Washer M10	1.17		2	2
12	250400036	Cotter Pin	1.99		2	2
13	293000110	Valve Cap	0.99		2	2
13	293000110	Valve Cap	1.99		2	2
14	293000111	Valve Cap	5.99		2	2
14	293000111	Valve Cap	6.99		2	2
15	293350040	Cone Bearing	69.49		2	2
16	293370019	Circlip	2.49		2	2

16	293370019	Circlip	2.99	2	2
19	293650138	Oetiker Gear Clamp	3.30	1	1
19	293650138	Oetiker Gear Clamp	3.99	1	1
21	390402200	Pop Rivet 3/16"	0.28	1	1
22	414227300	Clip	1.15	1	1
23	705400036	Wear Ring	18.49	1	1
24	705400504	Wheel Cap. XT Camo	7.49	2	2
24	705400504	Wheel Cap. XT Camo	7.99	2	2
24	705400520	Wheel Cap. XT Except Camo	7.49	2	2
24	705400520	Wheel Cap. XT Except Camo	7.99	2	2
24	705400520	Wheel Cap. DPS	7.49	2	2
24	705400520	Wheel Cap. DPS	7.99	2	2
25	705400791	Wheel Stud	9.49	4	4
26	705400921	Wheel Cap	2.49	2	2
27	705400872	Rim Valve with Cap	7.49	2	2
27	705400872	Rim Valve with Cap	7.99	2	2
28	705400193	Rim Valve With Cap	4.99	2	2
28	705400193	Rim Valve With Cap	5.99	2	2
29	705401248	Reinforcement Disc Plate	79.99	2	2
30	705401314	Wheel Hub	39.99	1	1
30	705401314	Wheel Hub	79.99	1	1
31	705502019	Rear Tire. XT North America Except Camo	209.99	2	2
31	705502019	Rear Tire. XT International Except Camo	209.99	1	1
31	705501295	Rear Tire. XT Europe	124.99	1	1
31	705502019	Rear Tire. XT Camo	209.99	1	1
32	705501121	Wear Sleeve	5.99	2	2
33	705501123	Protector	4.49	1	1
33	705501123	Protector	4.99	1	1
34	705501129	Rear Tire. STD Except Europe	94.99	2	2
34	705501434	Rear Tire. STD Europe	327.49	2	2
35	705501137	Rear Rim	139.99	2	2
36	705501385	1/2 OZ Weight	3.49	@	1
36	705501385	1/2 OZ Weight	3.99	@	1
37	715900118	Rubber Boot	12.99	1	1
38	509000045	Oetiker Gear Clamp	5.99	1	1
38	509000045	Oetiker Gear Clamp	6.99	1	1
39	705501481	Half Shaft	199.99	2	2
40	715900184	Grease Fitting	1.99	1	1
40	715900184	Grease Fitting	2.99	1	1
41	705501713	Wheel Hub Ass'y	79.99	1	1
41	705501713	Wheel Hub Ass'y	99.99	1	1
42	705501803	Axle Ass'y		1	1
43	705501804	Rear Differential Ass'y		1	1
44	705501494	Rear Tire. XTP Europe	179.99	2	2
44	705501817	Rear Tire. XTP Except Europe	164.99	2	2
45	705501874	Needle Bearing		1	1
46	705501875	Ball Bearing		1	1
47	705501876	Ball Bearing		1	1
48	705501877	Ball Bearing		1	1

49	705501878	Oil Seal			1	1
50	705501879	Oil Seal			2	2
51	705501880	Oil Seal			1	1
52	705501881	Oil Seal			1	1
53	705501882	Nut			1	1
54	705501885	Drain Plug			1	1
55	705501886	Screw			4	4
56	705501887	Vent Valve			1	1
57	705501889	Fill Level Plug			1	1
59	705600459	Clamp	3.49		1	1
59	705600459	Clamp	3.99		1	1
60	715500371	Universal Joint	54.99		2	2
61	715900233	Fixed Yoke	19.99		1	1
62	715900234	Fixe Joint	19.99		1	1
63	250300055	Wheel Stud	3.99		4	4
64	415080200	Hose, Polyurethane	4.99		@	1
64	415080200	Hose, Polyurethane	9.99		@	1
65	705501623	Rear Rim, Black. STD Except Europe	134.99		2	2
65	705501623	Rear Rim, Black. STD Europe	134.99		2	2
66	705501812	Rear Rim. Except XT Camo			2	2
66	705501814	Rear Rim. XT Camo	139.99		2	2
67	705501776	CV Joint	156.99		2	2
68a	705501780	Plunging Joint	194.99		2	2
68b	705501781	Circlip	2.99		2	2
68b	705501781	Circlip	3.99		2	2
69	715900241	Oetiker Clamp, 82.1 mm	7.99		2	2
70	715900242	Oetiker Clamp, 27.3 mm	7.99		2	2
100	705501777	Rubber Boot Kit	42.99	705501864	4	4

Commander 1000 STD, DPS, XT, XT-P, 2014: 08- Rear Suspension



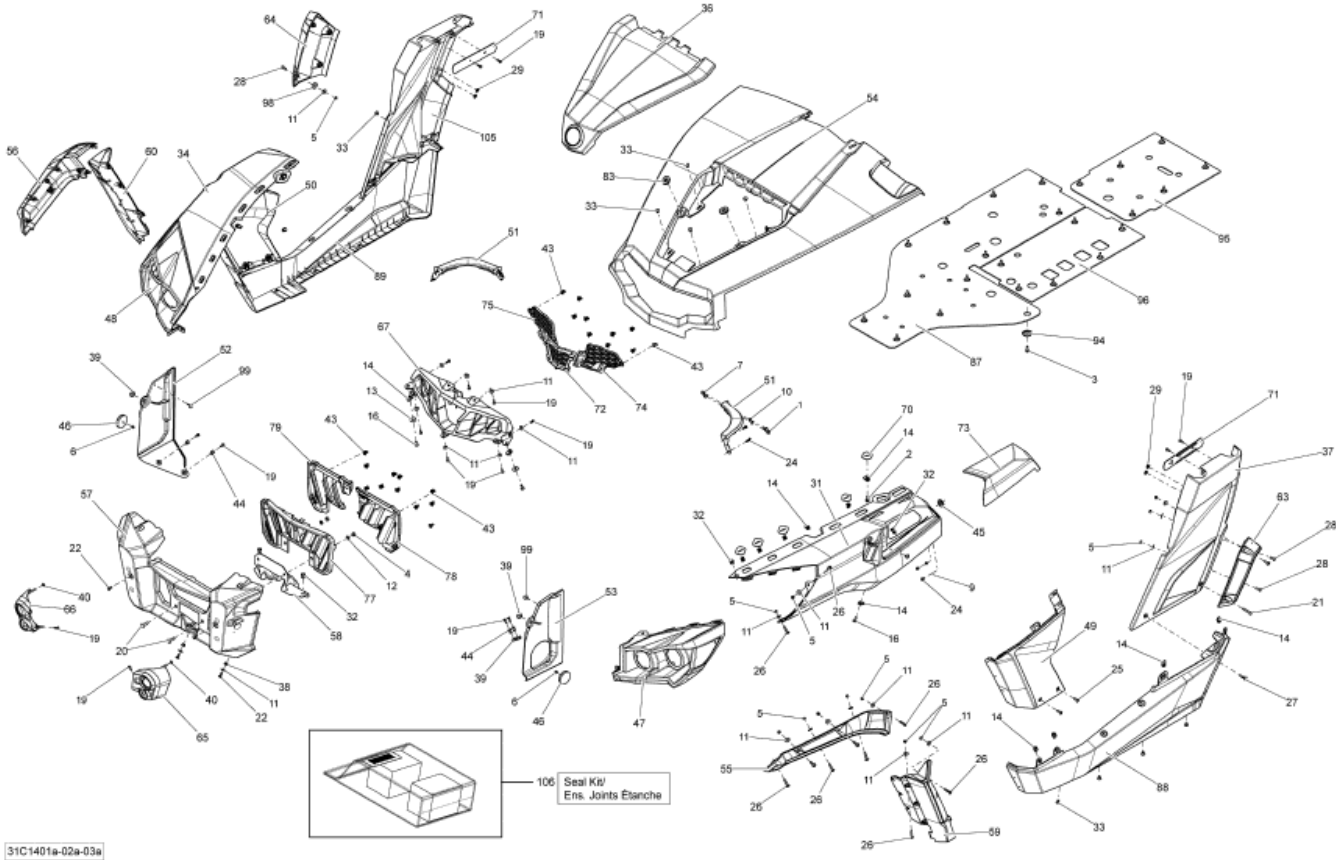
26C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207523544	Hex. Flanged Screw M12 X 35, Scotch Grip	3.99		8	8
2	N/A	Not available for this vehicle			4	
3	N/A	Not available for this vehicle			4	
4	N/A	Not available for this vehicle			2	
5	N/A	Not available for this vehicle			4	
6	233221416	Elastic Flange Nut M12	2.32		2	2
7	N/A	Not available for this vehicle			2	
8	N/A	Not available for this vehicle			3	
9	250000515	Hex. Cap Screw M12 X 241	3.49		2	2
10	N/A	Not available for this vehicle			2	
11	N/A	Not available for this vehicle			1	
12	250200120	Flat Washer M12	1.99		2	2
13	293150104	Pop Rivet 3/16"	0.47		4	4
14	293200094	Seal	6.99		4	4
14	293200094	Seal	7.99		4	4
15	293350055	Ball Bearing	8.49		8	8
15	293350055	Ball Bearing	8.99		8	8
16	N/A	Not available for this vehicle			4	
17	N/A	Not available for this vehicle			4	
18	N/A	Not available for this vehicle			4	
19	N/A	Not available for this vehicle			1	
20	N/A	Not available for this vehicle			1	
21	N/A	Not available for this vehicle			1	
22	N/A	Not available for this vehicle			3	
23	N/A	Not available for this vehicle			1	

24	N/A	Not available for this vehicle		4	
25	N/A	Not available for this vehicle		4	
26	N/A	Not available for this vehicle		1	
27	N/A	Not available for this vehicle		1	
28	N/A	Not available for this vehicle		2	
29	N/A	Not available for this vehicle		4	
30	N/A	Not available for this vehicle		2	
31	N/A	Not available for this vehicle		1	
32	706000567	Spring Stopper	9.99	1	1
32	706000567	Spring Stopper	10.99	1	1
33	706000615	Rear Shock Ass'y. Includes 33a	74.49	1	1
33a	715900122	Bushing	4.99	2	2
33a	715900122	Bushing	5.99	2	2
34	706000616	Pivot Bushing	19.49	2	2
34	706000616	Pivot Bushing	20.99	2	2
35	706000630	LH Joint Protector	5.99	1	1
36	706000667	Rear Spring, Blue-Gold. XT Yellow, DPS	44.49	1	1
36	706001043	Rear Spring, Blue-Yellow. XT Red, STD	96.99	1	1
36	706001045	Rear Spring, Green-Yellow. XT Magnesium, XT Camo	105.99	1	1
37	N/A	Not available for this vehicle		1	
38	N/A	Not available for this vehicle		1	
39	706000814	RH Joint Protector	5.99	1	1
40	706000821	Rear Spring, Gold-Gold	105.99	1	1
41	706000910	Adjustable Ring	9.99	1	1
42	706000911	Protector Ring	8.49	1	1
43	N/A	Not available for this vehicle		1	
44	N/A	Not available for this vehicle		1	
45	N/A	Not available for this vehicle		1	
46	N/A	Not available for this vehicle		1	
47	N/A	Not available for this vehicle		1	
50	N/A	Not available for this vehicle		1	
51	N/A	Not available for this vehicle		1	
52	N/A	Not available for this vehicle		3	
53	N/A	Not available for this vehicle		1	
54	N/A	Not available for this vehicle		1	
55	N/A	Not available for this vehicle		1	
56	N/A	Not available for this vehicle		1	
57	N/A	Not available for this vehicle		1	
58	N/A	Not available for this vehicle		1	
59	N/A	Not available for this vehicle		1	
60	N/A	Not available for this vehicle		1	
61	N/A	Not available for this vehicle		1	
62	N/A	Not available for this vehicle		1	
63	706001350	Spacer		4	4
64	706001360	Rear Shock Ass'y. Includes 64a To 64b	650.99	1	1
64a	715900209	O-Ring Bushing	9.99	4	4
64b	715900210	Interior Bushing	9.99	4	4
64b	715900210	Interior Bushing	10.99	4	4
65	706001500	Sway Bar Ass'y		1	1
66	706001503	Sway Bar Ass'y		1	1
67	706001513	RH Swing Arm		1	1
68	706001514	LH Swing Arm		1	1
69	N/A	Not available for this vehicle		1	
70	N/A	Not available for this vehicle		1	
71	N/A	Not available for this vehicle		1	
80	207605544	Hex. Flanged Screw M10 X 55	2.62	4	4

81	233201416	Hex. Flanged Elastic Nut M10	1.99	233201436	4	4	

Commander 1000 STD, DPS, XT, XT-P, 2014: 09- Body And Accessories



31C1401a-02a-03a

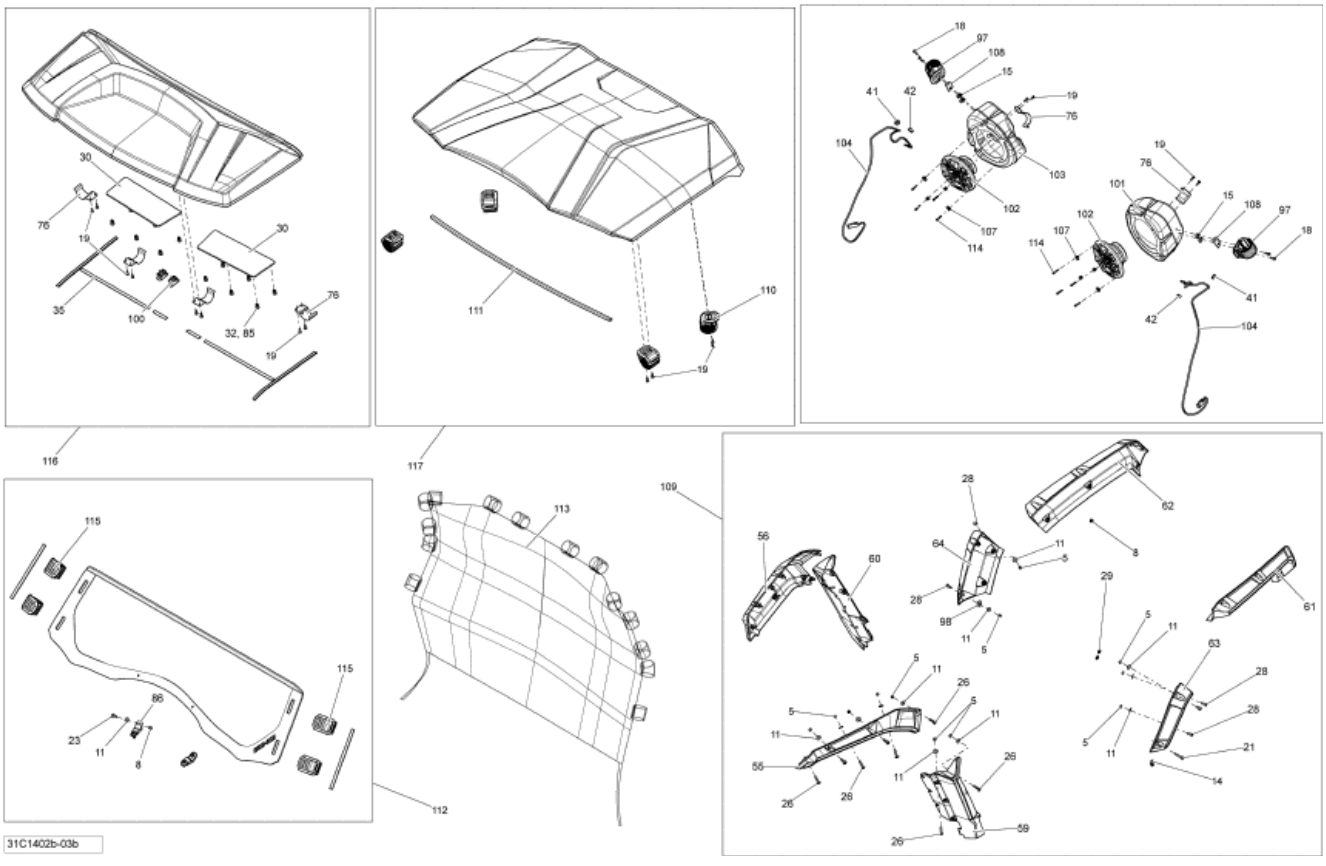
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207661644	Hex. Flanged Screw M6 X 16	0.58		4	4
2	207662044	Hex. Flanged Screw M6 X 20	1.99		2	2
3	210262080	Hex. Forming Screw M6 X 20	1.05		24	24
4	232081414	Hex. Nut M8	0.58		2	2
5	232561434	Elastic Stop Nut M6	1.99		@	1
6	233251414	Hex. Flanged Elastic Nut M5	1.99	233251434	2	2
7	233261414	Hex. Flanged Elastic Nut M6	1.05		4	4
9	234051410	Flat Washer M5	0.43		4	4
10	234061600	Flat Washer M6, Stainless	0.27		4	4
11	234062670	Flat Washer	1.99		@	1
12	234081410	Flat Washer 8 mm	0.68		2	2
13	234082410	Flat Washer 8 mm	1.05		2	2
14	250000048	Pannel Nut M6 X 1.0	1.35		@	1
16	250000128	Torx Truss Screw M6 X 20	1.30		4	4
19	250000146	Truss Head Torx Screw K50 X 16	1.17		@	1
20	250000197	Torx Truss Screw M8 X 30	2.40		2	2
21	250000215	Torx Screw M6 X 45	1.47		@	1
22	250000261	Torx Screw M6 X 16	0.72		4	4
24	250000297	Truss Head Torx Screw K50 X 20	1.99		8	8
25	250000350	Torx Truss Screw M6 X 20	4.99		@	1
26	250000371	Torx Screw M6 X 30 Stainless	1.99		@	1

27	250000398	Stainless Torx Screw,Nylon Patch,M6 X 30	1.99	@	1
28	250000488	Torx Truss Screw M6 X 20	1.99	@	1
29	250100129	Push Nut	2.49	5	5
29	250100129	Push Nut	2.99	5	5
31	705006754	LH Front Fender, Yellow. DPS		1	1
31	705006756	LH Front Fender, Red. STD		1	1
31	705006754	LH Front Fender, Yellow. XT Yellow Model		1	1
31	705006760	LH Front Fender, Red. XT Red Model		1	1
31	705006768	LH Front Fender, Camo. Camo Model		1	1
31	705006772	LH Front Fender, Magnesium. Magnesium Model		1	1
31	705007163	LH Front Fender, Black. XTP		1	1
32	293150089	Tuflok Plastic Rivet	0.87	2	2
33	293150104	Pop Rivet 3/16"	0.47	14	14
34	705006755	RH Front Fender, Yellow. DPS		1	1
34	705006757	RH Front Fender, Red. STD		1	1
34	705006755	RH Front Fender, Yellow. XT Yellow Model		1	1
34	705006761	RH Front Fender, Red. XT Red Model		1	1
34	705006769	RH Front Fender, Camo. Camo Model		1	1
34	705006773	RH Front Fender, Magnesium. Magnesium Model		1	1
34	705007164	RH Front Fender, Black. XTP		1	1
36	705007072	Removable Hood, Yellow. Yellow Model		1	1
36	705007073	Removable Hood, Red. Red Model		1	1
36	705007075	Removable Hood, Camo. Camo Model		1	1
36	705007076	Removable Hood, Magnesium. Magnesium Model	337.99	1	1
36	705007166	Removable Hood, Black. XTP		1	1
37	705006112	LH Rear Lateral Pannel, Yellow. DPS		1	1
37	705006114	LH Rear Lateral Pannel, Red. XT Red Model		1	1
37	705006112	LH Rear Lateral Pannel, Yellow. XT Yellow Model		1	1
37	705006122	LH Rear Lateral Pannel, Camo. Camo Model		1	1
37	705006126	LH Rear Lateral Pannel, Magnesium. Magnesium Model		1	1
37	705006742	LH Rear Lateral Pannel, Red. STD		1	1
37	705007169	LH Rear Lateral Pannel, Black. XTP		1	1
38	293450274	Insert	4.97	2	2
38	293450274	Insert	5.99	2	2
39	293720053	Grommet	2.49	6	6
39	293720053	Grommet	2.99	6	6
40	389804300	Push Nut	0.43	2	2
43	517302785	Clip	0.62	31	31
43	517302785	Clip	0.79	31	31
44	517303439	Knob	2.49	4	4
44	517303439	Knob	2.99	4	4
45	517303756	Grommet	3.49	1	1
45	517303756	Grommet	3.99	1	1
46	705002409	Reflector, Amber	7.49	2	2
46	705002409	Reflector, Amber	7.99	2	2
47	705002885	LH Front Facia	41.99	1	1
48	705002886	RH Front Facia	41.99	1	1
49	705002887	LH Front Lateral Pannel, Yellow. DPS	25.99	1	1

49	705004996	LH Front Lateral Pannel, Red. XT Red Model		1	1
49	705002887	LH Front Lateral Pannel, Yellow. XT Yellow Model	25.99	1	1
49	705005559	LH Front Lateral Pannel, Red. STD	25.99	1	1
49	705006378	LH Front Lateral Pannel, CAMO. Camo Model		1	1
49	705006382	LH Front Lateral Pannel, Magnesium. Magnesium Model	237.99	1	1
49	705007167	LH Front Lateral Pannel, Black. XTP		1	1
50	705002888	RH Front Lateral Pannel, Yellow. DPS	25.99	1	1
50	705004997	RH Front Lateral Pannel, Red. XT Red Model		1	1
50	705002888	RH Front Lateral Pannel, Yellow. XT Yellow Model	25.99	1	1
50	705005558	RH Front Lateral Pannel, Red. STD	25.99	1	1
50	705006379	RH Front Lateral Pannel, CAMO. Camo Model	242.99	1	1
50	705006383	RH Front Lateral Pannel, Magnesium. Magnesium Model	188.99	1	1
50	705007168	RH Front Lateral Pannel, Black. XTP		1	1
51	705002891	Facia Front Support	19.99	2	2
52	705002894	RH Deflector	10.99	1	1
52	705002894	RH Deflector	11.99	1	1
53	705002895	LH Deflector. STD, DPS	10.99	1	1
53	705002895	LH Deflector. STD, DPS	11.99	1	1
53	705005113	LH Deflector. XT, XTP	10.99	1	1
54	705002915	Fixed Hood, Yellow. XTP	549.99	1	1
54	705002915	Fixed Hood, Yellow. Yellow Model	549.99	1	1
54	705004379	Fixed Hood, Red. Red Model	549.99	1	1
54	705004380	Fixed Hood, Camo. Camo Model	645.99	1	1
54	705005289	Fixed Hood, Magnesium. Magnesium Model	1037.49	1	1
55	705003058	LH Upper Front Mudguards. XTP Except Europe	24.99	1	1
55	705003058	LH Upper Front Mudguards. XT Except Europe, LTD	24.99	1	1
55	705003058	LH Upper Front Mudguards. XT Europe	24.99	1	1
55	705003058	LH Upper Front Mudguards. XTP Europe	24.99	1	1
56	705003059	RH Upper Front Mudguards. XT Except Europe, LTD	24.99	1	1
56	705003059	RH Upper Front Mudguards. XTP Except Europe	24.99	1	1
56	705003059	RH Upper Front Mudguards. XT Europe	24.99	1	1
56	705003059	RH Upper Front Mudguards. XTP Europe	24.99	1	1
57	705003306	Front Facia. STD Except Europe, DPS Except Europe	54.49	1	1
57	705003306	Front Facia. XT Except Europe, LTD	54.49	1	1
57	705003306	Front Facia. XTP Except Europe	54.49	1	1
57	705003306	Front Facia. XT Europe	54.49	1	1
57	705003306	Front Facia. XTP Europe	54.49	1	1
58	705003399	Bottom Deflector	8.49	1	1
58	705003399	Bottom Deflector	8.99	1	1
59	705003601	LH Lower Front Mudguards	24.99	1	1
60	705003602	RH Lower Front Mudguards	24.99	1	1
63	705003605	LH Lower Rear Mudguards	24.99	1	1
64	705003606	RH Lower Rear Mudguards	24.99	1	1
65	705003627	LH Flasher Cap	8.49	1	1
66	705003628	RH Flasher Cap	8.49	1	1
67	705003629	Upper Facia, Black	13.49	1	1
70	705003841	Support Plate	0.99	12	12
71	705004261	Support Plate	1.99	2	2

72	705004336	Center Upper Facia Protector	2.49	1	1
73	705004337	CVT Inlet Cover, Yellow. Yellow Model	7.49	1	1
73	705004381	CVT Inlet Cover, Red. Red Model	10.99	1	1
73	705004382	CVT Inlet Cover, Camo. Camo Model	10.99	1	1
73	705005287	CVT Inlet Cover, Magnesium. Magnesium Model	119.99	1	1
73	705007165	CVT Inlet Cover, Black. XTP		1	1
74	705004350	LH Upper Facia Protector	2.49	1	1
75	705004351	RH Upper Facia Protector	2.49	1	1
77	705004755	Lower Front Facia Protector	11.99	1	1
78	705004819	LH Lower Rear Facia Protector	11.99	1	1
79	705004820	RH Lower Rear Facia Protector	11.99	1	1
83	705005156	Oval Washer	2.49	2	2
83	705005156	Oval Washer	2.99	2	2
87	705006075	RH Protector Plate	50.99	1	1
88	705006991	LH Lateral Middle Panel. STD, DPS	44.99	1	1
88	705006993	LH Middle Side Pannel. XT	30.99	1	1
88	705007093	LH Middle Side Pannel. XTP	30.99	1	1
89	705006992	RH Lateral Middle Panel. STD, DPS	30.99	1	1
89	705006994	RH Middle Side Pannel. XT	30.99	1	1
89	705007094	RH Middle Side Pannel. XTP	30.99	1	1
94	705007171	Cup	5.99	24	24
95	705007227	Rear Protector Plate		1	1
96	705007883	LH Protector Plate		1	1
98	250200086	Flat Washer. XTP Except Europe	3.49	1	1
98	250200086	Flat Washer. XTP Except Europe	3.99	1	1
98	250200086	Flat Washer. XT Except Europe, LTD	3.49	1	1
98	250200086	Flat Washer. XT Except Europe, LTD	3.99	1	1
98	250200086	Flat Washer. XT Europe	3.49	1	1
98	250200086	Flat Washer. XT Europe	3.99	1	1
98	250200086	Flat Washer. XTP Europe	3.49	1	1
98	250200086	Flat Washer. XTP Europe	3.99	1	1
99	708000759	Rubber Stopper	2.49	2	2
99	708000759	Rubber Stopper	2.99	2	2
105	705006113	RH Rear Lateral Pannel, Yellow. DPS		1	1
105	705006115	RH Rear Lateral Pannel, Red. XT Red Model		1	1
105	705006113	RH Rear Lateral Pannel, Yellow. XT Yellow Model		1	1
105	705006123	RH Rear Lateral Pannel, Camo. Camo Model		1	1
105	705006127	RH Rear Lateral Pannel, Magnesium. Magnesium Model		1	1
105	705006743	RH Rear Lateral Pannel, Red. STD		1	1
105	705007170	RH Rear Lateral Pannel, Black. XTP		1	1
106	293250318	Seal		2	2

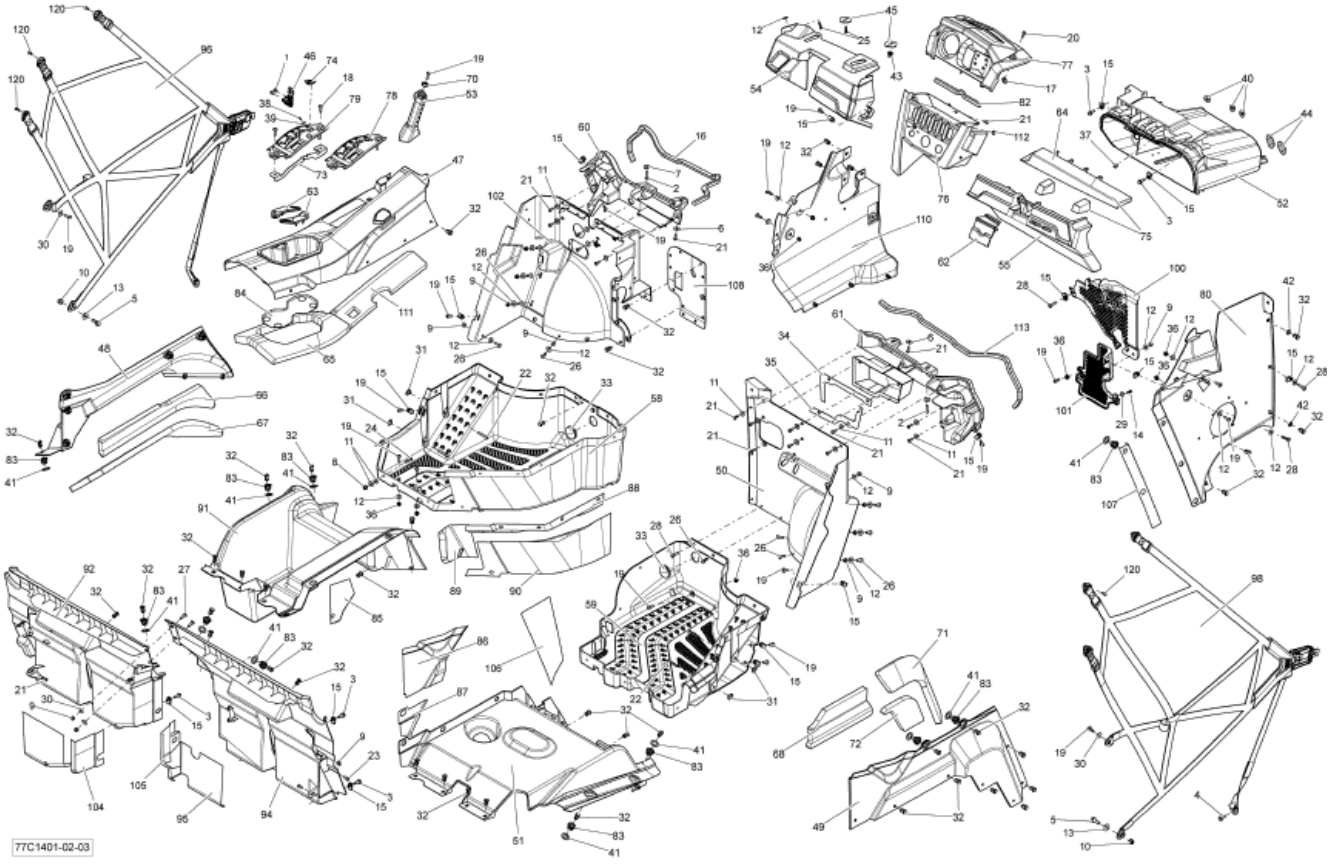
Commander 1000 STD, DPS, XT, XT-P, 2014: 09- Body And Accessories KIT



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
5	232561434	Elastic Stop Nut M6	1.99		43	43
8	N/A	Not available for this vehicle			4	
11	234062670	Flat Washer	1.99		43	43
14	250000048	Pannel Nut M6 X 1.0	1.35		4	4
15	N/A	Not available for this vehicle			2	
18	N/A	Not available for this vehicle			2	
19	N/A	Not available for this vehicle			8	
21	250000215	Torx Screw M6 X 45	1.47		1	1
23	N/A	Not available for this vehicle			2	
26	250000371	Torx Screw M6 X 30 Stainless	1.99		4	4
28	N/A	Not available for this vehicle			2	
29	250100129	Push Nut	2.49		5	5
29	250100129	Push Nut	2.99		5	5
30	N/A	Not available for this vehicle			2	
32	N/A	Not available for this vehicle			12	
35	N/A	Not available for this vehicle			@	
41	N/A	Not available for this vehicle			1	
42	N/A	Not available for this vehicle			1	
55	705003058	LH Upper Front Mudguards	24.99		1	1
56	705003059	RH Upper Front Mudguards	24.99		1	1
59	705003601	LH Lower Front Mudguards	24.99		1	1
60	705003602	RH Lower Front Mudguards	24.99		1	1
61	705003603	LH Upper Rear Mudguards	24.99		1	1
62	705003604	RH Upper Rear Mudguards	24.99		1	1
63	705003605	LH Lower Rear Mudguards	24.99		1	

					1
64	705003606	RH Lower Rear Mudguards	24.99	1	1
76	N/A	Not available for this vehicle		4	
85	N/A	Not available for this vehicle		1	
86	N/A	Not available for this vehicle		2	
97	N/A	Not available for this vehicle		1	
98	250200086	Flat Washer	3.49	1	1
98	250200086	Flat Washer	3.99	1	1
100	N/A	Not available for this vehicle		2	
101	N/A	Not available for this vehicle		1	
102	N/A	Not available for this vehicle		1	
103	N/A	Not available for this vehicle		1	
104	N/A	Not available for this vehicle		1	
107	N/A	Not available for this vehicle		4	
108	N/A	Not available for this vehicle		1	
109	715001013	Fender Extension Kit	199.99	1	1
110	N/A	Not available for this vehicle		4	
111	N/A	Not available for this vehicle		@	
112	N/A	Not available for this vehicle		1	
113	N/A	Not available for this vehicle		1	
114	N/A	Not available for this vehicle		4	
115	N/A	Not available for this vehicle		4	
116	N/A	Not available for this vehicle		1	
117	N/A	Not available for this vehicle		1	

Commander 1000 STD, DPS, XT, XT-P, 2014: 09- Cab Interior



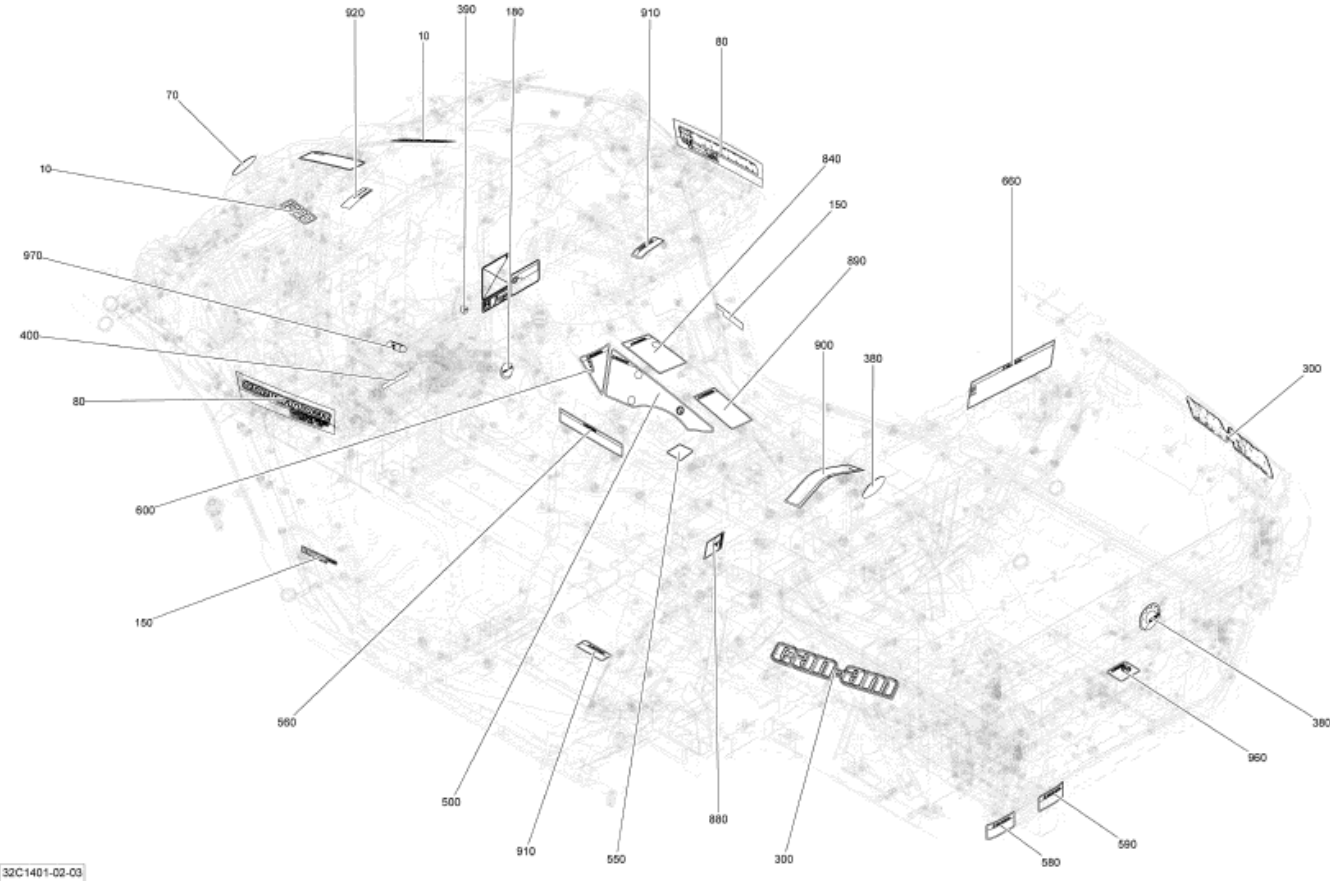
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	205951046	Socket Head Screw M5 X 10	1.99		2	2
2	207162544	Hex. Screw M6 X 25	0.87		2	2
3	207662034	Hex. Flanged Screw M6 X 20	1.99		6	6
4	207662044	Hex. Flanged Screw M6 X 20	1.99		1	1
5	207682544	Hex. Flanged Screw M8 X 25	1.99	207682534	2	2
6	224060201	Flat Washer	0.90		2	2
7	224061201	Flat Washer	1.00		2	2
8	233261414	Hex. Flanged Elastic Nut M6	1.05		2	2
9	233261494	Hex. Elastic Flanged Nut M6	0.72		19	19
10	233281414	Hex. Flanged Elastic Nut M8	1.05		@	1
11	234062410	Flat Washer 6 mm	0.62		18	18
12	234062670	Flat Washer	1.99		29	29
13	234082410	Flat Washer 8 mm	1.05		2	2
14	241151640	Hex. Flanged Screw K50 X 16	1.17		1	1
15	250000048	Pannel Nut M6 X 1.0	1.35		20	20
16	293200093	Neoprene Seal	11.99		@	1
16	293200093	Neoprene Seal	12.99		@	1
17	250000079	Panel Nut M5 X 0.8	2.97		2	2
18	250000081	Torx Screw M6 X 25	3.13		2	2
19	250000128	Torx Truss Screw M6 X 20	1.30		23	23
20	250000130	Torx Screw M5 X 20	1.30		2	2
21	250000146	Truss Head Torx Screw K50 X 16	1.17		@	1

22	250000215	Torx Screw M6 X 45	1.47		4	4
23	250000261	Torx Screw M6 X 16	0.72		1	1
24	250000284	Torx Screw M6 x 25	1.99		1	1
25	250000297	Truss Head Torx Screw K50 X 20	1.99		2	2
26	250000335	Socket Head Screw M6 X 20	1.99		15	15
27	250000350	Torx Truss Screw M6 X 20	4.99		2	2
28	250000398	Stainless Torx Screw,Nylon Patch,M6 X 30	1.99		4	4
29	250200025	Washer M5	0.58		1	1
30	250200040	Flat Washer	1.43		2	2
31	293100003	Nut M6	5.49		4	4
31	293100003	Nut M6	5.99		4	4
32	293150089	Tuflok Plastic Rivet	0.87		71	71
33	293250242	Rubber Cover	2.49		2	2
33	293250242	Rubber Cover	2.99		2	2
34	293250252	Upper Seal	1.99		1	1
35	293250253	Bottom Seal	1.99		1	1
36	293450274	Insert	4.97		11	11
36	293450274	Insert	5.99		11	11
37	293830005	Rubber Bumper	4.49		1	1
37	293830005	Rubber Bumper	4.99		1	1
38	390401400	Rivet		Obsolete	1	1
39	391301000	Washer	0.27		1	1
40	414859400	Cap	2.49		3	3
40	414859400	Cap	2.61		3	3
41	503189273	Washer	2.49		24	24
42	506151252	Washer	2.49		2	2
42	506151252	Washer	2.61		2	2
43	517302785	Clip	0.62		1	1
43	517302785	Clip	0.79		1	1
44	705003668	Oblong Grommet	3.99		4	4
44	705003668	Oblong Grommet	4.99		4	4
45	705003841	Support Plate	0.99		2	2
46	707000666	Lock	12.49		1	1
46	707000666	Lock	13.99		1	1
47	715001247	Central Console Ass'y. Except Europe	151.99		1	1
47	715001249	Central Console Ass'y. Europe	151.99		1	1
48	707900001	LH Side Console	20.99		1	1
49	707900002	RH Side Console	20.99		1	1
50	707900004	RH Front Floor	48.49		1	1
51	707900006	RH Under Cover Ass'y	69.49		1	1
52	707900009	Storage Bin. STD, DPS	68.49		1	1
52	707900046	Storage Bin. XT, XTP, LTD	68.49		1	1
53	707900011	Passenger Handle	9.49		1	1
54	715001250	Dashboard Ass'y	48.49		1	1
55	715001263	Bin Cover Ass'y		...	1	1
58	707900022	LH Lower Floor	122.49		1	1
59	707900023	RH Lower Floor	113.49		1	1
60	707900029	LH Floor Support	8.49		1	1
61	707900030	RH Floor Support	9.99		1	

					1
62	707900031	Latch	4.49	1	1
63	707900036	Cup Retainer	3.49	2	2
64	707900038	Trim Glove Box	6.99	1	1
65	707900042	Rear Central Console Foam	13.49	1	1
66	707900043	LH Upper Lateral Console Foam	9.99	1	1
67	707900044	LH Lower Lateral Console Foam	13.49	1	1
68	707900045	RH Lateral Console Foam	9.99	1	1
70	707900048	Connector Tube	4.99	1	1
71	707900055	RH Lateral Console Foam	9.99	1	1
72	707900056	RH Lateral Console Foam	9.99	1	1
73	707900058	Lock Support	14.49	1	1
74	707900060	Cap	3.99	1	1
75	707900062	Trim Glove Box	12.49	1	1
76	715001265	Central Dashboard Ass'y. Except Europe	35.99	1	1
76	715900108	Central Dashboard Ass'y. Europe	15.99	1	1
77	N/A	Not available for this vehicle		1	
78	707900070	Lever Indicator	9.49	1	1
79	707900071	Lever Indicator	9.99	1	1
80	707900021	RH Fixe Side Console	47.49	1	1
82	271000110	Protection Trim	10.99	@	1
82	271000110	Protection Trim	11.99	@	1
83	707900133	Insert		24	24
84	707900145	Heat Sheet		1	1
85	707900146	Heat Sheet		1	1
86	707900147	Heat Sheet		1	1
87	707900148	Heat Sheet		1	1
88	707900149	Heat Sheet		1	1
89	707900150	Heat Sheet		1	1
90	707900151	Heat Sheet		1	1
91	715001982	Plaque Inférieur De Siège Ass. GA		1	1
92	707900164	LH Rear Deflector. STD, DPS, XTP		1	1
92	707900164	LH Rear Deflector. XT		1	1
94	707900166	RH Rear Deflector		1	1
95	707900167	Heat Shield		1	1
96	707900171	LH Safety Net		1	1
98	707900172	RH Safety Net		1	1
100	707900178	Grill		1	1
101	707900180	Grill		1	1
102	707900181	LH Front Floor		1	1
103	707900182	Heat Shield		1	1
104	707900183	Heat Shield		1	1
105	707900184	Heat Shield		1	1
106	707900190	Heat Sheet		1	1
107	707900191	Heat Sheet		1	1
108	707900108	Deflector. STD	10.99	1	1
108	707900192	Deflector. Except STD		1	1
110	707900193	Front Side Dash Panel		1	1
111	707900214	Front Central Console Foam		1	1

112	N/A	Not available for this vehicle		3	
113	293200093	Neoprene Seal	11.99	@	1
113	293200093	Neoprene Seal	12.99	@	1
120	250000145	Torx Screw M5 X 14	1.17	6	6

Commander 1000 STD, DPS, XT, XT-P, 2014: 09- Decals

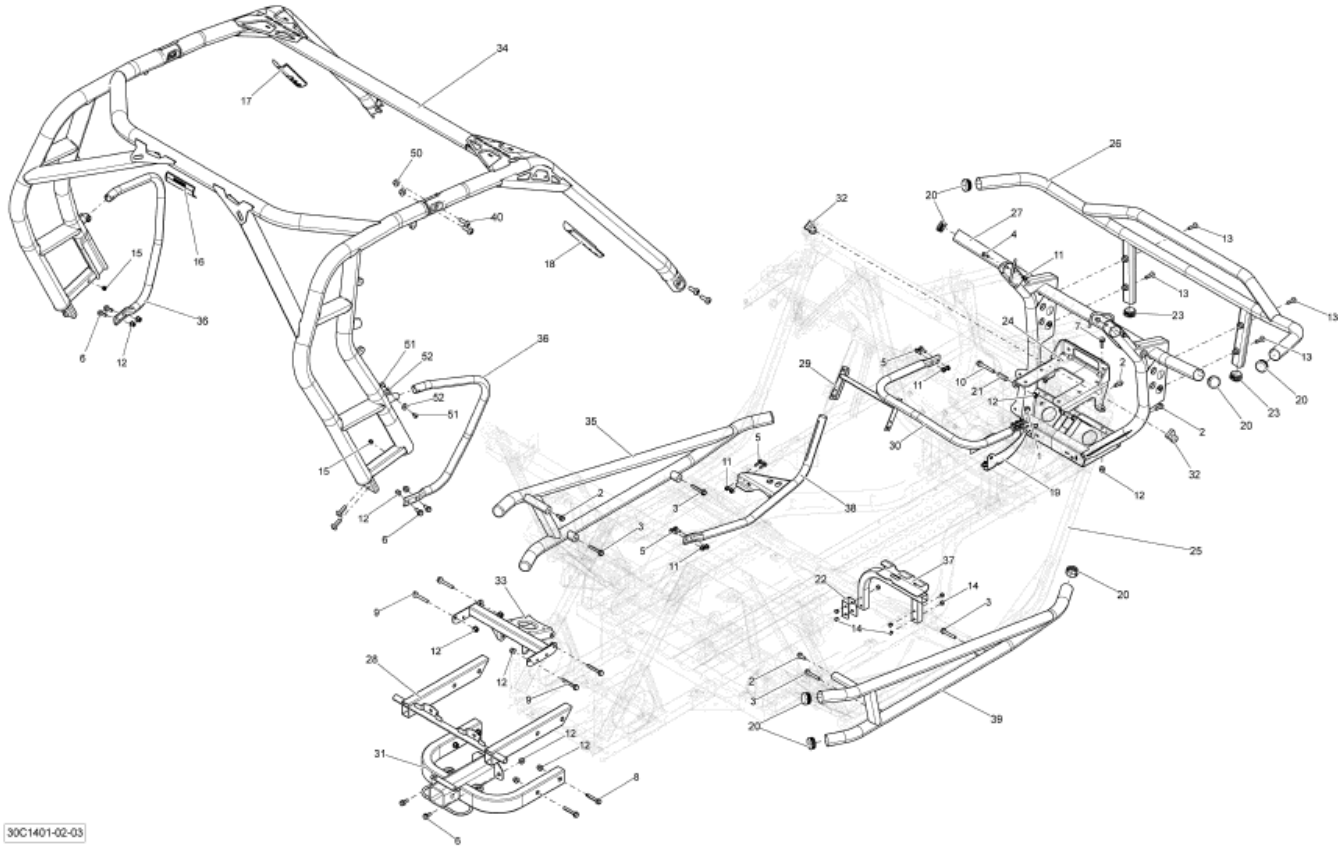


32C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
10	704903585	Hood Decal, Rotax 1000. XTP			2	2
10	704903746	Hood Decal, Rotax 1000. Red Model			2	2
10	704903747	Hood Decal, Rotax 1000. Yellow Model			2	2
10	704903749	Hood Decal, Rotax 1000. Magnesium Model			2	2
10	704903750	Hood Decal, Rotax 1000. Camo Model			2	2
70	219902469	Logo BRP, 68 mm	12.99		1	1
70	219902469	Logo BRP, 68 mm	29.49		1	1
80	704902310	Lateral Decal, Commander. DPS	12.49		2	2
80	704902311	Lateral Decal, Commander XT. XT Yellow Model	12.49		2	2
80	704902312	Lateral Decal, Commander XT. XT Red Model	12.49		2	2
80	704902509	Lateral Decal, Commander XT. XT Camo Model	16.99		2	2
80	704902716	Lateral Decal, Commander XT. XT Magnesium Model	16.99		2	2
80	704902999	Lateral Decal, Commander. STD	16.99		2	2
80	704903760	Lateral Decal, Commander XTP. XTP			2	2
150	704903587	Decal ROTAX POWER. Yellow Model			2	2
150	704903764	Decal ROTAX POWER. XTP			2	2
150	704903766	Decal ROTAX POWER. Magnesium Model			2	2
150	704903767	Decal ROTAX POWER. XT Camo Model			2	2
150	704903804	Decal ROTAX POWER. Red Model			2	2

180	704902065	Logo Can-Am, 35 mm	8.49	1	1
300	704902320	Decal, Can-Am. Yellow Model	13.49	2	2
300	704902321	Decal, Can-Am. Red Model	12.49	2	2
300	704902361	Decal, Can-Am. XTP	16.99	2	2
300	704902508	Decal, Can-Am. Camo Model	16.99	2	2
300	704902717	Decal, Can-Am. Magnesium Model	12.49	2	2
380	219902469	Logo BRP, 68 mm	12.99	1	1
380	219902469	Logo BRP, 68 mm	29.49	1	1
390	219902677	Logo BRP, 20 mm. XT, XTP	9.49	1	1
400	704901558	Decal, Dynamic Power Steering. Except STD	7.49	1	1
400	704901558	Decal, Dynamic Power Steering. Except STD	7.99	1	1
500	704903671	Warning Decal, Death And Injuries. Except Europe		1	1
500	704903672	Warning Decal, Death And Injuries. Europe		1	1
550	704902407	Decal, Public Roads Use. Except Europe	0.01	1	1
560	704903809	Warning Decal, Tire Pressure		1	1
580	704902336	Warning Decal, Towing. Except Europe	0.01	1	1
580	704902436	Warning Decal, Towing. Europe	16.99	1	1
590	704902345	Warning Decal, Trailer	0.01	1	1
600	704903692	Warning Label "Speed Selector"		1	1
660	704903894	Warning Decal, Cargo Box		1	1
840	704903676	Warning Label "Passenger"		1	1
880	704902350	Warning Decal, Injury	0.01	2	2
890	704902491	Warning Decal, Road Usage. Europe	32.49	1	1
900	704903808	Int'l Label Multi Language. Except North America		1	1
910	704902434	Caution Decal, Maximum Load. Except LTD	8.49	2	2
920	707800373	Decal, Air Filter Maintenance	0.01	1	1
960	704902420	Warning Decal, MAX 100 kg/222 lb	0.01	1	1
970	704903434	Notice Decal, Steering. Except STD	0.01	1	1

Commander 1000 STD, DPS, XT, XT-P, 2014: 09- Frame

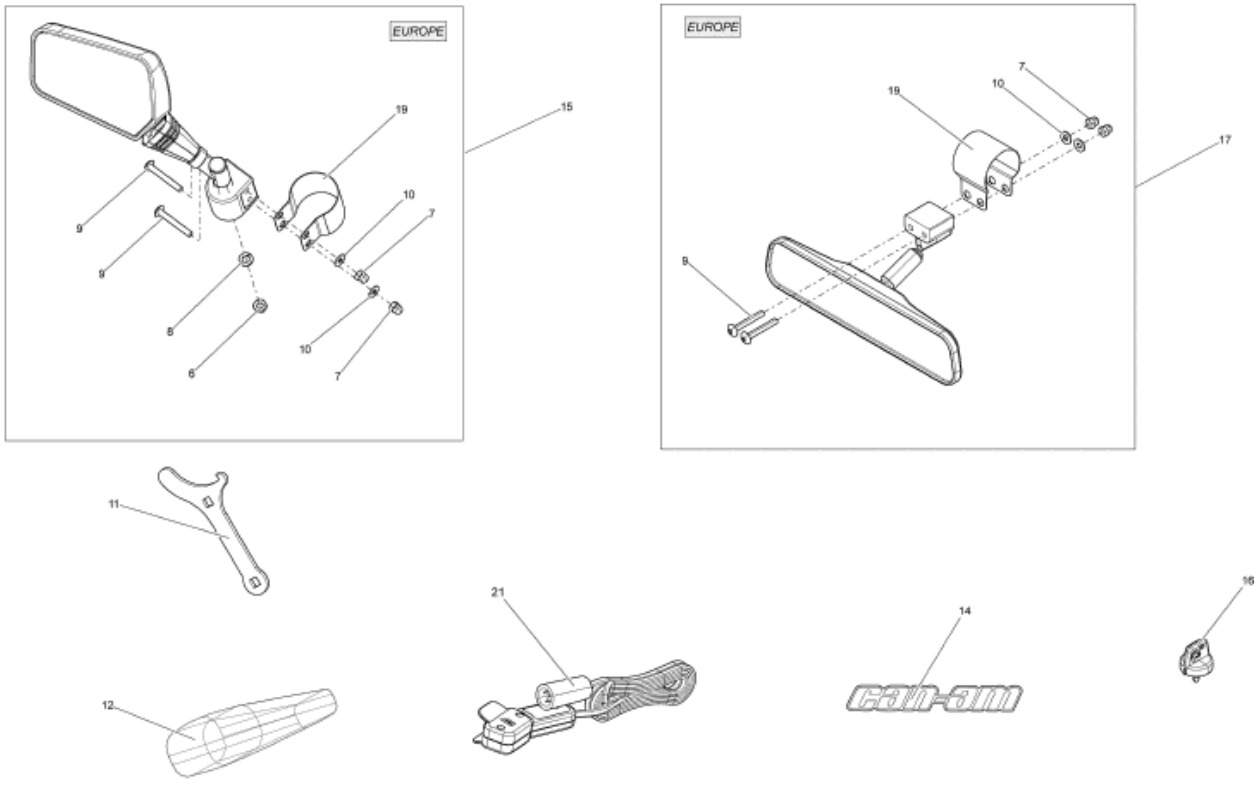


30C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207581644	Hex. Flanged Screw M8 X 16, Scotch Grip	4.33		1	1
2	207582044	Hex. Flanged Screw M8 X 20, Scotch Grip	1.30		@	1
3	207585044	Hex. Flanged Screw M8 X 50	3.49		4	4
4	207661644	Hex. Flanged Screw M6 X 16	0.58		2	2
5	207662044	Hex. Flanged Screw M6 X 20	1.99		8	8
6	207682044	Hex. Flanged Screw M8 X 20	0.87		2	2
7	207682544	Hex. Flanged Screw M8 X 25	1.99	207682534	2	2
8	207685044	Hex. Flanged Screw M8 X 50	1.30		4	4
9	207685544	Hex. Flanged Screw M8 X 55	4.49		4	4
10	207686044	Hex. Flanged Screw M8 x 60	2.38		2	2
11	233261414	Hex. Flanged Elastic Nut M6	1.05		12	12
12	233281414	Hex. Flanged Elastic Nut M8	1.05		@	1
13	250000197	Torx Truss Screw M8 X 30	2.40		4	4
14	293150096	Hemlock Rivet, 6.5 mm	2.62		7	7
15	293450274	Insert	4.97		2	2
15	293450274	Insert	5.99		2	2
16	704903492	Warning Label			1	1
17	704903679	Warning Label			1	1
18	704903680	Warning Label			1	1
19	705201721	Front Differential Support	14.99		1	1
20	705202455	Cap	1.99		@	1

20	705202455	Cap	2.99	@	1
21	705202499	Bushing	2.49	2	2
21	705202499	Bushing	2.99	2	2
22	705202602	Seat Support	2.49	1	1
23	705202631	Tube Cap	13.49	2	2
24	715000704	Winch Plate	89.99	1	1
25	715002077	Frame Ass'y		1	1
26	715000958	Front Bumper, XT, X	219.99	1	1
27	705202995	Front Bumper	219.99	1	1
28	705203325	Box Holder	119.99	1	1
29	705203330	Reinforcement Panel	95.99	1	1
30	705203332	Handle	89.99	1	1
31	715001251	Trailer Hitch Ass'y	255.99	1	1
32	705203415	Binding Block		2	2
33	705203538	Differential Holder		1	1
34	705203579	Cage Kit, Front And Rear Section		1	1
35	705203327	LH Lower Protector	204.99	1	1
36	705203640	Side Protector Tube. Right		1	1
36	705203637	Side Protector Tube. Left		1	1
37	705203720	Seat Holder		1	1
38	705203828	Handle		1	1
39	705203329	RH Lower Protector	204.99	1	1
40	250000624	Screw Torx M10 X 30	1.99	12	12
50	233101464	Hex. Elastic Flange Nut , M10 X 1.5	1.99	4	4
51	250000439	Torx Truss Screw M6 X 14	4.49	4	4
52	705202223	Offset Washer	2.49	4	4

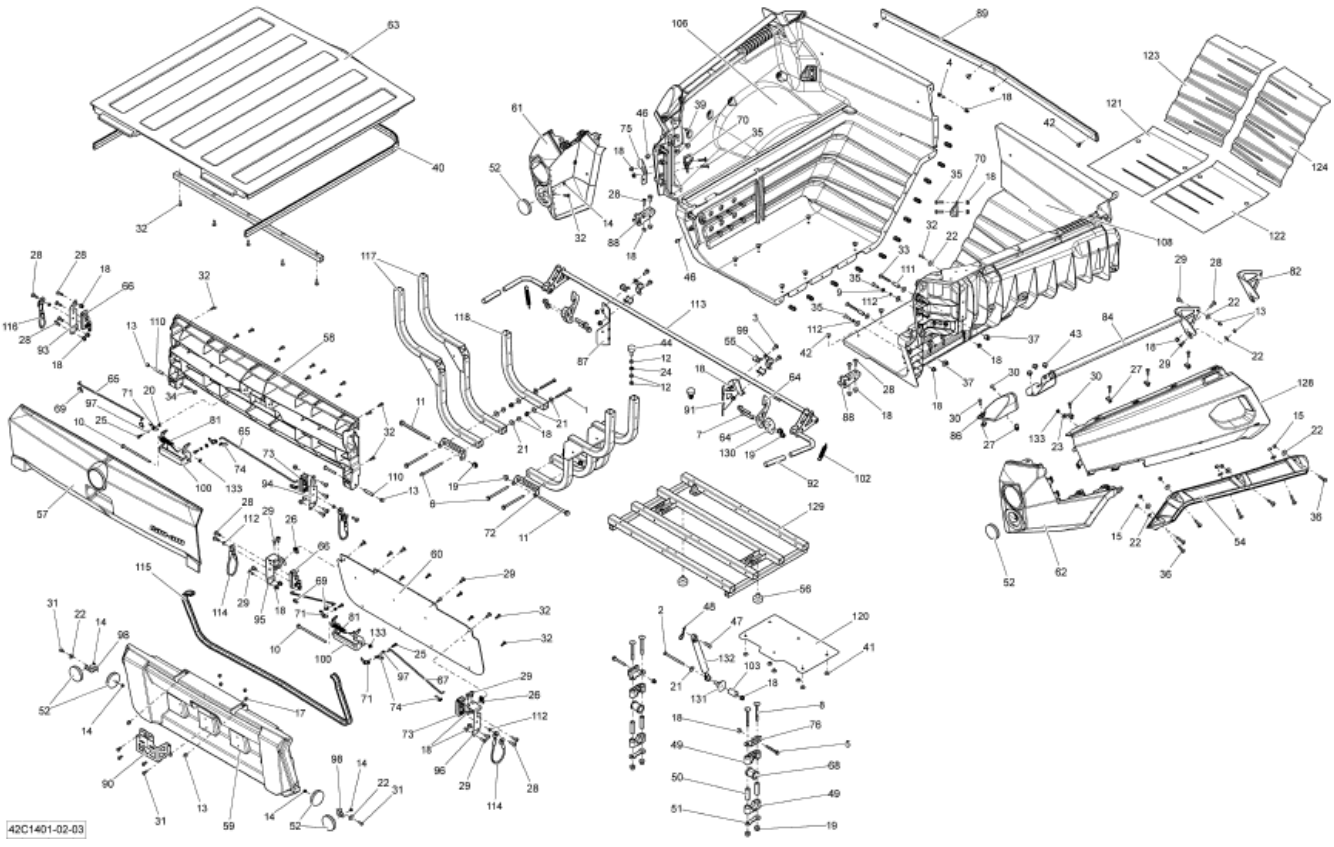
Commander 1000 STD, DPS, XT, XT-P, 2014: 09- Mirrors And Tools



67C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
6	232180600	Hex. Jam Nut M8	0.52		1	1
7	232361493	Domed Nut M6	1.65		4	4
8	234181401	Lock Washer 8 mm	0.75		1	1
9	250000215	Torx Screw M6 X 45	1.47		4	4
10	250200039	Flat Washer	0.58		4	4
11	529000057	Adjustment Wrench	5.99		1	1
12	704700148	Tool Kit	38.99		1	1
12	704700148	Tool Kit	44.99		1	1
14	704902319	Cage Decal	8.49		1	1
14	704902319	Cage Decal	8.99		1	1
15	708200182	Left Mirror Kit	89.99	715001192	1	1
16	710000817	Key, Electronic. Europe	34.99		1	1
16	710002183	Key, Electronic	18.49		1	1
16	710002183	Key, Electronic	19.99		1	1
17	715001191	Central Mirror Kit	89.99		1	1
19	708200185	Mirror Clamp			2	2
21	710001002	Remote Control	81.99		1	1

Commander 1000 STD, DPS, XT, XT-P, 2014: 09- Rear Cargo Box



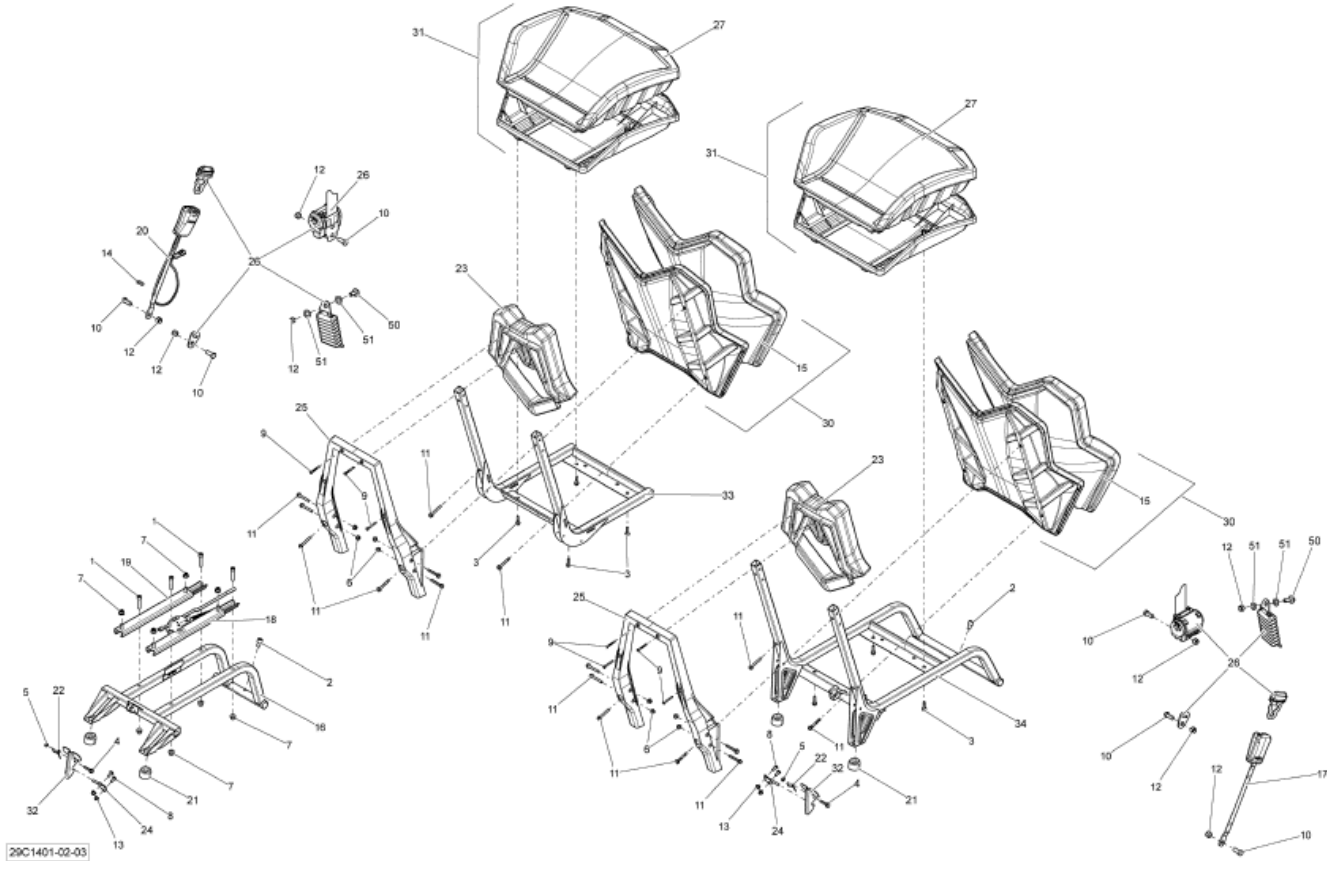
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207066544	Hex. Screw M6 X 65	0.37		4	4
2	207069044	Hex. Screw M6 X 90	3.70		1	1
3	207661644	Hex. Flanged Screw M6 X 16	0.58		4	4
4	207662044	Hex. Flanged Screw M6 X 20	1.99		13	13
5	207665044	Hex. Flanged Screw M6 X 50	3.13		2	2
6	207669584	Hex. Flanged Screw M6 X 95	2.62		4	4
7	207684586	Hex. Flanged Screw M8 X 45, Scotch Grip	2.99		4	4
8	207787044	Carriage Bolt M8 X 70	1.00		4	4
9	224061121	Flat Washer	0.43		2	2
10	230663084	Hex. Flanged Screw M6 X 130	2.62		2	2
11	230683034	Hex. Flanged Screw M8 X 130	5.99		2	2
12	232180600	Hex. Jam Nut M8	0.52		6	6
13	232361493	Domed Nut M6	1.65		8	8
14	232551414	Elastic Stop Nut M5	0.72		4	4
15	232561434	Elastic Stop Nut M6	1.99		14	14
17	233251414	Hex. Flanged Elastic Nut M5	1.99	233251434	8	8
18	233261414	Hex. Flanged Elastic Nut M6	1.05		60	60
19	233281414	Hex. Flanged Elastic Nut M8	1.05		10	10
20	234061410	Flat Washer 6 mm	1.00		4	4
21	234062410	Flat Washer 6 mm	0.62		13	13
22	234062670	Flat Washer	1.99		@	1
23	234081100	Flat Washer 8 mm, Nylon	0.87		2	2

24	234181401	Lock Washer 8 mm	0.75	2	2
25	241151640	Hex. Flanged Screw K50 X 16	1.17	4	4
26	250000048	Pannel Nut M6 X 1.0	1.35	2	2
27	250000079	Panel Nut M5 X 0.8	2.97	12	12
28	250000128	Torx Truss Screw M6 X 20	1.30	20	20
29	250000129	Torx Screw M6 X 16	0.97	16	16
30	250000130	Torx Screw M5 X 20	1.30	12	12
31	250000145	Torx Screw M5 X 14	1.17	10	10
32	250000146	Truss Head Torx Screw K50 X 16	1.17	36	36
33	250000215	Torx Screw M6 X 45	1.47	4	4
34	250000239	Torx Truss Screw M6 X 50	2.17	2	2
35	250000284	Torx Screw M6 x 25	1.99	12	12
36	250000371	Torx Screw M6 X 30 Stainless	1.99	14	14
37	269500725	Nut Housing Ass'y	3.49	4	4
37	269500725	Nut Housing Ass'y	3.99	4	4
39	293150100	Pop Rivet 3/16"	0.85	20	20
40	293250240	Neoprene Seal	10.99	@	1
41	293150103	Pop Rivet 3/16"	0.47	6	6
42	293150104	Pop Rivet 3/16"	0.47	16	16
43	293150190	Pop Rivet 3/16	4.49	6	6
44	293720091	Frame Rubber Bumper	4.99	2	2
46	293830005	Rubber Bumper	4.49	4	4
46	293830005	Rubber Bumper	4.99	4	4
47	414079100	Pin	1.99	1	1
48	414575600	Hair Pin	1.58	1	1
49	506150400	Housing Half	5.99	4	4
49	506150400	Housing Half	6.29	4	4
50	506150500	Housing Bushing	5.99	4	4
50	506150500	Housing Bushing	6.29	4	4
51	506150600	Stopper Plate	3.49	2	2
51	506150600	Stopper Plate	3.66	2	2
52	705002408	Reflector, Red. Except Europe	7.49	4	4
52	705002408	Reflector, Red. Except Europe	7.99	4	4
52	705002408	Reflector, Red. Europe	7.49	2	2
52	705002408	Reflector, Red. Europe	7.99	2	2
54	705003603	LH Upper Rear Mudguards. XTP Except Europe	24.99	1	1
54	705003603	LH Upper Rear Mudguards. XT Except Europe	24.99	1	1
54	705003604	RH Upper Rear Mudguards. XTP Except Europe	24.99	1	1
54	705003604	RH Upper Rear Mudguards. XT Except Europe	24.99	1	1
55	705500033	Half Ring	2.47	4	4
55	705500033	Half Ring	2.99	4	4
56	708000884	Rubber Stopper	5.99	2	2
57	708300052	Outside Top Pannel, Yellow. DPS	83.99	1	1
57	708300052	Outside Top Pannel, Yellow. XT Yellow Model	83.99	1	1
57	708300052	Outside Top Pannel, Yellow. XTP	83.99	1	1
57	708300441	Outside Top Pannel, Red. Red Model	83.99	1	1
57	708300442	Outside Top Pannel, Camo. Camo Model	189.99	1	1
57	708300552	Outside Top Pannel, Magnesium. Magnesium Model	299.99	1	1
58	708300053	Inside Top Pannel	89.49	1	1

59	715001255	Lower Panel Ass'y. Except Europe	99.99	1	1
59	715001255	Lower Panel Ass'y. Europe	99.99	1	1
60	708300073	Inside Bottom Pannel	10.99	1	1
61	708300103	LH Rear Facia. DPS	13.49	1	1
61	708300103	LH Rear Facia. STD Except Europe	13.49	1	1
61	708300103	LH Rear Facia. XT Except Europe	13.49	1	1
61	708300103	LH Rear Facia. XTP Except Europe	13.49	1	1
61	708300103	LH Rear Facia. XT Europe	13.49	1	1
61	708300103	LH Rear Facia. XTP Europe	13.49	1	1
62	708300104	RH Rear Facia. DPS	13.49	1	1
62	708300104	RH Rear Facia. STD Except Europe	13.49	1	1
62	708300104	RH Rear Facia. XT Except Europe	13.49	1	1
62	708300104	RH Rear Facia. XTP Except Europe	13.49	1	1
62	708300104	RH Rear Facia. XTP Europe	13.49	1	1
62	708300104	RH Rear Facia. XT Europe	13.49	1	1
63	708300131	Separator Pannel Ass'y	209.49	1	1
64	708300136	Box Retainer	4.99	2	2
65	708300160	Top Rod	1.99	2	2
66	708300162	LH Latch	12.49	2	2
67	708300164	Lower Bottom Rod	1.99	2	2
68	708300172	Pivot Bushing	2.49	2	2
69	708300182	LH Tie Rod Clip	0.99	4	4
69	708300182	LH Tie Rod Clip	1.99	4	4
70	708300183	Retaining Plate	5.99	4	4
71	708300184	Activator	5.99	4	4
72	708300185	Bracket Pivot	2.49	2	2
73	708300201	RH Latch	12.49	2	2
74	708300202	RH Tie Rod Clip	0.99	4	4
74	708300202	RH Tie Rod Clip	1.99	4	4
75	708300206	Retaining Plate Support	2.49	2	2
76	708300210	Adjustable Stopper Plate	2.49	2	2
81	708300219	Spring	2.49	2	2
82	708300333	LH Painted Rail Cap	10.99	1	1
82	708300334	RH Painted Rail Cap	10.99	1	1
84	708300231	LH Welded Rail	49.99	1	1
84	708300232	RH Welded Rail	49.99	1	1
86	708300233	LH Rail Cover	0.99	1	1
86	708300234	RH Rail Cover	3.49	1	1
87	708300278	LH Latch Lever Support	4.99	1	1
88	708300345	Upper Pivot Support	2.49	2	2
89	708300346	Front Support	19.49	1	1
90	708300349	Plate Support	24.99	2	2
91	708300351	RH Latch Lever Support	4.99	1	1
92	708300358	Cap Latch Lever	3.49	2	2
93	708300359	LH Upper Support	4.49	1	1
94	708300360	RH Upper Support	4.49	1	1
95	708300361	LH Lower Support	5.99	1	1
96	708300362	RH Lower Support	5.99	1	1
97	708300365	Bushing	4.49	4	4

98	708300367	Reflector Support	1.99	2	2
99	708300392	Clamp Reatiner	1.99	2	2
100	708300398	Handle	9.49	2	2
102	708300454	Spring	2.49	2	2
103	708300470	Spacer	5.99	1	1
106	715001259	LH Box Ass'y. STD, DPS, XTP	84.99	1	1
106	715001259	LH Box Ass'y. XT	84.99	1	1
108	715001257	RH Box Ass'y. STD, DPS, XTP	76.99	1	1
108	715001257	RH Box Ass'y. XT	76.99	1	1
110	708300735	Bushing	7.99	2	2
111	708300736	Spacer	5.99	4	4
112	708300737	Bushing	3.99	8	8
113	708300751	Cargo Handle Ass'y	47.99	1	1
114	708300762	Lower Retainer Cable	10.99	2	2
115	293250240	Neoprene Seal	10.99	@	1
116	708300763	Upper Retainer Cable	19.99	2	2
116	708300763	Upper Retainer Cable	20.99	2	2
117	708300879	Welded Lateral Support, Black	270.99	4	4
118	708300877	Lateral Support, Black	124.99	2	2
120	708300780	Heat Deflector	9.99	1	1
121	708300809	Heat Deflector Sheet	5.99	1	1
122	708300810	Heat Deflector Sheet	5.99	1	1
123	708300811	Heat Deflector Sheet	5.99	1	1
124	708300812	Heat Deflector Sheet	5.99	1	1
128	708300820	LH Rear Fender, Yellow. DPS		1	1
128	708300822	LH Rear Fender, Red. STD		1	1
128	708300820	LH Rear Fender, Yellow. XT Yellow Model		1	1
128	708300826	LH Rear Fender, Red. XT Red Model		1	1
128	708300834	LH Rear Fender, Camo. XT Camo Model	530.99	1	1
128	708300838	LH Rear Fender, Magnesium. Magnesium Model		1	1
128	708300928	LH Rear Fender, Black. XTP		1	1
128	708300821	RH Rear Fender, Yellow. DPS	84.99	1	1
128	708300823	RH Rear Fender, Red. STD		1	1
128	708300821	RH Rear Fender, Yellow. XT Yellow Model	84.99	1	1
128	708300827	RH Rear Fender, Red. XT Red Model		1	1
128	708300835	RH Rear Fender, Camo. XT Camo Model		1	1
128	708300839	RH Rear Fender, Magnesium. Magnesium Model	530.99	1	1
128	708300929	RH Rear Fender, Black. XTP		1	1
129	708300875	Box Support, Black	222.49	1	1
130	708300902	Spacer		2	2
131	708301059	Spacer		1	1
132	708301136	Gaz Shock		1	1
133	732610072	Push Nut	1.18	4	4

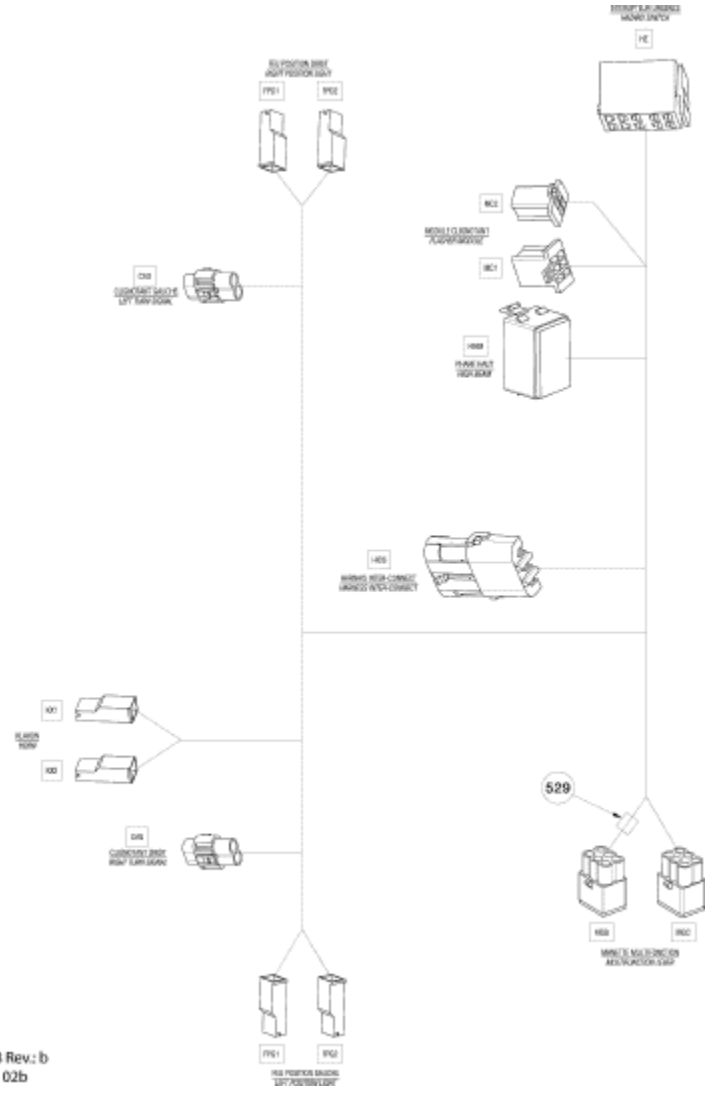
Commander 1000 STD, DPS, XT, XT-P, 2014: 09- Seat



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	205084044	Socket Head Screw M8 X 40	2.32		4	4
2	205501644	Socket Screw M10 X 16	3.49		2	2
3	207562544	Hex. Flanged Screw M6 X 25, Scotch Grip	1.30		8	8
4	207663034	Hex. Flanged Screw M6 X 30	1.99		2	2
5	232561600	Hex. Elastic Stop Nut M6	0.87		2	2
6	233161464	Hex. Elastic Flange Nut M6	0.99		8	8
7	233281414	Hex. Flanged Elastic Nut M8	1.05		8	8
8	250000223	Torx Screw M6 X 16	1.99		4	4
9	250000490	Hex. Washer Head Screw PT K50 X 40	5.99		8	8
10	250000521	Hex. Cap Screw 7/16"X 1"	1.99		6	6
11	250000672	Hex. Flange Screw M6	1.99		16	16
12	250100135	Nylon Insert Hex. Lock Nut 7/16-20	5.99		6	6
13	293450274	Insert	4.97		4	4
13	293450274	Insert	5.99		4	4
14	293750008	Tie-Rap 350 mm	0.49		1	1
14	293750008	Tie-Rap 350 mm	0.99		1	1
15	708000675	Backrest Cover	79.99		2	2
16	708000667	Seat Member	41.99		1	1
17	708000844	Passenger Buckle Side. Except Europe	37.99		1	1
17	708000857	Passenger Buckle Side, Europe. Europe	65.49		1	1
18	708000846	RH Rail	23.49		1	1

19	708000848	LH Rail	34.99	1	1
20	708000856	Driver Buckle Side, Europe. Europe	101.49	1	1
20	708000987	Driver Buckle Side. Except Europe	58.99	1	1
21	708000899	Rubber Bumper	0.99	4	4
22	708000921	Spring	0.99	2	2
23	708001074	Head Rest		2	2
24	708001238	Retaining Rod	5.99	2	2
25	708001245	Seat Support		2	2
26	708001130	Safety Belt. Europe	193.99	2	2
26	708001302	Safety Belt. Except Europe		2	2
27	708001103	Cover Seat	54.99	2	2
30	708001316	Backrest Ass'y		2	2
31	708001318	Cushion Ass'y		2	2
32	708001355	Seat Latch		2	2
33	708001356	Operator Frame		1	1
34	708001357	Seat Frame		1	1
50	708000890	Safety Belt Screw	3.49	2	2
51	708000891	Position Washer	0.99	4	4

Commander 1000 STD, DPS, XT, XT-P, 2014: 10- Electrical Harness Cablage Europe



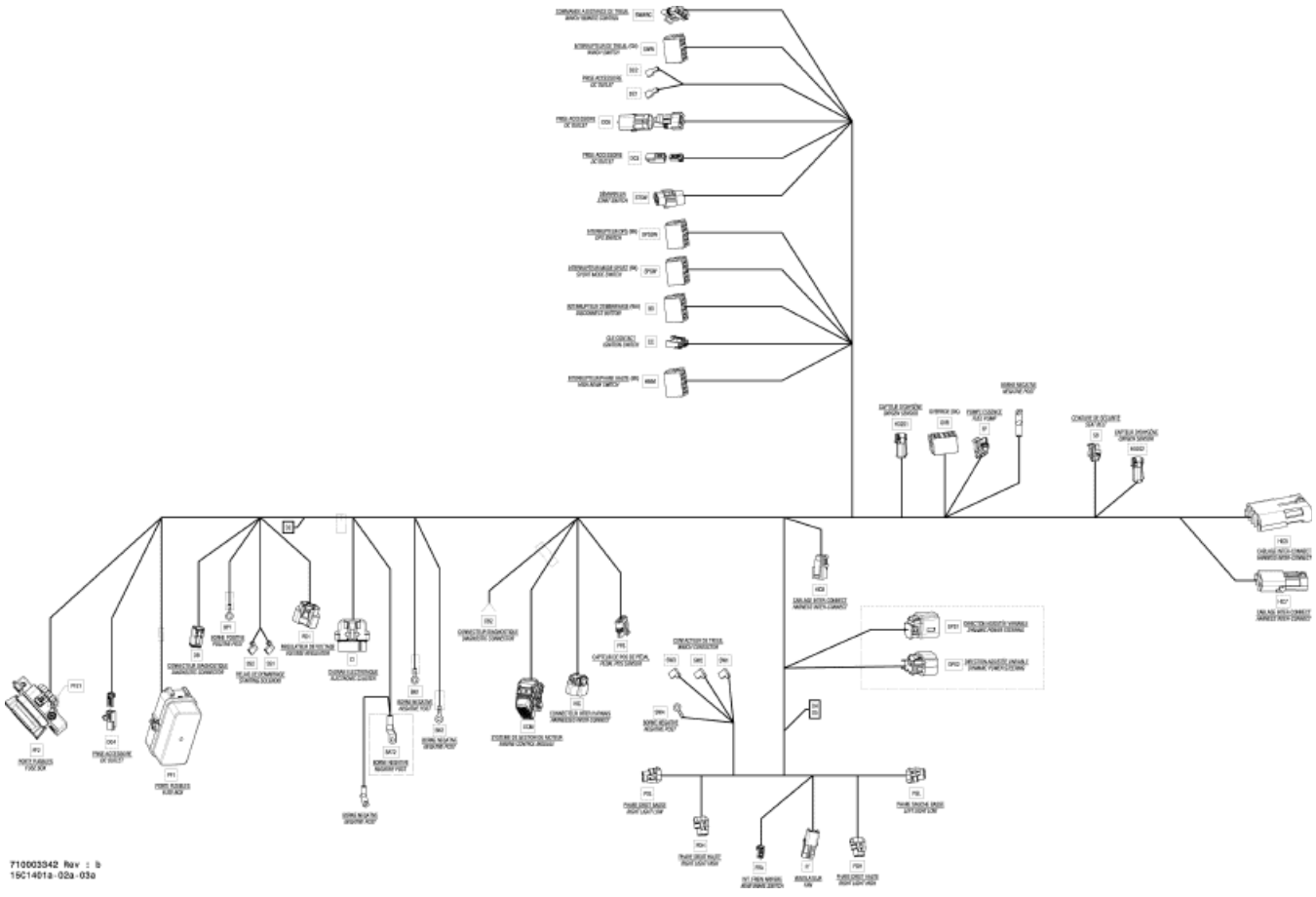
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710003008	Harness Ass'y. EUR	270.99		1	1
CAD	409012100	Female Terminal	2.49		@	1
CAD	409012100	Female Terminal	2.99		@	1
CAD	409012300	Seal	2.49		@	1
CAD	409012300	Seal	2.99		@	1
CAD	XXX	Female Housing, 2 Circuits			@	
CAG	409012100	Female Terminal	2.49		@	1
CAG	409012100	Female Terminal	2.99		@	1
CAG	409012300	Seal	2.49		@	1
CAG	409012300	Seal	2.99		@	1

CAG	409209200	Housing			@	1
D3	409012700	Diode	7.49		@	1
D3	409012700	Diode	7.99		@	1
D4	409012700	Diode	7.49		@	1
D4	409012700	Diode	7.99		@	1
FPD1	293550006	Female Terminal			@	1
FPD1	409010100	Female Terminal	4.49		@	1
FPD1	409010100	Female Terminal	4.71		@	1
FPD1	409010400	Female Terminal Housing, 1 Circuit	4.99		@	1
FPD1	409010400	Female Terminal Housing, 1 Circuit	5.99		@	1
FPD1	710000751	Shrink Tubing	1.49		@	1
FPD2	293550006	Female Terminal			@	1
FPD2	409010100	Female Terminal	4.49		@	1
FPD2	409010100	Female Terminal	4.71		@	1
FPD2	409010400	Female Terminal Housing, 1 Circuit	4.99		@	1
FPD2	409010400	Female Terminal Housing, 1 Circuit	5.99		@	1
FPD2	710000751	Shrink Tubing	1.49		@	1
FPG1	293550006	Female Terminal			@	1
FPG1	409010100	Female Terminal	4.49		@	1
FPG1	409010100	Female Terminal	4.71		@	1
FPG1	409010400	Female Terminal Housing, 1 Circuit	4.99		@	1
FPG1	409010400	Female Terminal Housing, 1 Circuit	5.99		@	1
FPG1	710000751	Shrink Tubing	1.49		@	1
FPG2	293550006	Female Terminal			@	1
FPG2	409010100	Female Terminal	4.49		@	1
FPG2	409010100	Female Terminal	4.71		@	1
FPG2	409010400	Female Terminal Housing, 1 Circuit	4.99		@	1
FPG2	409010400	Female Terminal Housing, 1 Circuit	5.99		@	1
FPG2	710000751	Shrink Tubing	1.49		@	1
HIBM	293550006	Female Terminal			@	1
HIBM	710002407	Housing			@	1
HIBM	710002863	Terminal			@	1
HIC6	278000222	Male Terminal	2.49		@	1
HIC6	278000222	Male Terminal	2.99		@	1
HIC6	278000281	Female Terminal Housing, 3 Circuits	6.99		@	1
HIC6	278000281	Female Terminal Housing, 3 Circuits	7.99		@	1
HIC6	278000585	Wire Seal (20 Gauge) (Purple)(Packard)	4.49	278001065	@	1
HIC6	278000585	Wire Seal (20 Gauge) (Purple)(Packard)	4.99	278001065	@	

					1
HIC6	710000992	Clip	3.49	@	1
HZ	293550006	Female Terminal		@	1
HZ	710001931	Terminal	1.99	@	1
HZ	710002000	Housing	5.99	@	1
KX1	293550006	Female Terminal		@	1
KX1	409010100	Female Terminal	4.49	@	1
KX1	409010100	Female Terminal	4.71	@	1
KX1	409010400	Female Terminal Housing, 1 Circuit	4.99	@	1
KX1	409010400	Female Terminal Housing, 1 Circuit	5.99	@	1
KX1	710000751	Shrink Tubing	1.49	@	1
KX2	293550006	Female Terminal		@	1
KX2	409010100	Female Terminal	4.49	@	1
KX2	409010100	Female Terminal	4.71	@	1
KX2	409010400	Female Terminal Housing, 1 Circuit	4.99	@	1
KX2	409010400	Female Terminal Housing, 1 Circuit	5.99	@	1
KX2	710000751	Shrink Tubing	1.49	@	1
MC1	293550006	Female Terminal		@	1
MC1	710002314	Housing	12.49	@	1
MC1	710002314	Housing	13.99	@	1
MC1	710002315	Terminal	2.49	@	1
MC1	710002315	Terminal	2.99	@	1
MC2	293550006	Female Terminal		@	1
MC2	710002313	Housing	14.49	@	1
MC2	710002313	Housing	15.99	@	1
MC2	710002315	Terminal	2.49	@	1
MC2	710002315	Terminal	2.99	@	1
MGB	409012100	Female Terminal	2.49	@	1
MGB	409012100	Female Terminal	2.99	@	1
MGB	409012300	Seal	2.49	@	1
MGB	409012300	Seal	2.99	@	1
MGB	710000080	Cap	4.49	@	1
MGB	710000080	Cap	4.99	@	1
MGB	710000081	Female Housing, 6 Circuits	5.80	@	1
MGB	710000081	Female Housing, 6 Circuits	6.99	@	1
MGC	409012100	Female Terminal	2.49	@	1
MGC	409012100	Female Terminal	2.99	@	1
MGC	409012300	Seal	2.49	@	

					1
MGC	409012300	Seal	2.99	@	1
MGC	710000080	Cap	4.49	@	1
MGC	710000080	Cap	4.99	@	1
MGC	710000081	Female Housing, 6 Circuits	5.80	@	1
MGC	710000081	Female Housing, 6 Circuits	6.99	@	1

Commander 1000 STD, DPS, XT, XT-P, 2014: 10- Electrical Harness Main Harness



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710003342	Main Harness Ass'y			1	1
BAT2	710000519	Open Barrel	6.99		@	1
BAT2	710000519	Open Barrel	7.99		@	1
BD	710002001	Housing Connector	9.99		@	1
BD	710003047	Terminal	3.99		@	1
BN1	710000913	Terminal	4.99		@	1
BN1	710000913	Terminal	5.99		@	1
BN2	278001392	Open Barrel	2.49		@	1
BN2	278001392	Open Barrel	2.99		@	1
BP1	710000913	Terminal	4.99		@	1
BP1	710000913	Terminal	5.99		@	1
CC	710000849	Male Housing, 6 Circuits	7.49		@	1
CC	710000849	Male Housing, 6 Circuits	7.99		@	1
CC	710000848	Lock	1.63		@	1
CC	710000848	Lock	1.99		@	1
CC	710001635	Terminal	1.99		@	1
CC	710001635	Terminal	2.99		@	1
CI	515175801	Female Housing, 24 Circuits	8.49		@	1
CI	515175801	Female Housing, 24 Circuits	8.99		@	

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CI	515175802	Retainer Block	7.49	@	1
CI	515175802	Retainer Block	7.99	@	1
CI	515175812	Plug	4.49	@	1
CI	515175812	Plug	4.99	@	1
CI	710000399	Female Housing	10.99	@	1
CI	710000399	Female Housing	11.99	@	1
CI	515175803	Wire Seal	12.49	@	1
CI	515175803	Wire Seal	13.99	@	1
CI	710001131	Female Terminal	4.99	@	1
CI	710001131	Female Terminal	5.99	@	1
D2	409012700	Diode	7.49	@	1
D2	409012700	Diode	7.99	@	1
D4	409012700	Diode	7.49	@	1
D4	409012700	Diode	7.99	@	1
D5	409012700	Diode	7.49	@	1
D5	409012700	Diode	7.99	@	1
DB	278002896	Housing, 6 Circuits	11.99	@	1
DB	515175678	Male Wedge, 6 Circuits	4.49	@	1
DB	515175678	Male Wedge, 6 Circuits	4.99	@	1
DB	278001665	Female Terminal	4.49	@	1
DB	278001665	Female Terminal	4.99	@	1
DB2	278001665	Female Terminal	4.49	@	1
DB2	278001665	Female Terminal	4.99	@	1
DC1	409010800	Female Terminal	0.99	@	1
DC1	409010800	Female Terminal	1.04	@	1
DC2	409010800	Female Terminal	0.99	@	1
DC2	409010800	Female Terminal	1.04	@	1
DC3	515175658	Female Housing, 2 Circuits	11.99	@	1
DC3	515175658	Female Housing, 2 Circuits	12.99	@	1
DC3	710000667	Male Housing, 2 Circuits	4.99	@	1
DC3	710000667	Male Housing, 2 Circuits	5.99	@	1
DC3	515175231	Female Terminal	2.49	@	1
DC3	515175231	Female Terminal	2.99	@	1
DC4	515175658	Female Housing, 2 Circuits	11.99	@	1
DC4	515175658	Female Housing, 2 Circuits	12.99	@	1
DC4	710000667	Male Housing, 2 Circuits	4.99	@	1
DC4	710000667	Male Housing, 2 Circuits	5.99	@	1
DC4	515175231	Female Terminal	2.49	@	1
DC4	515175231	Female Terminal	2.99	@	1
DC6	710000992	Clip	3.49	@	1
DC6	278000217	Female Housing, 2 Circuits	6.99	@	1
DC6	278000217	Female Housing, 2 Circuits	7.99	@	1
DC6	278000220	Male Connector, 2 Circuits	9.99	@	1
DC6	278000220	Male Connector, 2 Circuits	10.99	@	1
DC6	278000216	Wire Seal	2.49	@	1
DC6	278000216	Wire Seal	2.99	@	1

DC6	278000218	Wire Seal	2.49	@	1
DC6	278000218	Wire Seal	2.99	@	1
DC6	409007300	Female Terminal	14.49	@	1
DC6	409007300	Female Terminal	15.99	@	1
DPS1	710001161	Housing	7.49	@	1
DPS1	710001161	Housing	7.99	@	1
DPS1	710001162	Lock	3.49	@	1
DPS1	710001162	Lock	3.99	@	1
DPS1	710001225	Cap	5.99	@	1
DPS1	710001225	Cap	6.99	@	1
DPS1	710001114	Cap	11.99	@	1
DPS1	710001114	Cap	12.99	@	1
DPS1	710001163	Wire Seal	4.49	@	1
DPS1	710001163	Wire Seal	4.99	@	1
DPS1	710001164	Female Terminal	4.99	@	1
DPS1	710001164	Female Terminal	5.99	@	1
DPS2	278001325	Fuse Holder	5.99	@	1
DPS2	278001325	Fuse Holder	6.99	@	1
DPS2	710000113	Female Terminal	4.49	@	1
DPS2	710000113	Female Terminal	4.99	@	1
DPSSW	710002000	Housing	5.99	@	1
DPSSW	710003047	Terminal	3.99	@	1
ECM	710001591	Cover	9.49	@	1
ECM	710001588	Female Terminal Housing, 48 Circuits	34.99	@	1
ECM	710001592	Plug	1.99	@	1
ECM	710001593	Plug	1.99	@	1
ECM	710001589	Female Terminal	1.99	@	1
ECM	710001727	Female Terminal	1.99	@	1
ECM	710001727	Female Terminal	2.99	@	1
FP	409209700	Female Housing, 4 Circuits	12.49	@	1
FP	409209700	Female Housing, 4 Circuits	13.11	@	1
FP	278001013	Wire Seal	2.49	@	1
FP	278001013	Wire Seal	2.99	@	1
FP	515176621	Wire Seal	4.99	@	1
FP	515176621	Wire Seal	5.99	@	1
FP	278001014	Female Terminal	1.99	@	1
FP	278001014	Female Terminal	2.99	@	1
FP	710001340	Female Terminal	3.49	@	1
FP	710001340	Female Terminal	3.99	@	1
FRA	515175658	Female Housing, 2 Circuits	11.99	@	1
FRA	515175658	Female Housing, 2 Circuits	12.99	@	1
FRA	515175231	Female Terminal	2.49	@	1
FRA	515175231	Female Terminal	2.99	@	1
FT	710000992	Clip	3.49	@	1
FT	278000217	Female Housing, 2 Circuits	6.99	@	1
FT	278000217	Female Housing, 2 Circuits	7.99	@	1
FT	278000218	Wire Seal	2.49	@	1

FT	278000218	Wire Seal	2.99	@	1
FT	409004300	Male Terminal	4.49	@	1
FT	409004300	Male Terminal	4.71	@	1
HIBM	710002000	Housing	5.99	@	1
HIBM	710003048	Terminal	3.99	@	1
HIBM	710003047	Terminal	3.99	@	1
HIC	710001928	Housing	10.99	@	1
HIC	710001928	Housing	11.99	@	1
HIC	710001221	Lock	7.49	@	1
HIC	710001221	Lock	7.99	@	1
HIC	710001225	Cap	5.99	@	1
HIC	710001225	Cap	6.99	@	1
HIC	710001230	Seal	1.99	@	1
HIC	710001230	Seal	2.99	@	1
HIC	710001233	Seal	1.99	@	1
HIC	710001233	Seal	2.99	@	1
HIC	710001229	Terminal	1.99	@	1
HIC	710001229	Terminal	2.99	@	1
HIC	710001228	Terminal	1.99	@	1
HIC	710001228	Terminal	2.99	@	1
HIC5	710000992	Clip	3.49	@	1
HIC5	278001065	Wire Seal	4.49	@	1
HIC5	278001065	Wire Seal	4.99	@	1
HIC5	278000222	Male Terminal	2.49	@	1
HIC5	278000222	Male Terminal	2.99	@	1
HIC7	710000992	Clip	3.49	@	1
HIC7	278000217	Female Housing, 2 Circuits	6.99	@	1
HIC7	278000217	Female Housing, 2 Circuits	7.99	@	1
HIC7	278000218	Wire Seal	2.49	@	1
HIC7	278000218	Wire Seal	2.99	@	1
HIC7	409004300	Male Terminal	4.49	@	1
HIC7	409004300	Male Terminal	4.71	@	1
HIC8	710003175	Housing		@	1
HIC8	710003177	Housing		@	1
HO2S1	710002466	Housing	2.99	@	1
HO2S1	710002469	Lock		@	1
HO2S1	278001482	Seal	2.49	@	1
HO2S1	278001482	Seal	2.99	@	1
HO2S1	710002597	Gold Terminal		@	1
HO2S2	710002466	Housing	2.99	@	1
HO2S2	710002469	Lock		@	1
HO2S2	278001482	Seal	2.49	@	1
HO2S2	278001482	Seal	2.99	@	1
HO2S2	710002597	Gold Terminal		@	1
OVR	710002000	Housing	5.99	@	1
OVR	710003047	Terminal	3.99	@	1
PDH	710002278	Housing		@	1

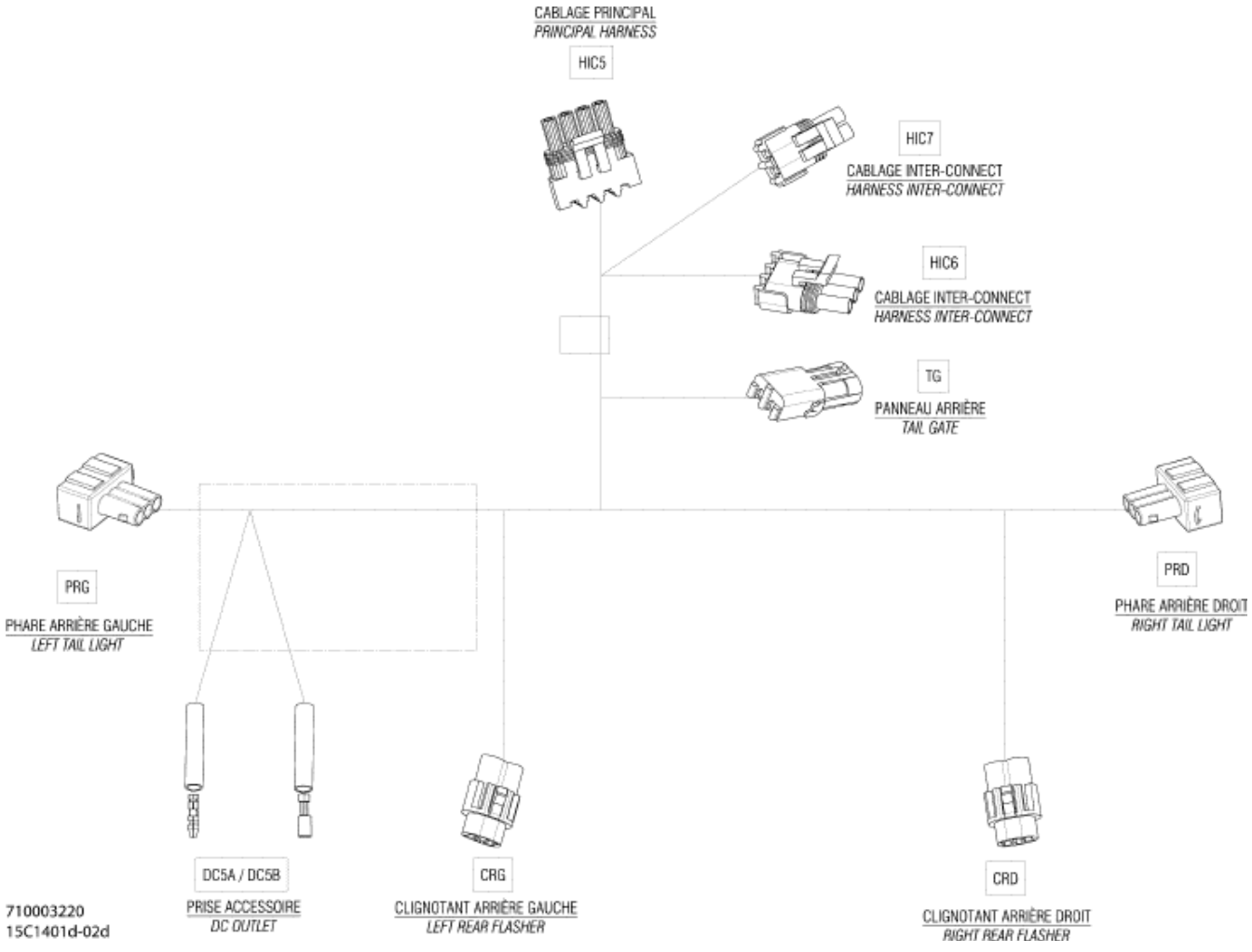
PDH	710002279	Lock	3.99	@	1
PDH	710001427	Wire Seal	1.99	@	1
PDH	710001427	Wire Seal	2.99	@	1
PDH	710000918	Female Terminal	4.49	@	1
PDH	710000918	Female Terminal	4.99	@	1
PDL	710002278	Housing		@	1
PDL	710002279	Lock	3.99	@	1
PDL	710001427	Wire Seal	1.99	@	1
PDL	710001427	Wire Seal	2.99	@	1
PDL	710000918	Female Terminal	4.49	@	1
PDL	710000918	Female Terminal	4.99	@	1
PF1	710000781	Fuse Puller	7.49	@	1
PF1	710001026	Fuse Cover	14.99	@	1
PF1	710001026	Fuse Cover	15.99	@	1
PF1	710002715	Logo Fuse Relay	4.99	@	1
PF1	278002172	Foam	3.49	@	1
PF1	278002172	Foam	3.99	@	1
PF1	710000660	Fuse Box Ass'y	27.49	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000743	Little Fuse, 7.5 Amperes	5.99	@	1
PF1	710000743	Little Fuse, 7.5 Amperes	6.99	@	1
PF1	710000743	Little Fuse, 7.5 Amperes	5.99	@	1
PF1	710000743	Little Fuse, 7.5 Amperes	6.99	@	1
PF1	710000744	Little Fuse, 10 Amperes	5.99	@	1
PF1	710000744	Little Fuse, 10 Amperes	6.99	@	1
PF1	710000744	Little Fuse, 10 Amperes	5.99	@	1
PF1	710000744	Little Fuse, 10 Amperes	6.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	5.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	6.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	5.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	6.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	5.99	@	1

PF1	710000745	Little Fuse, 15 Amperes	6.99	@	1
PF1	710000747	Little Fuse, 30 Amperes	5.99	@	1
PF1	710000747	Little Fuse, 30 Amperes	6.99	@	1
PF1	710000747	Little Fuse, 30 Amperes	5.99	@	1
PF1	710000747	Little Fuse, 30 Amperes	6.99	@	1
PF1	710002590	Fuse, 25 Amps	19.49	@	1
PF1	710002590	Fuse, 25 Amps	20.99	@	1
PF1	710000840	Cap	3.49	@	1
PF1	710000840	Cap	3.99	@	1
PF1	515176774	Relay, 30 AMP	9.99	@	1
PF1	515176774	Relay, 30 AMP	10.99	@	1
PF1	515176774	Relay, 30 AMP	9.99	@	1
PF1	515176774	Relay, 30 AMP	10.99	@	1
PF1	710001778	Relay	9.99	@	1
PF1	710001778	Relay	10.99	@	1
PF1	710001778	Relay	9.99	@	1
PF1	710001778	Relay	10.99	@	1
PF1	710001778	Relay	9.99	@	1
PF1	710001778	Relay	10.99	@	1
PF1	278000999	Wire Seal	2.49	@	1
PF1	278000999	Wire Seal	2.99	@	1
PF1	415128501	Seal	1.49	@	1
PF1	415128501	Seal	1.56	@	1
PF1	710000836	Female Terminal	3.49	@	1
PF1	710000836	Female Terminal	3.99	@	1
PF1	710000837	Female Terminal	3.49	@	1
PF1	710000837	Female Terminal	3.99	@	1
PF2	710001048	Fuse, 50 AMP	4.49	@	1
PF2	710001048	Fuse, 50 AMP	4.49	@	1
PF2	710001047	Fuse, 40 AMP	6.49	@	1
PF2	710001047	Fuse, 40 AMP	6.99	@	1
PF2	710001996	Housing	29.99	@	1
PF2	710001633	Lock	5.99	@	1
PF2	710001633	Lock	6.99	@	1
PF2	233261494	Hex. Elastic Flanged Nut M6	0.72	@	1
PF2	710003134	Seal Joint		@	1
PF2	710001905	Terminal Joint	1.99	@	1
PF2	710001905	Terminal Joint	2.99	@	1
PF2	710001636	Terminal	1.99	@	1
PF2	710001636	Terminal	2.99	@	1
PF21	710000526	Protector Cap	7.49	@	1
PF21	710000526	Protector Cap	7.99	@	1
PF21	278001392	Open Barrel	2.49	@	1
PF21	278001392	Open Barrel	2.99	@	1
PGH	710002278	Housing		@	1
PGH	710002279	Lock	3.99	@	1
PGH	710001427	Wire Seal	1.99	@	1

PGH	710001427	Wire Seal	2.99	@	1
PGH	710000918	Female Terminal	4.49	@	1
PGH	710000918	Female Terminal	4.99	@	1
PGL	710002278	Housing		@	1
PGL	710002279	Lock	3.99	@	1
PGL	710001427	Wire Seal	1.99	@	1
PGL	710001427	Wire Seal	2.99	@	1
PGL	710000918	Female Terminal	4.49	@	1
PGL	710000918	Female Terminal	4.99	@	1
PPS	278002299	Female Terminal Housing, 6 Circuits	7.49	@	1
PPS	710001119	Female Terminal	4.49	@	1
RD1	710000879	Housing, 3 Circuits	17.49	@	1
RD1	710000879	Housing, 3 Circuits	18.99	@	1
RD1	710000882	Cap	7.49	@	1
RD1	710000882	Cap	7.99	@	1
RD1	710001932	Seal	1.99	@	1
RD1	710001932	Seal	2.99	@	1
RD1	710001934	Terminal	3.49	@	1
RD1	710001934	Terminal	3.99	@	1
SB	710002177	Housing	2.49	@	1
SB	710002043	Lock	0.99	@	1
SB	278001482	Seal	2.49	@	1
SB	278001482	Seal	2.99	@	1
SB	710001134	Female Terminal	4.99	@	1
SPSW	710002000	Housing	5.99	@	1
SPSW	710003047	Terminal	3.99	@	1
SS1	409010300	Female Terminal	3.49	@	1
SS1	409010300	Female Terminal	3.66	@	1
SS2	409010300	Female Terminal	3.49	@	1
SS2	409010300	Female Terminal	3.66	@	1
STSW	409012300	Seal	2.49	@	1
STSW	409012300	Seal	2.99	@	1
STSW	409012100	Female Terminal	2.49	@	1
STSW	409012100	Female Terminal	2.99	@	1
SW1	409010300	Female Terminal	3.49	@	1
SW1	409010300	Female Terminal	3.66	@	1
SW2	409010300	Female Terminal	3.49	@	1
SW2	409010300	Female Terminal	3.66	@	1
SW3	710000038	Female Terminal	3.49	@	1
SW3	710000038	Female Terminal	3.99	@	1
SW4	278000992	Open Barrel	1.49	@	1
SW4	278000992	Open Barrel	1.99	@	1
SWW	710002003	Housing Connector	9.99	@	1
SWW	710003047	Terminal	3.99	@	1
SWWRC	278000273	Male Housing, 3 Circuits	6.99	@	1
SWWRC	278000273	Male Housing, 3 Circuits	7.99	@	1
SWWRC	278001065	Wire Seal	4.49	@	1

SWWRC	278001065	Wire Seal	4.99	@	1
SWWRC	278000223	Female Terminal	2.49	@	1
SWWRC	278000223	Female Terminal	2.99	@	1

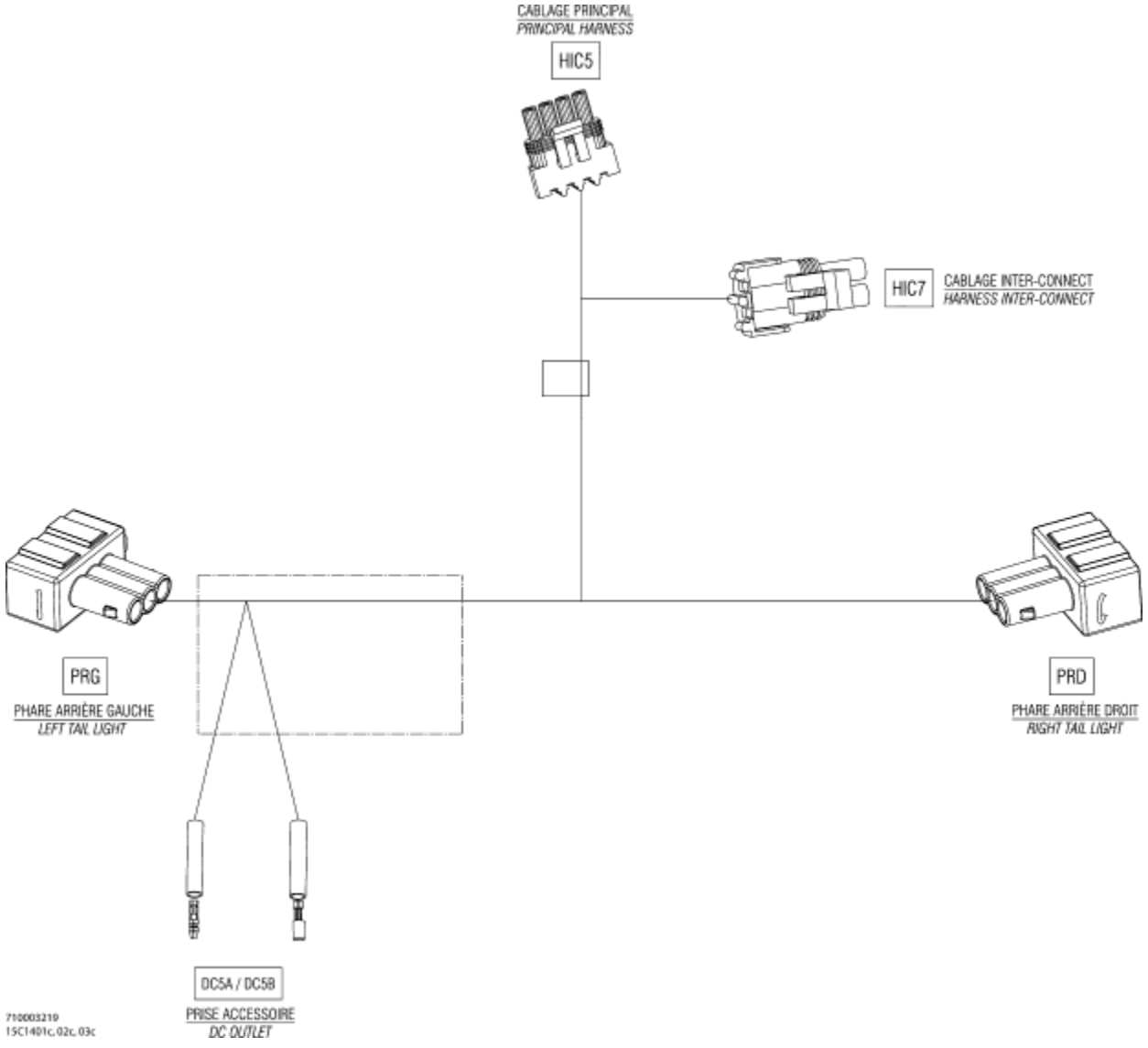
Commander 1000 STD, DPS, XT, XT-P, 2014: 10- Electrical Harness Rear, EUROPE



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710003220	Rear Harness. EUR	151.99		1	1
PRD	278000998	Female Terminal. EUR	2.49		6	6
PRD	278000998	Female Terminal. EUR	2.99		6	6
PRG	278000998	Female Terminal. EUR	2.49		6	6
PRG	278000998	Female Terminal. EUR	2.99		6	6
TG	278000222	Male Terminal. EUR	2.49		2	2
TG	278000222	Male Terminal. EUR	2.99		2	2
HIC7	409007300	Female Terminal. EUR	14.49		2	2
HIC7	409007300	Female Terminal. EUR	15.99		2	2
HIC5	278000223	Female Terminal. EUR	2.49		7	7
HIC5	278000223	Female Terminal. EUR	2.99		7	7
HIC6	278000223	Female Terminal. EUR	2.49		7	7
HIC6	278000223	Female Terminal. EUR	2.99		7	7

TG	278000217	Female Housing, 2 Circuits. EUR	6.99	1	1
TG	278000217	Female Housing, 2 Circuits. EUR	7.99	1	1
HIC7	278000220	Male Connector, 2 Circuits. EUR	9.99	1	1
HIC7	278000220	Male Connector, 2 Circuits. EUR	10.99	1	1
HIC6	278000273	Male Housing, 3 Circuits. EUR	6.99	1	1
HIC6	278000273	Male Housing, 3 Circuits. EUR	7.99	1	1
HIC5	278000395	Male Housing, 4 Circuits. EUR	11.99	1	1
HIC5	278000395	Male Housing, 4 Circuits. EUR	12.99	1	1
HIC7	278000218	Wire Seal. EUR	2.49	2	2
HIC7	278000218	Wire Seal. EUR	2.99	2	2
CRD	409012100	Female Terminal. EUR	2.49	4	4
CRD	409012100	Female Terminal. EUR	2.99	4	4
CRG	409012100	Female Terminal. EUR	2.49	4	4
CRG	409012100	Female Terminal. EUR	2.99	4	4
CRD	XXX	Female Housing, 2 Circuits. EUR		2	
CRD	409012300	Seal. EUR	2.49	4	4
CRD	409012300	Seal. EUR	2.99	4	4
CRG	409012300	Seal. EUR	2.49	4	4
CRG	409012300	Seal. EUR	2.99	4	4
DC5A	278001008	Insulated Sheath. EUR	2.49	1	1
DC5A	278001008	Insulated Sheath. EUR	2.99	1	1
DC5B	278001007	Insulated Sheath. EUR	2.49	1	1
DC5B	278001007	Insulated Sheath. EUR	2.99	1	1
PRD	415128501	Seal. EUR	1.49	6	6
PRD	415128501	Seal. EUR	1.56	6	6
PRG	415128501	Seal. EUR	1.49	6	6
PRG	415128501	Seal. EUR	1.56	6	6
HIC5	278001065	Wire Seal. EUR	4.49	9	9
HIC5	278001065	Wire Seal. EUR	4.99	9	9
DC5B	710000421	Female Terminal. EUR	3.49	1	1
DC5B	710000421	Female Terminal. EUR	3.99	1	1
DC5A	278002261	Female Terminal. EUR	4.49	1	1
DC5A	278002261	Female Terminal. EUR	4.99	1	1

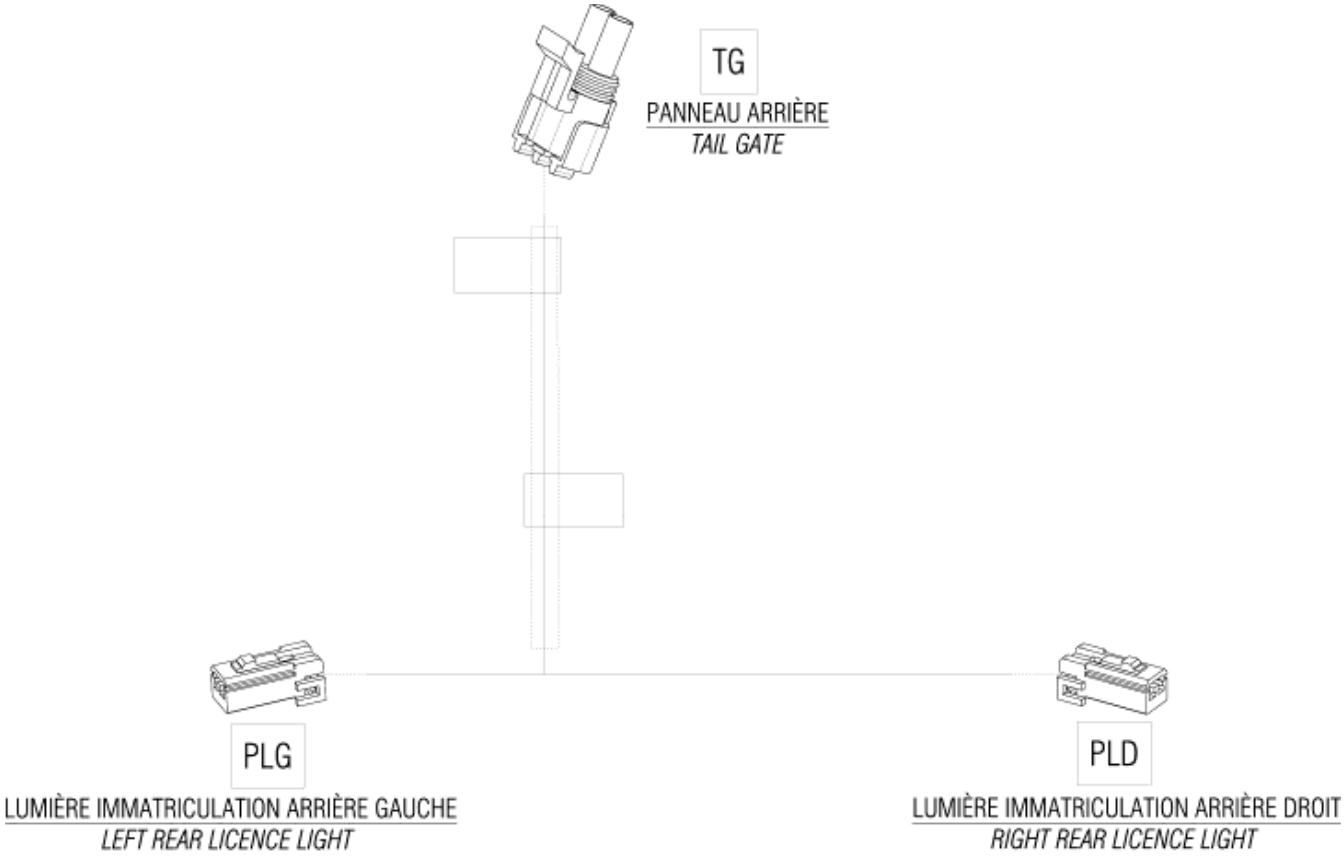
Commander 1000 STD, DPS, XT, XT-P, 2014: 10- Electrical Harness Rear, NA_Inter



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710003219	Rear Harness. North America, Inter	102.99		1	1
504	278001065	Wire Seal. North America, Inter	4.49		4	4
504	278001065	Wire Seal. North America, Inter	4.99		4	4
DC5A	278001008	Insulated Sheath. North America, Inter	2.49		1	1
DC5A	278001008	Insulated Sheath. North America, Inter	2.99		1	1
DC5A	278002261	Female Terminal. North America, Inter	4.49		1	1
DC5A	278002261	Female Terminal. North America, Inter	4.99		1	1
DC5B	278001007	Insulated Sheath. North America, Inter	2.49		1	1
DC5B	278001007	Insulated Sheath. North America, Inter	2.99		1	1

DC5B	710000421	Female Terminal. North America, Inter	3.49		1	1
DC5B	710000421	Female Terminal. North America, Inter	3.99		1	1
DC5B	293550006	Female Terminal. North America, Inter				1
HIC5	278000223	Female Terminal. North America, Inter	2.49		4	4
HIC5	278000223	Female Terminal. North America, Inter	2.99		4	4
HIC5	278000395	Male Housing, 4 Circuits. North America, Inter	11.99		1	1
HIC5	278000395	Male Housing, 4 Circuits. North America, Inter	12.99		1	1
HIC5	278000585	Wire Seal (20 Gauge) (Purple)(Packard). North America, Inter	4.49	278001065		1
HIC5	278000585	Wire Seal (20 Gauge) (Purple)(Packard). North America, Inter	4.99	278001065		1
HIC7	409007300	Female Terminal. North America, Inter	14.49		2	2
HIC7	409007300	Female Terminal. North America, Inter	15.99		2	2
HIC7	278000220	Male Connector, 2 Circuits. North America, Inter	9.99		1	1
HIC7	278000220	Male Connector, 2 Circuits. North America, Inter	10.99		1	1
HIC7	278000218	Wire Seal. North America, Inter	2.49		2	2
HIC7	278000218	Wire Seal. North America, Inter	2.99		2	2
PRD	278000998	Female Terminal. North America, Inter	2.49		6	6
PRD	278000998	Female Terminal. North America, Inter	2.99		6	6
PRD	415128501	Seal. North America, Inter	1.49		6	6
PRD	415128501	Seal. North America, Inter	1.56		6	6
PRD	XXX	Housing. North America, Inter				
PRG	278000998	Female Terminal. North America, Inter	2.49		6	6
PRG	278000998	Female Terminal. North America, Inter	2.99		6	6
PRG	XXX	Housing. North America, Inter				

Commander 1000 STD, DPS, XT, XT-P, 2014: 10- Electrical Harness Tail Gate, EUROPE

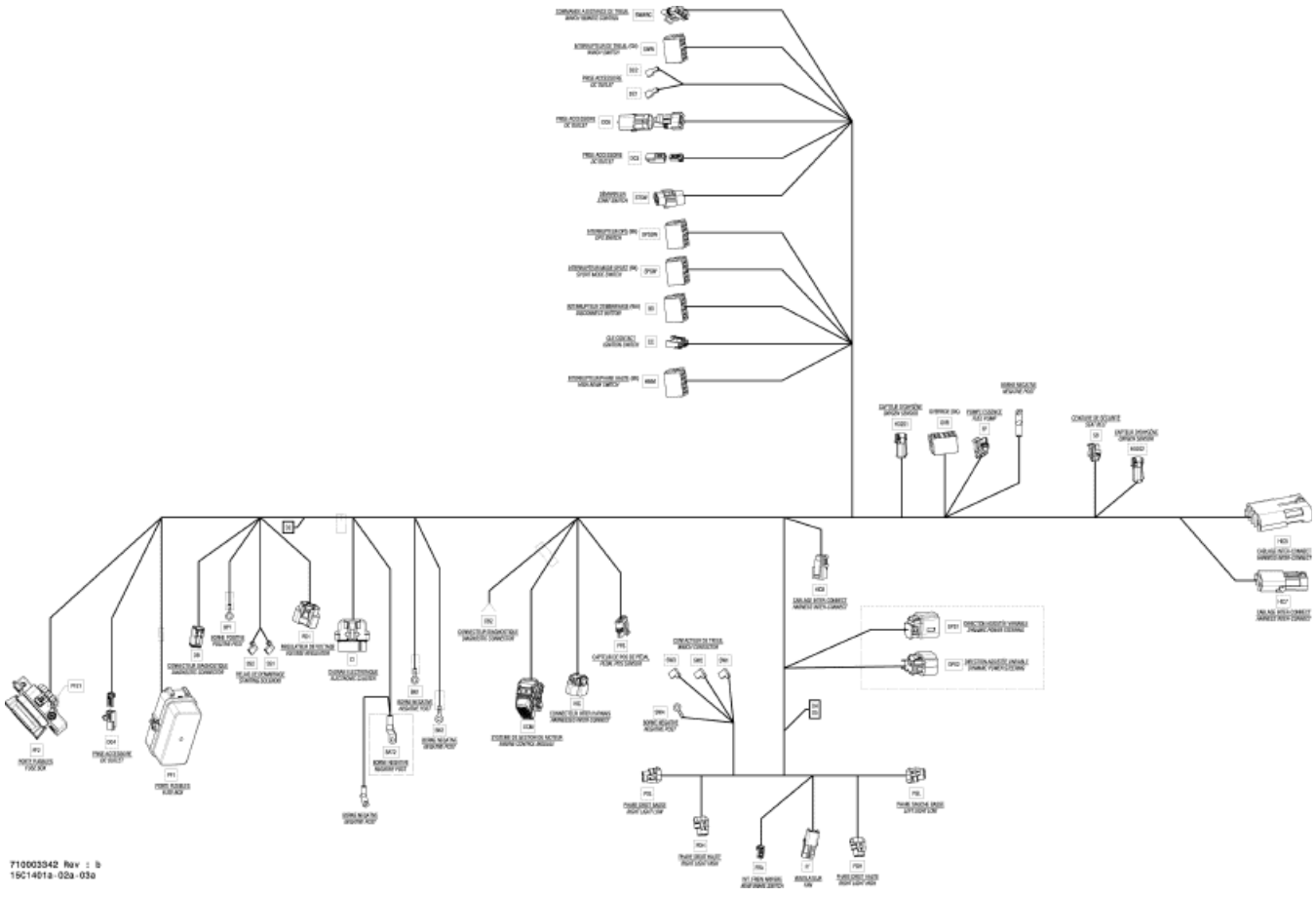


710002220
15C1401e-02e

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710002220	Tail Gate Harness Ass'y. EUR	99.49		1	1
PLD	515175231	Female Terminal. EUR	2.49		4	4
PLD	515175231	Female Terminal. EUR	2.99		4	4
PLD	515175658	Female Housing, 2 Circuits. EUR	11.99		2	2
PLD	515175658	Female Housing, 2 Circuits. EUR	12.99		2	2
PLG	515175231	Female Terminal. EUR	2.49		4	4
PLG	515175231	Female Terminal. EUR	2.99		4	4
PLG	515175658	Female Housing, 2 Circuits. EUR	11.99		2	2
PLG	515175658	Female Housing, 2 Circuits. EUR	12.99		2	2
TG	278000223	Female Terminal. EUR	2.49		2	2
TG	278000223	Female Terminal. EUR	2.99		2	2
TG	278000220	Male Connector, 2 Circuits. EUR	9.99		1	1

TG	278000220	Male Connector, 2 Circuits. EUR	10.99	1	1
TG	278001065	Wire Seal. EUR	4.49	2	2
TG	278001065	Wire Seal. EUR	4.99	2	2

Commander 1000 STD, DPS, XT, XT-P, 2014: 10- Electrical System All Models



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	205003044	Socket Screw M10 x 30	2.99		2	2
3	205082044	Socket Head Screw M8 X 20	0.87		4	4
4	207141044	Hex. Screw M4 X 10	0.87		2	2
5	207142544	Hex. Screw M4 X 25	1.53		12	12
6	207361644	Hex. Screw M6 X 16, Scotch Grip	0.70		2	2
7	207561644	Hex. Flanged Screw M6 X 16, Scotch Grip	1.47		1	1
8	207661644	Hex. Flanged Screw M6 X 16	0.58		2	2
9	207662044	Hex. Flanged Screw M6 X 20	1.99		@	1
10	207663034	Hex. Flanged Screw M6 X 30	1.99		3	3
11	210251680	Hex. Forming Screw M5 X 16	0.87		2	2
12	232061600	Hex. Nut M6	0.87		@	1
13	232541414	Elastic Stop Nut M4	0.47		12	12
14	715900265	Button	9.99		1	1
16	232561414	Elastic Stop Nut M6	1.99	232561434	1	1
17	232561434	Elastic Stop Nut M6	1.99		6	6
18	233061414	Hex. Flanged Nut M6	1.30		1	1
19	233201414	Hex. Flanged Elastic Nut M10	1.18		2	2
21	233261414	Hex. Flanged Elastic Nut M6	1.05		@	1
23	234051410	Flat Washer M5	0.43		24	

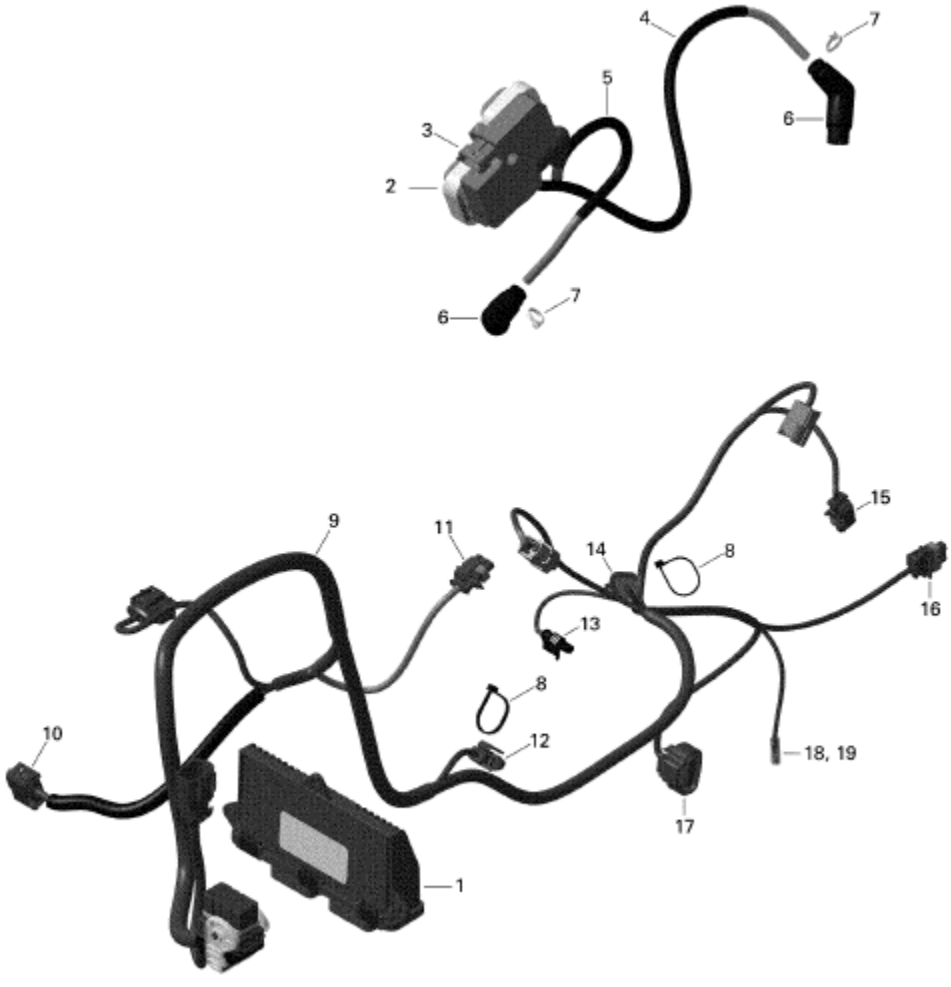
					24
24	234061410	Flat Washer 6 mm	1.00	4	4
25	234062410	Flat Washer 6 mm	0.62	5	5
26	234141601	Lock Washer 4 mm	0.87	2	2
27	234151401	Lock Washer 5 mm	0.43	2	2
28	234161601	Lock Washer Helical M6	0.87	6	6
29	234181401	Lock Washer 8 mm	0.75	4	4
30	234461608	External Serrated Lock Washer 6 mm	0.87	@	1
31	241154540	Hex. Screw K50 X 45	1.99	4	4
33	250000084	Phillips Screw K40 X 16	2.00	22	22
35	250000146	Truss Head Torx Screw K50 X 16	1.17	2	2
36	250000223	Torx Screw M6 X 16	1.99	1	1
38	250000284	Torx Screw M6 x 25	1.99	4	4
43	250400021	Clevis Pin	8.99	1	1
43	250400021	Clevis Pin	9.99	1	1
44	250400022	Cotter Pin	4.49	1	1
44	250400022	Cotter Pin	4.99	1	1
45	270000141	Clip	7.49	1	1
45	270000141	Clip	7.99	1	1
46	278000281	Female Terminal Housing, 3 Circuits	6.99	1	1
46	278000281	Female Terminal Housing, 3 Circuits	7.99	1	1
47	278002704	Diagnostic Connector	14.99	1	1
47	278002704	Diagnostic Connector	15.99	1	1
48	293150103	Pop Rivet 3/16"	0.47	2	2
49	293450274	Insert	4.97	2	2
49	293450274	Insert	5.99	2	2
50	293730040	Mount Dart	0.99	@	1
50	293730040	Mount Dart	1.99	@	1
51	293750008	Tie-Rap 350 mm	0.49	@	1
51	293750008	Tie-Rap 350 mm	0.99	@	1
113	293750009	Tie-Rap 173 mm	0.99	@	1
113	293750009	Tie-Rap 173 mm	1.99	@	1
121	390402400	Pop Rivet 3/16"	0.28	1	1
122	414115200	Tie-Rap 180 mm	0.49	@	1
129	414227300	Clip	1.15	@	1
131	410301203	Battery Ass'y, 18 Amperes	112.99	1	1
132	704901270	BRP Logo, 13 mm	8.49	1	1
132	704901270	BRP Logo, 13 mm	8.99	1	1
133	704902614	Fasher Decal	12.49	1	1
134	705002329	Hook	26.99	1	1
135	705003944	Winch	524.99	1	1
137	715001119	Winch Cable Guide	51.99	1	1
139	709200284	Support	3.49	1	1
139	709200284	Support	3.99	1	1
140	709400810	Flasher Arm Support	19.99	1	1
141	710000983	Horn	26.99	1	1
142	710000992	Clip	3.49	1	1

143	710001023	Winch Connector	39.99	1	1
146	710001059	Connector Ass'y	5.99	1	1
146	710001059	Connector Ass'y	6.99	1	1
147	710001081	RH Low Front Housing	9.99	1	1
147	710001081	RH Low Front Housing	10.99	1	1
147	710001083	LH Low Front Housing	9.99	1	1
147	710001083	LH Low Front Housing	10.99	1	1
148	710001082	RH Low Rear Housing	5.99	1	1
148	710001082	RH Low Rear Housing	6.99	1	1
148	710001084	LH Low Rear Housing	5.99	1	1
148	710001084	LH Low Rear Housing	6.99	1	1
151	710001085	RH High Front Housing	9.99	1	1
151	710001085	RH High Front Housing	10.99	1	1
151	710001087	LH High Front Housing	9.99	1	1
151	710001087	LH High Front Housing	10.99	1	1
152	710001086	RH High Rear Housing	5.99	1	1
152	710001086	RH High Rear Housing	6.99	1	1
152	710001088	LH High Rear Housing	5.99	1	1
152	710001088	LH High Rear Housing	6.99	1	1
155	710001094	RH Low Light Support	2.49	1	1
155	710001094	RH Low Light Support	2.99	1	1
155	710001037	LH Low Light Support	2.49	1	1
155	710001037	LH Low Light Support	2.99	1	1
156	710001115	RH High Light Support	2.49	1	1
156	710001115	RH High Light Support	2.99	1	1
156	710001036	LH High Light Support	2.49	1	1
156	710001036	LH High Light Support	2.99	1	1
157	710001147	Setting Screw	9.49	8	8
157	710001147	Setting Screw	9.99	8	8
159	710001183	Trim Ring Ass'y	11.99	1	1
159	710001183	Trim Ring Ass'y	12.99	1	1
160	710001191	Voltage Regulator	128.49	1	1
161	710001248	Outlet DC	26.99	1	1
162	710001364	Starter Relay	41.99	1	1
163	710001645	Tail Light. Includes 163a	41.99	2	2
163a	520000758	Bulb	9.99	1	1
164	710001721	Turn Signal	120.99	1	1
166	710001726	Day Light	56.99	2	2
166	710001726	Day Light	74.99	2	2
167	710001737	Switch	22.49	1	1
168	710001781	Switch DPS. DPS		1	1
168	710001781	Switch DPS. XT		1	1
168	710001781	Switch DPS. XTP		1	1
169	710001916	Battery Holder	4.49	1	1
170	710001999	Plug Carling	5.99	2	2
170	710001999	Plug Carling	6.99	2	2
171	710002047	Flasher	18.49	4	4

171	710002047	Flasher	19.99	4	4
175	710002052	Switch	15.99	1	1
176	710002053	Switch	15.99	1	1
177	710002055	License Light. Includes 177a	41.99	2	2
177a	219800128	Bulb	2.49	1	1
179	710001725	Hi/Low Switch. Except Europe	18.49	1	1
179	710002076	Switch. Europe	14.99	1	1
180	710002112	Solenoid	120.99	1	1
181	710002146	Positive Cable	21.99	1	1
182	710002148	Positive Cable. DPS, STD	20.99	1	1
183	710002159	Positive Cable. XT, XTP	44.99	1	1
184	710002214	Negative Cable	11.99	1	1
185	710002216	Electrical Winch Cable	32.49	1	1
186	710002220	Tail Gate Harness Ass'y	99.49	1	1
187	710002327	Ignition Switch	54.49	1	1
188	710002408	Support	4.99	1	1
188	710002408	Support	5.99	1	1
189	710002524	Low Beam Ass'y. Includes 189a	83.49	2	2
189a	415129249	Halogen Bulb	28.49	1	1
190	710002525	High Beam Ass'y. Includes 190a	83.49	2	2
190a	415129249	Halogen Bulb	28.49	1	1
191	N/A	Not available for this vehicle		1	
201	710002594	Engine START Button	44.99	1	1
214	710003008	Harness Ass'y	270.99	1	1
216	710003129	Battery Support	29.99	1	1
218	710003219	Rear Harness. Except Europe	102.99	1	1
218	710003220	Rear Harness. Europe	151.99	1	1
220	710003239	Flasher Unit	62.99	1	1
221	710003335	Fuse Holder	5.99	1	1
224	710003342	Main Harness Ass'y		1	1
236	710003851	Speedometer. DPS, STD	268.99	1	1
237	710003532	Speedometer. XT, XTP		1	1
238	710003541	Switch PPS Sport		1	1
300	415129355	Speedometer Button	9.99	1	1
300	415129355	Speedometer Button	10.99	1	1
301	415129348	Gauge Ring	8.49	1	1
301	415129348	Gauge Ring	8.99	1	1
302	415129349	Lens	15.99	1	1
302	415129349	Lens	16.99	1	1

Commander 1000 STD, DPS, XT, XT-P, 2014: 10- Engine Harness And Electronic Module

1000



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420266958	ECM Connector. Except Europe			1	1
1	XXX	ECM Connector. Europe			1	
2	278001546	Ignition Coil	168.49		1	1
3	710000568	Housing	7.49		1	1
3	710000568	Housing	7.99		1	1
4	420665330	Spark Plug Cable, 610 mm, PTO Side	64.49		1	1
5	420664300	Spark Plug Cable, 365 mm, MAG Side	46.99		1	1
6	420265248	Spark Plug Connector	24.49		2	2
7	420866710	Tie Rap	4.49		2	2

7	420866710	Tie Rap	4.71		2	2
8	420866714	Tie Rap	1.49		@	1
9	420666332	Engine Wiring Harness. Includes 9 to 17	421.99		1	1
10	710001872	Housing, 6 Positions	9.99		1	1
11	278000997	Male Housing, 3 Circuits	13.49		1	1
11	278000997	Male Housing, 3 Circuits	14.99		1	1
12	278001005	Male Housing, 2 Circuits	14.49		1	1
12	278001005	Male Housing, 2 Circuits	15.99		1	1
13	278001012	Male Housing, 1 Circuit	10.99		1	1
13	278001012	Male Housing, 1 Circuit	11.99		1	1
14	409207000	Male Housing, 3 Circuits	9.99	278002378	1	1
15	278001005	Male Housing, 2 Circuits	14.49		1	1
15	278001005	Male Housing, 2 Circuits	15.99		1	1
16	278000997	Male Housing, 3 Circuits	13.49		1	1
16	278000997	Male Housing, 3 Circuits	14.99		1	1
17	710000329	Male Housing, 4 Circuits	10.80		1	1
17	710000329	Male Housing, 4 Circuits	11.99		1	1
18	278001009	Female Terminal	2.49		1	1
18	278001009	Female Terminal	2.99		1	1
19	278001007	Insulated Sheath	2.49		1	1
19	278001007	Insulated Sheath	2.99		1	1

Commander 1000, LTD, 2014: 00- Model Numbers

The illustrations figuring in this parts catalog show typical construction of the different assemblies and, in all cases, may not reproduce the full detail or exact shape of the parts shown. However, they represent parts which have the same or similar function.

Les illustrations contenues dans ce catalogue indiquent la disposition des pièces les unes par rapport aux autres. Il est donc possible qu'elles ne rendent pas compte de la forme exacte de ces pièces ainsi que de leurs détails de fabrication. Ces illustrations ont pour but d'identifier des pièces qui remplissent la même fonction ou une fonction identique.

SYMBOLS USED IN THIS CATALOG

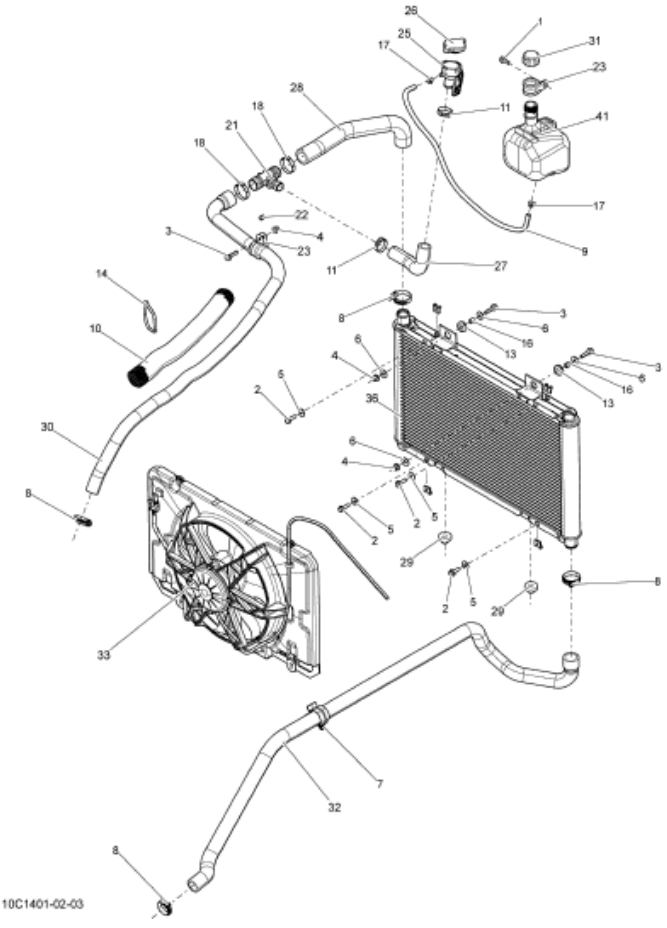
@	In «Quantity» column means «Use as Required».
Opt	In «Quantity» column means «Optional».
XXX	Parts marked with «XXX» are not available as spare parts.

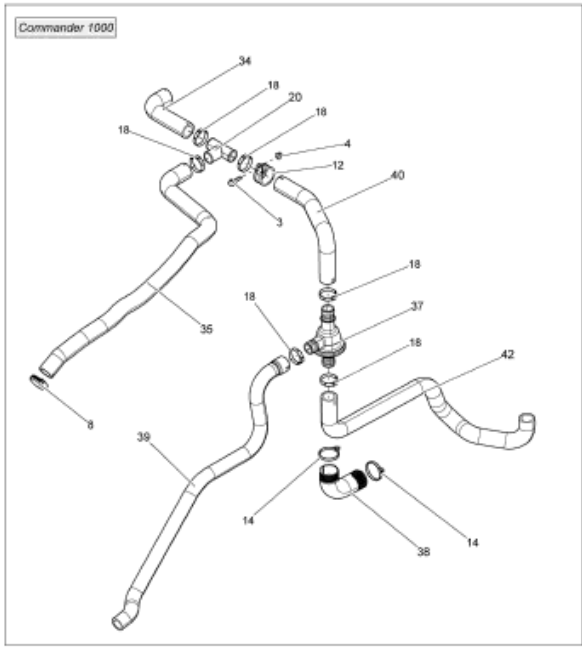
SYMBOLES UTILISÉS DANS CE CATALOGUE

@	Dans la colonne «Quantité» signifie «Au besoin».
Opt	Dans la colonne «Quantité» signifie «En option».
XXX	Les articles marqués d'un «XXX» ne sont pas disponibles comme pièces de remplacement.

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	6GEA	COMMANDER, 4X4 LTD, 1000 EFI CVT, White. North America				1
2	6GEB	COMMANDER, 4X4 LTD, 1000 EFI CVT, White. International				1
3	6GED	COMMANDER, 4X4 LTD, 1000 EFI CVT, Magnesium. North America				1

Commander 1000, LTD, 2014: 01- Cooling System

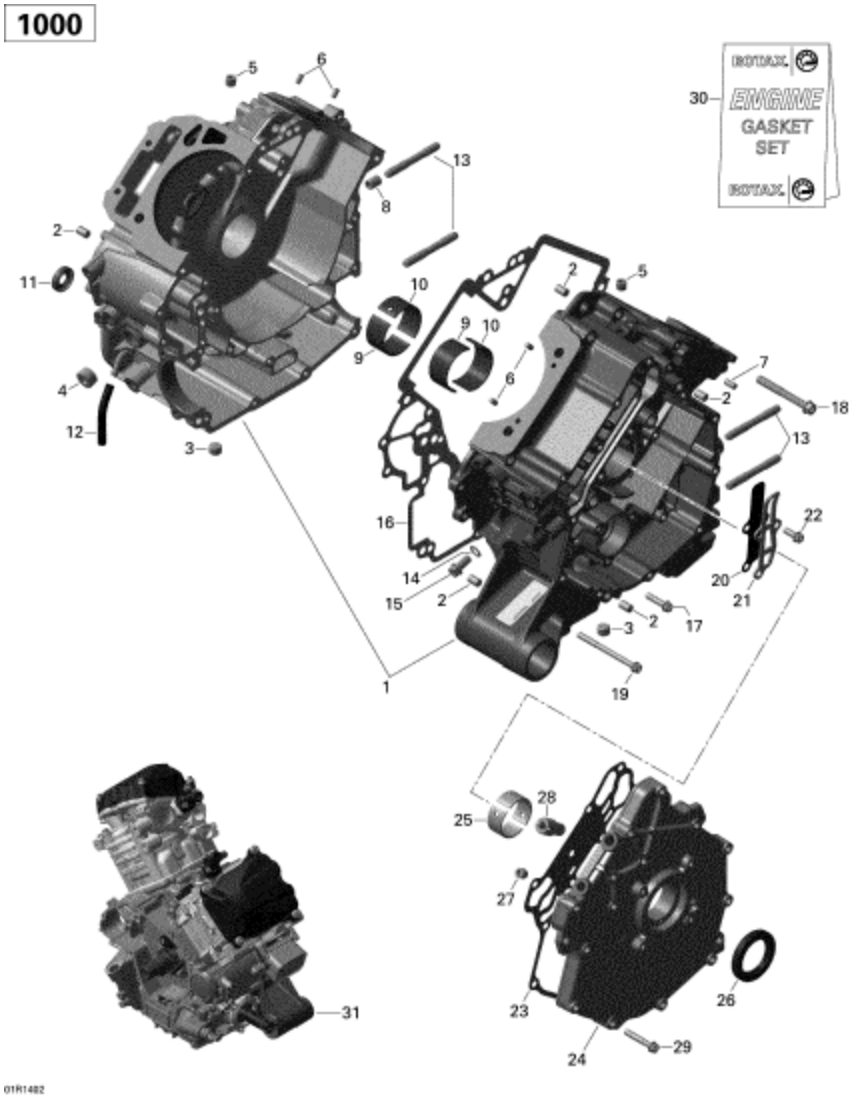




#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207661644	Hex. Flanged Screw M6 X 16	0.58		1	1
2	207662044	Hex. Flanged Screw M6 X 20	1.99		4	4
3	207662534	Hex. Flanged Screw	1.99		4	4
4	233261434	Flanged Elastic Nut M6	3.99		4	4
5	234062410	Flat Washer 6 mm	0.62		4	4
6	250200082	Flat Washer	1.99		4	4
7	275500590	Retainer	4.99		1	1
7	275500590	Retainer	5.99		1	1
8	293650098	Norma Gear Clamp	3.49		6	6
8	293650098	Norma Gear Clamp	3.99		6	6
9	415110000	Polyurethane Hose 5.2 mm	9.99		@	1
10	515176260	Tubing 35mm	7.49		@	1
10	515176260	Tubing 35mm	7.99		@	1
11	293650099	Crimp Clamp	3.49		2	2
11	293650099	Crimp Clamp	3.99		2	2
12	293650218	Hose Retainer	6.99		1	1
13	293720053	Grommet	2.49		2	2
13	293720053	Grommet	2.99		2	

					2
14	293750008	Tie-Rap 350 mm	0.49	3	3
14	293750008	Tie-Rap 350 mm	0.99	3	3
16	293900105	Bushing	4.49	2	2
16	293900105	Bushing	4.99	2	2
17	414554800	Spring Clamp	0.72	2	2
18	509000162	Gear Clamp	4.99	8	8
18	509000162	Gear Clamp	5.99	8	8
20	509000219	T-Fitting	11.99	1	1
20	509000219	T-Fitting	12.99	1	1
21	509000372	T-Fitting	6.99	1	1
21	509000372	T-Fitting	7.99	1	1
22	N/A	Not available for this vehicle		1	
23	709200036	Hose Anchor	6.63	1	1
23	709200036	Hose Anchor	6.99	1	1
25	709200179	Filler Neck	10.99	1	1
25	709200179	Filler Neck	11.99	1	1
26	709200207	Pressure Cap	14.49	1	1
26	709200207	Pressure Cap	15.99	1	1
27	709200264	Filler Neck Hose	6.99	1	1
28	709200265	Radiator Outlet Hose	7.49	1	1
29	709200285	Grommet	5.99	2	2
29	709200285	Grommet	6.99	2	2
30	N/A	Not available for this vehicle		1	
31	709200328	Tank Cap	2.49	1	1
31	709200328	Tank Cap	2.99	1	1
32	N/A	Not available for this vehicle		1	
33	709200375	Fan Ass'y	190.99	1	1
34	709200380	Intermediate Hose	10.99	1	1
35	709200382	Intermediate Hose	16.49	1	1
36	709200395	Radiator	176.99	1	1
37	709200406	Thermostat	63.49	1	1
38	515176260	Tubing 35mm	7.49	1	1
38	515176260	Tubing 35mm	7.99	1	1
39	709200441	Pump Hose	16.99	1	1
40	709200447	Hose	15.99	1	1
41	709200504	Coolant Tank	9.99	1	1
42	709200513	Radiator Inlet Hose		1	1

Commander 1000, LTD, 2014: 01- Crankcase



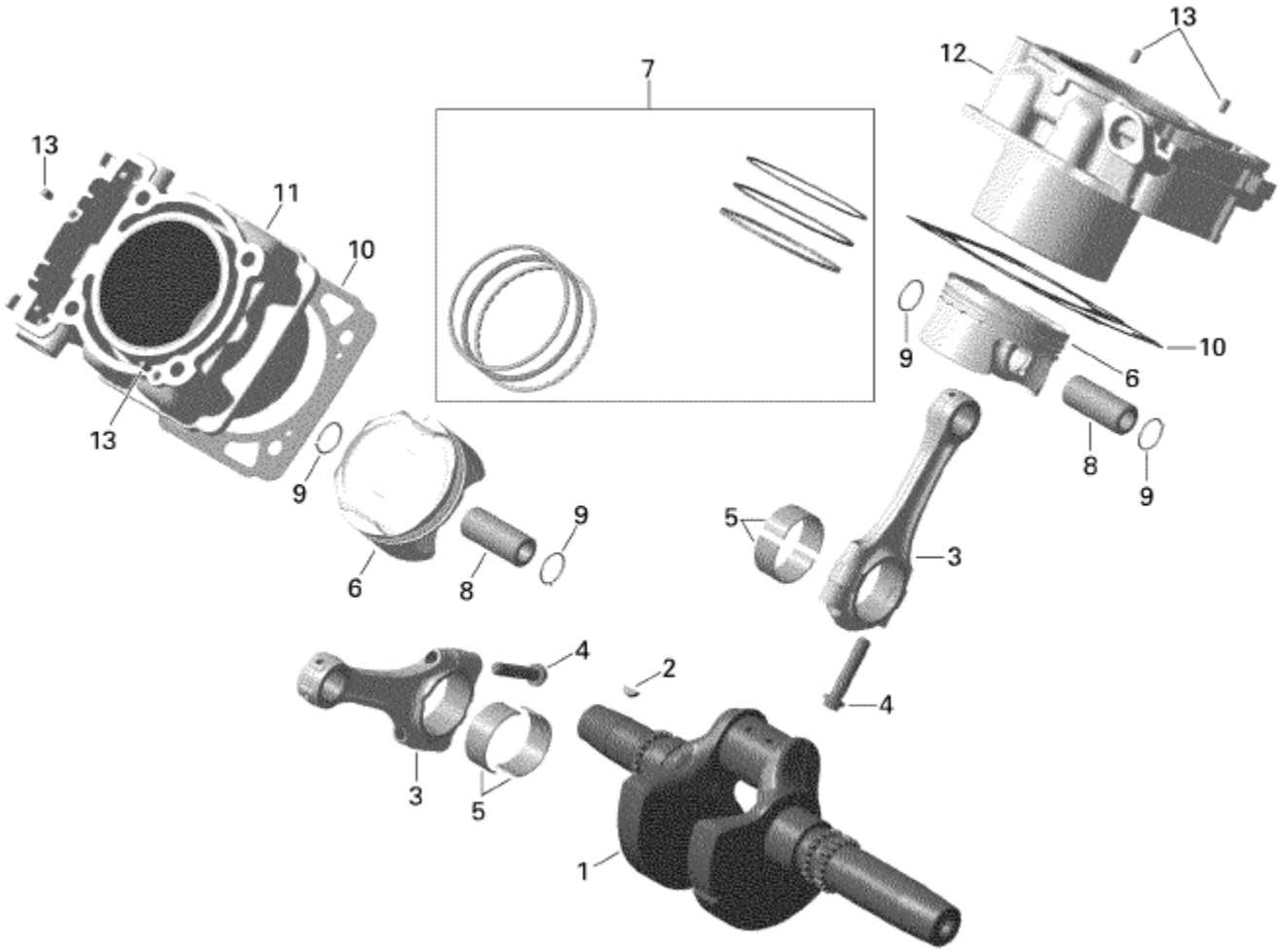
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420685253	Crankcase Ass'y. Includes 1 to 12	999.99		1	1
1	420685253	Crankcase Ass'y. Includes 1 to 12	1332.99		1	1
2	420632010	Center Pin 8 X 12	3.49		5	5
2	420632010	Center Pin 8 X 12	3.66		5	5
3	420840657	Plug Screw M12 X 1.5	5.99		2	2
3	420840657	Plug Screw M12 X 1.5	6.99		2	2
4	420240170	Plug Screw M18 X 1.5	5.99		1	1
4	420240170	Plug Screw M18 X 1.5	6.29		1	1
5	420641323	Plug Screw M10 X 1	9.99		2	2
5	420641323	Plug Screw M10 X 1	10.99		2	2
6	420929650	Drive Pin 5 X 10	1.49		4	

						4
6	420929650	Drive Pin 5 X 10	1.56		4	4
7	420932780	Needle Pin	5.99		1	1
7	420932780	Needle Pin	6.29		1	1
8	420929670	Dowel Pin 10 X 13	7.49		1	1
8	420929670	Dowel Pin 10 X 13	7.99		1	1
9	420233960	Plain Bearing	22.49		2	2
10	420233965	Plain Bearing	22.49		2	2
11	420650310	Oil Seal	10.99		1	1
11	420650310	Oil Seal	11.54		1	1
12	415110000	Polyurethane Hose 5.2 mm	9.99		1	1
13	420240814	Stud	4.99		4	4
13	420240814	Stud	5.99		4	4
14	420950141	Sealing Ring	1.99		1	1
14	420950141	Sealing Ring	2.09		1	1
15	420440852	Flanged Torx Screw M8 X 16	3.49		1	1
15	420440852	Flanged Torx Screw M8 X 16	3.66		1	1
16	420651225	Gasket	23.49		1	1
17	420641238	Flanged Torx Screw M6 X 25	2.99		2	2
17	420641238	Flanged Torx Screw M6 X 25	3.14		2	2
18	420440402	Flanged Torx Screw M8 X 65	5.99		4	4
18	420440402	Flanged Torx Screw M8 X 65	6.29		4	4
19	420440657	Flanged Torx Screw M6 X 75	2.49		13	13
19	420440657	Flanged Torx Screw M6 X 75	2.99		13	13
20	420224720	Valve Plate	13.49		1	1
20	420224720	Valve Plate	14.16		1	1
21	420224725	Reed Valve Stop	8.99		1	1
21	420224725	Reed Valve Stop	9.44		1	1
22	420641048	Flanged Torx Screw M6 X 16	2.49		3	3
22	420641048	Flanged Torx Screw M6 X 16	2.61		3	3
23	420651211	Gasket	19.99		1	1
23	420651211	Gasket	20.99		1	1
24	420612128	PTO Cover Ass'y. Includes 24 to 27	187.49		1	1
25	420233995	Bearing Sleeve	18.49		2	2
25	420233995	Bearing Sleeve	19.99		2	2
26	420631933	Oil Seal	18.49	420631932	1	1
26	420631933	Oil Seal	19.99	420631932	1	1
27	420641323	Plug Screw M10 X 1	9.99		1	

					1
27	420641323	Plug Screw M10 X 1	10.99	1	1
28	420256334	Hose Nipple M12 X 1.5	5.49	1	1
28	420256334	Hose Nipple M12 X 1.5	5.99	1	1
29	420440274	Flanged Torx Screw M6 X 35	1.99	14	14
30	420684150	Gasket Kit, Engine	379.49	1	1
31	420101002	Long Block, 1000	4985.99	1	1

Commander 1000, LTD, 2014: 01- Crankshaft, Piston And Cylinder

1000



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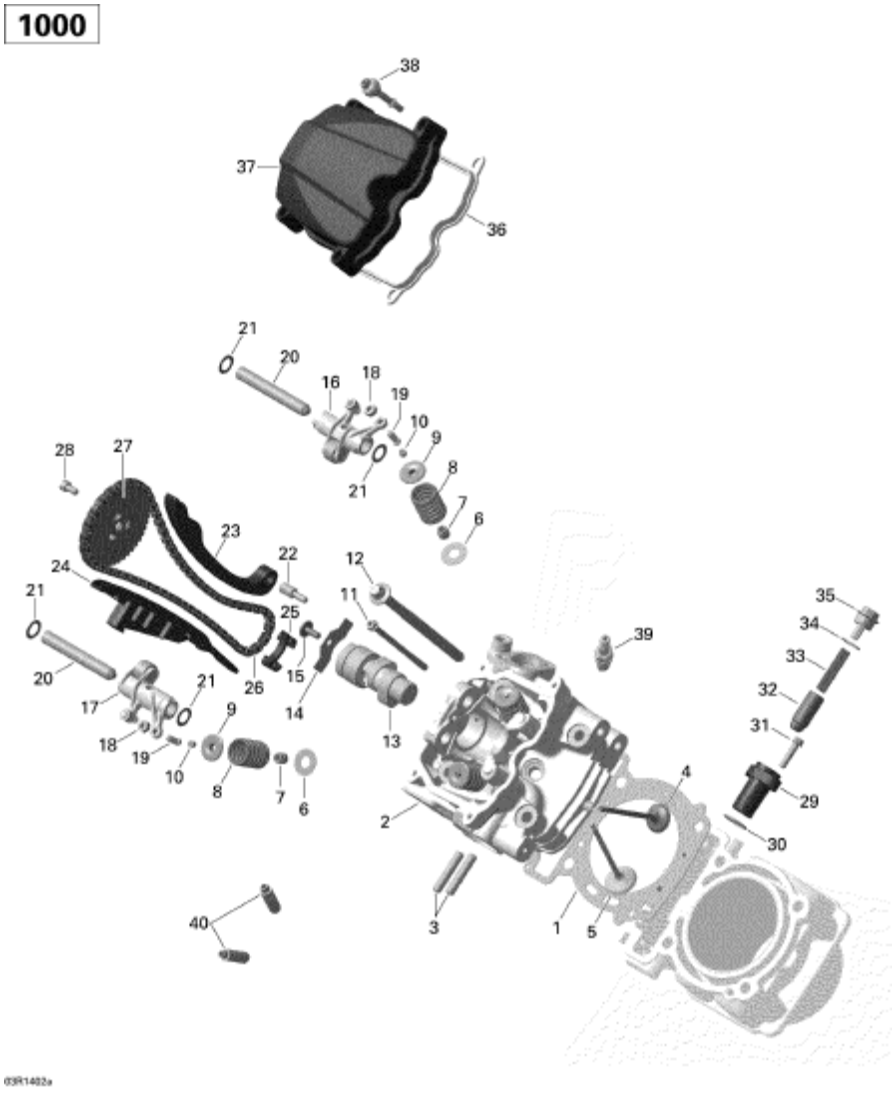
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420219736	Crankshaft	901.99		1	1
2	420246570	Woodruff Key 4 X 5	2.99		1	1
2	420246570	Woodruff Key 4 X 5	3.14		1	1
3	420217556	Connecting Rod Ass'y. Includes 3 to 4	176.99		2	2
4	420641475	Connecting Rod Screw M9 X 1	12.49		4	4
4	420641475	Connecting Rod Screw M9 X 1	13.99		4	4
5	420233726	Plain Bearing	14.99		4	4
5	420233726	Plain Bearing	15.99		4	4
6	420685242	Piston Ass'y, 90.955 mm. Includes 6 to 7	98.49		2	2

7	420296774	Piston Ring Set	79.49	2	2
8	420216351	Piston Pin	5.99	2	2
9	420245436	Piston Circlip	3.49	4	4
9	420245436	Piston Circlip	3.99	4	4
10	420630210	Gasket	10.99	2	2
10	420630210	Gasket	11.54	2	2
11	420623566	Cylinder With Sleeve, Front	182.64	1	1
11	420623566	Cylinder With Sleeve, Front	305.99	1	1
12	420623568	Cylinder With Sleeve, Rear	305.99	1	1
13	420929650	Drive Pin 5 X 10	1.49	4	4
13	420929650	Drive Pin 5 X 10	1.56	4	4

Commander 1000, LTD, 2014: 01- Cylinder Head, Front

1000



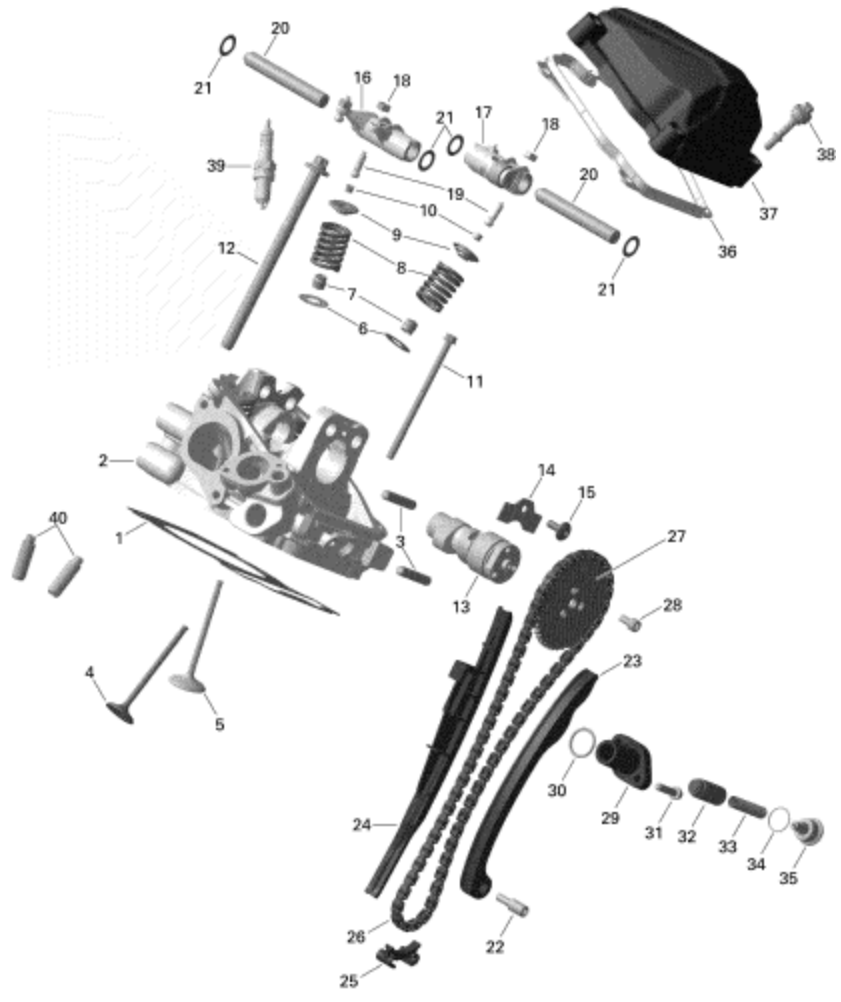
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420630195	Cylinder Head Gasket	57.49		1	1
2	420623064	Cylinder Front Ass'y. Includes 2 to 3	460.99		1	1
2	420623064	Cylinder Front Ass'y. Includes 2 to 3	499.99		1	1
3	420941014	Stud M8 x 26	9.49		2	2
3	420941014	Stud M8 x 26	9.99		2	2
4	420254361	Exhaust Valve, 27 mm	47.49		2	2
5	420254351	Intake Valve, 31 mm	31.99		2	2
6	420627770	Thrust Washer	1.49		4	4
6	420627770	Thrust Washer	1.56		4	4
7	420230515	Valve Stem Seal	5.99		4	4
7	420230515	Valve Stem Seal	6.29		4	4

8	420239295	Valve Spring	9.99	4	4
8	420239295	Valve Spring	10.99	4	4
9	420254132	Valve Spring Retainer	9.99	4	4
9	420254132	Valve Spring Retainer	10.99	4	4
10	420254120	Cotter Valve	3.49	8	8
10	420254120	Cotter Valve	3.66	8	8
11	420440612	Flanged Torx Screw M6 X 105	5.99	2	2
11	420440612	Flanged Torx Screw M6 X 105	6.29	2	2
12	420441284	Torx Screw M10 X 159	9.99	4	4
12	420441284	Torx Screw M10 X 159	10.99	4	4
13	420637410	Camshaft	274.99	1	1
14	420627743	Holding Strip	13.49	1	1
14	420627743	Holding Strip	14.99	1	1
15	420241525	Torx Screw M6 X 16	2.49	1	1
15	420241525	Torx Screw M6 X 16	2.99	1	1
16	420254905	Rocker Arm Inlet	113.49	1	1
²	420254915	Rocker Arm Exhaust	112.49	1	1
18	420242910	Hex. Nut M6	1.49	4	4
18	420242910	Hex. Nut M6	1.99	4	4
19	420241335	Adjustment Screw M6 X 0.75	13.49	4	4
19	420241335	Adjustment Screw M6 X 0.75	14.16	4	4
20	420229712	Pin #12, Small, M6 X 90	11.99	2	2
20	420229712	Pin #12, Small, M6 X 90	12.99	2	2
21	420944382	Shim	3.49	4	4
21	420944382	Shim	3.66	4	4
22	420240941	Bearing Screw M6	9.49	1	1
22	420240941	Bearing Screw M6	9.99	1	1
23	420436017	Chain Tension Guide	39.49	1	1
24	420236583	Chain Guide	4.99	1	1
24	420236583	Chain Guide	5.99	1	1
25	420236350	Chain Guide	9.99	1	1
25	420236350	Chain Guide	10.99	1	1
26	420297067	Silent Chain	69.99	1	1
27	420254435	Camshaft Sprocket, 42 Teeth	12.49	1	1
27	420254435	Camshaft Sprocket, 42 Teeth	13.99	1	1
28	420840031	Screw M6 X 12	3.49	3	3
28	420840031	Screw M6 X 12	3.66	3	3
29	420236510	Chain Tensioner Housing	8.99	1	

					1
29	420236510	Chain Tensioner Housing	9.44	1	1
30	420430370	O-Ring	5.99	1	1
30	420430370	O-Ring	6.99	1	1
31	420641238	Flanged Torx Screw M6 X 25	2.99	2	2
31	420641238	Flanged Torx Screw M6 X 25	3.14	2	2
32	420236520	Chain Tensioner Plunger	9.99	1	1
32	420236520	Chain Tensioner Plunger	10.99	1	1
33	420238120	Spring	5.99	1	1
33	420238120	Spring	6.29	1	1
34	420250890	O-Ring	4.49	1	1
34	420250890	O-Ring	4.99	1	1
35	420641150	Plug Screw	5.99	1	1
35	420641150	Plug Screw	6.29	1	1
36	420630260	Gasket	12.49	1	1
37	420610395	Valve Cover	13.49	1	1
37	420610395	Valve Cover	14.99	1	1
38	420440567	Hex. Distance Screw M6 X 30.5	5.73	4	4
38	420440567	Hex. Distance Screw M6 X 30.5	6.99	4	4
39	707000246	Spark Plug, NGK DCP-R8E	3.66	1	1
39	707000246	Spark Plug, NGK DCP-R8E	3.80	1	1
40	420254374	Valve Guide	18.99	4	4
40	420254374	Valve Guide	19.99	4	4

Commander 1000, LTD, 2014: 01- Cylinder Head, Rear

1000

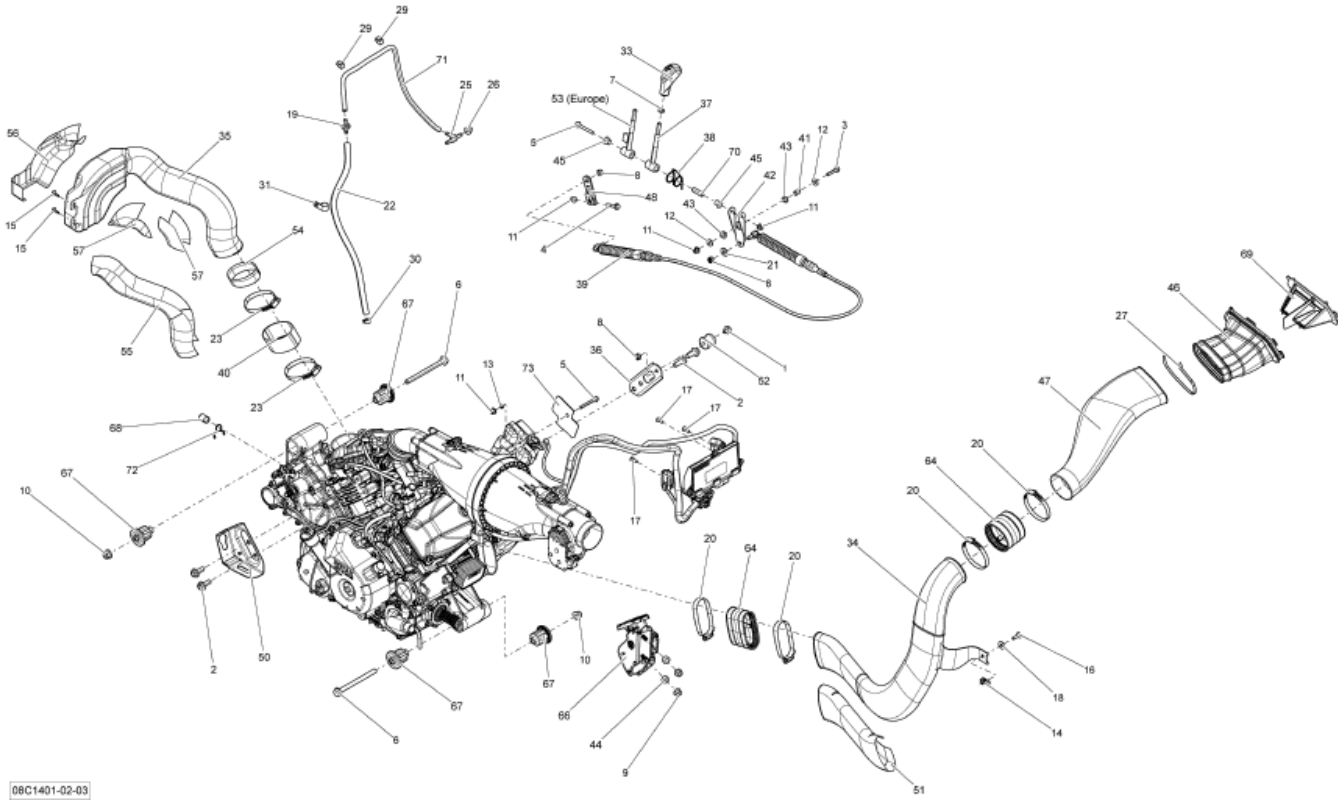


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420630195	Cylinder Head Gasket	57.49		1	1
2	420623064	Cylinder Front Ass'y. Includes 2 to 3	460.99		1	1
2	420623064	Cylinder Front Ass'y. Includes 2 to 3	499.99		1	1
3	420941014	Stud M8 x 26	9.49		2	2
3	420941014	Stud M8 x 26	9.99		2	2
4	420254361	Exhaust Valve, 27 mm	47.49		2	2
5	420254351	Intake Valve, 31 mm	31.99		2	2
6	420627770	Thrust Washer	1.49		4	4
6	420627770	Thrust Washer	1.56		4	4
7	420230515	Valve Stem Seal	5.99		4	4
7	420230515	Valve Stem Seal	6.29		4	

					4
8	420239295	Valve Spring	9.99	4	4
8	420239295	Valve Spring	10.99	4	4
9	420254132	Valve Spring Retainer	9.99	4	4
9	420254132	Valve Spring Retainer	10.99	4	4
10	420254120	Cotter Valve	3.49	8	8
10	420254120	Cotter Valve	3.66	8	8
11	420440612	Flanged Torx Screw M6 X 105	5.99	2	2
11	420440612	Flanged Torx Screw M6 X 105	6.29	2	2
12	420441284	Torx Screw M10 X 159	9.99	4	4
12	420441284	Torx Screw M10 X 159	10.99	4	4
13	420637412	Camshaft		1	1
14	420627743	Holding Strip	13.49	1	1
14	420627743	Holding Strip	14.99	1	1
15	420241525	Torx Screw M6 X 16	2.49	1	1
15	420241525	Torx Screw M6 X 16	2.99	1	1
16	420254905	Rocker Arm Inlet	113.49	1	1
17	420254915	Rocker Arm Exhaust	112.49	1	1
18	420242910	Hex. Nut M6	1.49	4	4
18	420242910	Hex. Nut M6	1.99	4	4
19	420241335	Adjustment Screw M6 X 0.75	13.49	4	4
19	420241335	Adjustment Screw M6 X 0.75	14.16	4	4
20	420229712	Pin #12, Small, M6 X 90	11.99	2	2
20	420229712	Pin #12, Small, M6 X 90	12.99	2	2
21	420944382	Shim	3.49	4	4
21	420944382	Shim	3.66	4	4
22	420240941	Bearing Screw M6	9.49	1	1
22	420240941	Bearing Screw M6	9.99	1	1
23	420436017	Chain Tension Guide	39.49	1	1
24	420236583	Chain Guide	4.99	1	1
24	420236583	Chain Guide	5.99	1	1
25	420236350	Chain Guide	9.99	1	1
25	420236350	Chain Guide	10.99	1	1
26	420297067	Silent Chain	69.99	1	1
27	420254435	Camshaft Sprocket, 42 Teeth	12.49	1	1
27	420254435	Camshaft Sprocket, 42 Teeth	13.99	1	1
28	420840031	Screw M6 X 12	3.49	3	3
28	420840031	Screw M6 X 12	3.66	3	

					3
29	420236510	Chain Tensioner Housing	8.99	1	1
29	420236510	Chain Tensioner Housing	9.44	1	1
30	420430370	O-Ring	5.99	1	1
30	420430370	O-Ring	6.99	1	1
31	420641238	Flanged Torx Screw M6 X 25	2.99	2	2
31	420641238	Flanged Torx Screw M6 X 25	3.14	2	2
32	420236520	Chain Tensioner Plunger	9.99	1	1
32	420236520	Chain Tensioner Plunger	10.99	1	1
33	420238120	Spring	5.99	1	1
33	420238120	Spring	6.29	1	1
34	420250890	O-Ring	4.49	1	1
34	420250890	O-Ring	4.99	1	1
35	420641150	Plug Screw	5.99	1	1
35	420641150	Plug Screw	6.29	1	1
36	420630260	Gasket	12.49	1	1
37	420610395	Valve Cover	13.49	1	1
37	420610395	Valve Cover	14.99	1	1
38	420440567	Hex. Distance Screw M6 X 30.5	5.73	4	4
38	420440567	Hex. Distance Screw M6 X 30.5	6.99	4	4
39	707000246	Spark Plug, NGK DCP-R8E	3.66	1	1
39	707000246	Spark Plug, NGK DCP-R8E	3.80	1	1
40	420254374	Valve Guide	18.99	4	4
40	420254374	Valve Guide	19.99	4	4

Commander 1000, LTD, 2014: 01- Engine



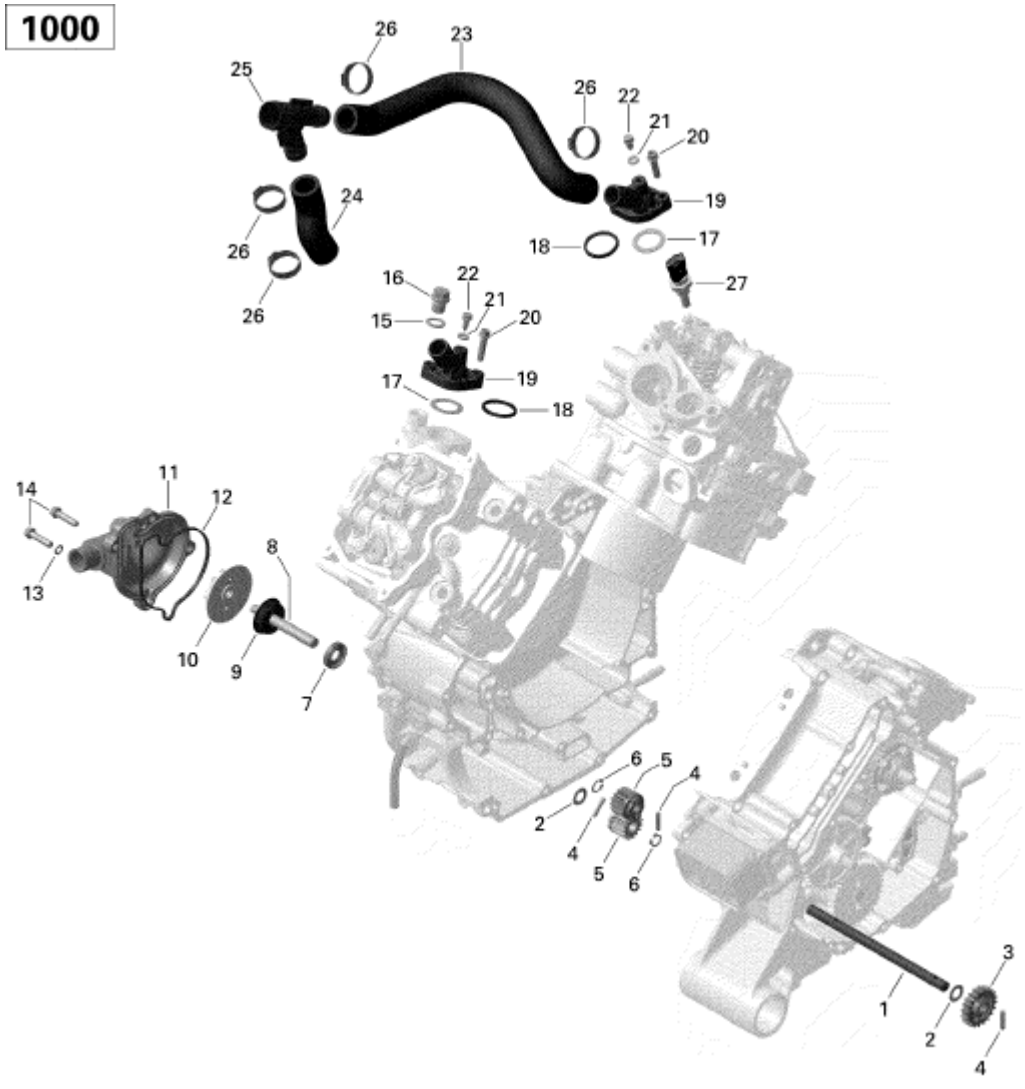
08C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207581046	Flanged Screw M8 x 10, Scotch Grip	3.70		1	1
2	207602544	Hex. Flanged Screw M10 X 25	1.33		4	4
3	207663034	Hex. Flanged Screw M6 X 30	1.99		1	1
4	207663544	Hex. Flanged Screw M6 X 35	0.72		1	1
5	207665044	Hex. Flanged Screw M6 X 50	3.13		2	2
6	230602546	Hex. Flanged Screw M10 X 125	5.73		2	2
7	232180491	Hex. Jam Nut M8	5.99		1	1
8	232581414	Hex. Elastic Stop Nut M8	0.47		3	3
9	233081416	Hex. Flanged Nut M8	0.87		2	2
10	233201436	Flanged Elastic Nut M10	1.99		2	2
11	233261414	Hex. Flanged Elastic Nut M6	1.05		4	4
12	234062410	Flat Washer 6 mm	0.62		2	2
13	234461608	External Serrated Lock Washer 6 mm	0.87		1	1
14	250000048	Pannel Nut M6 X 1.0	1.35		1	1
15	250000113	Screw M4 X 16, Type K-40	3.13		2	2
16	250000128	Torx Truss Screw M6 X 20	1.30		1	1
17	250000146	Truss Head Torx Screw K50 X 16	1.17		3	3
18	250200082	Flat Washer	1.99		1	1
19	275500398	Check Valve	7.99		1	1
19	275500398	Check Valve	7.49		1	1
20	293650091	Norma Clamp	7.99		4	4

20	293650091	Norma Clamp	7.49	4	4
21	234001410	Flat Washer 10 mm	0.90	1	1
22	415079800	Hose 1/4"	18.49	@	1
23	293650118	Norma Gear Clamp	8.99	2	2
23	293650118	Norma Gear Clamp	7.99	2	2
25	293710059	Y-Fitting	7.99	1	1
25	293710059	Y-Fitting	6.99	1	1
26	293720029	Grommet	4.49	1	1
26	293720029	Grommet	1.05	1	1
27	293750008	Tie-Rap 350 mm	0.49	1	1
27	293750008	Tie-Rap 350 mm	0.99	1	1
29	414227300	Clip	1.15	2	2
30	414415200	Spring Clamp	0.72	1	1
31	518321570	Open Clamp	4.99	1	1
31	518321570	Open Clamp	4.49	1	1
33	707000284	Lever Handle	10.80	1	1
33	707000284	Lever Handle	11.99	1	1
34	707000639	Air Inlet	12.49	1	1
35	707000640	CVT Air Outlet	12.49	1	1
36	707000707	Upper Engine Bracket	4.49	1	1
37	707000711	Upper Lever Arm	20.99	1	1
38	707000750	Lever Arm Spring	2.49	1	1
39	707000775	Shifting Cable	42.49	1	1
40	707000789	Adaptor	6.99	1	1
40	707000789	Adaptor	7.99	1	1
41	707000801	Bushing	2.49	1	1
42	707000828	Lower Lever Arm	12.49	1	1
43	707000847	Flanged Bushing	0.99	2	2
44	707000848	Bushing	0.99	2	2
45	707000869	Flanged Bushing	1.99	2	2
46	707000908	Adaptor	19.99	1	1
47	707000909	Primary Air Intake	13.49	1	1
48	707000911	Lever	10.99	1	1
48	707000911	Lever	11.99	1	1
50	707000919	Cable Support	10.99	1	1
51	707000924	Reflective Sheet	19.99	1	1
52	707000949	Rubber Isolator	6.99	1	1
52	707000949	Rubber Isolator	7.99	1	1
53	N/A	Not available for this vehicle		1	
54	707000988	Reflector	3.49	1	1
55	707000989	Reflective Sheet	16.99	1	1
56	707000990	Reflective Sheet	9.99	1	1
57	707000991	Reflector	5.99	2	2
64	707001043	Flexible Adaptor	8.49	2	2
64	707001043	Flexible Adaptor	9.99	2	2
66	707001166	Accelerator Pedal	188.99	1	1
67	707001169	Damper	20.99	4	4
68	707001185	Plug	0.99	1	1

68	707001185	Plug	1.99	1	1
69	707001344	CVT Filter		1	1
70	707001376	Bushing	3.99	1	1
71	415080200	Hose, Polyurethane	4.99	@	1
71	415080200	Hose, Polyurethane	9.99	@	1
72	707800506	Retainer Clip	7.99	1	1
72	707800506	Retainer Clip	8.99	1	1
73	710000073	Insulator Pad	5.80	1	1
73	710000073	Insulator Pad	6.99	1	1

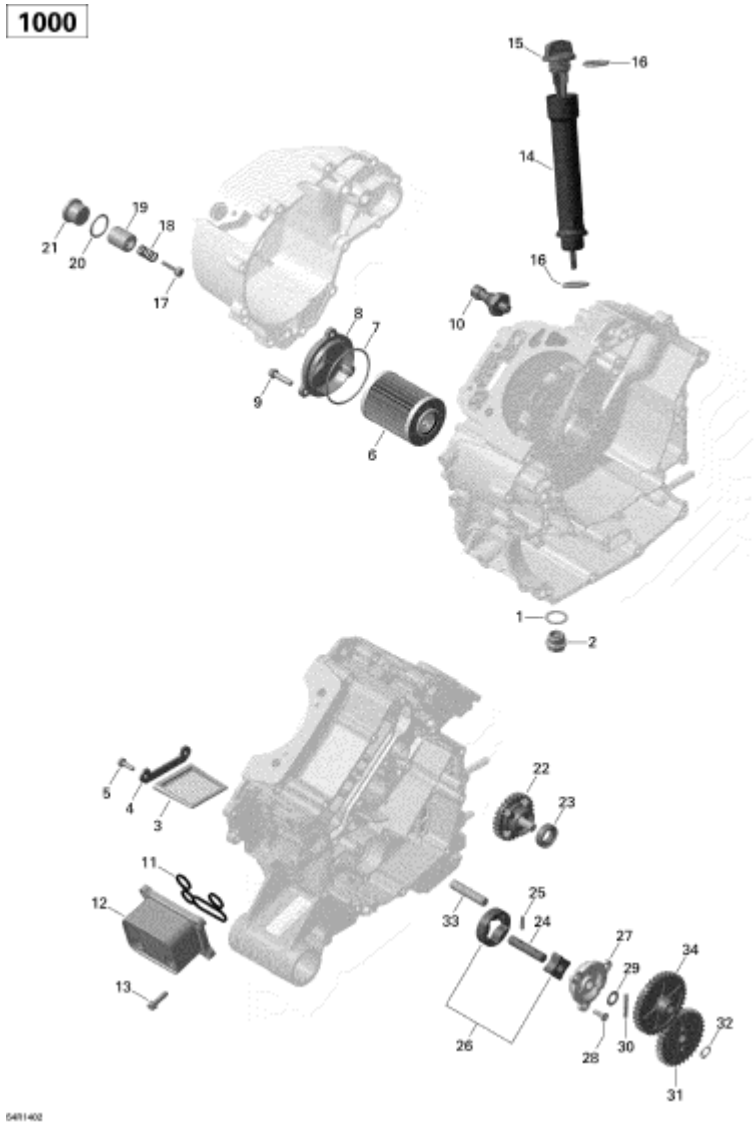
Commander 1000, LTD, 2014: 01- Engine Cooling



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420620500	Intermediate Shaft	26.99		1	1
2	420827590	Thrust Washer	3.49		2	2
2	420827590	Thrust Washer	3.66		2	2
3	420434330	Water Pump Gear	8.99		1	1
3	420434330	Water Pump Gear	9.44		1	1
4	420232420	Needle Pin	3.49		3	3
4	420232420	Needle Pin	3.66		3	3
5	420234627	Pump Gear, 15 Teeth	8.99		2	2
5	420234627	Pump Gear, 15 Teeth	9.44		2	2
6	504152282	Circlip	1.99		2	2

6	504152282	Circlip	2.99	2	2
7	420650310	Oil Seal	10.99	1	1
7	420650310	Oil Seal	11.54	1	1
8	420620175	Water Pump Shaft Ass'y. Includes 8 to 9	74.49	1	1
9	420650370	Rotary Seal	21.99	1	1
10	420222505	Water Impeller	14.49	1	1
10	420222505	Water Impeller	15.21	1	1
11	420222785	Water Pump Housing	36.99	1	1
12	420651190	Gasket	5.99	1	1
12	420651190	Gasket	6.29	1	1
13	420230415	Seal Washer	1.49	1	1
13	420230415	Seal Washer	1.56	1	1
14	420641238	Flanged Torx Screw M6 X 25	2.99	4	4
14	420641238	Flanged Torx Screw M6 X 25	3.14	4	4
15	420250640	Copper Washer	0.61	1	1
15	420250640	Copper Washer	0.99	1	1
16	420841921	Plug Screw M12 X 1.5	9.99	1	1
16	420841921	Plug Screw M12 X 1.5	10.99	1	1
17	420927837	Spacer Ass'y. Includes 17 to 18	5.99	2	2
17	420927837	Spacer Ass'y. Includes 17 to 18	6.29	2	2
18	420650300	Thermostat Gasket	5.99	2	2
18	420650300	Thermostat Gasket	6.29	2	2
19	420222691	Thermostat Cover	1.99	2	2
19	420222691	Thermostat Cover	2.99	2	2
20	420641238	Flanged Torx Screw M6 X 25	2.99	4	4
20	420641238	Flanged Torx Screw M6 X 25	3.14	4	4
21	420650255	Gasket Ring	3.49	2	2
21	420650255	Gasket Ring	3.66	2	2
22	420441621	Screw M5 X 16	1.99	2	2
22	420441621	Screw M5 X 16	2.99	2	2
23	420822690	Rear Head Hose	9.49	1	1
24	420822695	Front Head Hose	5.99	1	1
25	709200273	Y-Fitting	2.49	1	1
25	709200273	Y-Fitting	2.99	1	1
26	420251578	Clamp	5.99	4	4
26	420251578	Clamp	6.99	4	4
27	278001016	Temperature Sensor	72.49	1	1

Commander 1000, LTD, 2014: 01- Engine Lubrication

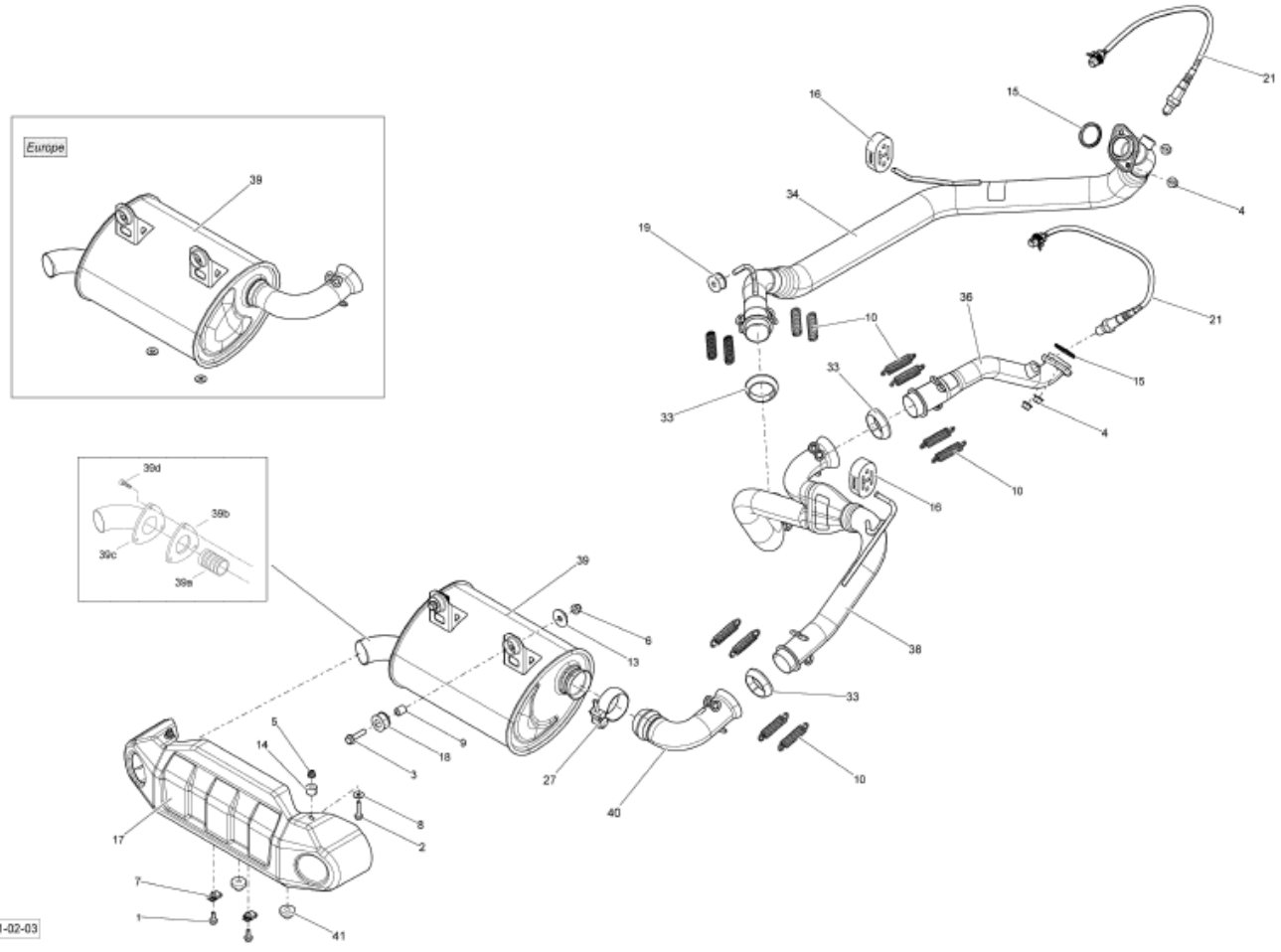


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420552280	O-Ring	3.30		1	1
2	420840277	Drain Plug M18 X 1.5	14.97		1	1
2	420840277	Drain Plug M18 X 1.5	15.99		1	1
3	420256322	Oil Sieve	20.99		1	1
4	420612070	Cover Sieve	2.49		1	1
4	420612070	Cover Sieve	2.99		1	1
5	420941925	Tapping Screw M5 X 16	1.49		2	2
5	420941925	Tapping Screw M5 X 16	1.56		2	2
6	420256188	Oil Filter	14.99		1	1
7	420230920	O-Ring	7.49		1	1

7	420230920	O-Ring	7.99		1	1
8	420210418	Oil Filter Cover	21.99		1	1
9	420641238	Flanged Torx Screw M6 X 25	2.99		3	3
9	420641238	Flanged Torx Screw M6 X 25	3.14		3	3
10	420256915	Oil Pressure Switch	34.49		1	1
11	420430325	Oil Seal	5.99		1	1
11	420430325	Oil Seal	6.99		1	1
12	420890180	Oil Radiator	63.99		1	1
13	420641048	Flanged Torx Screw M6 X 16	2.49		4	4
13	420641048	Flanged Torx Screw M6 X 16	2.61		4	4
14	420856922	Oil Lever Tube	37.49		1	1
15	420856810	Oil Dipstick	3.49		1	1
16	420631640	O-Ring	1.49		2	2
16	420631640	O-Ring	1.99		2	2
17	420656370	Pressure Relief Valve	13.49		1	1
17	420656370	Pressure Relief Valve	14.16		1	1
18	420939485	Compression Spring	7.49		1	1
18	420939485	Compression Spring	7.99		1	1
19	420256486	Housing Valve	5.99		1	1
19	420256486	Housing Valve	6.29		1	1
20	420650465	Gasket Ring	8.99		1	1
20	420650465	Gasket Ring	9.44		1	1
21	420640270	Screw Plug	10.99		1	1
21	420640270	Screw Plug	11.54		1	1
22	420434307	Idle Gear Ass'y, 28 Teeth. Includes 22 to 23	69.49		1	1
23	420430555	Oil Seal	12.49		1	1
23	420430555	Oil Seal	13.99		1	1
24	420237059	Oil Pump Shaft	21.99		1	1
25	420232730	Needle Pin	3.49		1	1
25	420232730	Needle Pin	3.66		1	1
26	420256348	Oil Pump Rotor	54.49		1	1
27	420210641	Oil Pump Cover	36.99		1	1
28	420640821	Torx Screw M5 X 16	1.49		3	3
28	420640821	Torx Screw M5 X 16	1.56		3	3
29	420827590	Thrust Washer	3.49		1	1
29	420827590	Thrust Washer	3.66		1	1
30	420232430	Needle Pin	3.99	420232431	1	1
31	420434320	Oil Pump Gear, 33 Teeth	10.99		1	

					1
31	420434320	Oil Pump Gear, 33 Teeth	11.54	1	1
32	504152282	Circlip	1.99	1	1
32	504152282	Circlip	2.99	1	1
33	420229302	Location Pin	1.99	1	1
33	420229302	Location Pin	2.99	1	1
34	420434300	Idle Gear, 38 Teeth	10.99	1	1
34	420434300	Idle Gear, 38 Teeth	11.54	1	1

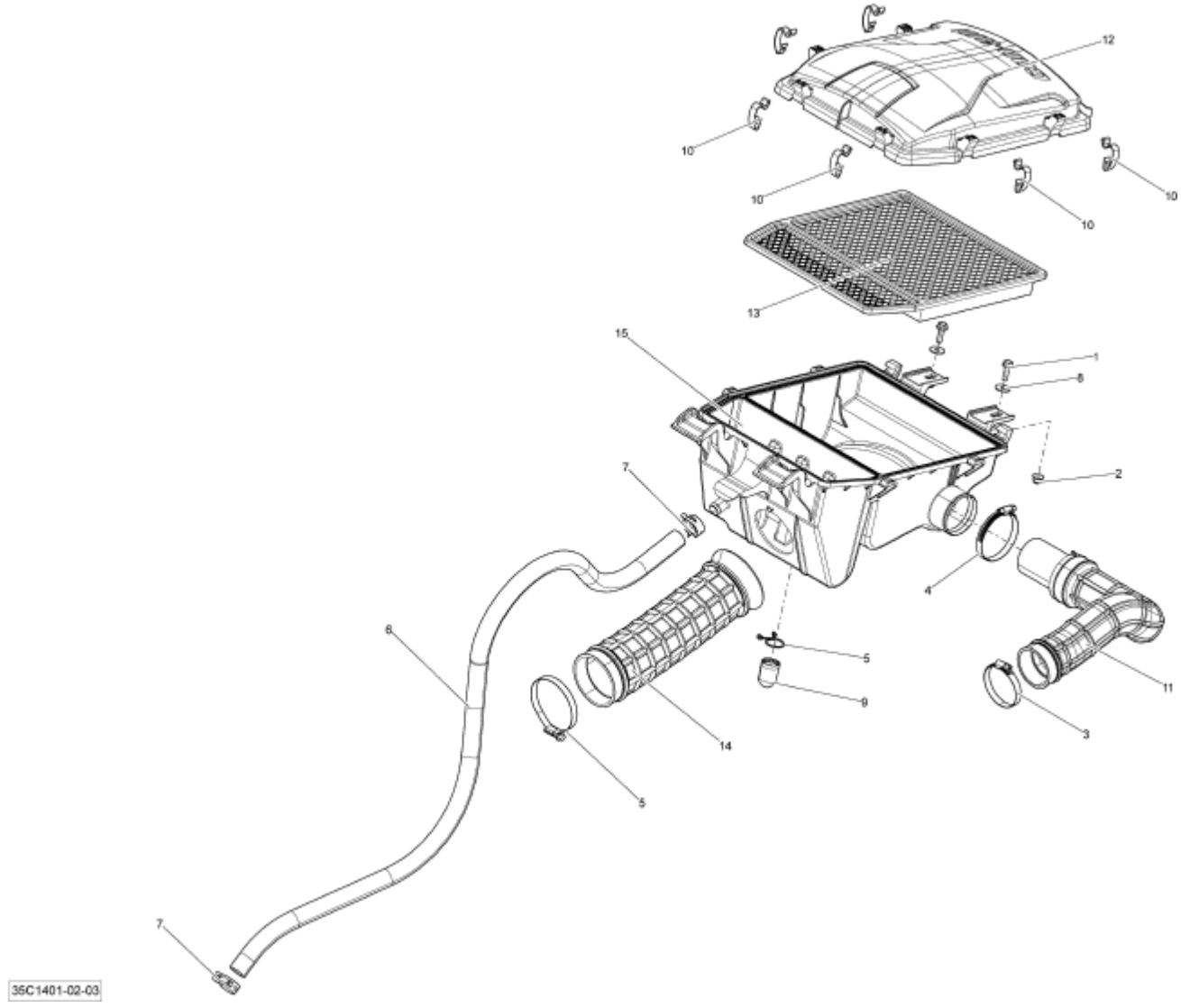
Commander 1000, LTD, 2014: 01- Exhaust System



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207661644	Hex. Flanged Screw M6 X 16	0.58		2	2
2	207663034	Hex. Flanged Screw M6 X 30	1.99		2	2
3	207683544	Hex. Flanged Screw M8 X 35	1.30		2	2
4	233081416	Hex. Flanged Nut M8	0.87		4	4
5	233261414	Hex. Flanged Elastic Nut M6	1.05		2	2
6	233281414	Hex. Flanged Elastic Nut M8	1.05		2	2
7	250000048	Pannel Nut M6 X 1.0	1.35		2	2
8	250200082	Flat Washer	1.99		2	2
9	293900106	Bushing	3.49		2	2
9	293900106	Bushing	3.99		2	2
10	415107100	Spring. Europe	4.49		8	8
10	415107100	Spring. Europe	4.99		8	8
10	415107100	Spring. Except Europe	4.49		12	12
10	415107100	Spring. Except Europe	4.99		12	12
13	503032900	Washer	2.49		2	2
13	503032900	Washer	2.61		2	2
14	707000882	Bushing	2.49		2	2

15	707600317	Gasket	6.99	2	2
15	707600317	Gasket	7.99	2	2
16	707600638	Rubber Bumper	10.99	1	1
16	707600638	Rubber Bumper	11.99	1	1
17	707600675	Deflector	29.99	1	1
18	707600701	Anti-Vibration Rubber	8.49	2	2
18	707600701	Anti-Vibration Rubber	8.99	2	2
19	707600702	Anti-Vibration Rubber	4.99	1	1
19	707600702	Anti-Vibration Rubber	5.99	1	1
21	707600872	Oxygen Sensor	92.49	2	2
27	707600980	Exhaust Clamp	19.99	1	1
33	707601033	Exhaust Gasket	5.99	3	3
34	707601013	Front Head Pipe. Europe	216.99	1	1
34	707601204	Front Head Pipe. Except Europe		1	1
36	707601016	Rear Head Pipe. Europe	216.99	1	1
36	707601206	Rear Head Pipe. Except Europe		1	1
38	707601020	Link Head Pipe. Europe	216.99	1	1
38	707601207	Link Head Pipe. Except Europe		1	1
39	707601245	Muffler Ass'y. Except Europe, Includes 39a To 39d		1	1
39	707600753	Muffler Ass'y. Europe, Includes 39a To 39d	589.49	1	1
39a	715900089	Spark Arrestor	82.49	1	1
39b	715900090	Gasket	6.99	1	1
39b	715900090	Gasket	7.99	1	1
39c	715900091	Muffler Outlet End Piece	82.49	1	1
39d	205062060	Socket Head Screw M6 X 20	1.82	3	3
40	707601327	Link Head Pipe		1	1
41	709200285	Grommet	5.99	2	2
41	709200285	Grommet	6.99	2	2

Commander 1000, LTD, 2014: 02- Air Intake



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207662044	Hex. Flanged Screw M6 X 20	1.99		2	2
2	233261414	Hex. Flanged Elastic Nut M6	1.05		2	2
3	293650078	Norma Clamp	9.99		1	1
3	293650078	Norma Clamp	10.99		1	1
4	293650079	Norma Clamp	6.99		1	1
4	293650079	Norma Clamp	7.99		1	1
5	293650091	Norma Clamp	7.49		2	2
5	293650091	Norma Clamp	7.99		2	2
6	707800411	Hose 15.88 mm	8.49		@	1
7	293650213	Norma Spring Clamp	2.49		2	2

8	250200082	Flat Washer	1.99	2	2
9	707800080	Drain Tube	4.99	1	1
9	707800080	Drain Tube	5.99	1	1
10	707800249	Cover Bracket	5.99	6	6
10	707800249	Cover Bracket	6.99	6	6
11	707800322	Intake Adaptor	37.49	1	1
12	707800326	Air Intake Silencer Cover	18.49	1	1
13	707800327	Air Filter	38.49	1	1
14	707800329	Intake Adaptor	29.49	1	1
15	707800517	Air Intake Silencer Base		1	1

Commander 1000, LTD, 2014: 02- Air Intake Manifold And Throttle Body

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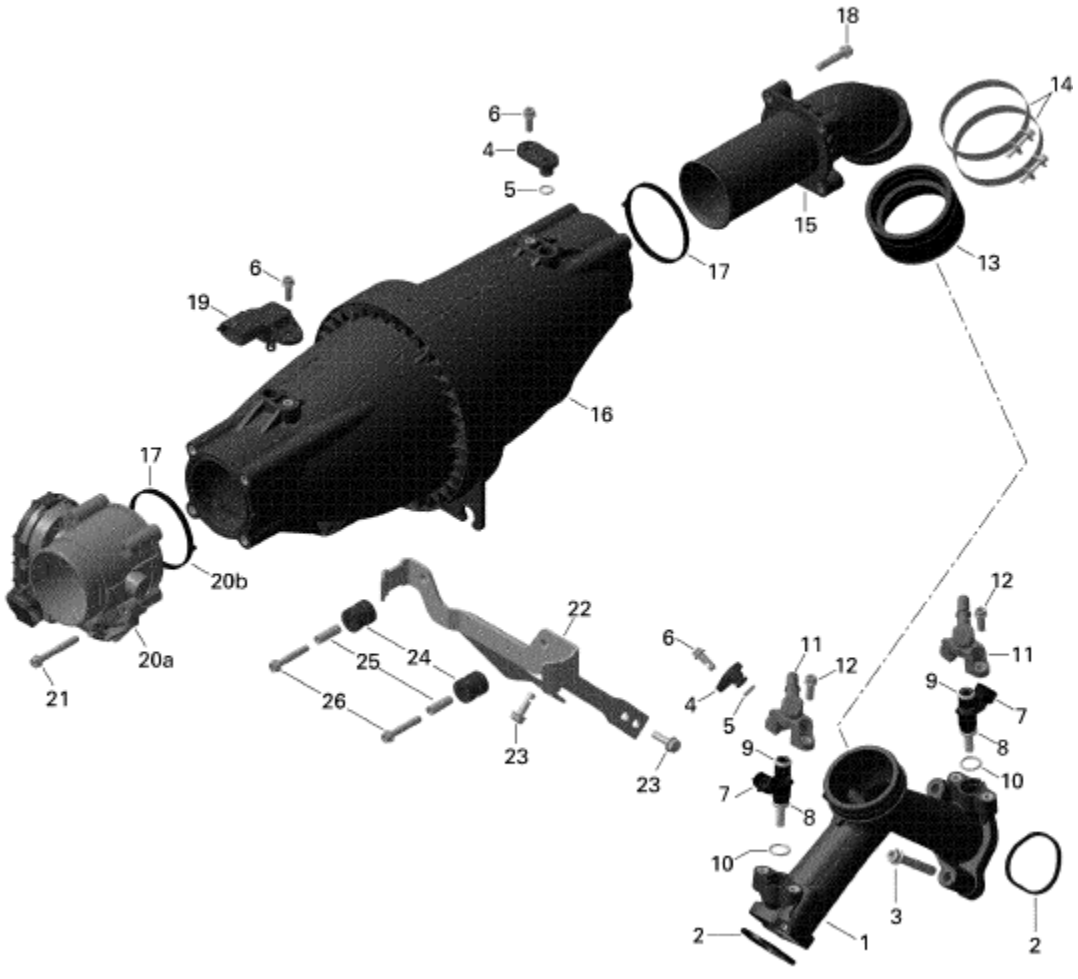
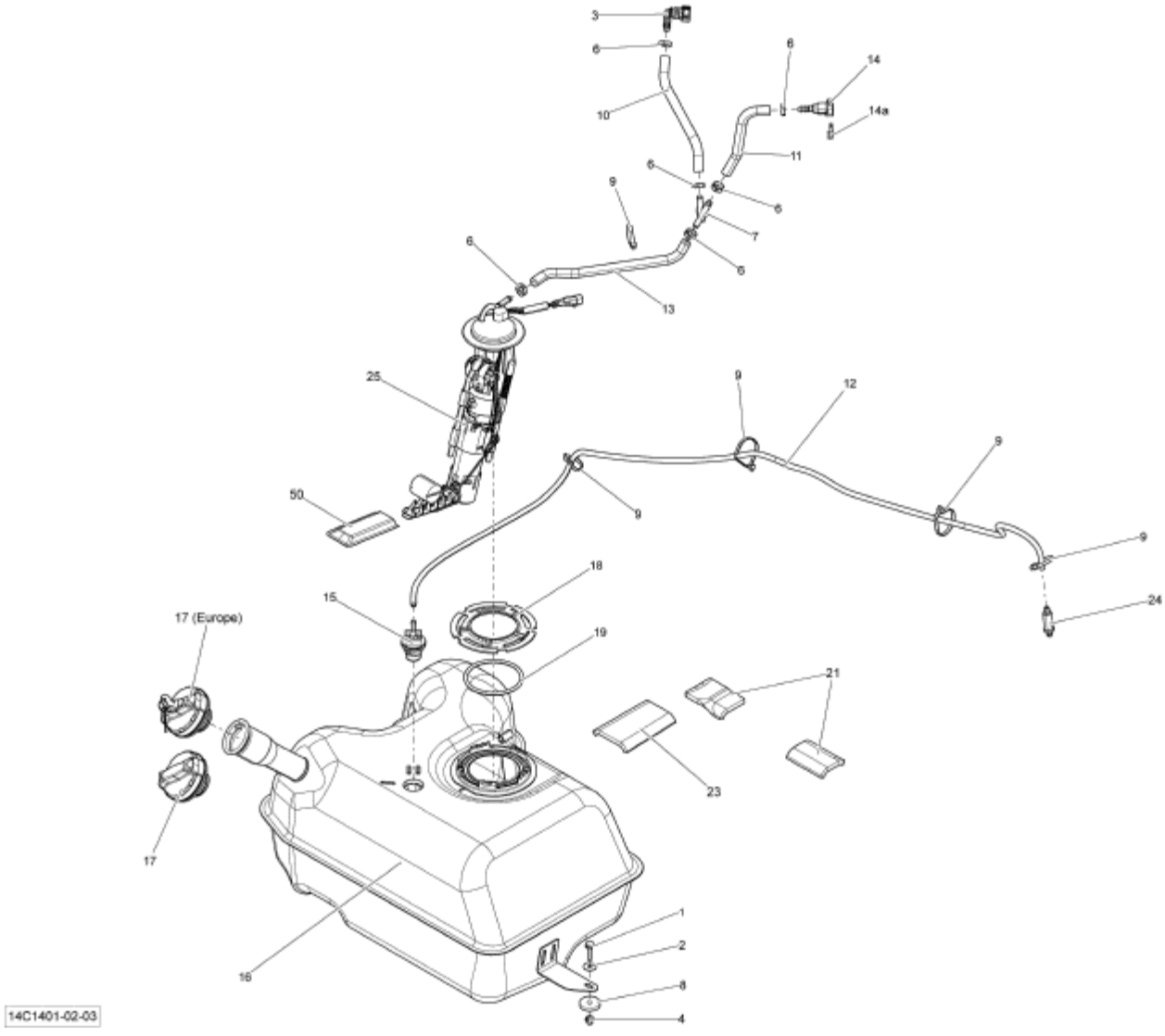


18R1402

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420667520	Air Intake Manifold	55.99		1	1
2	420630642	Gasket	3.49		2	2
2	420630642	Gasket	4.99		2	2
3	420641213	Flanged Torx Screw M8 X 55	5.99		4	4
3	420641213	Flanged Torx Screw M8 X 55	6.29		4	4
4	420460980	Cover	2.49		2	2
5	420230461	O-Ring	1.99		2	2
6	420440147	Flanged Hex. Screw M6 X 12	1.99		3	3
7	420874830	Injection Valve Ass'y. Includes 7 to 9	123.49		2	2

8	420431890	O-Ring	4.49	2	2
8	420431890	O-Ring	4.99	2	2
9	420631220	O-Ring	9.49	2	2
9	420631220	O-Ring	9.99	2	2
10	420631295	O-Ring	1.49	2	2
10	420631295	O-Ring	1.99	2	2
11	420874901	Fuel Rail	15.99	2	2
11	420874901	Fuel Rail	16.99	2	2
12	420641048	Flanged Torx Screw M6 X 16	2.49	4	4
12	420641048	Flanged Torx Screw M6 X 16	2.61	4	4
13	420267040	Intake Neck	9.99	1	1
14	420251209	Clamp	5.99	2	2
14	420251209	Clamp	6.99	2	2
15	420667522	Air Inlet Manifold	21.99	1	1
16	420667526	Air Inlet Manifold Ass'y. Includes 16 to 17	144.99	1	1
17	420431900	Gasket	4.99	2	2
18	420241947	Hex. Screw M6 X 30	3.49	4	4
18	420241947	Hex. Screw M6 X 30	3.99	4	4
19	707000564	Pressure And Temperature Sensor	153.49	1	1
20a	420892595	Throttle Body. Includes 20a to 20b	329.49	1	1
20b	420431900	Gasket	4.99	1	1
21	420641198	Flanged Torx Screw M6 X 45	3.49	4	4
21	420641198	Flanged Torx Screw M6 X 45	3.66	4	4
22	420651520	Support	49.49	1	1
23	420441311	Hex.Screw M6 X 20	3.49	2	2
23	420441311	Hex.Screw M6 X 20	3.99	2	2
24	420660090	Rubber Bracket	3.49	2	2
25	420847971	Spacer	5.99	2	2
26	420441457	Hex. Screw M6 X 35	2.49	2	2
26	420441457	Hex. Screw M6 X 35	2.99	2	2

Commander 1000, LTD, 2014: 02- Fuel System

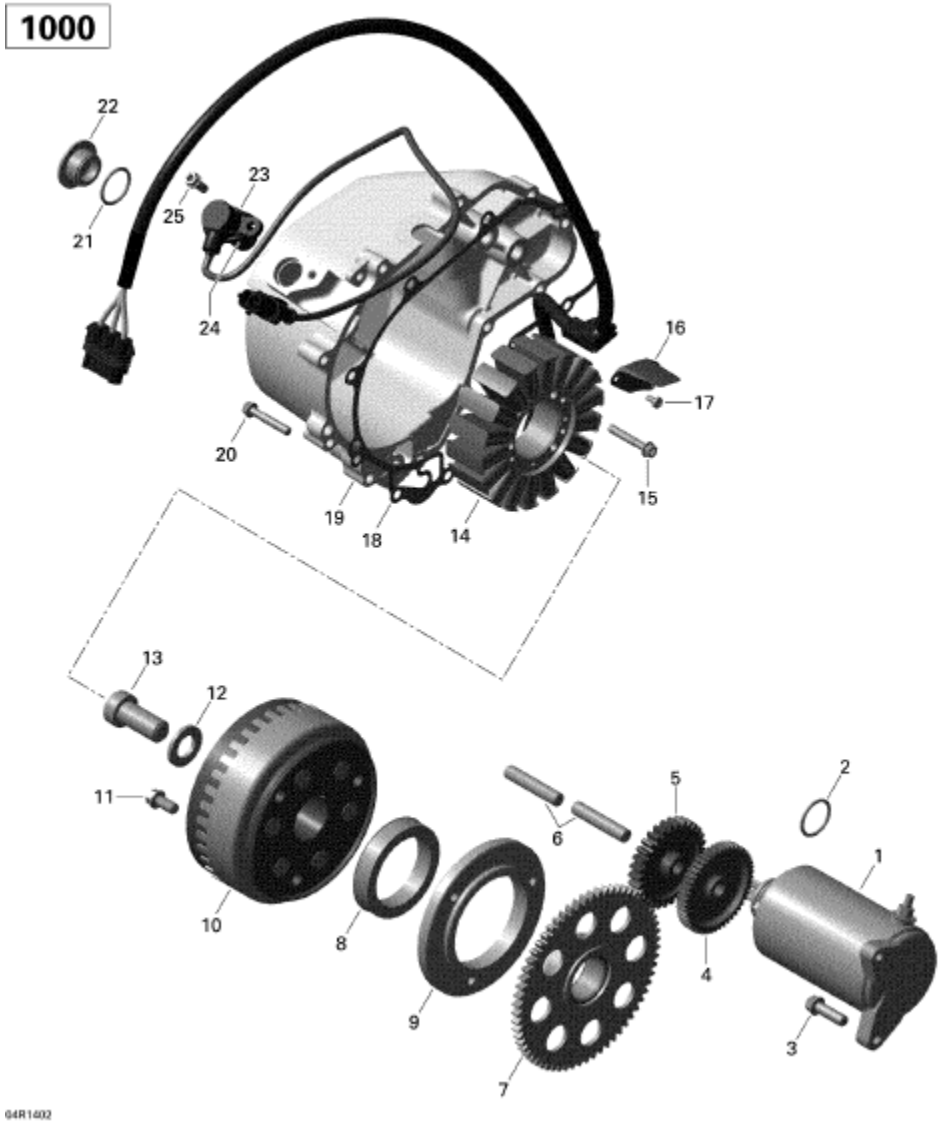


14C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207662544	Hex. Flanged Screw M6 X 25	0.52		2	2
2	224060201	Flat Washer	0.90		2	2
3	275500700	Quick Attach 90°	10.99		1	1
3	275500700	Quick Attach 90°	11.99		1	1
4	293450274	Insert	4.97		2	2
4	293450274	Insert	5.99		2	2
6	293650046	Oetiker Clamp	2.32		6	6
7	293710136	Y-Fitting, 5/16"	3.99		1	1
7	293710136	Y-Fitting, 5/16"	4.99		1	1
8	293830037	Rubber Washer	2.68		2	2

9	414115200	Tie-Rap 180 mm	0.49	5	5
10	709000393	Fuel Line	18.99	@	1
10	709000393	Fuel Line	19.99	@	1
11	709000393	Fuel Line	18.99	@	1
11	709000393	Fuel Line	19.99	@	1
12	415080200	Hose, Polyurethane	4.99	@	1
12	415080200	Hose, Polyurethane	9.99	@	1
13	709000393	Fuel Line	18.99	@	1
13	709000393	Fuel Line	19.99	@	1
14	709000125	Female Quick Fitting Ass'y	9.99	1	1
14	709000125	Female Quick Fitting Ass'y	10.99	1	1
14a	513033135	Locking Clip	3.49	1	1
14a	513033135	Locking Clip	3.99	1	1
15	709000127	Rollover Valve	34.49	1	1
16	709000467	Fuel Tank		1	1
17	709000268	Cap. Except Europe	19.99	1	1
17	715001124	Fuel Cap Kit. Europe	44.99	1	1
18	709000274	Ring	9.99	1	1
18	709000274	Ring	10.99	1	1
19	709000275	O-Ring	10.99	1	1
19	709000275	O-Ring	11.99	1	1
21	709000288	Neoprene Pad	9.99	2	2
23	709000289	Neoprene Pad	9.99	1	1
24	709000330	Filter	4.99	1	1
25	709000362	Fuel Pump	401.99	1	1
50	709000389	Fuel Pre-Filter Kit	50.99	1	1

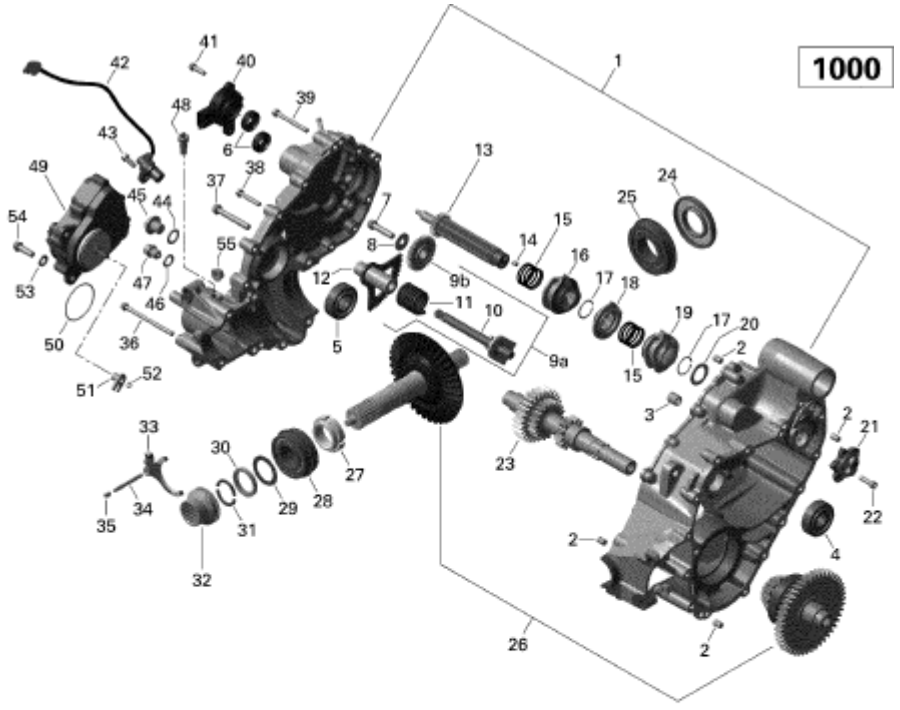
Commander 1000, LTD, 2014: 03- Magneto And Electric Starter

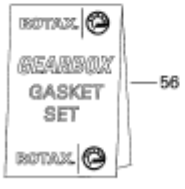


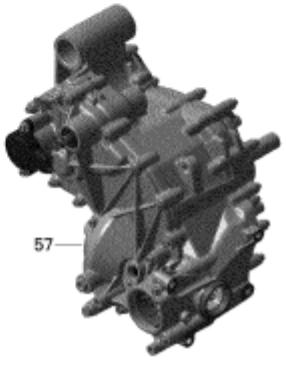
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420684562	Starter Ass'y. Includes 1 to 2	435.99		1	1
1	420684562	Starter Ass'y. Includes 1 to 2	544.99		1	1
2	420250140	O-Ring	5.99		1	1
2	420250140	O-Ring	6.29		1	1
3	420440372	Flanged Torx Screw M8 X 25	3.49		1	1
3	420440372	Flanged Torx Screw M8 X 25	3.66		1	1
4	420634741	Double Gear	146.99		1	1
5	420634605	Gear, 30 Teeth	61.99		1	1
6	420229302	Location Pin	1.99		2	2

6	420229302	Location Pin	2.99	2	2
7	420434235	Free Wheel Gear, 64 Teeth	139.99	1	1
8	420659112	Sprag Clutch	190.99	1	1
9	420659261	Sprag Clutch Housing	114.49	1	1
10	420685649	Flywheel	559.99	1	1
11	420440852	Flanged Torx Screw M8 X 16	3.49	3	3
11	420440852	Flanged Torx Screw M8 X 16	3.66	3	3
12	420627270	Shim	3.49	1	1
12	420627270	Shim	3.66	1	1
13	420241549	Socket Head Screw M16 X 35	5.99	1	1
13	420241549	Socket Head Screw M16 X 35	6.99	1	1
14	420685632	Stator Plate	273.49	1	1
15	420440274	Flanged Torx Screw M6 X 35	1.99	3	3
16	420251880	Cable Inner Cover	9.99	1	1
16	420251880	Cable Inner Cover	10.99	1	1
17	420240195	Tapping Screw M4 X 8	1.49	2	2
17	420240195	Tapping Screw M4 X 8	1.56	2	2
18	420651200	Gasket	18.49	1	1
18	420651200	Gasket	19.99	1	1
19	420611132	Cover	129.49	1	1
20	420440274	Flanged Torx Screw M6 X 35	1.99	11	11
21	420430782	O-Ring	3.49	1	1
21	420430782	O-Ring	3.99	1	1
22	420241630	Screw Plug	5.99	1	1
22	420241630	Screw Plug	6.29	1	1
23	420966570	Crankshaft Position Sensor Ass'y. Includes 23 to 24	76.99	1	1
24	420431580	O-Ring	9.99	1	1
24	420431580	O-Ring	10.99	1	1
25	420641048	Flanged Torx Screw M6 X 16	2.49	1	1
25	420641048	Flanged Torx Screw M6 X 16	2.61	1	1

Commander 1000, LTD, 2014: 05- Gear Box 1







#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	XXX	Gear Housing Ass'y. See Item 57, Gear Box. Includes 1 to 6			1	
2	420632010	Center Pin 8 X 12	3.49		2	2
2	420632010	Center Pin 8 X 12	3.66		2	2
3	XXX	Dowel. See Item 57, Gear Box			1	
4	420932815	Ball Bearing 6303E	19.99		1	1
4	420932815	Ball Bearing 6303E	20.99		1	1
5	420932433	Ball Bearing 6204	15.99		1	1
5	420932433	Ball Bearing 6204	16.99		1	1
6	420250450	Oil Seal	14.49		2	2
6	420250450	Oil Seal	15.99		2	2

7	420641188	Flanged Torx Screw M8 X 35	5.99	1	1
7	420641188	Flanged Torx Screw M8 X 35	6.29	1	1
8	420227937	Plain Washer	8.49	1	1
8	420227937	Plain Washer	8.99	1	1
9a	420620929	Shift Shaft Ass'y. Includes 9a to 12	48.49	1	1
9b	XXX	Intermediate Gear, 30 Teeth		1	
10	XXX	Shift Shaft		1	
11	XXX	Spring		1	
12	XXX	Tooth Segment		1	
13	420657230	Shift Drum Ass'y. Includes 13 to 20	198.49	1	1
14	XXX	Needle Pin		1	
15	XXX	Compression Spring		2	
16	XXX	Gear Shifting Gate		1	
17	XXX	Retaining Ring		2	
18	XXX	Disengagement Gate		1	
19	XXX	Gear Shifting Gate		1	
20	XXX	Thrust Washer		1	
21	XXX	Index Washer		1	
22	420241939	Allen Screw M6 X 20	0.99	1	1
22	420241939	Allen Screw M6 X 20	1.99	1	1
23	420620896	Countershaft	266.99	1	1
24	420831955	Oil Seal	17.49	1	1
24	420831955	Oil Seal	18.99	1	1
25	XXX	Ball Bearing. See Item 57, Gear Box		1	
26	XXX	Drive Axle Set. See Item 57, Gear Box		1	
27	XXX	Groove Nut. See Item 57, Gear Box		1	
28	XXX	Ball Bearing. See Item 57, Gear Box		1	
29	XXX	Shim Set. See Item 57, Gear Box		1	
30	XXX	Angular Ring. See Item 57, Gear Box		1	
31	XXX	Half Ring. See Item 57, Gear Box		2	
32	420257676	Shifting Sleeve Kit. Includes 32 to 35	85.99	1	1
33	XXX	Shifting Fork		1	
34	XXX	Needle Pin		1	
35	420841771	Set Screw M6 X 8	3.49	1	1
35	420841771	Set Screw M6 X 8	3.66	1	1
36	420641228	Flanged Torx Screw M6 X 85	5.99	2	2
36	420641228	Flanged Torx Screw M6 X 85	6.29	2	2
37	420641213	Flanged Torx Screw M8 X 55	5.99	5	5
37	420641213	Flanged Torx Screw M8 X 55	6.29	5	5
38	420440274	Flanged Torx Screw M6 X 35	1.99	8	8
39	420440702	Flanged Torx Screw M6 X 55	1.99	2	2
39	420440702	Flanged Torx Screw M6 X 55	2.99	2	2
40	420266168	Angle Rotation Sensor	134.99	1	1

41	420641048	Flanged Torx Screw M6 X 16	2.49		2	2
41	420641048	Flanged Torx Screw M6 X 16	2.61		2	2
42	420265626	Speed Sensor	109.49		1	1
43	420641048	Flanged Torx Screw M6 X 16	2.49		1	1
43	420641048	Flanged Torx Screw M6 X 16	2.61		1	1
44	420650350	O-Ring	7.49		1	1
44	420650350	O-Ring	7.99		1	1
45	420241660	Plug Screw M14 X 1.5	11.99		1	1
45	420241660	Plug Screw M14 X 1.5	12.99		1	1
46	420250640	Copper Washer	0.61		1	1
46	420250640	Copper Washer	0.99		1	1
47	420241786	Magnetic Drain Plug	13.99		1	1
47	420241786	Magnetic Drain Plug	14.69		1	1
48	420640192	Position Switch	22.49		1	1
49	415129174	Actuator Ass'y. Includes 49 to 52	209.49		1	1
50	293300117	O-Ring	2.99		1	1
50	293300117	O-Ring	3.99		1	1
51	415129175	Shifting Fork	11.99		1	1
51	415129175	Shifting Fork	12.99		1	1
52	415129176	Circlip	1.63	293370042	1	1
52	415129176	Circlip	1.99	293370042	1	1
53	420250311	Flat Washer 8.4 mm	0.99		3	3
53	420250311	Flat Washer 8.4 mm	1.04		3	3
54	420440372	Flanged Torx Screw M8 X 25	3.49		3	3
54	420440372	Flanged Torx Screw M8 X 25	3.66		3	3
55	420842619	Hex. Nut M8	1.99		4	4
55	420842619	Hex. Nut M8	2.99		4	4
56	420684139	Gasket Set	65.99		1	1
57	420684786	Gear Box	1944.99		1	1

Commander 1000, LTD, 2014: 05- Gear Box 2

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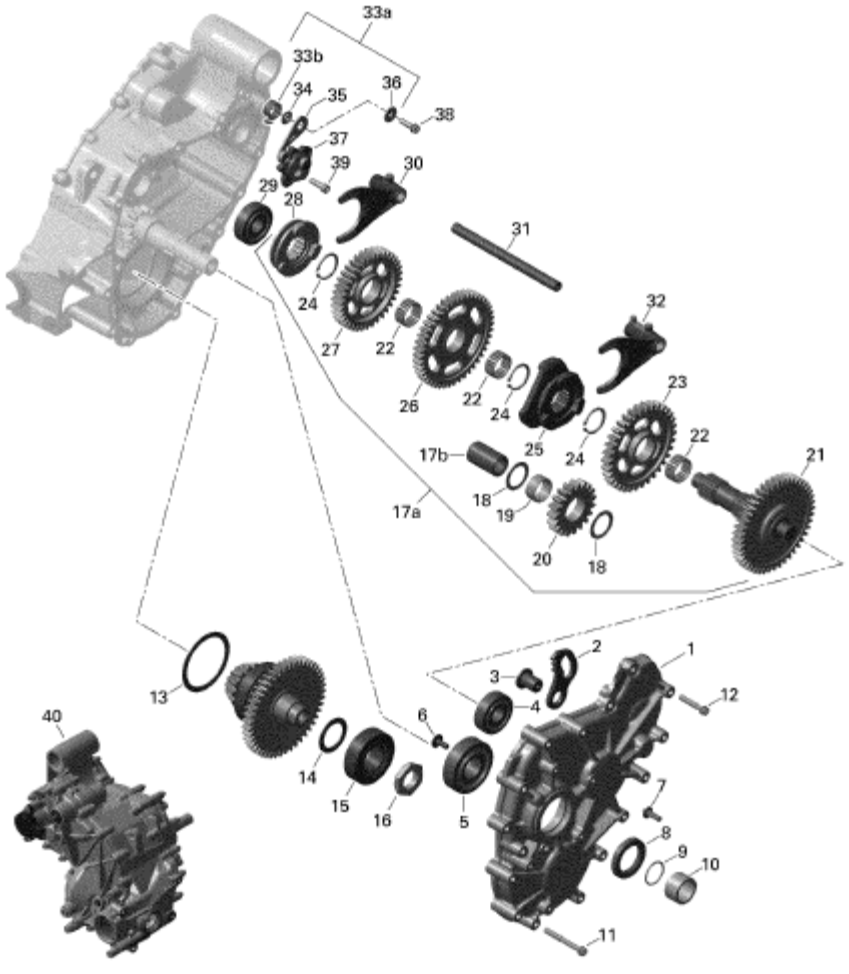

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	XXX	LH Gear Housing Ass'y. See Item 40, Gear Box. Includes 1 to 8			1	
2	420257658	Parking Lock Lever	49.99		1	1
2	420257658	Parking Lock Lever	124.49		1	1
3	420647120	Collar Sleeve	23.99	420647122	1	1
4	420932815	Ball Bearing 6303E	19.99		1	1
4	420932815	Ball Bearing 6303E	20.99		1	1
5	420932825	Ball Bearing	24.49		1	1
6	420241529	Torx Screw M6 X 16	5.99		1	1
6	420241529	Torx Screw M6 X 16	6.99		1	1
7	420441430	Distance Screw M6	2.49		1	1
7	420441430	Distance Screw M6	2.99		1	

						1
8	420950087	Oil Seal	14.99		1	1
8	420950087	Oil Seal	15.99		1	1
9	420631610	O-Ring	3.49		1	1
9	420631610	O-Ring	3.99		1	1
10	420647251	Distance Ring	28.99		1	1
11	420440702	Flanged Torx Screw M6 X 55	1.99		13	13
11	420440702	Flanged Torx Screw M6 X 55	2.99		13	13
12	420440274	Flanged Torx Screw M6 X 35	1.99		3	3
13	XXX	Shim Set. See Item 40, Gear Box			1	
14	XXX	Shim Set. See Item 40, Gear Box			1	
15	XXX	Roller Bearing. See Item 40, Gear Box			1	
16	XXX	Hex. Nut M24 X 1.5. See Item 40, Gear Box			1	
17a	420281270	Gear Set. Includes 17a to 28			1	1
17b	XXX	Intermediate Gear Shaft			1	
18	420944476	Thrust Washer	6.99		2	2
18	420944476	Thrust Washer	7.99		2	2
19	420932930	Needle Bearing	16.99		1	1
19	420932930	Needle Bearing	17.99		1	1
20	XXX	Intermediate Gear, 19 Teeth			1	
21	XXX	Main Shaft			1	
22	420632070	Needle Bearing	11.99		3	3
22	420632070	Needle Bearing	12.99		3	3
23	420434873	Gear Pinion, 34 Teeth	69.99		1	1
24	420845771	Retaining Ring	8.49		3	3
24	420845771	Retaining Ring	8.99		3	3
25	420257951	Shifting Sleeve	62.49		1	1
26	420434861	Gear Pinion, 44 Teeth		...	1	1
27	420434857	Gear Pinion, 36 Teeth	65.99		1	1
28	420257942	Shifting Sleeve	67.99		1	1
28	420257942	Shifting Sleeve	80.99		1	1
29	420932815	Ball Bearing 6303E	19.99		1	1
29	420932815	Ball Bearing 6303E	20.99		1	1
30	420257628	Shift Fork	94.99		1	1
31	420258386	Fork Spindle	15.99		1	1
31	420258386	Fork Spindle	16.99		1	1
32	420257618	Shift Fork	142.49		1	1
33a	420248532	Index Lever Ass'y. Includes 33a to 37	29.49		1	1
33b	XXX	Index Spring			1	
34	XXX	Step Ring			1	

35	XXX	Index Lever		1	
36	XXX	Washer		1	
37	XXX	Index Washer		1	
38	420440207	Flanged Torx Screw M6 X 20	1.99	1	1
38	420440207	Flanged Torx Screw M6 X 20	2.99	1	1
39	420241939	Allen Screw M6 X 20	0.99	1	1
39	420241939	Allen Screw M6 X 20	1.99	1	1
40	420684786	Gear Box	1944.99	1	1

Commander 1000, LTD, 2014: 05- Transmission

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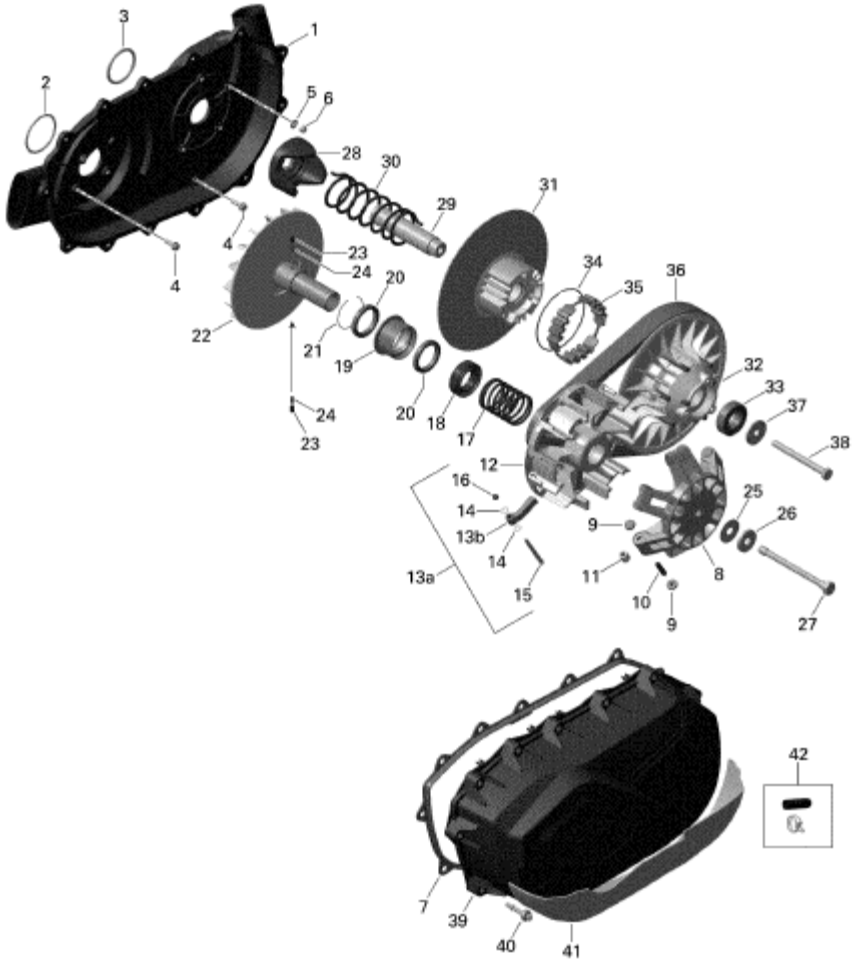

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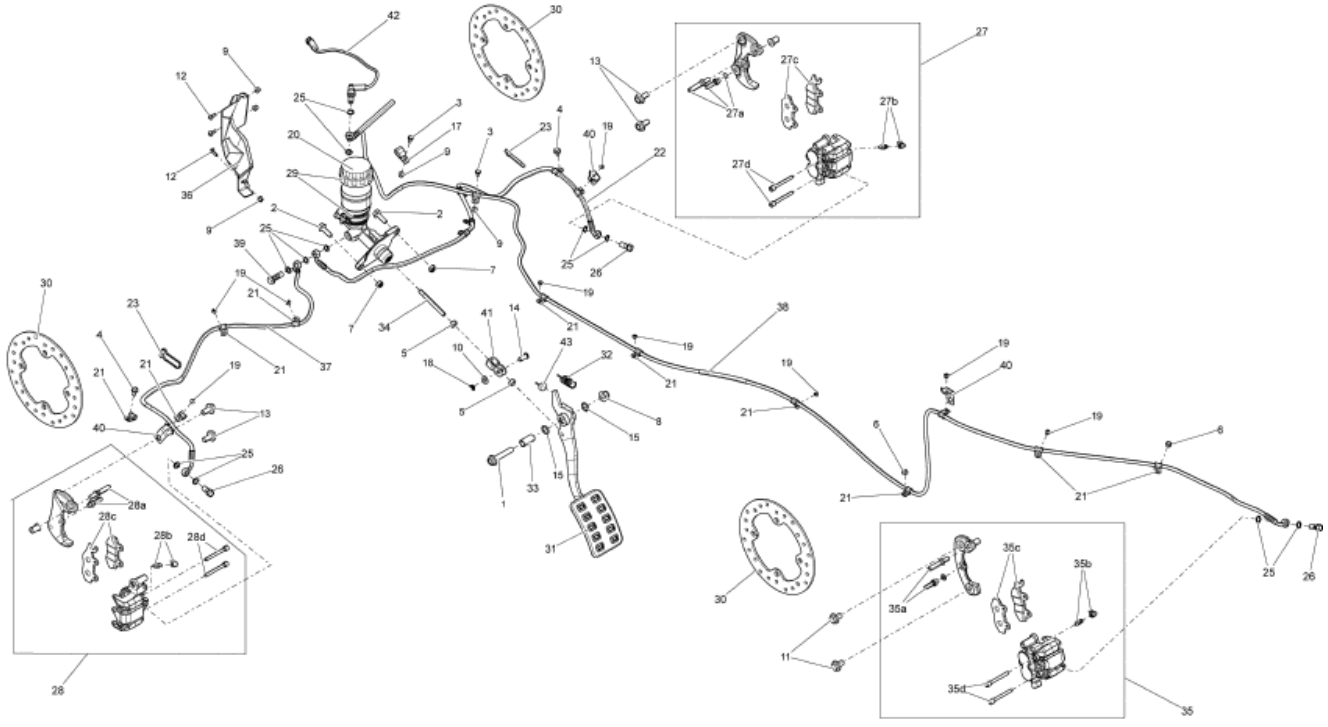
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420611408	CVT Air Guide	44.49		1	1
2	420430408	O-Ring	4.49		1	1
2	420430408	O-Ring	4.99		1	1
3	420631088	O-Ring	4.49		1	1
3	420631088	O-Ring	4.99		1	1
4	420441311	Hex.Screw M6 X 20	3.49		8	8
4	420441311	Hex.Screw M6 X 20	3.99		8	8
5	224061121	Flat Washer	0.43		1	1
6	232561414	Elastic Stop Nut M6	1.99	232561434	1	1
7	420430126	Gasket	28.49		1	1
8	420280522	Governor Cup Ass'y. Includes 8 to 11	318.99		1	1

9	420281296	Slider Shoe Set	49.99		1	1
10	417223257	Roller Axle	5.99		6	6
10	417223257	Roller Axle	6.99		6	6
11	417223387	Roller	7.49	417223767	6	6
11	417223387	Roller	7.99	417223767	6	6
12	420280467	Outher Haft	194.49		1	1
12	420280467	Outher Haft	239.99		1	1
13a	420248496	Centrifugal Lever Kit. Includes 13a to 16	131.99		6	6
13b	XXX	Lever			6	
14	XXX	Thrust Washer			12	
15	XXX	Screw			6	
16	XXX	Lock Nut M5			6	
17	420238615	Compression Spring, Drive Pulley	19.49		1	1
18	420627577	Spring Seat	20.99		1	1
19	420257195	Drive Pulley Clutch	96.49		1	1
20	420632377	Ball Bearing	47.49		2	2
21	420245951	Retaining Ring	13.99		1	1
21	420245951	Retaining Ring	14.99		1	1
22	420280374	Inner Half	275.99		1	1
23	420229577	Spring Sleeve	21.99		2	2
24	420239134	Spring	1.99		2	2
24	420239134	Spring	2.99		2	2
25	420627920	Thrust Washer	4.99		1	1
25	420627920	Thrust Washer	5.99		1	1
26	420627765	Spring Washer	13.49		1	1
26	420627765	Spring Washer	14.99		1	1
27	420641855	Hex. Screw M12 X 135	19.99		1	1
27	420641855	Hex. Screw M12 X 135	20.99		1	1
28	420280472	Cam	75.99		1	1
29	420220914	Driven Pulley Shaft	94.49		1	1
30	420638040	Compression Spring	32.99		1	1
31	420280499	Inner Half Ass'y	220.99		1	1
32	420280178	Outer Half Pulley Ass'y. Includes 32 to 35	239.99		1	1
32	420280178	Outer Half Pulley Ass'y. Includes 32 to 35	249.99		1	1
33	420932421	Ball Bearing	16.99		1	1
33	420932421	Ball Bearing	17.99		1	1
34	420245910	Retaining Ring	10.99		1	1
34	420245910	Retaining Ring	11.99		1	1
35	420660124	Torque Gear	15.99		1	

					1
35	420660124	Torque Gear	16.99	1	1
36	715000302	V-Belt	129.99	1	1
37	420627590	Thrust Washer	10.99	1	1
37	420627590	Thrust Washer	11.99	1	1
38	420441485	Hex. Screw M10 X 110	10.99	1	1
39	420611395	Variator Cover	109.49	1	1
40	420440567	Hex. Distance Screw M6 X 30.5	5.73	13	13
40	420440567	Hex. Distance Screw M6 X 30.5	6.99	13	13
41	715900200	Heat Protection Mat	30.99	1	1
42	707001179	Drain Plug Kit	9.49	1	1

Commander 1000, LTD, 2014: 06- Brakes



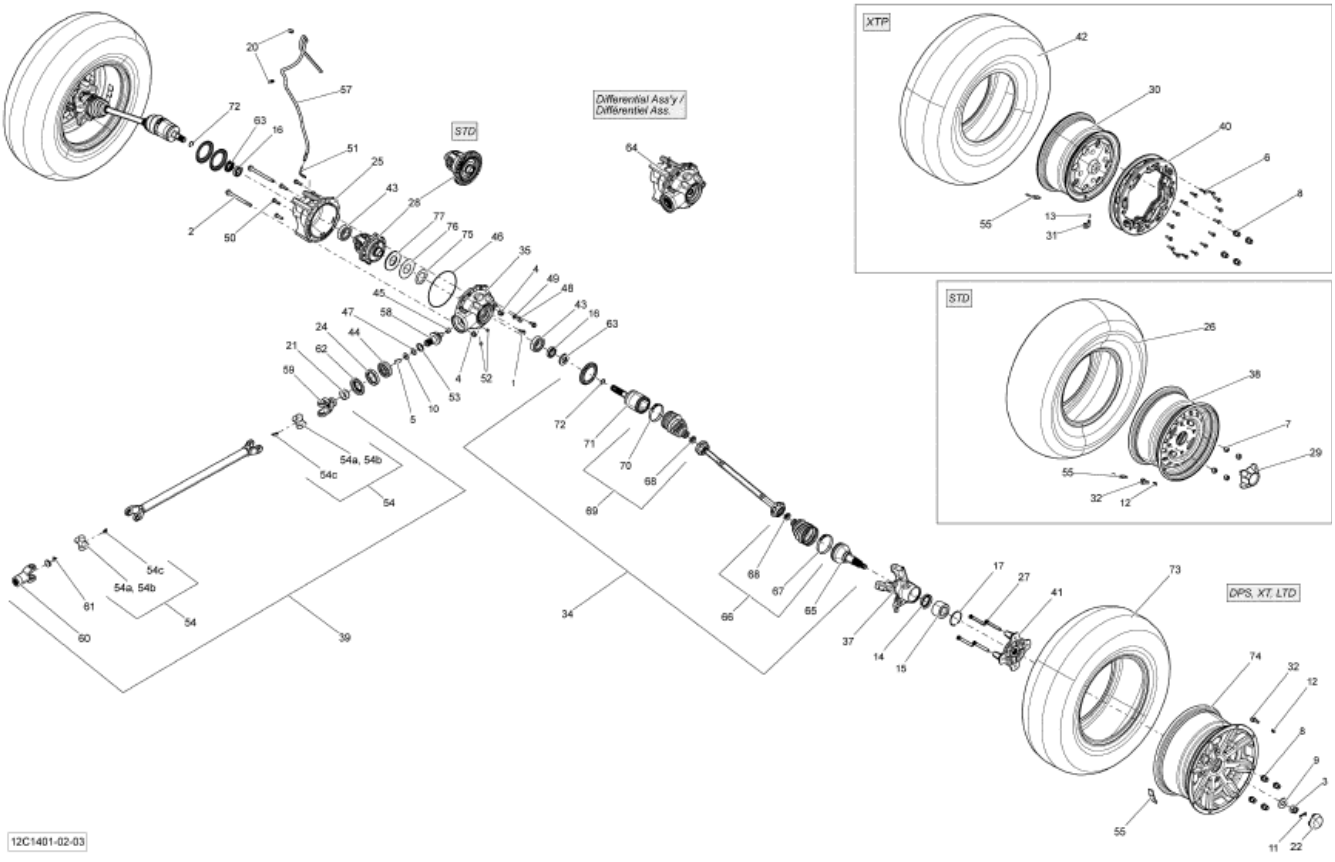
22C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207605544	Hex. Flanged Screw M10 X 55	2.62		1	1
2	207682544	Hex. Flanged Screw M8 X 25	1.99	207682534	2	2
3	210251680	Hex. Forming Screw M5 X 16	0.87		2	2
4	210261040	Hex. Flanged Screw M6 X 10	1.17		2	2
5	232081414	Hex. Nut M8	0.58		2	2
6	232561414	Elastic Stop Nut M6	1.99	232561434	2	2
7	232581414	Hex. Elastic Stop Nut M8	0.47		2	2
8	233201414	Hex. Flanged Elastic Nut M10	1.18		1	1
9	233251494	Elastic Flanged Nut M5	1.99		5	5
10	234081430	Flat Washer M8	1.99		1	1
11	250000060	Flanged Screw M10 X 16, Scotch Grip	2.88		2	2
12	250000145	Torx Screw M5 X 14	1.17		3	3
13	250000601	Hex. Flanged Screw M10 X 20, Scotch Grip	3.99		4	4
14	250400058	Pin	5.99		1	1
15	293300144	O-Ring	1.99		2	2
15	293300144	O-Ring	2.99		2	2
17	293650220	Clamp	0.99		1	1
17	293650220	Clamp	1.99		1	1
18	371800700	Cotter Pin	0.99		1	1
19	390402200	Pop Rivet 3/16"	0.28		12	12
20	715500332	Diaphragm Cap Kit	17.49		1	1

20	715500332	Diaphragm Cap Kit	18.99	1	1
21	705600459	Clamp	3.49	@	1
21	705600459	Clamp	3.99	@	1
22	705601265	RH Front Hose		1	1
23	414115200	Tie-Rap 180 mm	0.49	@	1
25	705600310	Copper Washer	1.99	11	11
25	705600310	Copper Washer	2.99	11	11
26	705600609	Banjo Bolt	0.90	3	3
27	705600678	RH Caliper	212.49	1	1
27a	715500333	Spring Boot Kit	12.49	1	1
27a	715500333	Spring Boot Kit	13.99	1	1
27b	705600080	Bleeding Screw	10.99	1	1
27b	705600080	Bleeding Screw	11.99	1	1
27c	715500336	Brake Pad Kit	39.99	1	1
27d	715500337	Pin Set	12.49	1	1
27d	715500337	Pin Set	13.99	1	1
28	705600679	LH Caliper	212.49	1	1
28a	715500333	Spring Boot Kit	12.49	1	1
28a	715500333	Spring Boot Kit	13.99	1	1
28b	705600080	Bleeding Screw	10.99	1	1
28b	705600080	Bleeding Screw	11.99	1	1
28c	715500335	Brake Pad Kit	39.99	1	1
28d	715500337	Pin Set	12.49	1	1
28d	715500337	Pin Set	13.99	1	1
29	705600681	Master Cylinder Ass'y	158.49	1	1
30	705600684	Brake Disc	29.49	3	3
31	705600724	Brake Pedal	36.99	1	1
32	705600792	Brake Pedal Spring	5.99	1	1
32	705600792	Brake Pedal Spring	6.99	1	1
33	705600815	Inner Spacer	7.99	1	1
33	705600815	Inner Spacer	8.99	1	1
34	705600833	Master Cylinder Rod	158.49	1	1
35	705600872	Rear Caliper	208.49	1	1
35a	715500333	Spring Boot Kit	12.49	1	1
35a	715500333	Spring Boot Kit	13.99	1	1
35b	705600080	Bleeding Screw	10.99	1	1
35b	705600080	Bleeding Screw	11.99	1	1
35c	715500336	Brake Pad Kit	39.99	1	1
35d	715500337	Pin Set	12.49	1	1
35d	715500337	Pin Set	13.99	1	1
36	705600917	LH Front Deflector	4.99	1	1
37	705600943	LH Front Hose	56.99	1	1
38	705600945	Rear Flexible Hose	105.99	1	1
39	705600958	Banjo Bolt	4.49	1	1
39	705600958	Banjo Bolt	4.99	1	1
40	705601088	Bracket	1.99	3	3
41	705601142	Yoke		1	1
42	705601250	Brake Switch	33.99	1	1

43	708000759	Rubber Stopper	2.49	1	1
43	708000759	Rubber Stopper	2.99	1	1

Commander 1000, LTD, 2014: 07- Drive System, Front

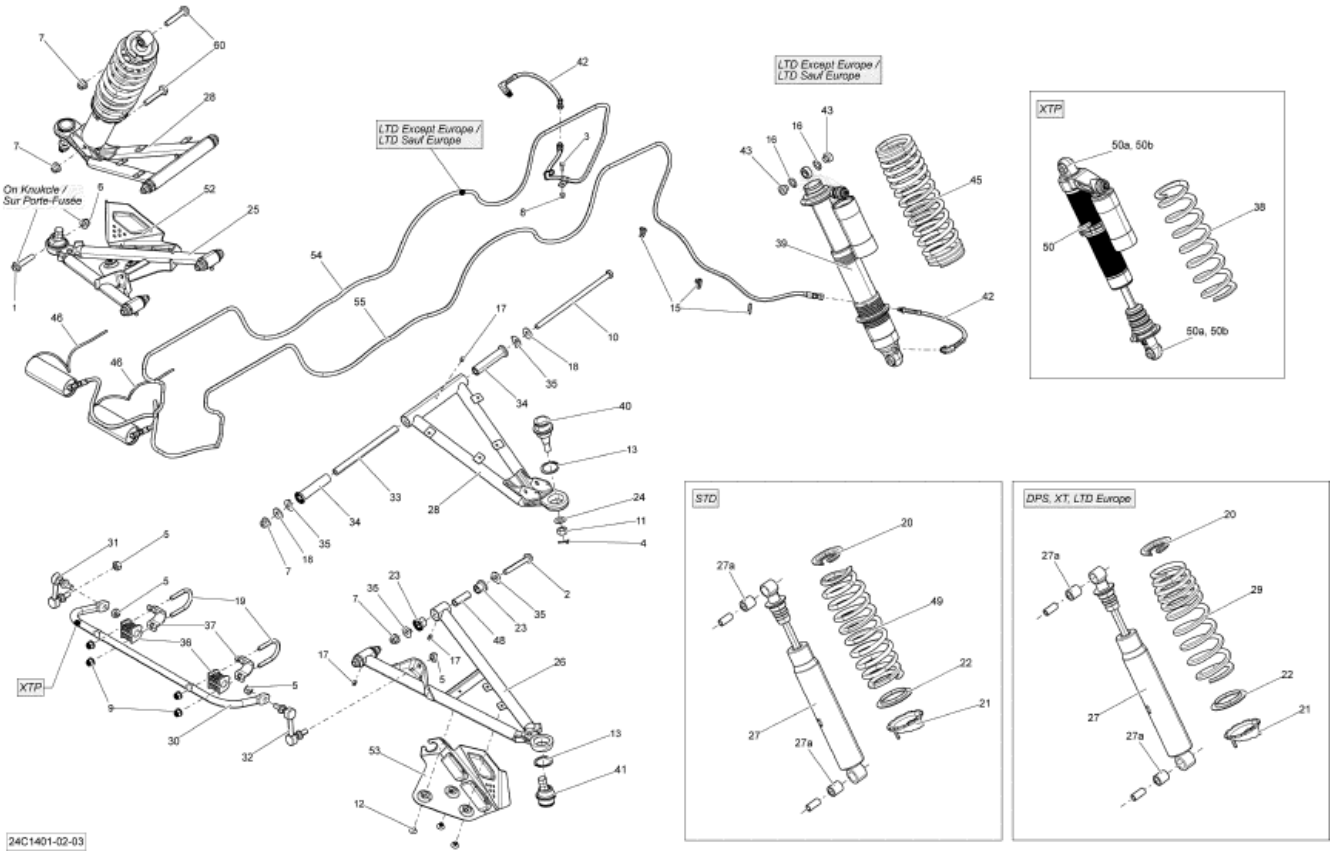


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207582044	Hex. Flanged Screw M8 X 20, Scotch Grip	1.30		2	2
2	230602546	Hex. Flanged Screw M10 X 125	5.73		2	2
3	250100047	Hex. Castellated Nut M18	7.07		2	2
3	250100047	Hex. Castellated Nut M18	8.99		2	2
4	233201436	Flanged Elastic Nut M10	1.99		2	2
5	250000378	Hex Flanged Screw M12 X 16, Scotch Grip	3.49		1	1
6	N/A	Not available for this vehicle			16	
7	N/A	Not available for this vehicle			8	
8	250100082	Chrome Wheel Nut M10 X 1.25	4.97		8	8
9	250200049	Spring Washer	3.30		2	2
9	250200049	Spring Washer	3.99		2	2
10	250200102	Flat Washer M12	1.99		1	1
11	250400036	Cotter Pin	1.99		2	2
12	293000110	Valve Cap	0.99		2	2
12	293000110	Valve Cap	1.99		2	2
13	N/A	Not available for this vehicle			2	
14	293250246	O-Ring	5.99		2	2
15	293350040	Cone Bearing	69.49		2	2
16	293350044	Ball Bearing	19.99		2	2
16	293350044	Ball Bearing	20.99		2	2
17	293370019	Circlip	2.49		2	2
17	293370019	Circlip	2.99		2	2
20	293750002	Tie-Rap 142 mm	0.99		2	

					2
20	293750002	Tie-Rap 142 mm	1.99	2	2
21	705400036	Wear Ring	18.49	1	1
22	705400520	Wheel Cap	7.49	2	2
22	705400520	Wheel Cap	7.99	2	2
24	705400661	Nut	27.49	1	1
25	705400762	Front Cover	239.99	1	1
26	N/A	Not available for this vehicle		1	
27	705400791	Wheel Stud	9.49	8	8
28	705400822	Differential	719.99	1	1
28	705400822	Differential	1199.99	1	1
29	N/A	Not available for this vehicle		2	
30	N/A	Not available for this vehicle		1	
31	N/A	Not available for this vehicle		1	
32	705400193	Rim Valve With Cap	4.99	2	2
32	705400193	Rim Valve With Cap	5.99	2	2
34	705401105	LH Half Shaft	398.99	1	1
34	705401106	RH Half Shaft	398.99	1	1
35	705401136	Front Gear Cover	149.99	1	1
37	705401204	LH Front Knuckle	70.99	1	1
37	705401205	RH Front Knuckle	70.99	1	1
38	N/A	Not available for this vehicle		1	
39	705401239	Axle Drive Ass'y		1	1
40	N/A	Not available for this vehicle		1	
41	705401314	Wheel Hub	39.99	2	2
41	705401314	Wheel Hub	79.99	2	2
42	N/A	Not available for this vehicle		1	
43	705500259	Ball Bearing	34.99	2	2
44	705500260	Ball Bearing	19.99	1	1
44	705500260	Ball Bearing	20.99	1	1
45	705500261	Needle Bearing	11.63	1	1
45	705500261	Needle Bearing	12.99	1	1
46	705500265	Seal	10.80	1	1
46	705500265	Seal	11.99	1	1
47	705500267	O-Ring	3.30	1	1
47	705500267	O-Ring	3.99	1	1
48	705500504	Fill Level Plug	6.99	1	1
48	705500504	Fill Level Plug	7.99	1	1
49	705500506	Copper Washer	0.32	1	1
50	705500892	Screw	6.99	6	6
50	705500892	Screw	7.99	6	6
51	705500893	Vent Valve	11.99	1	1
51	705500893	Vent Valve	12.99	1	1
52	705500894	Drain Plug	6.99	2	2
52	705500894	Drain Plug	7.99	2	2
53	705501162	Pinion Gear Shim	9.99	1	1
53	705501162	Pinion Gear Shim	10.99	1	1
54	703500814	Unit Pack Kit	66.99	2	2
54a	715900183	U-Joint	20.99	2	2
54b	715900117	Snap Ring	2.99	8	8
54c	703500813	Grease Fitting	2.99	2	

					2
55	705501385	1/2 OZ Weight	3.49	@	1
55	705501385	1/2 OZ Weight	3.99	@	1
57	415080200	Hose, Polyurethane	4.99	1	1
57	415080200	Hose, Polyurethane	9.99	1	1
58	705501588	10 Teeth Pinion	141.99	1	1
59	715900231	Yoke Joint	21.99	1	1
60	715900232	Yoke Joint	19.99	1	1
61	703500815	Grease Fitting	2.99	1	1
62	705401481	Oil Seal	18.99	1	1
63	705401486	Oil Seal	9.99	2	2
64	705401488	Front Differential Ass'y		1	1
65	705401353	CV Joint	156.99	2	2
66	705401354	Wheel Side Boot Kit	42.99	2	2
67	715900260	Oetiker Clamp, Large	7.99	2	2
68	715900261	Oetiker Clamp, Small	4.99	4	4
69	705401355	Differential Side Boot Kit	42.99	2	2
70	715900262	Oetiker Clamp, Large Dif.Side	7.99	2	2
71	705401357	RH Plunging Joint	194.99	1	1
71	705401359	LH Plunging Joint	194.99	1	1
72	705401349	Circlip Joint	2.99	2	2
72	705401349	Circlip Joint	3.99	2	2
73	705400961	Front Tire. LTD Europe	119.99	2	2
73	705401377	Front Tire. LTD Except Europe	195.99	2	2
74	705401380	Front Rim	124.99	2	2
75	703500049	Pinion Shim Kit	49.99	1	1
76	703500288	Differential Shim Kit	52.49	1	1
77	703500050	Differential Shim Kit	84.49	1	1

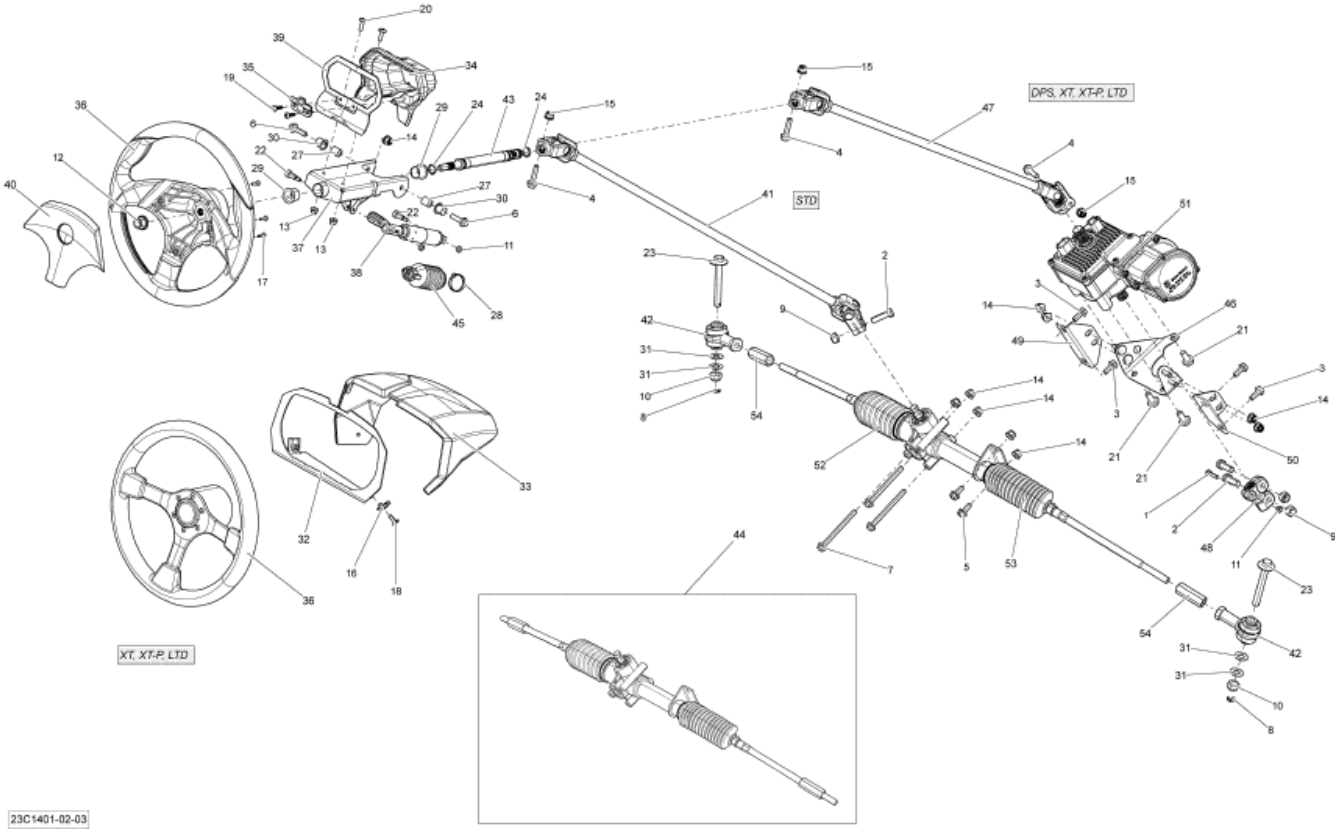
Commander 1000, LTD, 2014: 07- Front Suspension



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207605044	Hex. Flanged Screw M10 X 50	4.07		2	2
2	207607046	Hex. Flanged Screw M10 X 70	2.32		4	4
3	210251680	Hex. Forming Screw M5 X 16	0.87		1	1
4	211400017	Cotter Pin	0.27		2	2
5	N/A	Not available for this vehicle			4	
6	233201414	Hex. Flanged Elastic Nut M10	1.18		2	2
7	233201436	Flanged Elastic Nut M10	1.99		6	6
8	233251494	Elastic Flanged Nut M5	1.99		1	1
9	N/A	Not available for this vehicle			4	
10	250000510	Hex. Cap Screw M10 X 225	9.99		2	2
11	250100099	Nut M12	1.99		2	2
12	293150104	Pop Rivet 3/16"	0.47		6	6
13	293370035	Circlip	4.97		4	4
15	293750002	Tie-Rap 142 mm	0.99		4	4
15	293750002	Tie-Rap 142 mm	1.99		4	4
16	715500360	O-Ring Bushing	6.99		4	4
16	715500360	O-Ring Bushing	7.99		4	4
17	408200700	Grease Fitting	2.99		6	6
17	408200700	Grease Fitting	6.99		6	6
18	503190439	Washer	4.49		4	4
18	503190439	Washer	4.71		4	4
19	N/A	Not available for this vehicle			2	
20	706000567	Spring Stopper	9.99		2	

					2
20	706000567	Spring Stopper	10.99	2	2
21	706000910	Adjustable Ring	9.99	2	2
22	706000911	Protector Ring	8.49	2	2
23	706200181	Cushion	1.99	8	8
23	706200181	Cushion	7.49	8	8
24	250200086	Flat Washer	3.49	2	2
24	250200086	Flat Washer	3.99	2	2
25	706200742	LH Lower Suspension Arm	74.99	1	1
26	706200744	RH Lower Suspension Arm	74.99	1	1
27	706200782	Front Shock	99.99	2	2
27a	715900122	Bushing	4.99	4	4
27a	715900122	Bushing	5.99	4	4
28	706200796	Suspension Upper Arm	69.49	2	2
29	706201369	Front Spring, Red-Yellow	105.99	2	2
30	N/A	Not available for this vehicle		1	
31	N/A	Not available for this vehicle		1	
32	N/A	Not available for this vehicle		1	
33	706201061	Inner Bushing	12.49	2	2
34	706201062	Cushion	1.99	4	4
35	706201063	Wear Plate	0.99	12	12
35	706201063	Wear Plate	1.99	12	12
36	N/A	Not available for this vehicle		2	
37	N/A	Not available for this vehicle		2	
38	N/A	Not available for this vehicle		1	
39	706201364	Front Shock	1217.49	2	2
40	706201370	Upper Ball Joint	39.99	2	2
41	706201371	Upper Ball Joint	39.99	2	2
42	706201446	LH Front Hose Assembly	58.49	2	2
43	715500361	Interior Bushing	19.99	4	4
43	715500361	Interior Bushing	20.99	4	4
45	706201473	Spring, Red-White	54.99	2	2
46	706001143	Hose, Polyurethane 4 mm	7.99	2	2
48	706201587	Inner Bushing	2.99	4	4
49	N/A	Not available for this vehicle		2	
50	N/A	Not available for this vehicle		2	
50a	N/A	Not available for this vehicle		8	
50b	N/A	Not available for this vehicle		8	
52	706201669	LH Protector	12.99	1	1
52	706201669	LH Protector	13.99	1	1
53	706201670	RH Protector	12.99	1	1
53	706201670	RH Protector	13.99	1	1
54	706201792	LH Front Hose Ass'y. Includes 46		1	1
55	706201793	RH Front Hose Ass'y. Includes 46		1	1
60	207605544	Hex. Flanged Screw M10 X 55	2.62	4	4

Commander 1000, LTD, 2014: 07- Steering



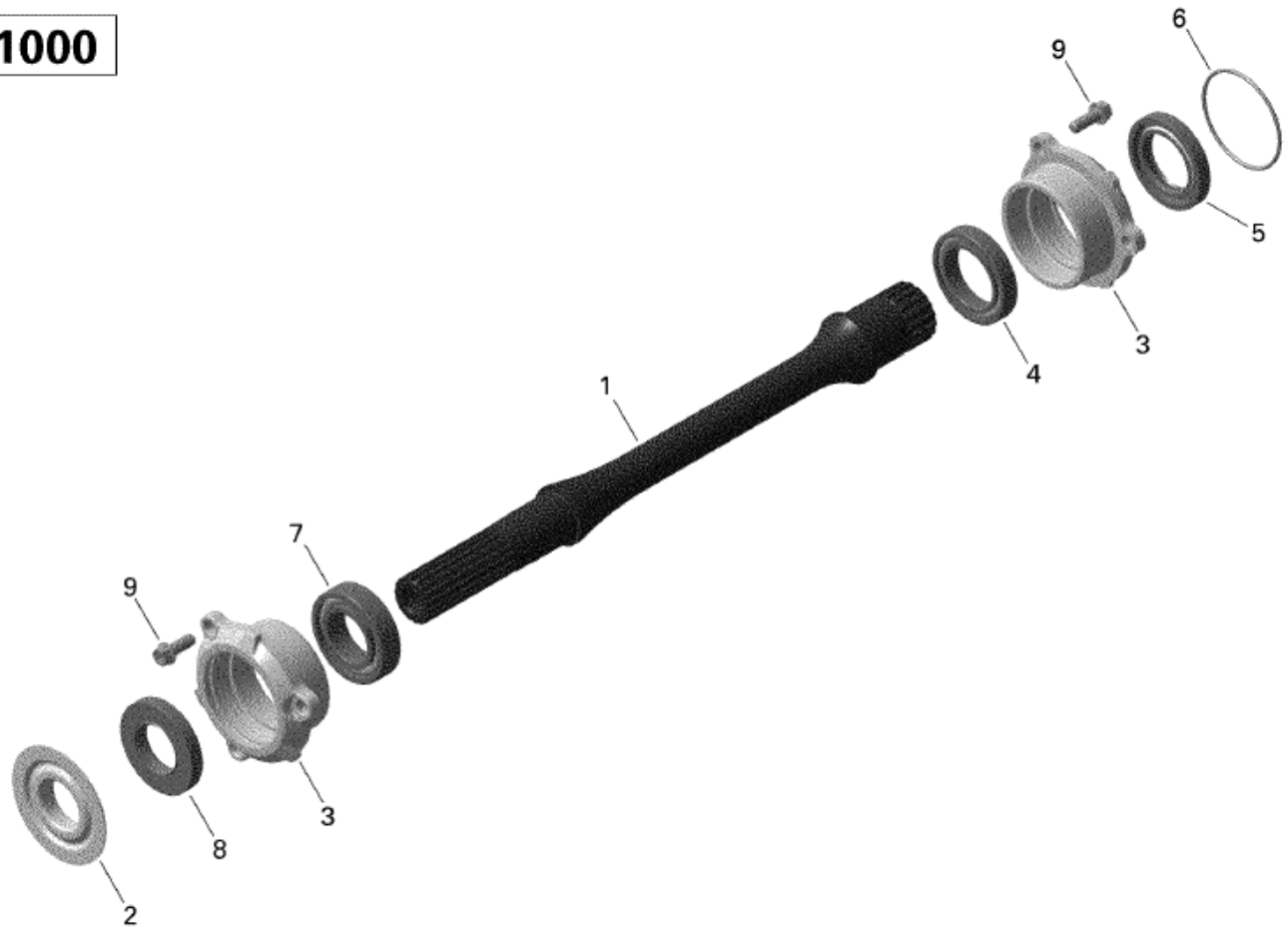
23C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207063044	Hex. Screw M6 X 30	0.90		1	1
2	207103586	Hex. Screw M10 X 35	1.99		2	2
3	207582044	Hex. Flanged Screw M8 X 20, Scotch Grip	1.30		4	4
4	207583586	Hex. Flanged Screw M8 X 35, Scotch Grip	1.99		2	2
5	207682044	Hex. Flanged Screw M8 X 20	0.87		2	2
6	207683044	Hex. Flanged Screw M8 X 30	1.30		2	2
7	207689534	Hex. Flanged Scew M8 X 95	3.99		3	3
8	211400017	Cotter Pin	0.27		2	2
9	232500416	Elastic Stop Nut M10	1.47		2	2
10	232521416	Elastic Flanged Stop Nut M12	1.33		2	2
11	232561414	Elastic Stop Nut M6	1.99	232561434	@	1
12	233221414	Hex. Flanged Elastic Nut M12	5.12		1	1
13	233261414	Hex. Flanged Elastic Nut M6	1.05		2	2
14	233281414	Hex. Flanged Elastic Nut M8	1.05		@	1
15	233281416	Hex. Elastic Flanged Nut M8	1.17		2	2
16	250000048	Pannel Nut M6 X 1.0	1.35		2	2
17	N/A	Not available for this vehicle			3	
18	250000129	Torx Screw M6 X 16	0.97		2	2
19	N/A	Not available for this vehicle			2	
20	250000350	Torx Truss Screw M6 X 20	4.99		2	2
21	250000601	Hex. Flanged Screw M10 X 20, Scotch Grip	3.99		3	3
22	250000649	Socket Head Screw M6 X 16	5.99		2	2

23	250000657	Hexagonal Screw M12 X 88	5.99	2	2
24	293300144	O-Ring	1.99	2	2
24	293300144	O-Ring	2.99	2	2
27	293900106	Bushing	3.49	2	2
27	293900106	Bushing	3.99	2	2
28	414115200	Tie-Rap 180 mm	0.49	1	1
29	415108000	Cushion	10.99	2	2
29	415108000	Cushion	11.54	2	2
30	705600799	Bushing	3.49	2	2
31	250200086	Flat Washer	3.49	4	4
31	250200086	Flat Washer	3.99	4	4
32	707900013	Cluster Support	9.99	1	1
33	707900124	Upper Cluster Cover	9.99	1	1
34	N/A	Not available for this vehicle		1	
35	N/A	Not available for this vehicle		1	
36	715001134	Steering Wheel Kit. XT, XTP, LTD	149.99	1	1
37	709400655	Steering Support	49.49	1	1
38	709400656	Adjustment Cylinder	37.49	1	1
39	N/A	Not available for this vehicle		1	
40	N/A	Not available for this vehicle		1	
41	N/A	Not available for this vehicle		1	
42	709401134	Ball Joint	33.99	2	2
43	709401167	Steering Shaft	35.99	1	1
44	709401185	Steering Ass'y		1	1
45	709401232	Boot Kit, Tube Side		1	1
46	709401296	Support		1	1
47	709401326	Steering Column		1	1
48	709401328	Coupling		1	1
49	709401336	LH DPS Support		1	1
50	709401337	RH DPS Support		1	1
51	709401406	Power Steering Ass'y		1	1
52	715900235	Boot Kit, Pinion Side		1	1
53	715900236	Boot Kit, Tube Side		1	1
54	715900237	Nut Tie Rod End		2	2

Commander 1000, LTD, 2014: 08- Drive Shaft

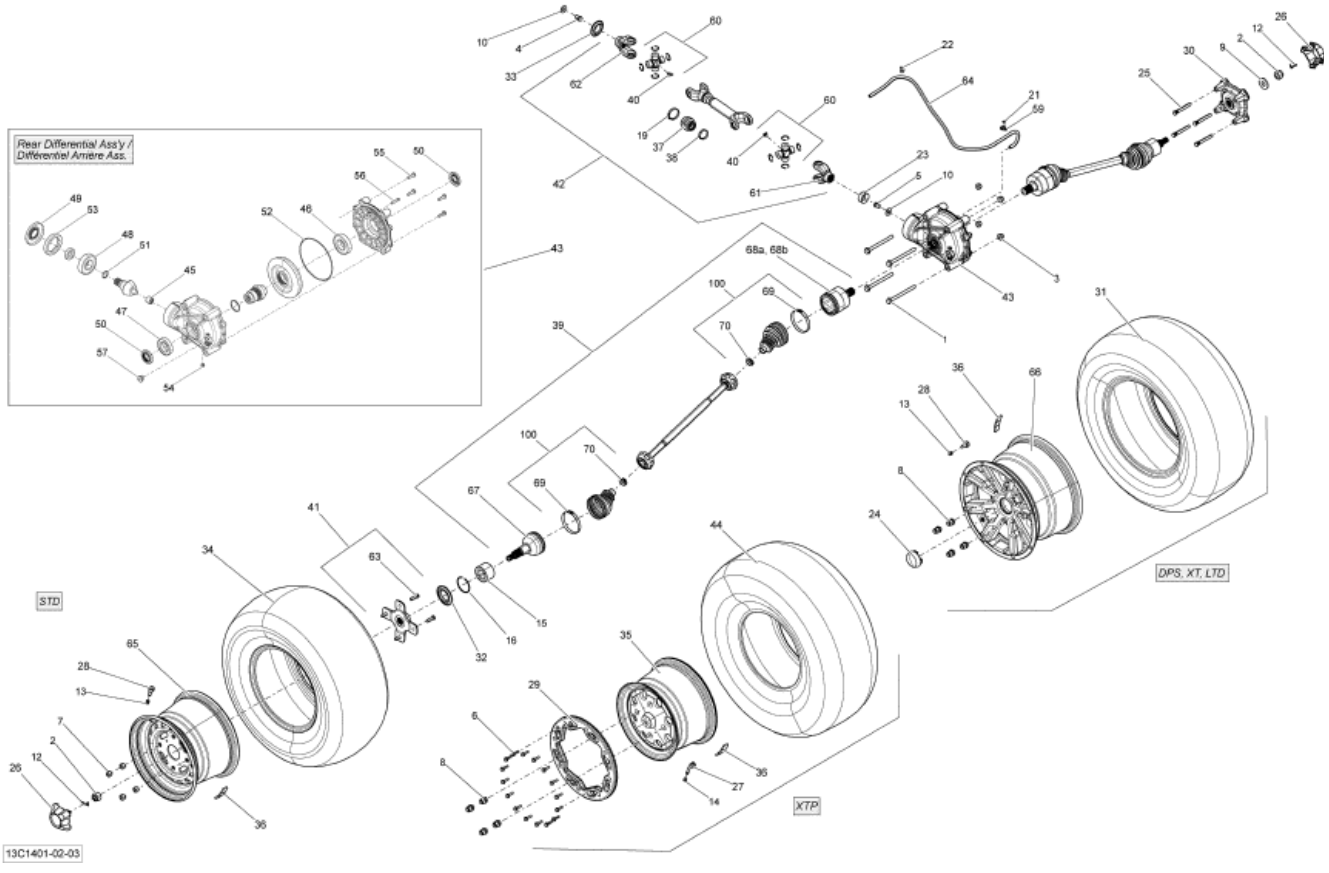
1000



56R1402

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420620514	Drive Shaft			1	1
2	420626990	Cover			1	1
3	420611221	Bearing Cover	20.99		2	2
4	420632275	Ball Bearing	26.99		1	1
5	420850055	Oil Seal	12.49		1	1
5	420850055	Oil Seal	13.11		1	1
6	420230305	O-Ring	7.49		1	1
6	420230305	O-Ring	7.99		1	1
7	420232341	Ball Bearing	16.99		1	1
7	420232341	Ball Bearing	17.99		1	1
8	420430589	Oil Seal	18.49		1	1
8	420430589	Oil Seal	19.99		1	1
9	420641048	Flanged Torx Screw M6 X 16	2.49		6	6
9	420641048	Flanged Torx Screw M6 X 16	2.61		6	6

Commander 1000, LTD, 2014: 08- Drive System, Rear

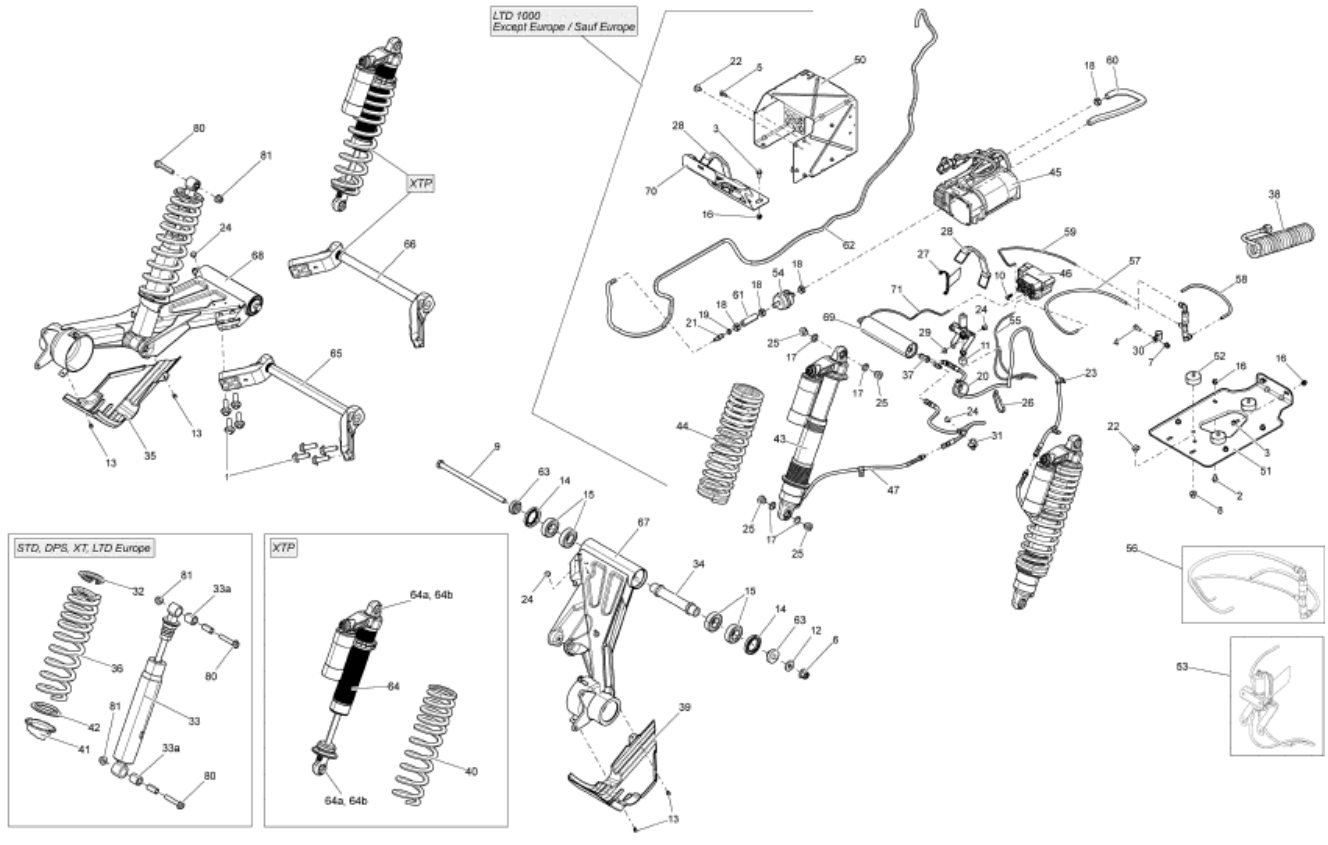


#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	230602546	Hex. Flanged Screw M10 X 125	5.73		4	4
2	250100047	Hex. Castellated Nut M18	7.07		2	2
2	250100047	Hex. Castellated Nut M18	8.99		2	2
3	233201436	Flanged Elastic Nut M10	1.99		4	4
4	250000359	Hex Flanged Screw M12 x 16	3.99		1	1
5	250000615	Hex Flanged Screwv M10 X 16	3.99		1	1
6	N/A	Not available for this vehicle			16	
7	N/A	Not available for this vehicle			8	
8	250100082	Chrome Wheel Nut M10 X 1.25	4.97		8	8
9	250200049	Spring Washer	3.30		2	2
9	250200049	Spring Washer	3.99		2	2
10	250200014	Flat Washer M10	1.17		2	2
12	250400036	Cotter Pin	1.99		2	2
13	293000110	Valve Cap	0.99		2	2
13	293000110	Valve Cap	1.99		2	2
14	N/A	Not available for this vehicle			2	
15	293350040	Cone Bearing	69.49		2	2
16	293370019	Circlip	2.49		2	2
16	293370019	Circlip	2.99		2	2
19	293650138	Oetiker Gear Clamp	3.30		1	1
19	293650138	Oetiker Gear Clamp	3.99		1	1
21	390402200	Pop Rivet 3/16"	0.28		1	1
22	414227300	Clip	1.15		1	

					1
23	705400036	Wear Ring	18.49	1	1
24	705400520	Wheel Cap	7.49	2	2
24	705400520	Wheel Cap	7.99	2	2
25	705400791	Wheel Stud	9.49	4	4
26	N/A	Not available for this vehicle		2	
27	N/A	Not available for this vehicle		2	
28	705400193	Rim Valve With Cap	4.99	2	2
28	705400193	Rim Valve With Cap	5.99	2	2
29	N/A	Not available for this vehicle		2	
30	705401314	Wheel Hub	39.99	1	1
30	705401314	Wheel Hub	79.99	1	1
31	705501295	Rear Tire. LTD Europe	124.99	2	2
31	705502019	Rear Tire. LTD Except Europe	209.99	2	2
32	705501121	Wear Sleeve	5.99	1	1
33	705501123	Protector	4.49	1	1
33	705501123	Protector	4.99	1	1
34	N/A	Not available for this vehicle		2	
35	N/A	Not available for this vehicle		2	
36	705501385	1/2 OZ Weight	3.49	@	1
36	705501385	1/2 OZ Weight	3.99	@	1
37	715900118	Rubber Boot	12.99	1	1
38	509000045	Oetiker Gear Clamp	5.99	1	1
38	509000045	Oetiker Gear Clamp	6.99	1	1
39	705501481	Half Shaft	199.99	2	2
40	715900184	Grease Fitting	1.99	2	2
40	715900184	Grease Fitting	2.99	2	2
41	705501713	Wheel Hub Ass'y	79.99	1	1
41	705501713	Wheel Hub Ass'y	99.99	1	1
42	705501803	Axle Ass'y		1	1
43	705501804	Rear Differential Ass'y		1	1
44	N/A	Not available for this vehicle		2	
45	705501874	Needle Bearing		1	1
46	705501875	Ball Bearing		1	1
47	705501876	Ball Bearing		1	1
48	705501877	Ball Bearing		1	1
49	705501878	Oil Seal		1	1
50	705501879	Oil Seal		2	2
51	705501880	Oil Seal		1	1
52	705501881	Oil Seal		1	1
53	705501882	Nut		1	1
54	705501885	Drain Plug		1	1
55	705501886	Screw		4	4
56	705501887	Vent Valve		1	1
57	705501889	Fill Level Plug		1	1
59	705600459	Clamp	3.49	1	1
59	705600459	Clamp	3.99	1	1
60	715500371	Universal Joint	54.99	2	2
61	715900233	Fixed Yoke	19.99	1	1
62	715900234	Fixe Joint	19.99	1	1

63	250300055	Wheel Stud	3.99		4	4
64	415080200	Hose, Polyurethane	4.99		@	1
64	415080200	Hose, Polyurethane	9.99		@	1
65	N/A	Not available for this vehicle			1	
66	705501813	Rear Rim	139.99		2	2
67	705501776	CV Joint	156.99		2	2
68a	705501780	Plunging Joint	194.99		2	2
68b	705501781	Circlip	2.99		2	2
68b	705501781	Circlip	3.99		2	2
69	715900241	Oetiker Clamp, 82.1 mm	7.99		2	2
70	715900242	Oetiker Clamp, 27.3 mm	7.99		2	2
100	705501777	Rubber Boot Kit	42.99	705501864	4	4

Commander 1000, LTD, 2014: 08- Rear Suspension



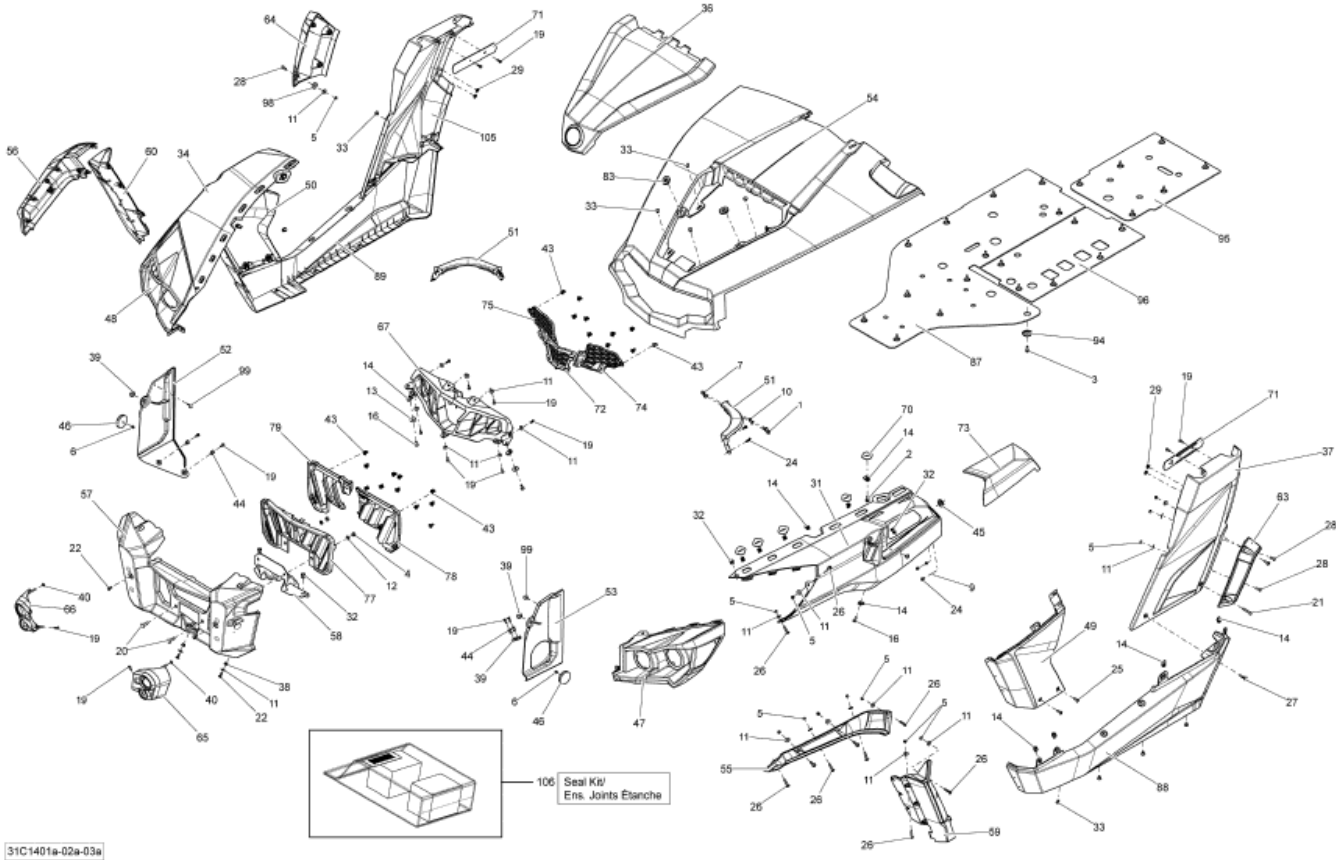
26C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207523544	Hex. Flanged Screw M12 X 35, Scotch Grip	3.99		8	8
2	207561244	Hex. Flanged Screw M6 X 12, Scotch Grip	1.47		4	4
3	207561644	Hex. Flanged Screw M6 X 16, Scotch Grip	1.47		4	4
4	207661644	Hex. Flanged Screw M6 X 16	0.58		2	2
5	210261280	Hex. Flanged Screw M6 X 12	1.47		4	4
6	233221416	Elastic Flange Nut M12	2.32		2	2
7	233261414	Hex. Flanged Elastic Nut M6	1.05		2	2
8	233281414	Hex. Flanged Elastic Nut M8	1.05		3	3
9	250000515	Hex. Cap Screw M12 X 241	3.49		2	2
10	250000546	Oval Head Torx Screw K60 X 1	1.99		2	2
11	250100124	Hex. Nut With Nylon 1/2" X 20	5.99		1	1
12	250200120	Flat Washer M12	1.99		2	2
13	293150104	Pop Rivet 3/16"	0.47		4	4
14	293200094	Seal	6.99		4	4
14	293200094	Seal	7.99		4	4
15	293350055	Ball Bearing	8.49		8	8
15	293350055	Ball Bearing	8.99		8	8
16	293450274	Insert	4.97		8	8
16	293450274	Insert	5.99		8	8
17	715500360	O-Ring Bushing	6.99		4	4
17	715500360	O-Ring Bushing	7.99		4	4

18	293650053	Crimp Clamp	2.49	4	4
19	293650195	Clamp, Oetiker	0.99	1	1
19	293650195	Clamp, Oetiker	1.99	1	1
20	293650218	Hose Retainer	6.99	1	1
21	293710035	Straight Fitting	6.99	1	1
22	293730018	Mount Dart	0.99	3	3
22	293730018	Mount Dart	1.99	3	3
23	293750002	Tie-Rap 142 mm	0.99	1	1
23	293750002	Tie-Rap 142 mm	1.99	1	1
24	390406500	Pop Rivet 3/16"	0.72	5	5
25	715500361	Interior Bushing	19.99	4	4
25	715500361	Interior Bushing	20.99	4	4
26	414115200	Tie-Rap 180 mm	0.49	1	1
27	414811400	O-Ring	4.99	1	1
27	414811400	O-Ring	5.24	1	1
28	515176044	Battery Strap	12.49	2	2
28	515176044	Battery Strap	13.99	2	2
29	517124300	Washer	0.17	4	4
30	705600040	Open Clamp	7.49	2	2
30	705600040	Open Clamp	7.99	2	2
31	705601088	Bracket	1.99	1	1
32	706000567	Spring Stopper	9.99	1	1
32	706000567	Spring Stopper	10.99	1	1
33	706000615	Rear Shock Ass'y. Includes 33a	74.49	1	1
33a	715900122	Bushing	4.99	2	2
33a	715900122	Bushing	5.99	2	2
34	706000616	Pivot Bushing	19.49	2	2
34	706000616	Pivot Bushing	20.99	2	2
35	706000630	LH Joint Protector	5.99	1	1
36	706001045	Rear Spring, Green-Yellow	105.99	1	1
37	706000806	T-Fitting	13.49	1	1
37	706000806	T-Fitting	14.99	1	1
38	706000808	Auxiliary Hose	71.99	1	1
39	706000814	RH Joint Protector	5.99	1	1
40	N/A	Not available for this vehicle		1	
41	706000910	Adjustable Ring	9.99	1	1
42	706000911	Protector Ring	8.49	1	1
43	706001039	Rear Shock Ass'y	1217.49	1	1
44	706001040	Rear Spring, Yellow-White	45.99	1	1
45	706001100	Compressor	889.99	1	1
46	706001104	Solenoid Valve	611.99	1	1
47	706001118	Rear Hose Ass'y	58.99	1	1
50	706001120	Upper Support	74.99	1	1
51	706001121	Lower Support	45.99	1	1
52	706001127	Rubber Mount	14.99	3	3
53	706001134	Bracket Ass'y	83.99	1	1
54	706001141	Air Filter	19.99	1	1
55	706001143	Hose, Polyurethane 4 mm	7.99	1	1

56	706001144	Pressure Distributor Ass'y	1.99		1	1
57	706001145	Hose, Polyurethane 6 mm	7.99		1	1
58	706001145	Hose, Polyurethane 6 mm	7.99		1	1
59	706001143	Hose, Polyurethane 4 mm	7.99		1	1
60	415080300	Fuel Line	14.99		1	1
61	415080300	Fuel Line	14.99		1	1
62	415080200	Hose, Polyurethane	4.99		1	1
62	415080200	Hose, Polyurethane	9.99		1	1
63	706001350	Spacer			4	4
64	N/A	Not available for this vehicle			1	
64a	N/A	Not available for this vehicle			4	
64b	N/A	Not available for this vehicle			4	
65	706001500	Sway Bar Ass'y			1	1
66	N/A	Not available for this vehicle			1	
67	706001513	RH Swing Arm			1	1
68	706001514	LH Swing Arm			1	1
69	706001540	Rear Shocks Distributor Ass'y		...	1	1
70	706201524	Tank Bracket	35.99		1	1
71	706001143	Hose, Polyurethane 4 mm	7.99		1	1
80	207605544	Hex. Flanged Screw M10 X 55	2.62		4	4
81	233201416	Hex. Flanged Elastic Nut M10	1.99	233201436	4	4

Commander 1000, LTD, 2014: 09- Body And Accessories



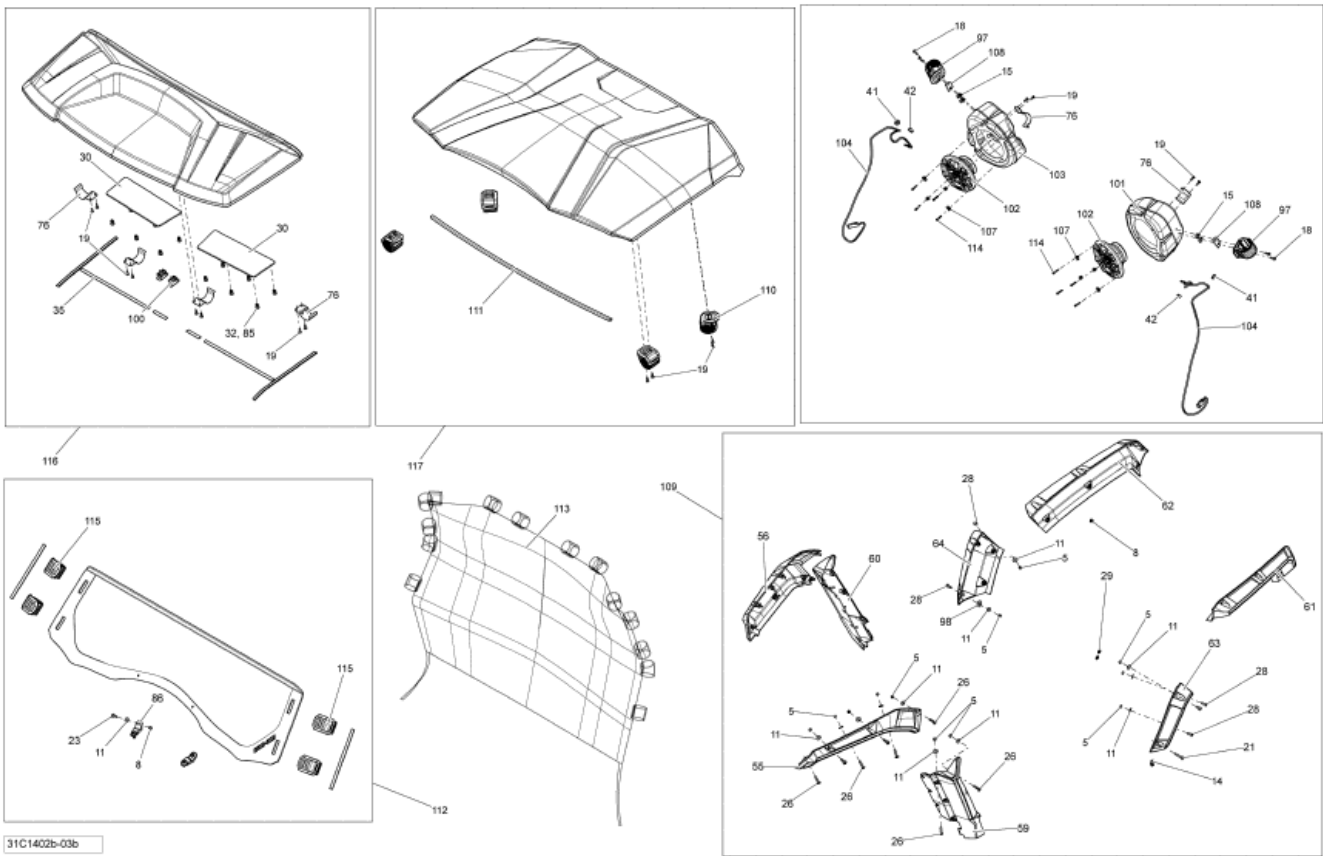
31C1401a-02a-03a

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207661644	Hex. Flanged Screw M6 X 16	0.58		4	4
2	207662044	Hex. Flanged Screw M6 X 20	1.99		2	2
3	210262080	Hex. Forming Screw M6 X 20	1.05		24	24
4	N/A	Not available for this vehicle			2	
5	232561434	Elastic Stop Nut M6	1.99		@	1
6	233251414	Hex. Flanged Elastic Nut M5	1.99	233251434	2	2
7	233261414	Hex. Flanged Elastic Nut M6	1.05		4	4
9	234051410	Flat Washer M5	0.43		4	4
10	234061600	Flat Washer M6, Stainless	0.27		4	4
11	234062670	Flat Washer	1.99		@	1
12	N/A	Not available for this vehicle			2	
13	234082410	Flat Washer 8 mm	1.05		2	2
14	250000048	Pannel Nut M6 X 1.0	1.35		@	1
16	250000128	Torx Truss Screw M6 X 20	1.30		4	4
19	250000146	Truss Head Torx Screw K50 X 16	1.17		15	15
21	250000215	Torx Screw M6 X 45	1.47		1	1
22	250000261	Torx Screw M6 X 16	0.72		4	4
24	250000297	Truss Head Torx Screw K50 X 20	1.99		8	8
25	250000350	Torx Truss Screw M6 X 20	4.99		2	2
26	250000371	Torx Screw M6 X 30 Stainless	1.99		@	1
27	250000398	Stainless Torx Screw,Nylon Patch,M6 X 30	1.99		2	2
28	250000488	Torx Truss Screw M6 X 20	1.99		7	7

29	N/A	Not available for this vehicle		5	
31	705006772	LH Front Fender, Magnesium. Magnesium Model		1	1
31	705006774	LH Front Fender, White. White Model		1	1
32	293150089	Tuflok Plastic Rivet	0.87	4	4
33	293150104	Pop Rivet 3/16"	0.47	14	14
34	705006773	RH Front Fender, Magnesium. Magnesium Model		1	1
34	705006775	RH Front Fender, White. White Model		1	1
36	705007076	Removable Hood, Magnesium. Magnesium Model	337.99	1	1
36	705007077	Removable Hood, White. White Model	343.99	1	1
37	705006126	LH Rear Lateral Pannel, Magnesium. Magnesium Model		1	1
37	705006744	LH Rear Lateral Pannel, White. White Model		1	1
38	293450274	Insert	4.97	2	2
38	293450274	Insert	5.99	2	2
39	293720053	Grommet	2.49	6	6
39	293720053	Grommet	2.99	6	6
40	N/A	Not available for this vehicle		2	
43	517302785	Clip	0.62	31	31
43	517302785	Clip	0.79	31	31
44	517303439	Knob	2.49	4	4
44	517303439	Knob	2.99	4	4
45	517303756	Grommet	3.49	1	1
45	517303756	Grommet	3.99	1	1
46	705002409	Reflector, Amber	7.49	2	2
46	705002409	Reflector, Amber	7.99	2	2
47	705002885	LH Front Facia	41.99	1	1
48	705002886	RH Front Facia	41.99	1	1
49	705006037	LH Front Lateral Pannel, White. White Model	242.99	1	1
49	705006382	LH Front Lateral Pannel, Magnesium. Magnesium Model	237.99	1	1
50	705006059	RH Front Lateral Pannel, White. White Model	242.99	1	1
50	705006383	RH Front Lateral Pannel, Magnesium. Magnesium Model	188.99	1	1
51	705002891	Facia Front Support	19.99	2	2
52	705002894	RH Deflector	10.99	1	1
52	705002894	RH Deflector	11.99	1	1
53	705005113	LH Deflector	10.99	1	1
54	705005289	Fixed Hood, Magnesium. Magnesium Model	1037.49	1	1
54	705006036	Fixed Hood, White. White Model	1053.99	1	1
55	705003058	LH Upper Front Mudguards	24.99	1	1
56	705003059	RH Upper Front Mudguards	24.99	1	1
57	705003306	Front Facia	54.49	1	1
58	N/A	Not available for this vehicle		1	
59	705003601	LH Lower Front Mudguards	24.99	1	1
60	705003602	RH Lower Front Mudguards	24.99	1	1
63	705003605	LH Lower Rear Mudguards	24.99	1	1
64	705003606	RH Lower Rear Mudguards	24.99	1	1
65	N/A	Not available for this vehicle		1	
66	N/A	Not available for this vehicle		1	
67	705003629	Upper Facia, Black	13.49	1	1
70	705003841	Support Plate	0.99	12	12
71	705004261	Support Plate	1.99	2	2

72	705004336	Center Upper Facia Protector	2.49	1	1
73	705005287	CVT Inlet Cover, Magnesium. Magnesium Model	119.99	1	1
73	705006054	CVT Inlet Cover, White. White Model	117.99	1	1
74	705004350	LH Upper Facia Protector	2.49	1	1
75	705004351	RH Upper Facia Protector	2.49	1	1
77	705004755	Lower Front Facia Protector	11.99	1	1
78	705004819	LH Lower Rear Facia Protector	11.99	1	1
79	705004820	RH Lower Rear Facia Protector	11.99	1	1
83	705005156	Oval Washer	2.49	2	2
83	705005156	Oval Washer	2.99	2	2
87	705006075	RH Protector Plate	50.99	1	1
88	705006993	LH Middle Side Pannel	30.99	1	1
89	705006994	RH Middle Side Pannel	30.99	1	1
94	705007171	Cup	5.99	24	24
95	705007227	Rear Protector Plate		1	1
96	705007883	LH Protector Plate		1	1
98	250200086	Flat Washer	3.49	1	1
98	250200086	Flat Washer	3.99	1	1
99	708000759	Rubber Stopper	2.49	2	2
99	708000759	Rubber Stopper	2.99	2	2
105	705006127	RH Rear Lateral Pannel, Magnesium. Magnesium Model		1	1
105	705006745	RH Rear Lateral Pannel, White. White Model		1	1
106	293250318	Seal		2	2

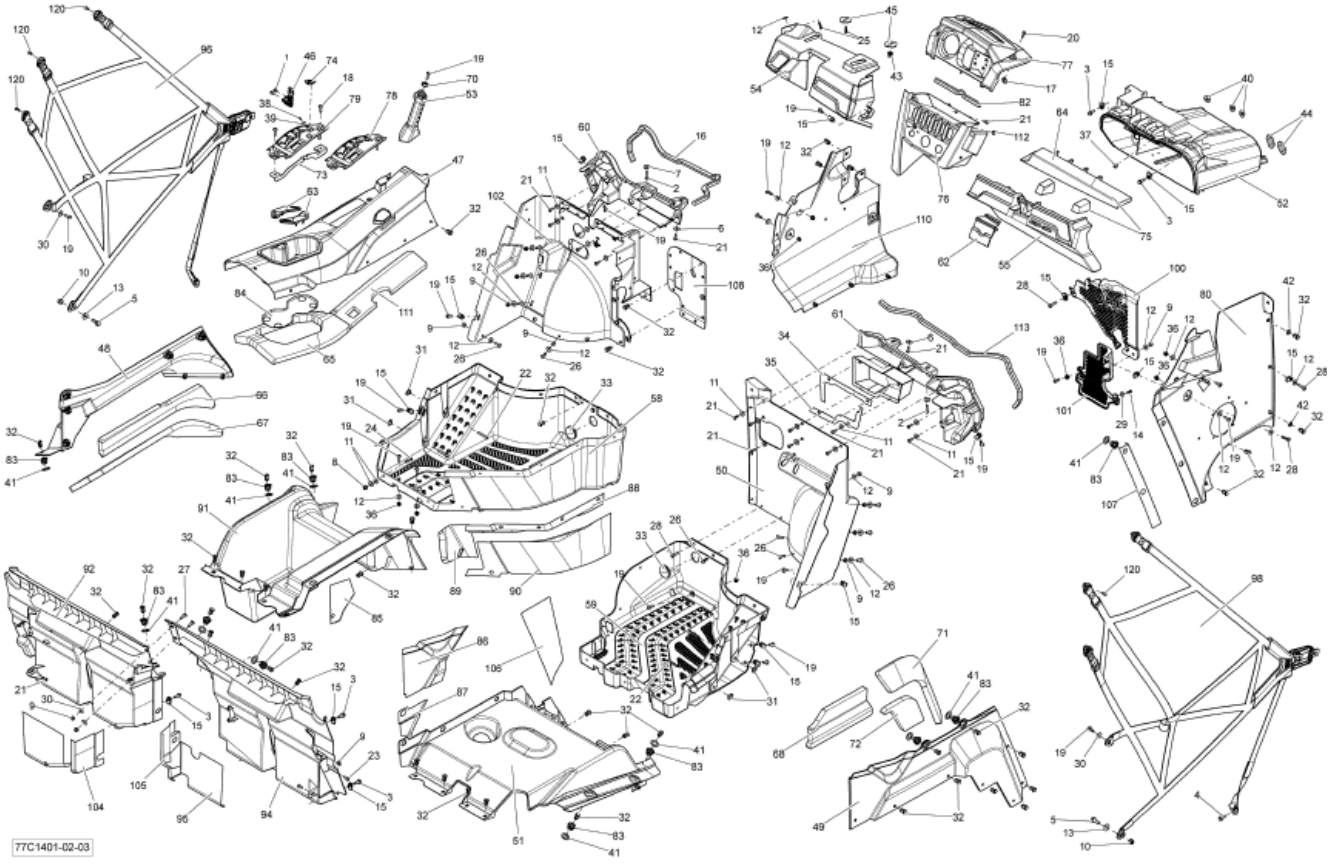
Commander 1000, LTD, 2014: 09- Body And Accessories KIT



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
5	N/A	Not available for this vehicle			43	
8	233261494	Hex. Elastic Flanged Nut M6	0.72		4	4
11	234062670	Flat Washer	1.99		2	2
14	N/A	Not available for this vehicle			4	
15	250000079	Panel Nut M5 X 0.8	2.97		4	4
18	250000130	Torx Screw M5 X 20	1.30		4	4
19	250000146	Truss Head Torx Screw K50 X 16	1.17		@	1
21	N/A	Not available for this vehicle			1	
23	250000284	Torx Screw M6 x 25	1.99		2	2
26	N/A	Not available for this vehicle			4	
28	250000488	Torx Truss Screw M6 X 20	1.99		2	2
29	N/A	Not available for this vehicle			5	
30	280000496	Visor Pocket	21.99		2	2
32	293150089	Tuflok Plastic Rivet	0.87		12	12
35	293250087	Gasket, Neoprene	4.99		@	1
35	293250087	Gasket, Neoprene	5.99		@	1
41	414036300	Grommet	2.17		2	2
41	414036300	Grommet	2.28		2	2
42	414227300	Clip	1.15		2	2
55	N/A	Not available for this vehicle			1	
56	N/A	Not available for this vehicle			1	
59	N/A	Not available for this vehicle			1	
60	N/A	Not available for this vehicle			1	
61	N/A	Not available for this vehicle			1	

62	N/A	Not available for this vehicle			1	
63	N/A	Not available for this vehicle			1	
64	N/A	Not available for this vehicle			1	
76	705004430	"U" Bracket	12.99		6	6
85	705005658	Visor Fastener Kit	177.49		1	1
86	705005776	Windshield Support	9.99		2	2
97	705007962	Perforated Velcro Strap			6	6
98	N/A	Not available for this vehicle			1	
100	710001999	Plug Carling	5.99		2	2
100	710001999	Plug Carling	6.99		2	2
101	710002837	LH Speaker Box Ass'y			1	1
102	710002838	Speaker	117.49		2	2
103	710002839	RH Speaker Box Ass'y			1	1
104	710002857	Speaker Harness	74.49		2	2
107	250100143	Extruded Panel Nut M4 X 0.7	5.99		8	8
107	250100143	Extruded Panel Nut M4 X 0.7	6.99		8	8
108	710002946	M5 Support Plate	5.99		2	2
109	N/A	Not available for this vehicle			1	
110	705005720	Perforated Velcro Strap		...	4	4
111	293200136	Seal, Meter	9.49		@	1
112	705005671	Half Windshield Ass'y	294.99		1	1
113	715002003	Rear Net Wind Deflector Ass'y			1	1
114	250000622	Torx Pan Screw M4 X 20	1.99		8	8
115	705007961	Velcro Strap			4	4
116	715001952	Roof Visor Ass'y			1	1
117	715001949	Mid Roof Kit			1	1

Commander 1000, LTD, 2014: 09- Cab Interior



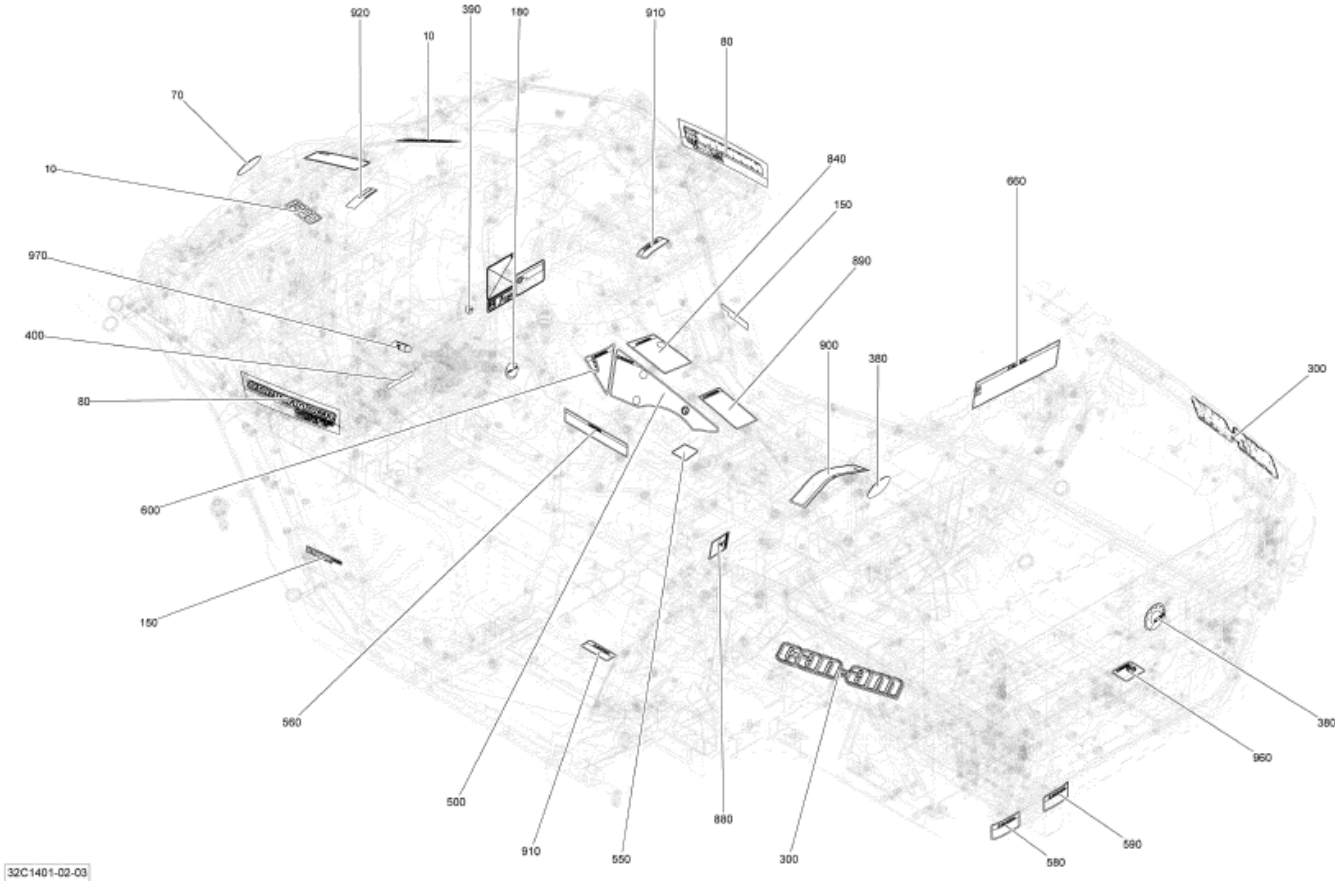
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	205951046	Socket Head Screw M5 X 10	1.99		2	2
2	207162544	Hex. Screw M6 X 25	0.87		2	2
3	207662034	Hex. Flanged Screw M6 X 20	1.99		6	6
4	207662044	Hex. Flanged Screw M6 X 20	1.99		1	1
5	207682544	Hex. Flanged Screw M8 X 25	1.99	207682534	2	2
6	224060201	Flat Washer	0.90		2	2
7	224061201	Flat Washer	1.00		2	2
8	233261414	Hex. Flanged Elastic Nut M6	1.05		2	2
9	233261494	Hex. Elastic Flanged Nut M6	0.72		19	19
10	233281414	Hex. Flanged Elastic Nut M8	1.05		@	1
11	234062410	Flat Washer 6 mm	0.62		18	18
12	234062670	Flat Washer	1.99		29	29
13	234082410	Flat Washer 8 mm	1.05		2	2
14	241151640	Hex. Flanged Screw K50 X 16	1.17		1	1
15	250000048	Pannel Nut M6 X 1.0	1.35		20	20
16	293200093	Neoprene Seal	11.99		@	1
16	293200093	Neoprene Seal	12.99		@	1
17	250000079	Panel Nut M5 X 0.8	2.97		2	2
18	250000081	Torx Screw M6 X 25	3.13		2	2
19	250000128	Torx Truss Screw M6 X 20	1.30		23	23
20	250000130	Torx Screw M5 X 20	1.30		2	2
21	250000146	Truss Head Torx Screw K50 X 16	1.17		@	1

22	250000215	Torx Screw M6 X 45	1.47		4	4
23	250000261	Torx Screw M6 X 16	0.72		1	1
24	250000284	Torx Screw M6 x 25	1.99		1	1
25	250000297	Truss Head Torx Screw K50 X 20	1.99		2	2
26	250000335	Socket Head Screw M6 X 20	1.99		15	15
27	250000350	Torx Truss Screw M6 X 20	4.99		2	2
28	250000398	Stainless Torx Screw,Nylon Patch,M6 X 30	1.99		4	4
29	250200025	Washer M5	0.58		1	1
30	250200040	Flat Washer	1.43		2	2
31	293100003	Nut M6	5.49		4	4
31	293100003	Nut M6	5.99		4	4
32	293150089	Tuflok Plastic Rivet	0.87		71	71
33	293250242	Rubber Cover	2.49		2	2
33	293250242	Rubber Cover	2.99		2	2
34	293250252	Upper Seal	1.99		1	1
35	293250253	Bottom Seal	1.99		1	1
36	293450274	Insert	4.97		11	11
36	293450274	Insert	5.99		11	11
37	293830005	Rubber Bumper	4.49		1	1
37	293830005	Rubber Bumper	4.99		1	1
38	390401400	Rivet		Obsolete	1	1
39	391301000	Washer	0.27		1	1
40	414859400	Cap	2.49		3	3
40	414859400	Cap	2.61		3	3
41	503189273	Washer	2.49		24	24
42	506151252	Washer	2.49		2	2
42	506151252	Washer	2.61		2	2
43	517302785	Clip	0.62		1	1
43	517302785	Clip	0.79		1	1
44	705003668	Oblong Grommet	3.99		4	4
44	705003668	Oblong Grommet	4.99		4	4
45	705003841	Support Plate	0.99		2	2
46	707000666	Lock	12.49		1	1
46	707000666	Lock	13.99		1	1
47	715001247	Central Console Ass'y. Except Europe	151.99		1	1
47	715001249	Central Console Ass'y. Europe	151.99		1	1
48	707900001	LH Side Console	20.99		1	1
49	707900002	RH Side Console	20.99		1	1
50	707900004	RH Front Floor	48.49		1	1
51	707900006	RH Under Cover Ass'y	69.49		1	1
52	707900046	Storage Bin	68.49		1	1
53	707900011	Passenger Handle	9.49		1	1
54	715001250	Dashboard Ass'y	48.49		1	1
55	715001263	Bin Cover Ass'y		...	1	1
58	707900022	LH Lower Floor	122.49		1	1
59	707900023	RH Lower Floor	113.49		1	1
60	707900029	LH Floor Support	8.49		1	1
61	707900030	RH Floor Support	9.99		1	1
62	707900031	Latch	4.49		1	

					1
63	707900036	Cup Retainer	3.49	2	2
64	707900038	Trim Glove Box	6.99	1	1
65	707900042	Rear Central Console Foam	13.49	1	1
66	707900043	LH Upper Lateral Console Foam	9.99	1	1
67	707900044	LH Lower Lateral Console Foam	13.49	1	1
68	707900045	RH Lateral Console Foam	9.99	1	1
70	707900048	Connector Tube	4.99	1	1
71	707900055	RH Lateral Console Foam	9.99	1	1
72	707900056	RH Lateral Console Foam	9.99	1	1
73	707900058	Lock Support	14.49	1	1
74	707900060	Cap	3.99	1	1
75	707900062	Trim Glove Box	12.49	1	1
76	707900065	Lower Central Dashboard Ass'y. LTD	15.99	1	1
76	715001265	Central Dashboard Ass'y. Except Europe	35.99	1	1
76	715900108	Central Dashboard Ass'y. Europe	15.99	1	1
77	707900066	Gauge Support	19.99	1	1
78	707900070	Lever Indicator	9.49	1	1
79	707900071	Lever Indicator	9.99	1	1
80	707900098	RH Fixe Side Console	49.99	1	1
82	271000110	Protection Trim	10.99	@	1
82	271000110	Protection Trim	11.99	@	1
83	707900133	Insert		24	24
84	707900145	Heat Sheet		1	1
85	707900146	Heat Sheet		1	1
86	707900147	Heat Sheet		1	1
87	707900148	Heat Sheet		1	1
88	707900149	Heat Sheet		1	1
89	707900150	Heat Sheet		1	1
90	707900151	Heat Sheet		1	1
91	715001982	Plaque Inférieur De Siège Ass. GA		1	1
92	707900164	LH Rear Deflector. LTD Europe		1	1
92	707900165	LH Rear Deflector. LTD Except Europe		1	1
94	707900166	RH Rear Deflector		1	1
95	707900167	Heat Shield		1	1
96	707900171	LH Safety Net		1	1
98	707900172	RH Safety Net		1	1
100	707900178	Grill		1	1
101	707900180	Grill		1	1
102	707900181	LH Front Floor		1	1
103	707900182	Heat Shield		1	1
104	707900183	Heat Shield		1	1
105	707900184	Heat Shield		1	1
106	707900190	Heat Sheet		1	1
107	707900191	Heat Sheet		1	1
108	707900192	Deflector		1	1
110	707900193	Front Side Dash Panel		1	1
111	707900214	Front Central Console Foam		1	1
112	732610072	Push Nut	1.18	3	3

113	293200093	Neoprene Seal	11.99	@	1
113	293200093	Neoprene Seal	12.99	@	1
120	250000145	Torx Screw M5 X 14	1.17	6	6

Commander 1000, LTD, 2014: 09- Decals

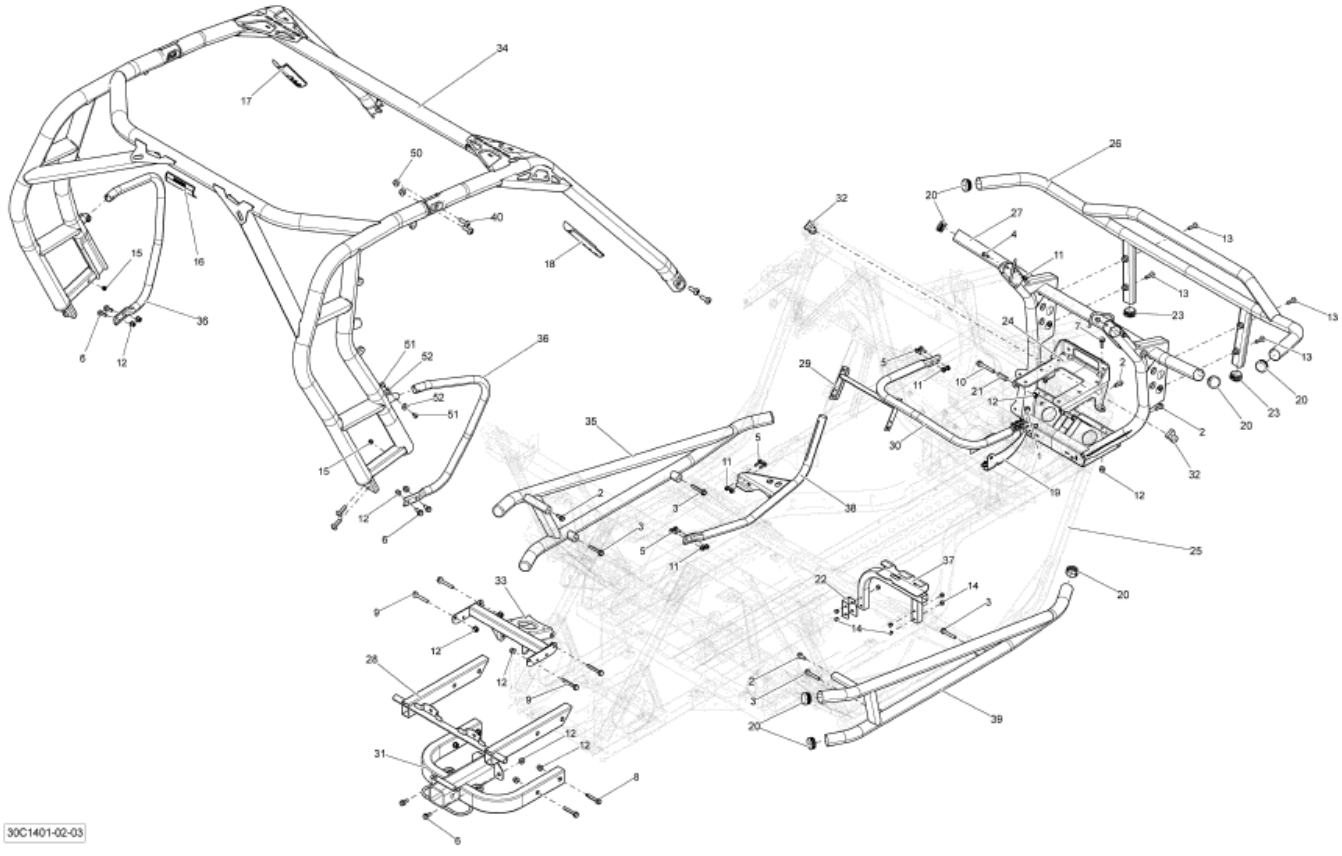


32C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
10	704903748	Hood Decal, Rotax 1000. White Model			2	2
10	704903749	Hood Decal, Rotax 1000. Magnesium Model			2	2
70	219902469	Logo BRP, 68 mm	12.99		1	1
70	219902469	Logo BRP, 68 mm	29.49		1	1
80	704903002	Lateral Decal, Commander Limited. White Model	16.99		2	2
80	704903030	Lateral Decal, Commander Limited. LTD Magnesium Model	16.99		2	2
150	704903766	Decal ROTAX POWER. Magnesium Model			2	2
150	704903807	Decal ROTAX POWER. White Model			2	2
180	704902065	Logo Can-Am, 35 mm	8.49		1	1
300	704902717	Decal, Can-Am. Magnesium Model	12.49		2	2
300	704903001	Decal, Can-Am. White Model	16.99		2	2
380	219902469	Logo BRP, 68 mm	12.99		1	1
380	219902469	Logo BRP, 68 mm	29.49		1	1
390	219902677	Logo BRP, 20 mm. LTD	9.49		1	1
400	704901558	Decal, Dynamic Power Steering. Except STD	7.49		1	1
400	704901558	Decal, Dynamic Power Steering. Except STD	7.99		1	1
500	704903671	Warning Decal, Death And Injuries. Except Europe			1	1
550	704902407	Decal, Public Roads Use. Except Europe	0.01		1	1
560	704903809	Warning Decal, Tire Pressure			1	1

580	704902336	Warning Decal, Towing. Except Europe	0.01	1	1
590	704902345	Warning Decal, Trailer	0.01	1	1
600	704903692	Warning Label "Speed Selector"		1	1
660	704903894	Warning Decal, Cargo Box		1	1
840	704903676	Warning Label "Passenger"		1	1
880	704902350	Warning Decal, Injury	0.01	2	2
890	N/A	Not available for this vehicle. Europe		1	
900	704903808	Int'l Label Multi Language. Except North America		1	1
910	704902434	Caution Decal, Maximum Load. LTD	8.49	1	1
920	707800373	Decal, Air Filter Maintenance	0.01	1	1
960	704902420	Warning Decal, MAX 100 kg/222 lb	0.01	1	1
970	704903434	Notice Decal, Steering. Except STD	0.01	1	1

Commander 1000, LTD, 2014: 09- Frame

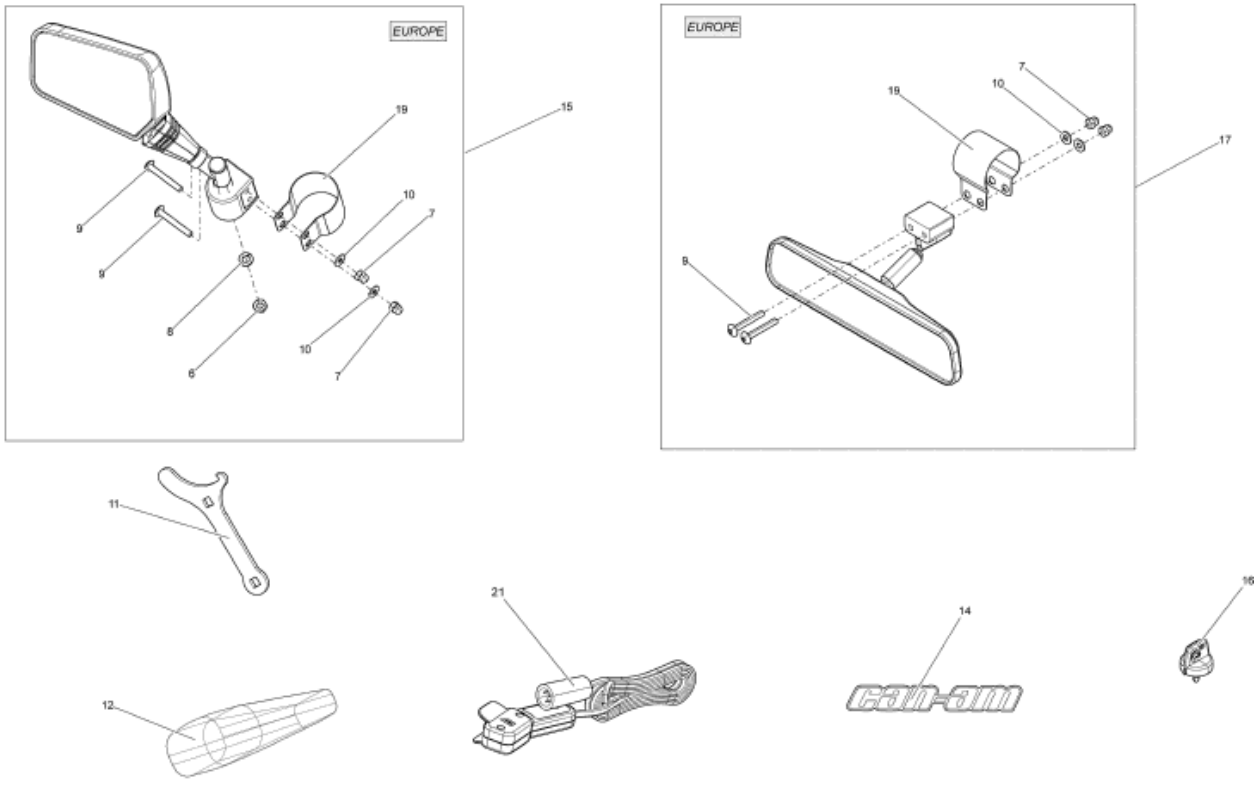


30C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207581644	Hex. Flanged Screw M8 X 16, Scotch Grip	4.33		1	1
2	207582044	Hex. Flanged Screw M8 X 20, Scotch Grip	1.30		2	2
3	N/A	Not available for this vehicle			2	
4	207661644	Hex. Flanged Screw M6 X 16	0.58		2	2
5	207662044	Hex. Flanged Screw M6 X 20	1.99		8	8
6	207682044	Hex. Flanged Screw M8 X 20	0.87		2	2
7	207682544	Hex. Flanged Screw M8 X 25	1.99	207682534	2	2
8	207685044	Hex. Flanged Screw M8 X 50	1.30		4	4
9	207685544	Hex. Flanged Screw M8 X 55	4.49		4	4
10	207686044	Hex. Flanged Screw M8 x 60	2.38		2	2
11	233261414	Hex. Flanged Elastic Nut M6	1.05		12	12
12	233281414	Hex. Flanged Elastic Nut M8	1.05		@	1
13	250000197	Torx Truss Screw M8 X 30	2.40		4	4
14	293150096	Hemlock Rivet, 6.5 mm	2.62		7	7
15	293450274	Insert	4.97		2	2
15	293450274	Insert	5.99		2	2
16	704903492	Warning Label			1	1
17	704903679	Warning Label			1	1
18	704903680	Warning Label			1	1
19	705201721	Front Differential Support	14.99		1	1
20	705202455	Cap	1.99		@	1

20	705202455	Cap	2.99	@	1
21	705202499	Bushing	2.49	2	2
21	705202499	Bushing	2.99	2	2
22	705202602	Seat Support	2.49	1	1
23	705202631	Tube Cap	13.49	2	2
24	715000704	Winch Plate	89.99	1	1
25	715002077	Frame Ass'y		1	1
26	715000958	Front Bumper, XT, X	219.99	1	1
27	705202995	Front Bumper	219.99	1	1
28	705203325	Box Holder	119.99	1	1
29	705203330	Reinforcement Panel	95.99	1	1
30	705203332	Handle	89.99	1	1
31	715001251	Trailer Hitch Ass'y	255.99	1	1
32	705203415	Binding Block		2	2
33	705203538	Differential Holder		1	1
34	705203579	Cage Kit, Front And Rear Section		1	1
35	N/A	Not available for this vehicle		1	
36	705203640	Side Protector Tube. Right		1	1
36	705203637	Side Protector Tube. Left		1	1
37	705203720	Seat Holder		1	1
38	705203828	Handle		1	1
39	N/A	Not available for this vehicle		1	
40	250000624	Screw Torx M10 X 30	1.99	12	12
50	233101464	Hex. Elastic Flange Nut , M10 X 1.5	1.99	4	4
51	250000439	Torx Truss Screw M6 X 14	4.49	4	4
52	705202223	Offset Washer	2.49	4	4

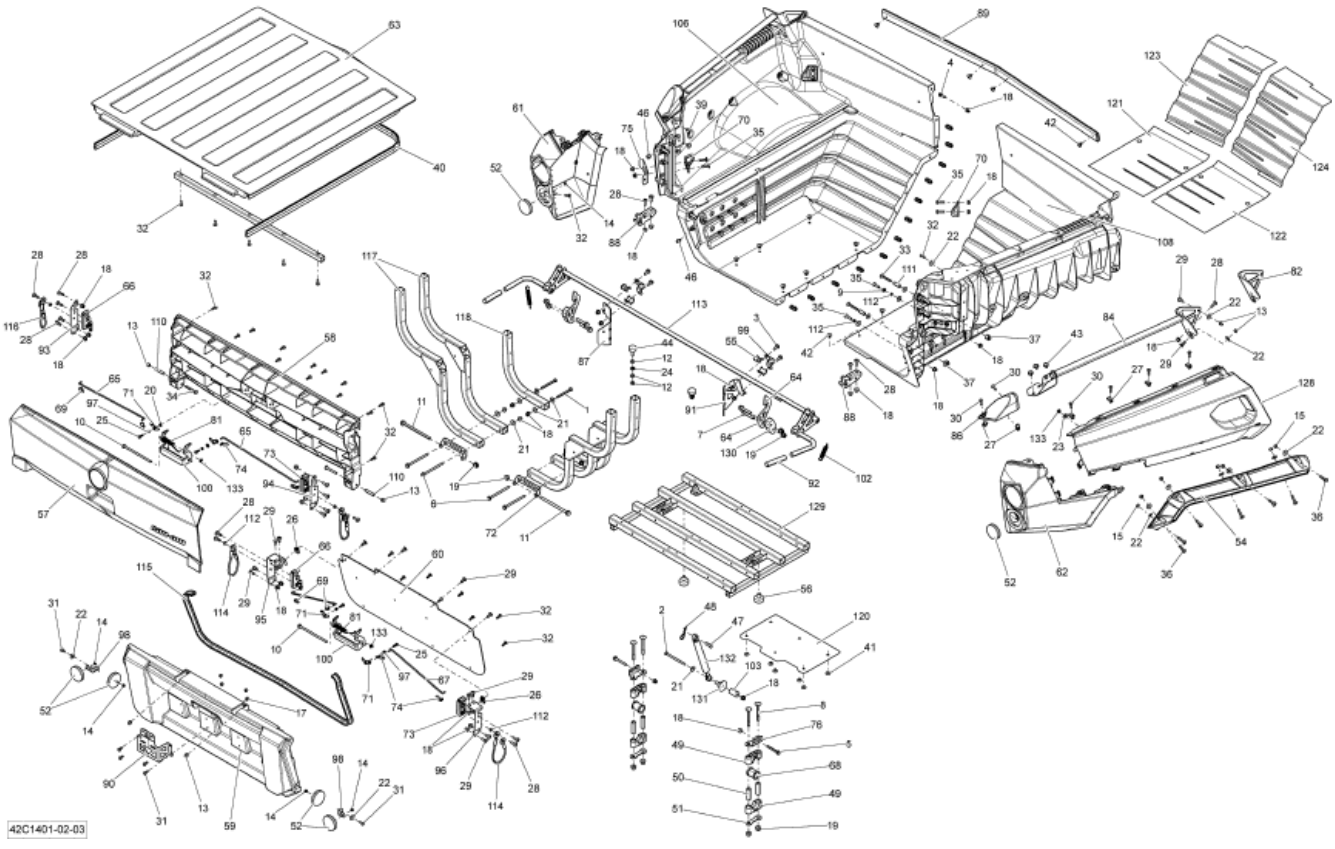
Commander 1000, LTD, 2014: 09- Mirrors And Tools



67C1401-02-03

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
6	N/A	Not available for this vehicle			1	
7	N/A	Not available for this vehicle			4	
8	N/A	Not available for this vehicle			1	
9	N/A	Not available for this vehicle			4	
10	N/A	Not available for this vehicle			4	
11	529000057	Adjustment Wrench	5.99		1	1
12	704700148	Tool Kit	38.99		1	1
12	704700148	Tool Kit	44.99		1	1
14	704902319	Cage Decal	8.49		1	1
14	704902319	Cage Decal	8.99		1	1
15	N/A	Not available for this vehicle			1	
16	710002183	Key, Electronic	18.49		1	1
16	710002183	Key, Electronic	19.99		1	1
17	N/A	Not available for this vehicle			1	
19	N/A	Not available for this vehicle			2	
21	710001002	Remote Control	81.99		1	1

Commander 1000, LTD, 2014: 09- Rear Cargo Box



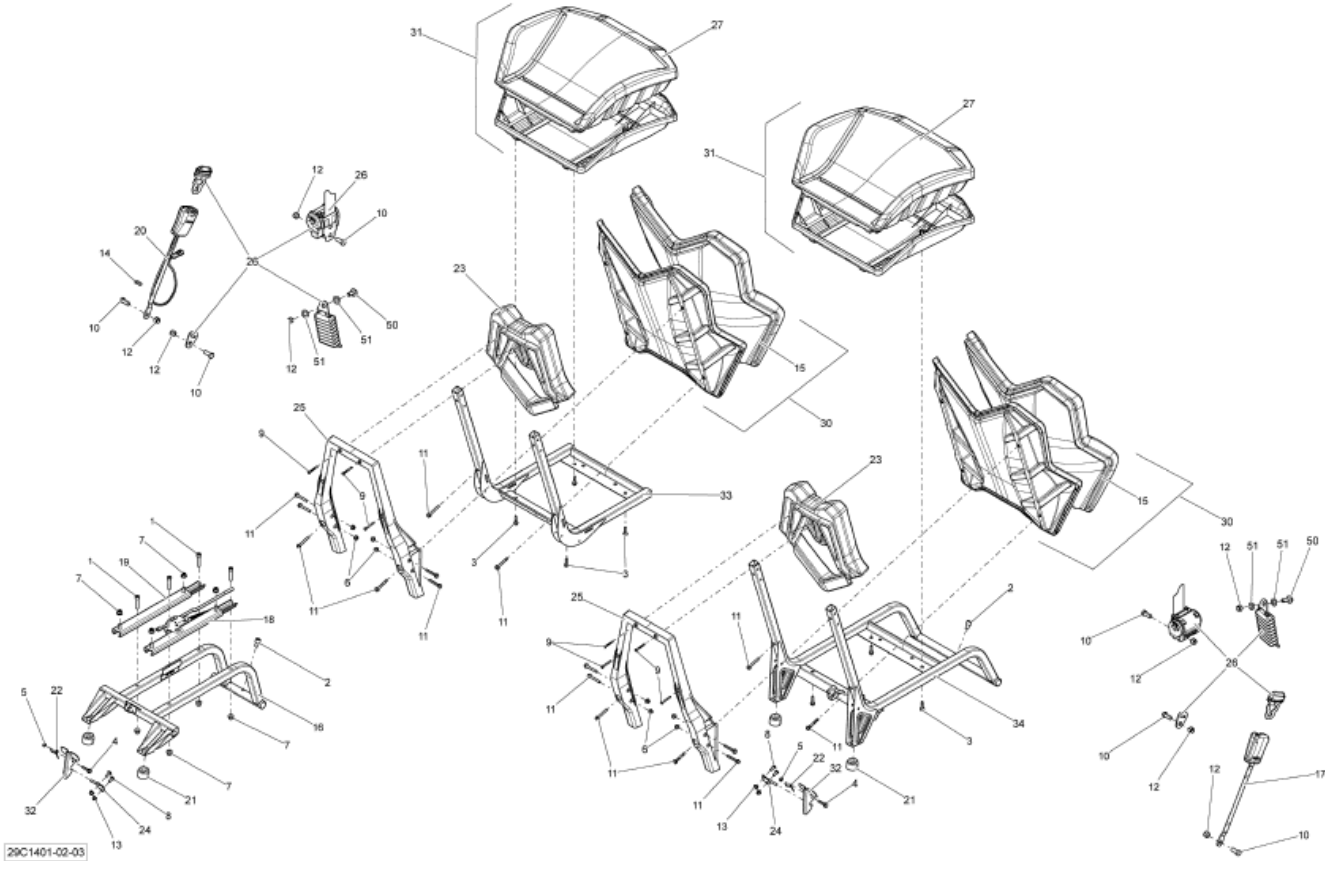
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	207066544	Hex. Screw M6 X 65	0.37		4	4
2	207069044	Hex. Screw M6 X 90	3.70		1	1
3	207661644	Hex. Flanged Screw M6 X 16	0.58		4	4
4	207662044	Hex. Flanged Screw M6 X 20	1.99		13	13
5	207665044	Hex. Flanged Screw M6 X 50	3.13		2	2
6	207669584	Hex. Flanged Screw M6 X 95	2.62		4	4
7	207684586	Hex. Flanged Screw M8 X 45, Scotch Grip	2.99		4	4
8	207787044	Carriage Bolt M8 X 70	1.00		4	4
9	224061121	Flat Washer	0.43		2	2
10	230663084	Hex. Flanged Screw M6 X 130	2.62		2	2
11	230683034	Hex. Flanged Screw M8 X 130	5.99		2	2
12	232180600	Hex. Jam Nut M8	0.52		6	6
13	232361493	Domed Nut M6	1.65		8	8
14	232551414	Elastic Stop Nut M5	0.72		4	4
15	232561434	Elastic Stop Nut M6	1.99		14	14
17	N/A	Not available for this vehicle			8	
18	233261414	Hex. Flanged Elastic Nut M6	1.05		60	60
19	233281414	Hex. Flanged Elastic Nut M8	1.05		10	10
20	234061410	Flat Washer 6 mm	1.00		4	4
21	234062410	Flat Washer 6 mm	0.62		13	13
22	234062670	Flat Washer	1.99		@	1
23	234081100	Flat Washer 8 mm, Nylon	0.87		2	2

24	234181401	Lock Washer 8 mm	0.75	2	2
25	241151640	Hex. Flanged Screw K50 X 16	1.17	4	4
26	250000048	Pannel Nut M6 X 1.0	1.35	2	2
27	250000079	Panel Nut M5 X 0.8	2.97	12	12
28	250000128	Torx Truss Screw M6 X 20	1.30	20	20
29	250000129	Torx Screw M6 X 16	0.97	16	16
30	250000130	Torx Screw M5 X 20	1.30	12	12
31	N/A	Not available for this vehicle		10	
32	250000146	Truss Head Torx Screw K50 X 16	1.17	36	36
33	250000215	Torx Screw M6 X 45	1.47	4	4
34	250000239	Torx Truss Screw M6 X 50	2.17	2	2
35	250000284	Torx Screw M6 x 25	1.99	12	12
36	250000371	Torx Screw M6 X 30 Stainless	1.99	14	14
37	269500725	Nut Housing Ass'y	3.49	4	4
37	269500725	Nut Housing Ass'y	3.99	4	4
39	293150100	Pop Rivet 3/16"	0.85	20	20
40	293250240	Neoprene Seal	10.99	@	1
41	293150103	Pop Rivet 3/16"	0.47	6	6
42	293150104	Pop Rivet 3/16"	0.47	16	16
43	293150190	Pop Rivet 3/16	4.49	6	6
44	293720091	Frame Rubber Bumper	4.99	2	2
46	293830005	Rubber Bumper	4.49	4	4
46	293830005	Rubber Bumper	4.99	4	4
47	414079100	Pin	1.99	1	1
48	414575600	Hair Pin	1.58	1	1
49	506150400	Housing Half	5.99	4	4
49	506150400	Housing Half	6.29	4	4
50	506150500	Housing Bushing	5.99	4	4
50	506150500	Housing Bushing	6.29	4	4
51	506150600	Stopper Plate	3.49	2	2
51	506150600	Stopper Plate	3.66	2	2
52	705002408	Reflector, Red	7.49	4	4
52	705002408	Reflector, Red	7.99	4	4
54	705003603	LH Upper Rear Mudguards	24.99	1	1
54	705003604	RH Upper Rear Mudguards	24.99	1	1
55	705500033	Half Ring	2.47	4	4
55	705500033	Half Ring	2.99	4	4
56	708000884	Rubber Stopper	5.99	2	2
57	708300552	Outside Top Pannel, Magnesium. Magnesium Model	299.99	1	1
57	708300672	Outside Top Pannel, White. White Model	299.99	1	1
58	708300053	Inside Top Pannel	89.49	1	1
59	715001255	Lower Panel Ass'y	99.99	1	1
60	708300073	Inside Bottom Pannel	10.99	1	1
61	708300103	LH Rear Facia	13.49	1	1
62	708300104	RH Rear Facia	13.49	1	1
63	708300131	Separator Pannel Ass'y	209.49	1	1
64	708300136	Box Retainer	4.99	2	2
65	708300160	Top Rod	1.99	2	2
66	708300162	LH Latch	12.49	2	2

67	708300164	Lower Bottom Rod	1.99	2	2
68	708300172	Pivot Bushing	2.49	2	2
69	708300182	LH Tie Rod Clip	0.99	4	4
69	708300182	LH Tie Rod Clip	1.99	4	4
70	708300183	Retaining Plate	5.99	4	4
71	708300184	Activator	5.99	4	4
72	708300185	Bracket Pivot	2.49	2	2
73	708300201	RH Latch	12.49	2	2
74	708300202	RH Tie Rod Clip	0.99	4	4
74	708300202	RH Tie Rod Clip	1.99	4	4
75	708300206	Retaining Plate Support	2.49	2	2
76	708300210	Adjustable Stopper Plate	2.49	2	2
81	708300219	Spring	2.49	2	2
82	N/A	Not available for this vehicle		1	
84	708300231	LH Welded Rail	49.99	1	1
84	708300232	RH Welded Rail	49.99	1	1
86	708300233	LH Rail Cover	0.99	1	1
86	708300234	RH Rail Cover	3.49	1	1
87	708300278	LH Latch Lever Support	4.99	1	1
88	708300345	Upper Pivot Support	2.49	2	2
89	708300346	Front Support	19.49	1	1
90	N/A	Not available for this vehicle		2	
91	708300351	RH Latch Lever Support	4.99	1	1
92	708300358	Cap Latch Lever	3.49	2	2
93	708300359	LH Upper Support	4.49	1	1
94	708300360	RH Upper Support	4.49	1	1
95	708300361	LH Lower Support	5.99	1	1
96	708300362	RH Lower Support	5.99	1	1
97	708300365	Bushing	4.49	4	4
98	N/A	Not available for this vehicle		2	
99	708300392	Clamp Reatiner	1.99	2	2
100	708300398	Handle	9.49	2	2
102	708300454	Spring	2.49	2	2
103	708300470	Spacer	5.99	1	1
106	715001259	LH Box Ass'y	84.99	1	1
108	715001257	RH Box Ass'y	76.99	1	1
110	708300735	Bushing	7.99	2	2
111	708300736	Spacer	5.99	4	4
112	708300737	Bushing	3.99	8	8
113	708300751	Cargo Handle Ass'y	47.99	1	1
114	708300762	Lower Retainer Cable	10.99	2	2
115	293250240	Neoprene Seal	10.99	@	1
116	708300763	Upper Retainer Cable	19.99	2	2
116	708300763	Upper Retainer Cable	20.99	2	2
117	708300879	Welded Lateral Support, Black	270.99	4	4
118	708300877	Lateral Support, Black	124.99	2	2
120	708300780	Heat Deflector	9.99	1	1
121	708300809	Heat Deflector Sheet	5.99	1	1
122	708300810	Heat Deflector Sheet	5.99	1	1
123	708300811	Heat Deflector Sheet	5.99	1	

					1
124	708300812	Heat Deflector Sheet	5.99	1	1
128	708300838	LH Rear Fender, Magnesium. Magnesium Model		1	1
128	708300840	LH Rear Fender, White. White Model		1	1
128	708300839	RH Rear Fender, Magnesium. Magnesium Model	530.99	1	1
128	708300841	RH Rear Fender, White. White Model		1	1
129	708300875	Box Support, Black	222.49	1	1
130	708300902	Spacer		2	2
131	708301059	Spacer		1	1
132	708301136	Gaz Shock		1	1
133	732610072	Push Nut	1.18	4	4

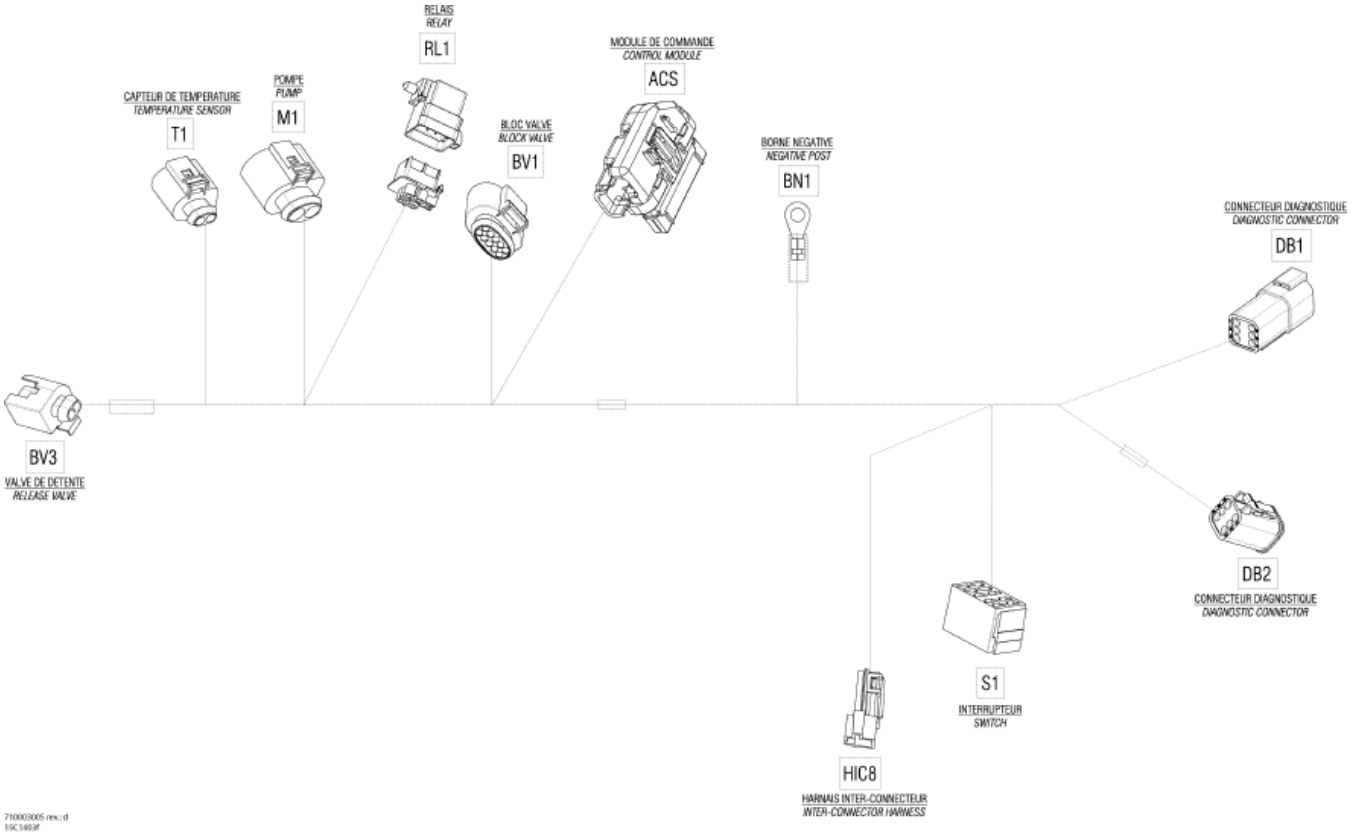
Commander 1000, LTD, 2014: 09- Seat



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	205084044	Socket Head Screw M8 X 40	2.32		4	4
2	205501644	Socket Screw M10 X 16	3.49		2	2
3	207562544	Hex. Flanged Screw M6 X 25, Scotch Grip	1.30		8	8
4	207663034	Hex. Flanged Screw M6 X 30	1.99		2	2
5	232561600	Hex. Elastic Stop Nut M6	0.87		2	2
6	233161464	Hex. Elastic Flange Nut M6	0.99		8	8
7	233281414	Hex. Flanged Elastic Nut M8	1.05		8	8
8	250000223	Torx Screw M6 X 16	1.99		4	4
9	250000490	Hex. Washer Head Screw PT K50 X 40	5.99		12	12
10	250000521	Hex. Cap Screw 7/16"X 1"	1.99		6	6
11	250000672	Hex. Flange Screw M6	1.99		16	16
12	250100135	Nylon Insert Hex. Lock Nut 7/16-20	5.99		6	6
13	293450274	Insert	4.97		4	4
13	293450274	Insert	5.99		4	4
14	293750008	Tie-Rap 350 mm	0.49		1	1
14	293750008	Tie-Rap 350 mm	0.99		1	1
15	708000935	Backrest Cover LTD	79.99		2	2
16	708000667	Seat Member	41.99		1	1
17	708000844	Passenger Buckle Side	37.99		1	1
18	708000846	RH Rail	23.49		1	1
19	708000848	LH Rail	34.99		1	1

20	708000987	Driver Buckle Side	58.99	1	1
21	708000899	Rubber Bumper	0.99	4	4
22	708000921	Spring	0.99	2	2
23	708001074	Head Rest		2	2
24	708001238	Retaining Rod	5.99	2	2
25	708001245	Seat Support		2	2
26	708001302	Safety Belt		2	2
27	708001099	Cover Seat, LTD Model	68.99	2	2
30	708001411	Backrest Ass'y		2	2
31	708001412	Cushion Ass'y		2	2
32	708001355	Seat Latch		2	2
33	708001356	Operator Frame		1	1
34	708001357	Seat Frame		1	1
50	708000890	Safety Belt Screw	3.49	2	2
51	708000891	Position Washer	0.99	4	4

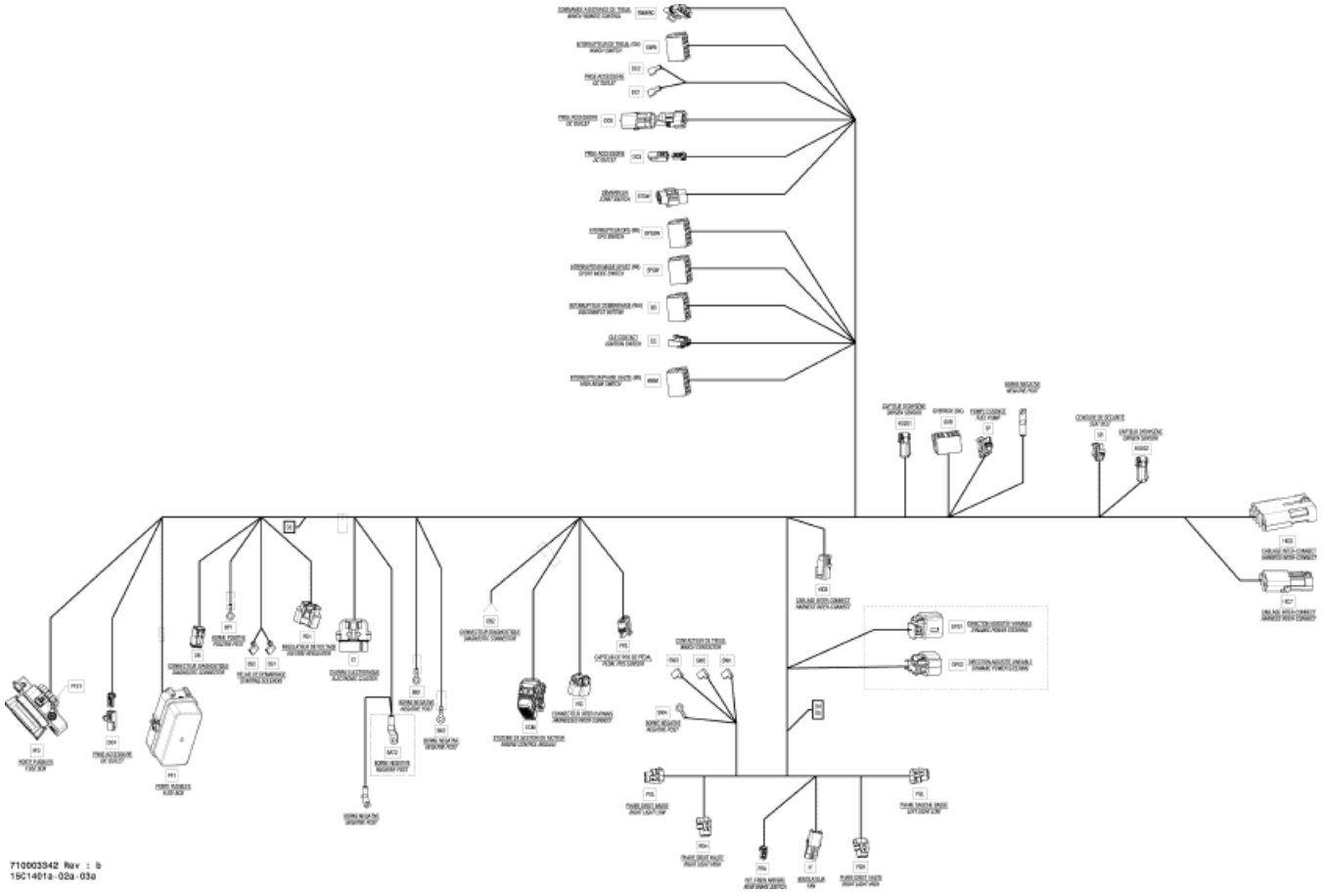
Commander 1000, LTD, 2014: 10- Electrical Harness Compressor, LTD



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710003005	Compressor Harness. LTD	267.99		1	1
ACS	515175812	Plug. LTD	4.49		@	1
ACS	515175812	Plug. LTD	4.99		@	1
ACS	515176221	Female Housing. LTD	12.49		@	1
ACS	515176222	Wire Seal. LTD	11.99		@	1
ACS	515176223	Female Terminal Housing, 36 Circuits. LTD	10.99		@	1
ACS	515176224	Terminal Support. LTD	12.49		@	1
ACS	710001131	Female Terminal. LTD	4.99		@	1
ACS	710001131	Female Terminal. LTD	5.99		@	1
BN1	278001392	Open Barrel. LTD	2.49		@	1
BN1	278001392	Open Barrel. LTD	2.99		@	1
BV1	710001185	Female Terminal. LTD	7.49		@	1
BV1	710001258	Plug. LTD	3.49		@	1
BV1	XXX	Housing. LTD			@	
BV1	XXX	Seal. LTD			@	
BV3	278001482	Seal. LTD	2.49		@	1
BV3	278001482	Seal. LTD	2.99		@	1
BV3	XXX	Housing. LTD			@	
BV3	XXX	Terminal. LTD			@	
DB1	278000735	Female Lock, 6 Circuits. LTD	2.49		@	1
DB1	278000735	Female Lock, 6 Circuits. LTD	2.99		@	1
DB1	710001348	Male Terminal. LTD	8.49		@	1
DB1	710001348	Male Terminal. LTD	8.99		@	1
DB1	710001539	Male Terminal Housing, 6 Circuits. LTD	15.99		@	1

DB1	710001539	Male Terminal Housing, 6 Circuits. LTD	16.99	@	1
DB2	515175678	Male Wedge, 6 Circuits. LTD	4.49	@	1
DB2	515175678	Male Wedge, 6 Circuits. LTD	4.99	@	1
DB2	278001665	Female Terminal. LTD	4.49	@	1
DB2	278001665	Female Terminal. LTD	4.99	@	1
DB2	710001540	Male Housing, 6 Circuits. LTD	15.99	@	1
DB2	710001540	Male Housing, 6 Circuits. LTD	16.99	@	1
HIC8	XXX	Female Terminal. LTD		@	
M1	XXX	Housing. LTD		@	
M1	XXX	Seal. LTD		@	
M1	XXX	Terminal. LTD		@	
RL1	278000216	Wire Seal. LTD	2.49	@	1
RL1	278000216	Wire Seal. LTD	2.99	@	1
RL1	278001505	Wire Seal. LTD	4.49	@	1
RL1	278001505	Wire Seal. LTD	4.99	@	1
RL1	278001065	Wire Seal. LTD	4.49	@	1
RL1	278001065	Wire Seal. LTD	4.99	@	1
S1	710001931	Terminal. LTD	1.99	@	1
S1	710002000	Housing. LTD	5.99	@	1
S1	293550006	Female Terminal. LTD		@	1
T1	415128501	Seal. LTD	1.49	@	1
T1	415128501	Seal. LTD	1.56	@	1
T1	710002670	Housing. LTD		@	1
T1	710000836	Female Terminal. LTD	3.49	@	1
T1	710000836	Female Terminal. LTD	3.99	@	1

Commander 1000, LTD, 2014: 10- Electrical Harness Main Harness



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710003342	Main Harness Ass'y			1	1
BAT2	710000519	Open Barrel	6.99		@	1
BAT2	710000519	Open Barrel	7.99		@	1
BD	710002001	Housing Connector	9.99		@	1
BD	710003047	Terminal	3.99		@	1
BN1	710000913	Terminal	4.99		@	1
BN1	710000913	Terminal	5.99		@	1
BN2	278001392	Open Barrel	2.49		@	1
BN2	278001392	Open Barrel	2.99		@	1
BP1	710000913	Terminal	4.99		@	1
BP1	710000913	Terminal	5.99		@	1
CC	710000849	Male Housing, 6 Circuits	7.49		@	1
CC	710000849	Male Housing, 6 Circuits	7.99		@	1
CC	710000848	Lock	1.63		@	1
CC	710000848	Lock	1.99		@	1
CC	710001635	Terminal	1.99		@	1
CC	710001635	Terminal	2.99		@	1
CI	515175801	Female Housing, 24 Circuits	8.49		@	1
CI	515175801	Female Housing, 24 Circuits	8.99		@	1
CI	515175802	Retainer Block	7.49		@	1

CI	515175802	Retainer Block	7.99	@	1
CI	515175812	Plug	4.49	@	1
CI	515175812	Plug	4.99	@	1
CI	710000399	Female Housing	10.99	@	1
CI	710000399	Female Housing	11.99	@	1
CI	515175803	Wire Seal	12.49	@	1
CI	515175803	Wire Seal	13.99	@	1
CI	710001131	Female Terminal	4.99	@	1
CI	710001131	Female Terminal	5.99	@	1
D2	409012700	Diode	7.49	@	1
D2	409012700	Diode	7.99	@	1
D4	409012700	Diode	7.49	@	1
D4	409012700	Diode	7.99	@	1
D5	409012700	Diode	7.49	@	1
D5	409012700	Diode	7.99	@	1
DB	278002896	Housing, 6 Circuits	11.99	@	1
DB	515175678	Male Wedge, 6 Circuits	4.49	@	1
DB	515175678	Male Wedge, 6 Circuits	4.99	@	1
DB	278001665	Female Terminal	4.49	@	1
DB	278001665	Female Terminal	4.99	@	1
DB2	278001665	Female Terminal	4.49	@	1
DB2	278001665	Female Terminal	4.99	@	1
DC1	409010800	Female Terminal	0.99	@	1
DC1	409010800	Female Terminal	1.04	@	1
DC2	409010800	Female Terminal	0.99	@	1
DC2	409010800	Female Terminal	1.04	@	1
DC3	515175658	Female Housing, 2 Circuits	11.99	@	1
DC3	515175658	Female Housing, 2 Circuits	12.99	@	1
DC3	710000667	Male Housing, 2 Circuits	4.99	@	1
DC3	710000667	Male Housing, 2 Circuits	5.99	@	1
DC3	515175231	Female Terminal	2.49	@	1
DC3	515175231	Female Terminal	2.99	@	1
DC4	515175658	Female Housing, 2 Circuits	11.99	@	1
DC4	515175658	Female Housing, 2 Circuits	12.99	@	1
DC4	710000667	Male Housing, 2 Circuits	4.99	@	1
DC4	710000667	Male Housing, 2 Circuits	5.99	@	1
DC4	515175231	Female Terminal	2.49	@	1
DC4	515175231	Female Terminal	2.99	@	1
DC6	710000992	Clip	3.49	@	1
DC6	278000217	Female Housing, 2 Circuits	6.99	@	1
DC6	278000217	Female Housing, 2 Circuits	7.99	@	1
DC6	278000220	Male Connector, 2 Circuits	9.99	@	1
DC6	278000220	Male Connector, 2 Circuits	10.99	@	1
DC6	278000216	Wire Seal	2.49	@	1
DC6	278000216	Wire Seal	2.99	@	1
DC6	278000218	Wire Seal	2.49	@	1
DC6	278000218	Wire Seal	2.99	@	1

DC6	409007300	Female Terminal	14.49	@	1
DC6	409007300	Female Terminal	15.99	@	1
DPS1	710001161	Housing	7.49	@	1
DPS1	710001161	Housing	7.99	@	1
DPS1	710001162	Lock	3.49	@	1
DPS1	710001162	Lock	3.99	@	1
DPS1	710001225	Cap	5.99	@	1
DPS1	710001225	Cap	6.99	@	1
DPS1	710001114	Cap	11.99	@	1
DPS1	710001114	Cap	12.99	@	1
DPS1	710001163	Wire Seal	4.49	@	1
DPS1	710001163	Wire Seal	4.99	@	1
DPS1	710001164	Female Terminal	4.99	@	1
DPS1	710001164	Female Terminal	5.99	@	1
DPS2	278001325	Fuse Holder	5.99	@	1
DPS2	278001325	Fuse Holder	6.99	@	1
DPS2	710000113	Female Terminal	4.49	@	1
DPS2	710000113	Female Terminal	4.99	@	1
DPSSW	710002000	Housing	5.99	@	1
DPSSW	710003047	Terminal	3.99	@	1
ECM	710001591	Cover	9.49	@	1
ECM	710001588	Female Terminal Housing, 48 Circuits	34.99	@	1
ECM	710001592	Plug	1.99	@	1
ECM	710001593	Plug	1.99	@	1
ECM	710001589	Female Terminal	1.99	@	1
ECM	710001727	Female Terminal	1.99	@	1
ECM	710001727	Female Terminal	2.99	@	1
FP	409209700	Female Housing, 4 Circuits	12.49	@	1
FP	409209700	Female Housing, 4 Circuits	13.11	@	1
FP	278001013	Wire Seal	2.49	@	1
FP	278001013	Wire Seal	2.99	@	1
FP	515176621	Wire Seal	4.99	@	1
FP	515176621	Wire Seal	5.99	@	1
FP	278001014	Female Terminal	1.99	@	1
FP	278001014	Female Terminal	2.99	@	1
FP	710001340	Female Terminal	3.49	@	1
FP	710001340	Female Terminal	3.99	@	1
FRA	515175658	Female Housing, 2 Circuits	11.99	@	1
FRA	515175658	Female Housing, 2 Circuits	12.99	@	1
FRA	515175231	Female Terminal	2.49	@	1
FRA	515175231	Female Terminal	2.99	@	1
FT	710000992	Clip	3.49	@	1
FT	278000217	Female Housing, 2 Circuits	6.99	@	1
FT	278000217	Female Housing, 2 Circuits	7.99	@	1
FT	278000218	Wire Seal	2.49	@	1
FT	278000218	Wire Seal	2.99	@	1
FT	409004300	Male Terminal	4.49	@	1

FT	409004300	Male Terminal	4.71	@	1
HIBM	710002000	Housing	5.99	@	1
HIBM	710003048	Terminal	3.99	@	1
HIBM	710003047	Terminal	3.99	@	1
HIC	710001928	Housing	10.99	@	1
HIC	710001928	Housing	11.99	@	1
HIC	710001221	Lock	7.49	@	1
HIC	710001221	Lock	7.99	@	1
HIC	710001225	Cap	5.99	@	1
HIC	710001225	Cap	6.99	@	1
HIC	710001230	Seal	1.99	@	1
HIC	710001230	Seal	2.99	@	1
HIC	710001233	Seal	1.99	@	1
HIC	710001233	Seal	2.99	@	1
HIC	710001229	Terminal	1.99	@	1
HIC	710001229	Terminal	2.99	@	1
HIC	710001228	Terminal	1.99	@	1
HIC	710001228	Terminal	2.99	@	1
HIC5	710000992	Clip	3.49	@	1
HIC5	278001065	Wire Seal	4.49	@	1
HIC5	278001065	Wire Seal	4.99	@	1
HIC5	278000222	Male Terminal	2.49	@	1
HIC5	278000222	Male Terminal	2.99	@	1
HIC7	710000992	Clip	3.49	@	1
HIC7	278000217	Female Housing, 2 Circuits	6.99	@	1
HIC7	278000217	Female Housing, 2 Circuits	7.99	@	1
HIC7	278000218	Wire Seal	2.49	@	1
HIC7	278000218	Wire Seal	2.99	@	1
HIC7	409004300	Male Terminal	4.49	@	1
HIC7	409004300	Male Terminal	4.71	@	1
HIC8	710003175	Housing		@	1
HIC8	710003177	Housing		@	1
HO2S1	710002466	Housing	2.99	@	1
HO2S1	710002469	Lock		@	1
HO2S1	278001482	Seal	2.49	@	1
HO2S1	278001482	Seal	2.99	@	1
HO2S1	710002597	Gold Terminal		@	1
HO2S2	710002466	Housing	2.99	@	1
HO2S2	710002469	Lock		@	1
HO2S2	278001482	Seal	2.49	@	1
HO2S2	278001482	Seal	2.99	@	1
HO2S2	710002597	Gold Terminal		@	1
OVR	710002000	Housing	5.99	@	1
OVR	710003047	Terminal	3.99	@	1
PDH	710002278	Housing		@	1
PDH	710002279	Lock	3.99	@	1
PDH	710001427	Wire Seal	1.99	@	1

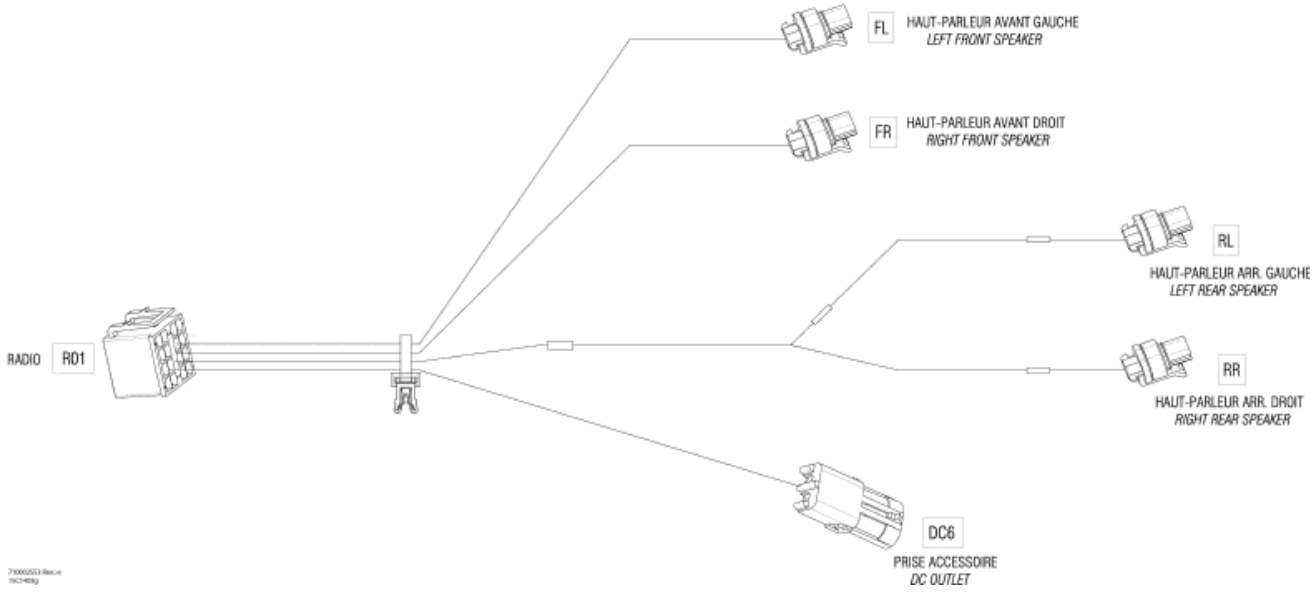
PDH	710001427	Wire Seal	2.99	@	1
PDH	710000918	Female Terminal	4.49	@	1
PDH	710000918	Female Terminal	4.99	@	1
PDL	710002278	Housing		@	1
PDL	710002279	Lock	3.99	@	1
PDL	710001427	Wire Seal	1.99	@	1
PDL	710001427	Wire Seal	2.99	@	1
PDL	710000918	Female Terminal	4.49	@	1
PDL	710000918	Female Terminal	4.99	@	1
PF1	710000781	Fuse Puller	7.49	@	1
PF1	710001026	Fuse Cover	14.99	@	1
PF1	710001026	Fuse Cover	15.99	@	1
PF1	710002715	Logo Fuse Relay	4.99	@	1
PF1	278002172	Foam	3.49	@	1
PF1	278002172	Foam	3.99	@	1
PF1	710000660	Fuse Box Ass'y	27.49	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	5.99	@	1
PF1	710000742	Little Fuse, 5 Amperes	6.99	@	1
PF1	710000743	Little Fuse, 7.5 Amperes	5.99	@	1
PF1	710000743	Little Fuse, 7.5 Amperes	6.99	@	1
PF1	710000743	Little Fuse, 7.5 Amperes	5.99	@	1
PF1	710000743	Little Fuse, 7.5 Amperes	6.99	@	1
PF1	710000744	Little Fuse, 10 Amperes	5.99	@	1
PF1	710000744	Little Fuse, 10 Amperes	6.99	@	1
PF1	710000744	Little Fuse, 10 Amperes	5.99	@	1
PF1	710000744	Little Fuse, 10 Amperes	6.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	5.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	6.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	5.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	6.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	5.99	@	1
PF1	710000745	Little Fuse, 15 Amperes	6.99	@	1
PF1	710000747	Little Fuse, 30 Amperes	5.99	@	1

PF1	710000747	Little Fuse, 30 Amperes	6.99	@	1
PF1	710000747	Little Fuse, 30 Amperes	5.99	@	1
PF1	710000747	Little Fuse, 30 Amperes	6.99	@	1
PF1	710002590	Fuse, 25 Amps	19.49	@	1
PF1	710002590	Fuse, 25 Amps	20.99	@	1
PF1	710000840	Cap	3.49	@	1
PF1	710000840	Cap	3.99	@	1
PF1	515176774	Relay, 30 AMP	9.99	@	1
PF1	515176774	Relay, 30 AMP	10.99	@	1
PF1	515176774	Relay, 30 AMP	9.99	@	1
PF1	515176774	Relay, 30 AMP	10.99	@	1
PF1	710001778	Relay	9.99	@	1
PF1	710001778	Relay	10.99	@	1
PF1	710001778	Relay	9.99	@	1
PF1	710001778	Relay	10.99	@	1
PF1	710001778	Relay	9.99	@	1
PF1	710001778	Relay	10.99	@	1
PF1	278000999	Wire Seal	2.49	@	1
PF1	278000999	Wire Seal	2.99	@	1
PF1	415128501	Seal	1.49	@	1
PF1	415128501	Seal	1.56	@	1
PF1	710000836	Female Terminal	3.49	@	1
PF1	710000836	Female Terminal	3.99	@	1
PF1	710000837	Female Terminal	3.49	@	1
PF1	710000837	Female Terminal	3.99	@	1
PF2	710001048	Fuse, 50 AMP	4.49	@	1
PF2	710001048	Fuse, 50 AMP	4.49	@	1
PF2	710001047	Fuse, 40 AMP	6.49	@	1
PF2	710001047	Fuse, 40 AMP	6.99	@	1
PF2	710001996	Housing	29.99	@	1
PF2	710001633	Lock	5.99	@	1
PF2	710001633	Lock	6.99	@	1
PF2	233261494	Hex. Elastic Flanged Nut M6	0.72	@	1
PF2	710003134	Seal Joint		@	1
PF2	710001905	Terminal Joint	1.99	@	1
PF2	710001905	Terminal Joint	2.99	@	1
PF2	710001636	Terminal	1.99	@	1
PF2	710001636	Terminal	2.99	@	1
PF21	710000526	Protector Cap	7.49	@	1
PF21	710000526	Protector Cap	7.99	@	1
PF21	278001392	Open Barrel	2.49	@	1
PF21	278001392	Open Barrel	2.99	@	1
PGH	710002278	Housing		@	1
PGH	710002279	Lock	3.99	@	1
PGH	710001427	Wire Seal	1.99	@	1
PGH	710001427	Wire Seal	2.99	@	1
PGH	710000918	Female Terminal	4.49	@	1

PGH	710000918	Female Terminal	4.99	@	1
PGL	710002278	Housing		@	1
PGL	710002279	Lock	3.99	@	1
PGL	710001427	Wire Seal	1.99	@	1
PGL	710001427	Wire Seal	2.99	@	1
PGL	710000918	Female Terminal	4.49	@	1
PGL	710000918	Female Terminal	4.99	@	1
PPS	278002299	Female Terminal Housing, 6 Circuits	7.49	@	1
PPS	710001119	Female Terminal	4.49	@	1
RD1	710000879	Housing, 3 Circuits	17.49	@	1
RD1	710000879	Housing, 3 Circuits	18.99	@	1
RD1	710000882	Cap	7.49	@	1
RD1	710000882	Cap	7.99	@	1
RD1	710001932	Seal	1.99	@	1
RD1	710001932	Seal	2.99	@	1
RD1	710001934	Terminal	3.49	@	1
RD1	710001934	Terminal	3.99	@	1
SB	710002177	Housing	2.49	@	1
SB	710002043	Lock	0.99	@	1
SB	278001482	Seal	2.49	@	1
SB	278001482	Seal	2.99	@	1
SB	710001134	Female Terminal	4.99	@	1
SPSW	710002000	Housing	5.99	@	1
SPSW	710003047	Terminal	3.99	@	1
SS1	409010300	Female Terminal	3.49	@	1
SS1	409010300	Female Terminal	3.66	@	1
SS2	409010300	Female Terminal	3.49	@	1
SS2	409010300	Female Terminal	3.66	@	1
STSW	409012300	Seal	2.49	@	1
STSW	409012300	Seal	2.99	@	1
STSW	409012100	Female Terminal	2.49	@	1
STSW	409012100	Female Terminal	2.99	@	1
SW1	409010300	Female Terminal	3.49	@	1
SW1	409010300	Female Terminal	3.66	@	1
SW2	409010300	Female Terminal	3.49	@	1
SW2	409010300	Female Terminal	3.66	@	1
SW3	710000038	Female Terminal	3.49	@	1
SW3	710000038	Female Terminal	3.99	@	1
SW4	278000992	Open Barrel	1.49	@	1
SW4	278000992	Open Barrel	1.99	@	1
SWW	710002003	Housing Connector	9.99	@	1
SWW	710003047	Terminal	3.99	@	1
SWWRC	278000273	Male Housing, 3 Circuits	6.99	@	1
SWWRC	278000273	Male Housing, 3 Circuits	7.99	@	1
SWWRC	278001065	Wire Seal	4.49	@	1
SWWRC	278001065	Wire Seal	4.99	@	1
SWWRC	278000223	Female Terminal	2.49	@	1

SWWRC	278000223	Female Terminal	2.99	@	1

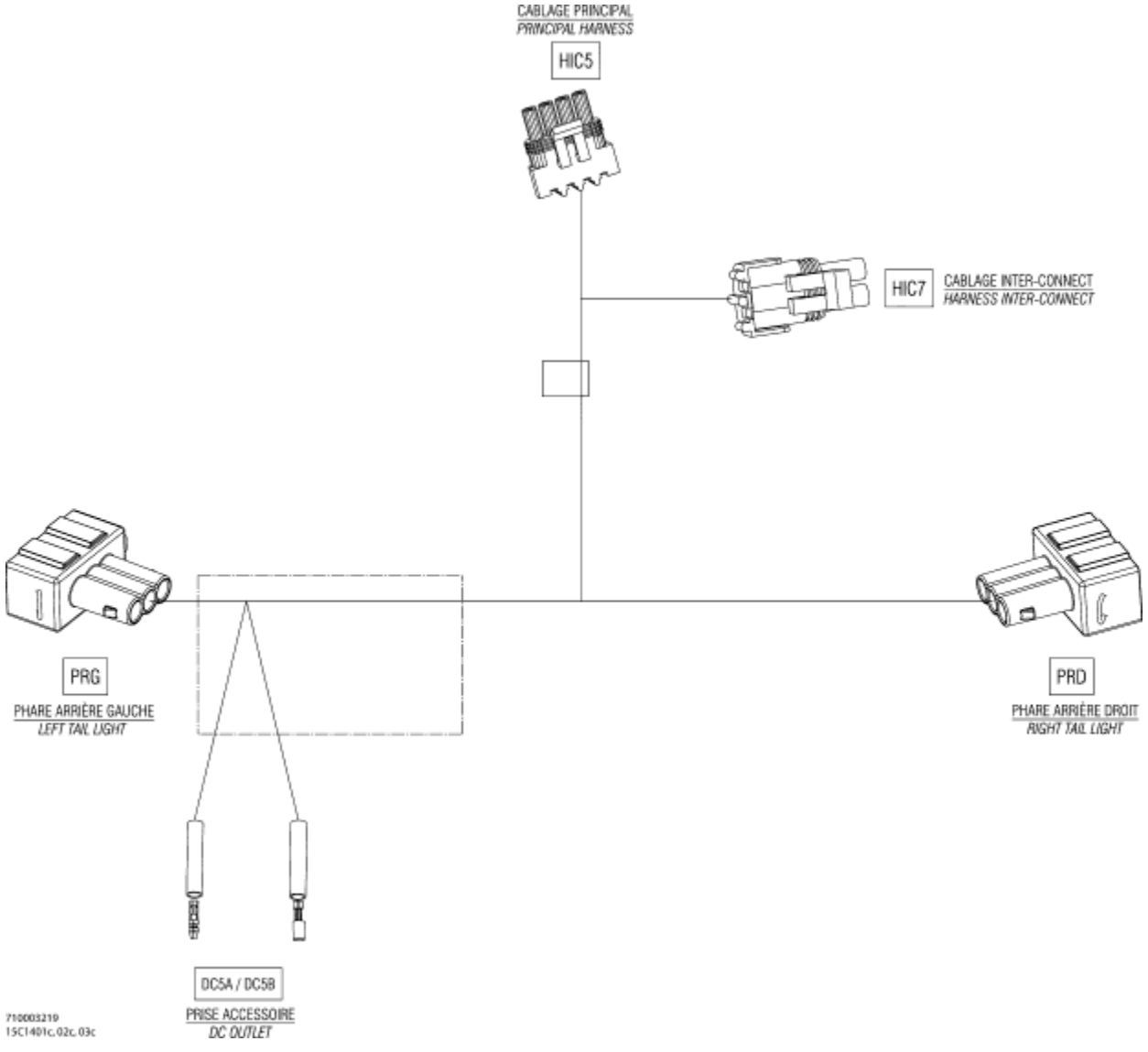
Commander 1000, LTD, 2014: 10- Electrical Harness Radio, LTD



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710002553	Radio Harness. LTD	74.49		1	1
DC6	278000217	Female Housing, 2 Circuits. LTD	6.99		@	1
DC6	278000217	Female Housing, 2 Circuits. LTD	7.99		@	1
DC6	278000218	Wire Seal. LTD	2.49		@	1
DC6	278000218	Wire Seal. LTD	2.99		@	1
DC6	278000222	Male Terminal. LTD	2.49		@	1
DC6	278000222	Male Terminal. LTD	2.99		@	1
FL	XXX	Female Housing. LTD			@	
FL	XXX	Terminal. LTD			@	
FL	710001153	Seal Wire. LTD	1.99		@	1
FR	XXX	Female Housing. LTD			@	
FR	XXX	Terminal. LTD			@	
FR	710001153	Seal Wire. LTD	1.99		@	1
R01	293550006	Female Terminal. LTD			@	1
R01	XXX	Terminal. LTD			@	
R01	XXX	Housing. LTD			@	
RL	XXX	Female Housing. LTD			@	
RL	XXX	Terminal. LTD			@	
RL	710001153	Seal Wire. LTD	1.99		@	1
RR	XXX	Female Housing. LTD			@	
RR	XXX	Terminal. LTD			@	
RR	710001153	Seal Wire. LTD	1.99		@	

1

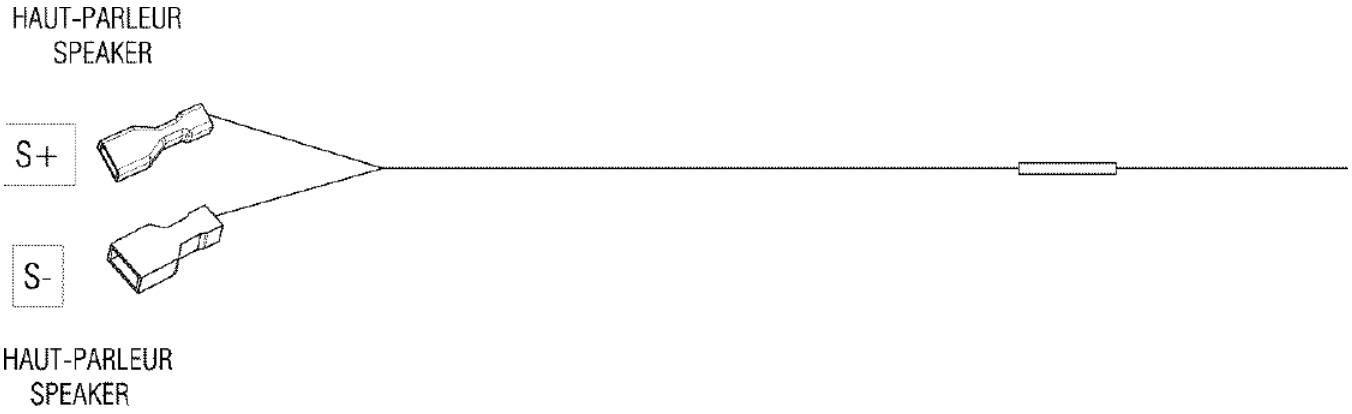
Commander 1000, LTD, 2014: 10- Electrical Harness Rear, NA_Inter



#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710003219	Rear Harness. North America, Inter	102.99		1	1
504	278001065	Wire Seal. North America, Inter	4.49		4	4
504	278001065	Wire Seal. North America, Inter	4.99		4	4
DC5A	278001008	Insulated Sheath. North America, Inter	2.49		1	1
DC5A	278001008	Insulated Sheath. North America, Inter	2.99		1	1
DC5A	278002261	Female Terminal. North America, Inter	4.49		1	1
DC5A	278002261	Female Terminal. North America, Inter	4.99		1	1
DC5B	278001007	Insulated Sheath. North America, Inter	2.49		1	1
DC5B	278001007	Insulated Sheath. North America, Inter	2.99		1	1

DC5B	710000421	Female Terminal. North America, Inter	3.49		1	1
DC5B	710000421	Female Terminal. North America, Inter	3.99		1	1
DC5B	293550006	Female Terminal. North America, Inter				1
HIC5	278000223	Female Terminal. North America, Inter	2.49		4	4
HIC5	278000223	Female Terminal. North America, Inter	2.99		4	4
HIC5	278000395	Male Housing, 4 Circuits. North America, Inter	11.99		1	1
HIC5	278000395	Male Housing, 4 Circuits. North America, Inter	12.99		1	1
HIC5	278000585	Wire Seal (20 Gauge) (Purple)(Packard). North America, Inter	4.49	278001065		1
HIC5	278000585	Wire Seal (20 Gauge) (Purple)(Packard). North America, Inter	4.99	278001065		1
HIC7	409007300	Female Terminal. North America, Inter	14.49		2	2
HIC7	409007300	Female Terminal. North America, Inter	15.99		2	2
HIC7	278000220	Male Connector, 2 Circuits. North America, Inter	9.99		1	1
HIC7	278000220	Male Connector, 2 Circuits. North America, Inter	10.99		1	1
HIC7	278000218	Wire Seal. North America, Inter	2.49		2	2
HIC7	278000218	Wire Seal. North America, Inter	2.99		2	2
PRD	278000998	Female Terminal. North America, Inter	2.49		6	6
PRD	278000998	Female Terminal. North America, Inter	2.99		6	6
PRD	415128501	Seal. North America, Inter	1.49		6	6
PRD	415128501	Seal. North America, Inter	1.56		6	6
PRD	XXX	Housing. North America, Inter				
PRG	278000998	Female Terminal. North America, Inter	2.49		6	6
PRG	278000998	Female Terminal. North America, Inter	2.99		6	6
PRG	XXX	Housing. North America, Inter				

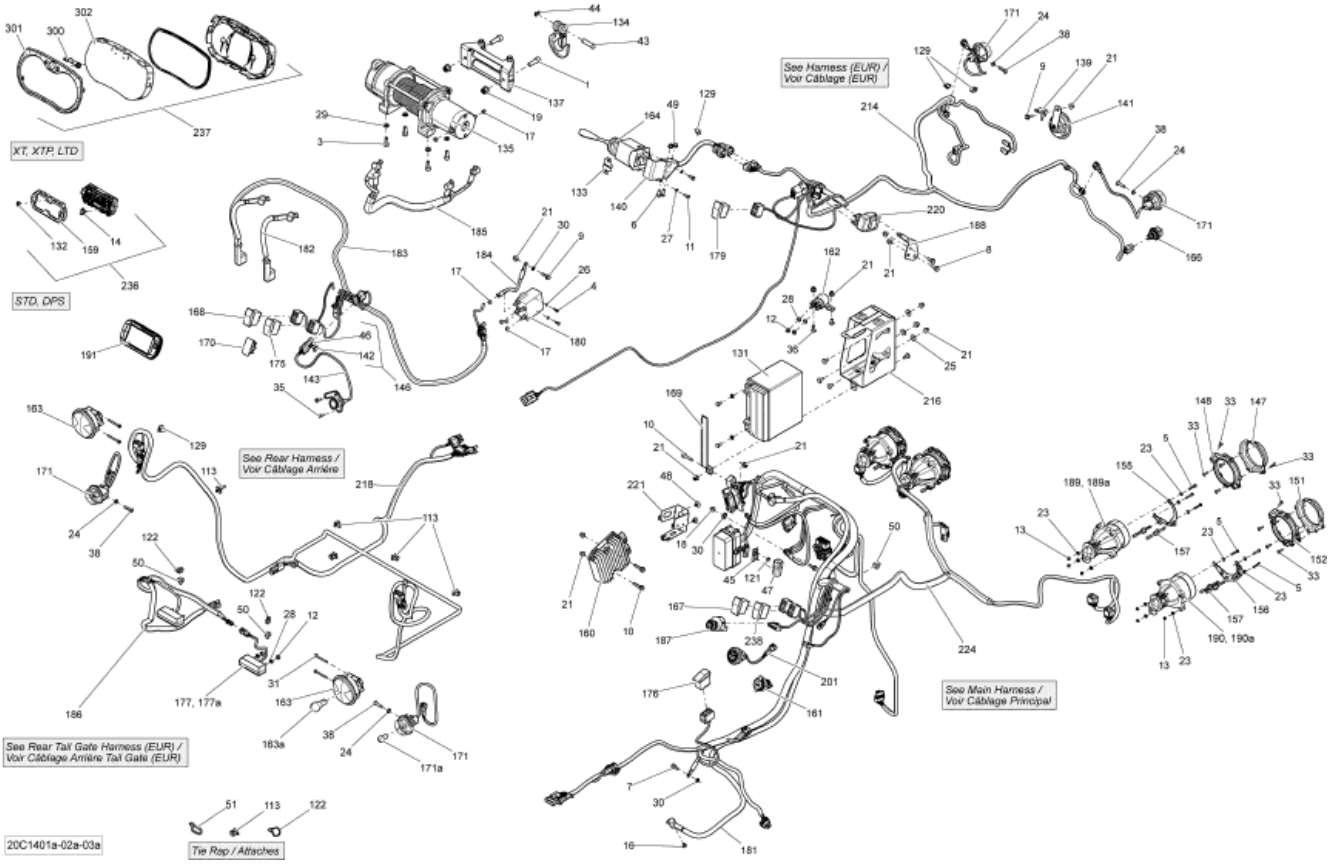
Commander 1000, LTD, 2014: 10- Electrical Harness Speaker



710002833 Rev. a
15C1403h

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	710002833	Speaker Harness. LTD	14.99		2	2
FS	710001038	Clip	3.49		@	1
FS	710001038	Clip	3.99		@	1
FS	710001151	Housing PT			@	1
FS	710001152	Lock			@	1
FS	710001153	Seal Wire	1.99		@	1
FS	710001154	Male Terminal			@	1
S-	293550006	Female Terminal			@	1
S-	710000114	Female Terminal	6.99		@	1
S+	293550006	Female Terminal			@	1
S+	710001235	Terminal	1.99		@	1

Commander 1000, LTD, 2014: 10- Electrical System All Models



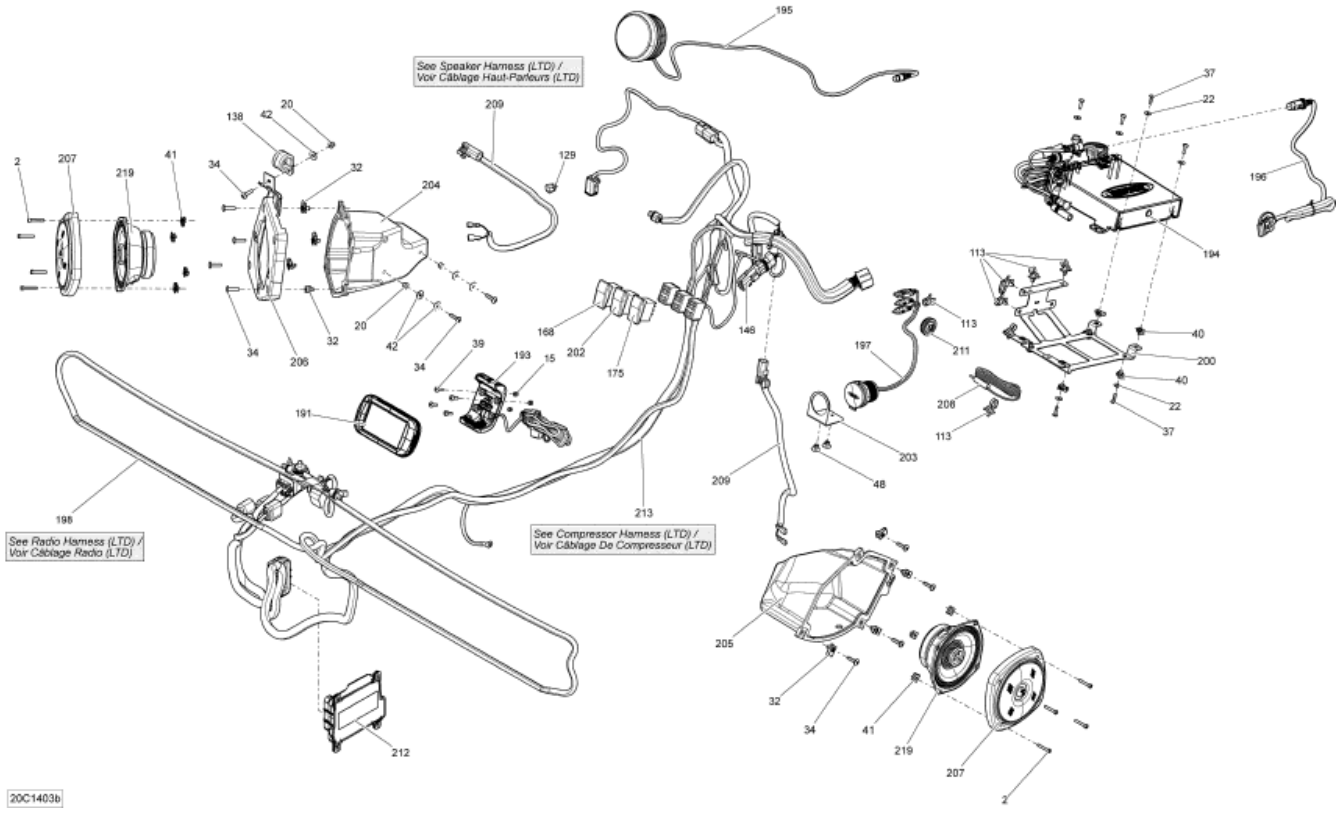
#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	205003044	Socket Screw M10 x 30	2.99		2	2
3	205082044	Socket Head Screw M8 X 20	0.87		4	4
4	207141044	Hex. Screw M4 X 10	0.87		2	2
5	207142544	Hex. Screw M4 X 25	1.53		12	12
6	N/A	Not available for this vehicle			2	
7	207561644	Hex. Flanged Screw M6 X 16, Scotch Grip	1.47		1	1
8	N/A	Not available for this vehicle			2	
9	207662044	Hex. Flanged Screw M6 X 20	1.99		@	1
10	207663034	Hex. Flanged Screw M6 X 30	1.99		3	3
11	N/A	Not available for this vehicle			2	
12	N/A	Not available for this vehicle			@	
13	232541414	Elastic Stop Nut M4	0.47		12	12
14	N/A	Not available for this vehicle			1	
16	232561414	Elastic Stop Nut M6	1.99	232561434	1	1
17	232561434	Elastic Stop Nut M6	1.99		6	6
18	233061414	Hex. Flanged Nut M6	1.30		1	1
19	233201414	Hex. Flanged Elastic Nut M10	1.18		2	2
21	233261414	Hex. Flanged Elastic Nut M6	1.05		@	1
23	234051410	Flat Washer M5	0.43		24	24
24	N/A	Not available for this vehicle			4	
25	234062410	Flat Washer 6 mm	0.62		5	5
26	234141601	Lock Washer 4 mm	0.87		2	2
27	N/A	Not available for this vehicle			2	
28	N/A	Not available for this vehicle			6	

29	234181401	Lock Washer 8 mm	0.75	4	4
30	234461608	External Serrated Lock Washer 6 mm	0.87	@	1
31	241154540	Hex. Screw K50 X 45	1.99	4	4
33	250000084	Phillips Screw K40 X 16	2.00	22	22
35	250000146	Truss Head Torx Screw K50 X 16	1.17	2	2
36	250000223	Torx Screw M6 X 16	1.99	1	1
38	N/A	Not available for this vehicle		4	
43	250400021	Clevis Pin	8.99	1	1
43	250400021	Clevis Pin	9.99	1	1
44	250400022	Cotter Pin	4.49	1	1
44	250400022	Cotter Pin	4.99	1	1
45	270000141	Clip	7.49	1	1
45	270000141	Clip	7.99	1	1
46	278000281	Female Terminal Housing, 3 Circuits	6.99	1	1
46	278000281	Female Terminal Housing, 3 Circuits	7.99	1	1
47	278002704	Diagnostic Connector	14.99	1	1
47	278002704	Diagnostic Connector	15.99	1	1
48	293150103	Pop Rivet 3/16"	0.47	2	2
49	N/A	Not available for this vehicle		2	
50	293730040	Mount Dart	0.99	@	1
50	293730040	Mount Dart	1.99	@	1
51	293750008	Tie-Rap 350 mm	0.49	@	1
51	293750008	Tie-Rap 350 mm	0.99	@	1
113	293750009	Tie-Rap 173 mm	0.99	@	1
113	293750009	Tie-Rap 173 mm	1.99	@	1
121	390402400	Pop Rivet 3/16"	0.28	1	1
122	414115200	Tie-Rap 180 mm	0.49	@	1
129	414227300	Clip	1.15	2	2
131	410301203	Battery Ass'y, 18 Amperes	112.99	1	1
132	N/A	Not available for this vehicle		1	
133	N/A	Not available for this vehicle		1	
134	705002329	Hook	26.99	1	1
135	705003944	Winch	524.99	1	1
137	715001119	Winch Cable Guide	51.99	1	1
139	N/A	Not available for this vehicle		1	
140	N/A	Not available for this vehicle		1	
141	N/A	Not available for this vehicle		1	
142	710000992	Clip	3.49	1	1
143	710001023	Winch Connector	39.99	1	1
146	710001059	Connector Ass'y	5.99	1	1
146	710001059	Connector Ass'y	6.99	1	1
147	710001081	RH Low Front Housing	9.99	1	1
147	710001081	RH Low Front Housing	10.99	1	1
147	710001083	LH Low Front Housing	9.99	1	1
147	710001083	LH Low Front Housing	10.99	1	1
148	710001082	RH Low Rear Housing	5.99	1	1
148	710001082	RH Low Rear Housing	6.99	1	1
148	710001084	LH Low Rear Housing	5.99	1	1
148	710001084	LH Low Rear Housing	6.99	1	1
151	710001085	RH High Front Housing	9.99	1	1
151	710001085	RH High Front Housing	10.99	1	

					1
151	710001087	LH High Front Housing	9.99	1	1
151	710001087	LH High Front Housing	10.99	1	1
152	710001086	RH High Rear Housing	5.99	1	1
152	710001086	RH High Rear Housing	6.99	1	1
152	710001088	LH High Rear Housing	5.99	1	1
152	710001088	LH High Rear Housing	6.99	1	1
155	710001094	RH Low Light Support	2.49	1	1
155	710001094	RH Low Light Support	2.99	1	1
155	710001037	LH Low Light Support	2.49	1	1
155	710001037	LH Low Light Support	2.99	1	1
156	710001115	RH High Light Support	2.49	1	1
156	710001115	RH High Light Support	2.99	1	1
156	710001036	LH High Light Support	2.49	1	1
156	710001036	LH High Light Support	2.99	1	1
157	710001147	Setting Screw	9.49	8	8
157	710001147	Setting Screw	9.99	8	8
159	N/A	Not available for this vehicle		1	
160	710001191	Voltage Regulator	128.49	1	1
161	710001248	Outlet DC	26.99	1	1
162	710001364	Starter Relay	41.99	1	1
163	710001645	Tail Light. Includes 163a	41.99	2	2
163a	520000758	Bulb	9.99	1	1
164	N/A	Not available for this vehicle		1	
166	N/A	Not available for this vehicle		2	
167	710001737	Switch	22.49	1	1
168	N/A	Not available for this vehicle		1	
169	710001916	Battery Holder	4.49	1	1
170	N/A	Not available for this vehicle		2	
171	N/A	Not available for this vehicle		4	
175	710002052	Switch	15.99	1	1
176	710002053	Switch	15.99	1	1
177	N/A	Not available for this vehicle		2	
177a	N/A	Not available for this vehicle		1	
179	710001725	Hi/Low Switch	18.49	1	1
180	710002112	Solenoid	120.99	1	1
181	710002146	Positive Cable	21.99	1	1
182	N/A	Not available for this vehicle		1	
183	710002159	Positive Cable	44.99	1	1
184	710002214	Negative Cable	11.99	1	1
185	710002216	Electrical Winch Cable	32.49	1	1
186	N/A	Not available for this vehicle		1	
187	710002327	Ignition Switch	54.49	1	1
188	N/A	Not available for this vehicle		1	
189	710002524	Low Beam Ass'y. Includes 189a	83.49	2	2
189a	415129249	Halogen Bulb	28.49	1	1
190	710002525	High Beam Ass'y. Includes 190a	83.49	2	2
190a	415129249	Halogen Bulb	28.49	1	1
191	715001361	GPS	649.99	1	1
201	710002594	Engine START Button	44.99	1	1
214	N/A	Not available for this vehicle		1	
216	710003129	Battery Support	29.99	1	1

218	710003219	Rear Harness	102.99	1	1
220	N/A	Not available for this vehicle		1	
221	710003335	Fuse Holder	5.99	1	1
224	710003342	Main Harness Ass'y		1	1
236	N/A	Not available for this vehicle		1	
237	710003532	Speedometer		1	1
238	710003541	Switch PPS Sport		1	1
300	415129355	Speedometer Button	9.99	1	1
300	415129355	Speedometer Button	10.99	1	1
301	415129348	Gauge Ring	8.49	1	1
301	415129348	Gauge Ring	8.99	1	1
302	415129349	Lens	15.99	1	1
302	415129349	Lens	16.99	1	1

Commander 1000, LTD, 2014: 10- Electrical System LTD



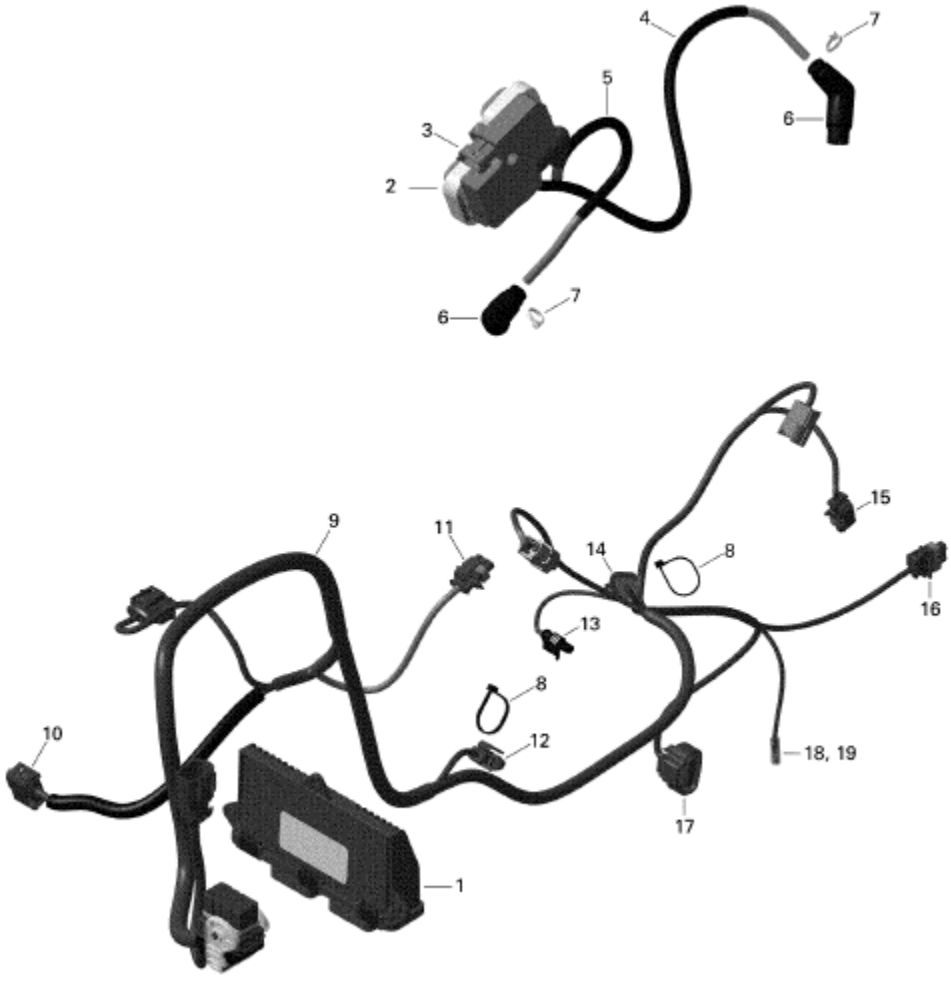
20C1403b

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
2	205042560	Socket Head Screw M4 X 25	1.73		8	8
15	232541484	Elastic Stop Nut M4	0.58		4	4
20	233251494	Elastic Flanged Nut M5	1.99		3	3
22	234042600	Flat Washer 4 mm, Stainless	0.87		8	8
32	250000079	Panel Nut M5 X 0.8	2.97		8	8
34	250000130	Torx Screw M5 X 20	1.30		8	8
34	250000130	Torx Screw M5 X 20	1.30		3	3
37	250000242	Truss Torx Screw M4 X 16	1.30		8	8
39	250000575	Torx-Truss M4 X 16	1.99		4	4
40	250100143	Extruded Panel Nut M4 X 0.7	5.99		8	8
40	250100143	Extruded Panel Nut M4 X 0.7	6.99		8	8
41	250100149	Extruded Panel Nut M4 X 0.7	2.49		8	8
41	250100149	Extruded Panel Nut M4 X 0.7	2.99		8	8
42	250200025	Washer M5	0.58		5	5
48	293150103	Pop Rivet 3/16"	0.47		2	2
113	293750009	Tie-Rap 173 mm	0.99		1	1
113	293750009	Tie-Rap 173 mm	1.99		1	1
113	293750009	Tie-Rap 173 mm	0.99		1	1
113	293750009	Tie-Rap 173 mm	1.99		1	1
113	293750009	Tie-Rap 173 mm	0.99		1	1
113	293750009	Tie-Rap 173 mm	1.99		1	1

113	293750009	Tie-Rap 173 mm	0.99	1	1
113	293750009	Tie-Rap 173 mm	1.99	1	1
113	293750009	Tie-Rap 173 mm	0.99	1	1
113	293750009	Tie-Rap 173 mm	1.99	1	1
113	293750009	Tie-Rap 173 mm	0.99	1	1
113	293750009	Tie-Rap 173 mm	1.99	1	1
113	293750009	Tie-Rap 173 mm	0.99	1	1
113	293750009	Tie-Rap 173 mm	1.99	1	1
113	293750009	Tie-Rap 173 mm	0.99	1	1
113	293750009	Tie-Rap 173 mm	1.99	1	1
129	414227300	Clip	1.15	1	1
138	709200036	Hose Anchor	6.63	1	1
138	709200036	Hose Anchor	6.99	1	1
146	710001059	Connector Ass'y	5.99	1	1
146	710001059	Connector Ass'y	6.99	1	1
168	710001781	Switch DPS		1	1
175	710002052	Switch	15.99	1	1
191	715001361	GPS	649.99	1	1
191	715001361	GPS	649.99	1	1
191	715001406	GPS	699.99	1	1
193	710002545	GPS Support	149.99	1	1
194	710002548	Amplifier	709.99	1	1
195	710002549	Radio Interface	267.49	1	1
196	710002550	IPOD Extension	97.49	1	1
197	710002551	USB Extension	82.49	1	1
198	710002553	Radio Harness	74.49	1	1
200	710002556	Amplifier Support	74.49	1	1
202	710002684	Switched Accessory	34.49	1	1
203	710002731	USB Extension Support	12.49	1	1
204	710002786	LH Front Speaker Box	14.99	1	1
205	710002787	RH Front Speaker Box	14.99	1	1
206	710002789	Speaker Box Plate	10.99	1	1
207	710002790	Speaker Cover	10.99	2	2
208	710002810	Antenna	7.49	1	1
209	710002833	Speaker Harness	14.99	2	2
211	710002926	Grommet Boot	2.49	1	1
212	710002947	Calibrated Compressor Module	347.99	1	1
212	710002947	Calibrated Compressor Module	347.99	1	1
213	710003005	Compressor Harness	267.99	1	1
219	710003233	Front Speaker	69.99	2	2

Commander 1000, LTD, 2014: 10- Engine Harness And Electronic Module

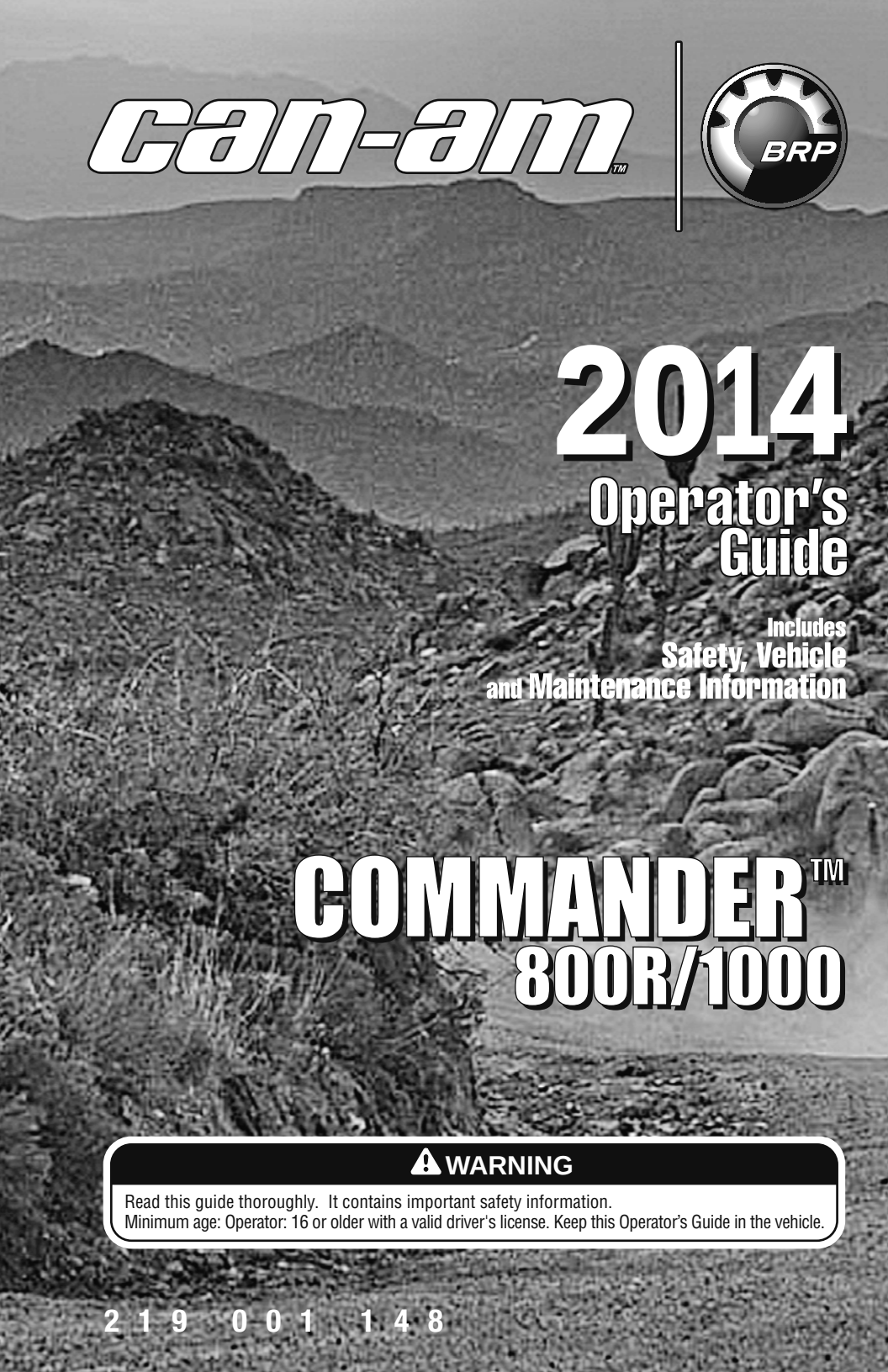
1000



51R1402

#	Part #	Description	List	Supersession	Qty Req'd	Pick List
1	420266958	ECM Connector. Except Europe			1	1
1	XXX	ECM Connector. Europe			1	
2	278001546	Ignition Coil	168.49		1	1
3	710000568	Housing	7.49		1	1
3	710000568	Housing	7.99		1	1
4	420665330	Spark Plug Cable, 610 mm, PTO Side	64.49		1	1
5	420664300	Spark Plug Cable, 365 mm, MAG Side	46.99		1	1
6	420265248	Spark Plug Connector	24.49		2	2
7	420866710	Tie Rap	4.49		2	2

7	420866710	Tie Rap	4.71		2	2
8	420866714	Tie Rap	1.49		@	1
9	420666332	Engine Wiring Harness. Includes 9 to 17	421.99		1	1
10	710001872	Housing, 6 Positions	9.99		1	1
11	278000997	Male Housing, 3 Circuits	13.49		1	1
11	278000997	Male Housing, 3 Circuits	14.99		1	1
12	278001005	Male Housing, 2 Circuits	14.49		1	1
12	278001005	Male Housing, 2 Circuits	15.99		1	1
13	278001012	Male Housing, 1 Circuit	10.99		1	1
13	278001012	Male Housing, 1 Circuit	11.99		1	1
14	409207000	Male Housing, 3 Circuits	9.99	278002378	1	1
15	278001005	Male Housing, 2 Circuits	14.49		1	1
15	278001005	Male Housing, 2 Circuits	15.99		1	1
16	278000997	Male Housing, 3 Circuits	13.49		1	1
16	278000997	Male Housing, 3 Circuits	14.99		1	1
17	710000329	Male Housing, 4 Circuits	10.80		1	1
17	710000329	Male Housing, 4 Circuits	11.99		1	1
18	278001009	Female Terminal	2.49		1	1
18	278001009	Female Terminal	2.99		1	1
19	278001007	Insulated Sheath	2.49		1	1
19	278001007	Insulated Sheath	2.99		1	1


can-am
BRP
2014
Operator's Guide
Includes
Safety, Vehicle
and Maintenance Information
COMMANDER™
800R/1000
WARNING
Read this guide thoroughly. It contains important safety information.
Minimum age: Operator: 16 or older with a valid driver's license. Keep this Operator's Guide in the vehicle.
2 1 9 0 0 1 1 4 8

⚠ WARNING

YOUR VEHICLE CAN BE HAZARDOUS TO OPERATE. A collision or rollover can occur quickly, if you fail to take proper precautions, even during routine maneuvers such as turning and driving on hills or over obstacles.
For your safety, understand and follow all the warnings contained in this Operator's Guide and on the labels on your vehicle. **Failure to follow these warnings can result in SEVERE INJURY OR DEATH!**
Keep this Operator's Guide with the vehicle at all times.

⚠ WARNING

Disregarding any of the safety precautions and instructions contained in this Operator's Guide, *SAFETY DVD* video and on-product safety labels could result in severe injury including the possibility of death!

⚠ WARNING

This vehicle may exceed the performance of other vehicles you may have ridden in the past. Take time to familiarize yourself with your new vehicle.

CALIFORNIA PROPOSITION 65 WARNING

⚠ WARNING

This product contains or emits chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

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FOREWORD

Deutsch	Dieses Handbuch ist möglicherweise in Ihrer Landessprache verfügbar. Bitte wenden Sie sich an Ihren Händler oder besuchen Sie: **www.operatorsguide.brp.com**.
English	This guide may be available in your language. Check with your dealer or go to: **www.operatorsguide.brp.com**.
Español	Es posible que este manual esté disponible en su idioma. Consulte a su distribuidor o visite: **www.operatorsguide.brp.com**.
Français	Ce guide peut être disponible dans votre langue. Vérifier avec votre concessionaire ou aller à: **www.operatorsguide.brp.com**.
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Congratulations on your purchase of a new Can-Am™ side-by-side vehicle. It's backed by the BRP limited warranty and a network of authorized Can-Am dealers ready to provide the parts, accessories or service you may require.

At delivery, you were informed of the warranty coverage and signed the *PREDELIVERY CHECK LIST* to ensure your new vehicle was prepared to your entire satisfaction.

Your dealer is committed to your satisfaction. If you need more information, please ask your dealer.

Know Before you Go

To learn how to reduce the risk of accident for you or bystanders, read this Operator's Guide before you operate the vehicle.

Also, read all safety labels on your vehicle and watch the *SAFETY DVD* video.

Failure to follow the warnings contained in this Operator's Guide can result in SERIOUS INJURY or DEATH.

Safety Messages

The types of safety messages, what they look like and how they are used in this guide are explained as follows:

The safety alert symbol ⚠ indicates a potential injury hazard.

⚠ WARNING

Indicates a potential hazard which, if not avoided, could result in serious injury or death.

⚠ CAUTION Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE Indicates an instruction which, if not followed, could result in severely damaged vehicle components or other property.

About this Operator's Guide

This Operator's Guide has been prepared to acquaint the owner/operator of a new vehicle with the various vehicle controls, maintenance and safe operating instructions. It is indispensable for the proper use of the product.

Keep this Operator's Guide in the vehicle as you can refer to it for things such as maintenance, troubleshooting and instructing others.

Note that this guide is available in several languages. In the event of any discrepancy, the English version shall prevail.

If you want to view and/or print an extra copy of your Operator's Guide, simply visit the following website **www.operatorsguide.brp.com**.

The information contained in this document is correct at the time of publication. BRP, however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, some differences between the manufactured product and the descriptions and/or specifications in this guide may occur. BRP reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring any obligation upon itself.

This Operator's Guide and the *SAFETY DVD* video should remain with the vehicle when it is sold.

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SAFETY INFORMATION

GENERAL PRECAUTIONS

Avoid Carbon Monoxide Poisoning

All engine exhaust contains carbon monoxide, a deadly gas. Breathing carbon monoxide can cause headaches, dizziness, drowsiness, nausea, confusion and eventually death.

Carbon monoxide is a colorless, odorless, tasteless gas that may be present even if you do not see or smell any engine exhaust. Deadly levels of carbon monoxide can collect rapidly, and you can quickly be overcome and unable to save yourself. Also, deadly levels of carbon monoxide can linger for hours or days in enclosed or poorly ventilated areas. If you experience any symptoms of carbon monoxide poisoning, leave the area immediately, get fresh air and seek medical treatment.

To prevent serious injury or death from carbon monoxide:

– Never run the vehicle in poorly ventilated or partially enclosed areas such as garages, carports or barns. Even if you try to ventilate engine exhaust with fans or open windows and doors, carbon monoxide can rapidly reach dangerous levels.
– Never run the vehicle outdoors where engine exhaust can be drawn into a building through openings such as windows and doors.

Avoid Gasoline Fires and Other Hazards

Gasoline is extremely flammable and highly explosive. Fuel vapors can spread and be ignited by a spark or flame many feet away from the engine. To reduce the risk of fire or explosion, follow these instructions:

– Use only an approved gasoline container to store fuel.
– Never fill the gasoline container in the vehicle cargo box or on the vehicle - an electrical static discharge may ignite the fuel.
– Strictly adhere to instructions in *FUELING PROCEDURE*.
– Never start or operate the engine if the fuel cap is not properly installed.

Gasoline is poisonous and can cause injury or death.

– Never siphon gasoline by mouth.
– If you swallow gasoline, get any in your eye(s), or inhale gasoline vapor, see a doctor immediately.

If gasoline spills on you, wash with soap and water and change your clothes.

Avoid Burns from Hot Parts

Certain components become hot during operation. Avoid contact with those parts during and shortly after operation to avoid burns.

Accessories and Modifications

Do not make unauthorized modifications, or use attachments or accessories that are not approved by BRP. Since these changes have not been tested by BRP, they may increase the risk of crash or injury, and can render the vehicle illegal. For example, modifications such as different tires can affect the handling and increase the risk of crash.

See your authorized Can-Am dealer for available accessories for your vehicle.

SAFE OPERATION - RESPONSIBILITIES

This is a high performance off-road vehicle. Operators must be responsible and use care to avoid rollovers, tipovers, collisions, and other accidents. Even with vehicle safety features (such as protective structure, seat belts, side nets) and protective gear (such as a helmet), there is always a risk of injury or death in these accidents. To reduce the risk of serious injury or death, follow the rules in this section.

Owner - Be Responsible

Read this Operator's Guide and watch the *SAFETY DVD* video.

Always inspect and confirm the safe operating condition of your vehicle prior to ride. Always follow the maintenance schedule described in this Operator's Guide.

Never allow anyone to operate your vehicle unless they are responsible and can be trusted with a high performance vehicle. Consider supervising new or young operators and setting rules and limits (e.g., whether they can carry a passenger, what they may do with the vehicle, where they may ride, etc.) for anyone using your vehicle.

Select the appropriate key (see *IGNITION SWITCH AND KEYS*) based on the operator's experience, vehicle use and environment.

Discuss the safety information with anyone who will be using the vehicle. Be sure that all operators and passengers meet the qualifications below and agree to follow the safety information. Help users become familiar with the vehicle.

Operator - Be Qualified and Responsible

Read this Operator's Guide and watch the *SAFETY DVD* video.

Become completely familiar with the operational controls and the general operation of the vehicle.

Take a training course if available (contact an authorized Can-Am dealer to find out about training course availability as well as on the internet at http://www.rohva.org/), and perform the practice exercises in *PRACTICE EXERCISES* section. Practice driving in a suitable area free of hazards and feel the response of each control. Drive at low speeds. Higher speeds require greater experience, knowledge and suitable riding conditions.

Be at least 16 years of age.

Be tall enough to be properly seated: back against the backrest with the seat belt fastened, to hold the steering wheel with both hands and still be able to reach the full stroke of brake and accelerator pedals with the right foot and to firmly plant left foot on the footrest.

Have a proper driver's license in accordance with local laws.

Never use this vehicle with drugs or alcohol, or if tired or ill. These slow reaction time and impair judgment.

Carrying Passenger

Only carry one passenger. The passenger must be properly seated in the cockpit.

The passenger must be tall enough to always be properly seated: back against the backrest with seat belt fastened, holding both handholds, and feet firmly planted - right foot on the footrest and the left foot on the vehicle floor.

Never carry a passenger who has used drugs or alcohol, or is tired or ill. These slow reaction time and impair judgment.

Instruct the passenger to read the vehicle's safety labels.

Never carry a passenger if you judge his ability or judgement insufficient to concentrate on the terrain conditions and adapt accordingly. More specifi-

cally for side-by-side vehicles, the passenger must also pay constant attention to the terrain ahead and be able to brace for bumps.

Riding Carefully

- This vehicle handles differently from other vehicles. A collision or rollover can occur quickly, during abrupt maneuvers such as doing sharp turns, acceleration or deceleration and driving on hills or over obstacles, if you fail to take proper precautions.
- Never operate at excessive speeds. Always go at a speed that is proper for the terrain, visibility, and operating conditions, and your experience.
- Never attempt jumps, side slides, donuts or any other stunts.
- Never attempt rapid acceleration or deceleration when performing a sharp turn. This may result in a roll over.
- Never attempt skidding or sliding. If vehicle starts to skid or slide, counter steer in the direction of skidding or sliding. On extremely slippery surfaces, such as ice, go slowly and be very cautious in order to reduce the chance of skidding out of control.
- Always be sure there are no obstacles or people behind the vehicle when you operate in reverse. Pay attention to blind spots. When it is safe to proceed in reverse, go slowly.
- Never exceed the stated load limits for this vehicle. Cargo must be properly secured. Reduce speed, allow for greater braking distance and follow other instructions in *MOVING LOADS AND DOING WORK* subsection.
- Always remember that this vehicle is heavy! Its pure weight alone may entrap you should it tip or rollover.

Occupant Restraint System

- This vehicle is designed to carry one driver and one passenger, both wearing proper protective gears (refer to *RIDING GEAR* in this section).
- The driver and passenger must latch the side nets and wear the seat belts at all times when riding.

Terrain Condition

- This vehicle is not designed to ride on paved surfaces; if you must shortly use the vehicle on such surfaces, avoid abrupt inputs to steering wheel, accelerator and brake pedals.
- Always go slowly and be extra careful when operating on unfamiliar terrain. Always be alert to changing terrain conditions when operating this vehicle. Take the time to learn how the vehicle performs in different environments.
- Never operate on excessively rough, slippery or loose terrain until you have learned and practiced the skills necessary to control this vehicle on such terrain. Always be especially cautious on these kinds of terrain.
- Never operate this vehicle on hills too steep for the vehicle or your abilities. Practice on small inclines.
- Always follow proper procedures for climbing or going down hills as described in *RIDING THE VEHICLE* subsection. Check the terrain carefully before you start up or down any hill. Never climb or descend hills with excessively slippery or loose surfaces. Never go over the top of any hill at high speed.
- Never attempt steep hills or side hilling when pulling a trailer.
- Always check for obstacles before operating in a new area. Always follow proper procedures when operating over obstacles as described in *RIDING THE VEHICLE* subsection.

– Never operate this vehicle in fast flowing water or in water deeper than specified in *RIDING THE VEHICLE* subsection. Remember that wet brakes may have reduced stopping ability. Test your brakes after leaving water. If necessary, apply them several times to let friction dry out the brakes.
– Always ensure to properly park the vehicle on the flattest terrain section available. Put shift lever in PARK, stop engine and remove key before leaving the vehicle.
– Never assume that the vehicle will go everywhere safely. Sudden changes in terrain caused by holes, depressions, banks, softer or harder "ground" or other irregularities may cause the vehicle to topple or become unstable. To avoid this, slow down and always observe the terrain ahead. If the vehicle does begin to topple or rollover, the best advice is to immediately steer in the direction of the rollover! Never attempt to prevent a rollover with your arms or legs. You should keep your limbs inside the cage.

PRE-RIDE INSPECTION

Always inspect and confirm the safe operating condition of your vehicle prior to ride. Always follow the maintenance schedule described in this Operator's Guide.

⚠ WARNING

Perform a pre-ride inspection before each ride to detect any potential problem that could occur during operation. The pre-ride inspection can help you monitor component wear and deterioration before they become a problem. Correct any problem that you discover to reduce the risk of a breakdown or crash. See an authorized Can-Am dealer as necessary.

Before using this vehicle, the operator should always perform the following pre-ride inspection check list.

Pre-Ride Inspection Check List

What to Do Before Starting the Engine (Key OFF)

ITEMS TO BE INSPECTED	INSPECTION TO PERFORM	✔
Tires	Check tire pressure and condition. – Front: MIN 69 kPa (10 PSI), LOADED 83 kPa (12 PSI) – Rear: MIN 83 kPa (12 PSI), LOADED 152 kPa (22 PSI)	
Wheels	Check wheels for damage and for abnormal play, and check lug nuts are tightened	
Radiator	Check cleanliness of the radiator.	
Front grill kit	Inspect front grill kit for cleanliness.	
Engine oil	Check engine oil level.	
Coolant	Check coolant level.	
Engine Air filter	Inspect the engine air filter.	
CVT Air filter	Inspect the CVT air filter (when riding in severe conditions).	
Drive shaft boots	Check drive shaft boots and protectors condition.	
Cargo and load	Cargo Load: If you transport a cargo, respect the maximum loading capacity of 272 kg (600 lb). Ensure cargo is properly secured to the rear cargo box. Vehicle Load: Ensure that total load on the vehicle (including operator, passenger, cargo, tongue weight and added accessories) does not exceed 363 kg (800 lb) (all models except LTD) and 340 kg (750 lb) (LTD model).	
	If you are pulling a trailer or another equipment: – Check hitch and trailer ball condition. – Respect the tongue capacity and towing capacity. – Ensure trailer is properly secured to hitch.	

ITEMS TO BE INSPECTED	INSPECTION TO PERFORM	✔
Rear cargo box	Check if the cargo box is properly latched.	
	Check if both tail gates are properly latched.	
Chassis and suspension	Check underneath vehicle for any debris on chassis or suspension and clean them properly.	

What to Do Before Starting the Engine (Key ON)

ITEMS TO BE INSPECTED	INSPECTION TO PERFORM	✔
Gauge	Check operation of indicator lamps in gauge (during first few seconds of key ON).	
	Check for messages in gauge.	
Lights	Check operation and cleanliness of headlights and taillight.	
	Check operation of high and low beam.	
	Check operation of brake light.	
Seats, side nets and seat belts	Check if seats are properly latched.	
	Check side nets for any damage. Have the nets replaced if any damage is found. Fasten both side nets and confirm that they latch securely. Use the adjustment strap to tighten the net as required.	
	Check seat belts for any damage. Fasten seat belts and confirm that they latch securely.	
Accelerator pedal	Press on the accelerator pedal a few times to ensure it operates freely and it returns to the rest position when released.	
Brake pedal	Press down on the brake pedal and make sure you feel firm resistance and that it fully returns to position when released.	
Fuel level	Check the fuel level.	

What to Do After the Engine is Started

ITEMS TO BE INSPECTED	INSPECTION TO PERFORM	✔
Steering	Check if steering operates freely by completely turning it from side to side.	
Ignition switch	Turn the ignition switch to OFF to verify if engine will shut down. Restart engine.	
Shift lever	Check operation of shift lever (P, R, N, H and L).	
2WD/4WD selector	Check operation of 2WD/4WD selector.	
Brakes	Drive forward slowly a few feet and apply brakes. The brake pedal must feel firm when applied. The pedal must return to rest position when released. The brakes must respond adequately to the driver's input.	

Before you Ride

Perform pre-ride inspection to confirm the safe operating condition of your vehicle. Refer to *PRE-RIDE INSPECTION* subsection.

Driver and passenger must:

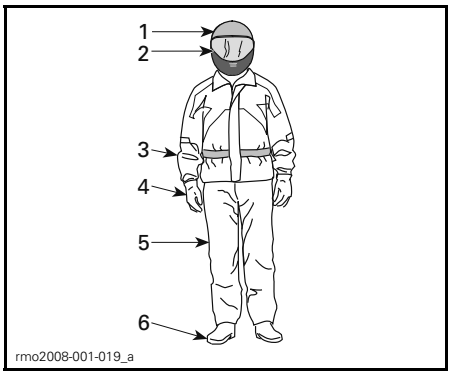
– Be properly seated.
– Latch both side nets and fasten seat belt.
– Wear appropriate riding gear. (Refer to *RIDING GEAR* subsection below.)

Riding Gear

It is important that the operator and passenger always wears appropriate protective clothing and apparel, including:

– An approved helmet
– Eye protection
– Boots
– Gloves
– A long sleeved shirt or jacket
– Long pants.

Depending on conditions, anti-fogging goggles may be required.



RIDING GEAR
1. *Approved helmet*
2. *Eye and face protection*
3. *Long sleeves shirt or jacket*
4. *Gloves*
5. *Long pants*
6. *Boots (over-the-ankle footwear)*

Weather conditions should help you decide how to dress. To maximize comfort and avoid frostbites in winter, dress for the coldest weather expected. Thermal underwear next to the skin also provides good insulation.

Never wear any loose clothing that may get entangled in the vehicle or on tree branches and shrubs.

Helmets and Eye Protection

Helmets protect the head and brain from injury. Even with the vehicle's cage and side nets, objects can enter the cockpit and strike the head, or the head can strike the cage itself or objects outside the vehicle. Even the best helmet is no guarantee against injury, but statistics indicate that helmet use significantly reduces the risk of brain injury. So, be safe and always wear a helmet while riding.

Choosing a Helmet

Helmets should be manufactured to meet the appropriate standard in your state, province or country and should fit properly.

A helmet with face protection is a better choice as it protects also against frontal impacts. It can also protect against debris, stones, insects, the elements, etc.

An open-face helmet does not offer the same protection for the face and chin. If you wear an open-face helmet, you should use a snap-on face shield and/or a pair of goggles. Ordinary glasses or sunglasses are not sufficient eye protection for riders. They can shatter or fly off, and they allow wind and airborne objects to reach the eyes.

For winter riding conditions, a stocking type cap, balaclava and face mask should always be carried or worn.

Use tinted face shields or goggles in the daytime only; do not use them at night or in poor illumination. Do not use them if they impair your ability to discern color.

Other Riding Gear

Footwear

Always wear closed toe footwear. Sturdy over-the-ankle boots with non-slip soles offer more protection and allow you to plant your foot properly on footrest.

Avoid long shoelaces that can be tangled in the accelerator or brake pedals.

For winter riding conditions, rubber soled boots with either a nylon or leather uppers, with removable felt liners are best suited.

Avoid rubber boots. Rubber boots may get trapped behind or between pedals, impairing the proper operation of brake and accelerator pedals.

Gloves

Full-fingered gloves protect hands from the wind, sun, heat, cold and flying objects. Gloves that fit snugly will improve grip on the steering wheel and help reduce hand fatigue. Sturdy, reinforced motorcycle or ATV gloves help protect hands better in the event of an accident or a rollover. If gloves are too bulky, it may be difficult to operate the controls.

For winter riding conditions, hands should be protected by a pair of snowmobile gloves which have sufficient insulation and allow use of thumbs and fingers for operation of controls.

Jackets, Pants and Riding Suits

Wear a jacket or a long sleeved shirt and long pants, or a full riding suit. Quality ATV-type protective gear will provide comfort, and it can help you avoid being distracted by adverse environmental elements. In case of a crash, good quality protective gear made of sturdy material may prevent or reduce injury.

In cool-weather riding, protect yourself against hypothermia. Hypothermia, a condition of low body temperature, can cause loss of concentration, slowed reactions and loss of smooth, precise muscle movement. In cool conditions, proper protective gear like a windproof jacket and insulated layers of clothing are essential. Even while riding at moderate temperatures, you can feel very cold due to the wind.

Protective gear that is appropriate for cold-weather riding may be too hot when stopped. Dress in layers so that clothing can be removed as desired. Topping the protective gear with a windproof outer layer can prevent cold air from reaching the skin.

Rain Gear

If you must ride in wet weather, a rain suit or a waterproof riding suit is recommended. On long rides, it is a good idea to carry rain gear. A dry rider will be much more comfortable and alert.

Hearing Protection

Long-term exposure to wind and engine noise when riding can cause permanent hearing loss. Properly worn hearing protective devices such as earplugs can help prevent hearing loss. Check local laws before using any hearing protective devices.

Avoid Rollovers and Tipovers

Side-by-side vehicles handle differently from other vehicles. Side-by-side vehicles are designed to handle off-road terrain (for example, their wheel base and track width, ground clearance, suspension, drivetrain, tires, etc.), and, as a result, can overturn in situations where vehicles designed for use primarily on paved or smooth terrain may not.

A rollover or other accident can occur quickly during abrupt maneuvers such as sharp turns or hard acceleration or deceleration when turning, or when driving on hills or over obstacles. Abrupt maneuvers or aggressive driving can cause rollovers or loss of control even in flat open areas. If the vehicle rolls over, any part of your body (such as arms, legs, or head) outside of the cockpit can be crushed and trapped by the cage or other parts of the vehicle. You can also be injured by impact with the ground, cockpit or other objects.

To reduce the risk of rollovers:

– Use care when turning.
  - Do not turn the steering wheel too far or too fast for your speed and environment. Adjust steering inputs according to your speed and environment.
  - Slow down before entering a turn. Avoid hard braking during a turn.
  - Avoid sudden or hard acceleration when turning, even from a stop or low speed.
– Never attempt donuts, skids, slides, fishtails, jumps, or other stunts. If vehicle starts to skid or slide, steer in the direction of the skid or slide. Never slam the brakes and lock the wheels.
– Avoid paved surfaces. This vehicle is not designed to operate on paved surfaces and is more likely to roll over. If you must drive on pavement, turn gradually, go slowly, and avoid abrupt acceleration and braking.

This vehicle can roll over sideways or tip over forward or backwards on slopes or uneven terrain.

– Avoid side hilling (driving along the slope rather than up or down a hill). When possible, drive straight up and down inclines rather than across them. If you must side hill, use extreme caution and avoid slippery surfaces, objects, or depressions. If you feel the vehicle start to rollover or slide sideways, steer downhill if possible.
– Avoid steep hills and follow procedures in this guide for climbing and descending hills.
– Sudden changes in terrain such as holes, depressions, banks, softer or harder ground or other irregularities may cause the vehicle to tip or become unstable. Observe the terrain ahead and slow down in areas of uneven terrain.

This vehicle will handle differently when carrying or pulling a load.

– Reduce speed and follow instructions in this manual for carrying cargo or pulling a trailer.
– Avoid hills and rough terrain.
– Allow more distance to stop.

Be Prepared in Case of Rollover

– Fasten side nets and seat belt to help you avoid sticking out arms or legs.

– Never grab the cage while riding. Hands can be crushed between the cage and the ground in a rollover. Keep hands on the steering wheel or handholds.
– Never try to stop a rollover using your arms or legs. If you think that the vehicle may tip or roll, the driver should keep both hands on the steering wheel and the left foot firmly planted on the footrest. The passenger should keep both hands on the handholds and both feet firmly planted on the floor.

Avoid Collisions

This vehicle can reach high speeds. At higher speeds, there is an increased risk of losing control, particularly in challenging off-road conditions, and the risk of injury in a collision is greater. Never operate at excessive speeds. Always go at a speed that is proper for the terrain, visibility, and operating conditions, and your experience. Consider reserving use of the performance key for situations in which full speed and acceleration capability are appropriate.

Never operate this vehicle on any public street, road or highway, even dirt or gravel ones. Riding your vehicle on roads or highways could result in a collision with another vehicle. This vehicle is not designed for operation on roads. For example, it does not meet motor vehicle safety standards that apply to automobiles. In many jurisdictions it is not legal to operate this vehicle on public roads.

This vehicle does not have the same kind of protection for collisions as a car; for example, there are no air bags, the cockpit is not fully enclosed, and it is not designed for collisions with other vehicles. Therefore, it is particularly important to fasten seat belts and side nets and wear an approved helmet.

Practice Exercises

Before you go out for a ride, it is very important to familiarize yourself with the handling of your vehicle by practicing in a controlled environment. If possible, it is also a very good idea to take a more formal training course to sharpen your skills and increase your knowledge of the vehicle.

Find a suitable area to practice and perform the following exercises. It should be at least 45 m (150 ft) by 45 m (150 ft) free of obstacles like trees and rocks. Once you've selected a suitable permitted location, proceed with the following practice exercises.

Turning Exercises

Turning is one of the most frequent causes of accidents. It is easier for the vehicle to lose traction or rollover if you turn too sharply, or go too fast. Slow down when you approach a turn.

- First learn how to perform slight right turns at very low speeds. Release the throttle before turning and slowly reapply the throttle when turning.
- Repeat turning exercise but this time maintain the throttle at the level while turning.
- Finally, repeat turning exercise while accelerating slowly.
- Practice exercises turning on the other side.

Note how your vehicle reacts in these different exercises. We recommend releasing the throttle before entering a turn to help initiate directional change. You will feel the lateral force increasing with the speed and with your steering input. The lateral force should be maintained as low as possible to make sure it does not cause the vehicle to roll over.

U Turn Exercises

Practice doing U turns.

- Accelerate slowly and while remaining at low speed, then gradually turn the steering wheel to the right until you have completed the U turn.
- Repeat U turn exercise with different steering inputs and always at a very low speed.
- Repeat U turn exercise on the other side.

As mentioned before in this guide, do not ride on paved surfaces as the vehicle behavior will not be the same, increasing the risk of rollover.

Braking Exercises

Practice braking to get familiar with the brake response.

- Do it at low speed first, then increase the speed.
- Practice braking in straight line at different speeds and different braking force.
- Practice emergency braking; optimal braking is obtained in straight line, with high force applied, without locking the wheels.

Remember, braking distance depends on vehicle speed, load and the type of surface. Also, the tires and brakes conditions play a major role.

Reverse Exercises

The next step involves using the reverse.

- Install 1 cone marker on both sides of the vehicle beside each rear wheel. Move the vehicle forward until you can see the cone markers, then stop the vehicle. Acknowledge the distance required to see obstacles behind you.
- Learn how the vehicle handles itself in reverse and reacts with steering inputs.

– Always perform this reverse exercise at slow speeds.
– Become familiar with the usage of the override function. Do not steer while using the override as it increases the risks of rollover.

Emergency Engine Stopping Exercise

Learn how to stop your engine quickly in an emergency situation.

– While running at low speed, simply turn the ignition key to the off position.

This is to familiarize you with the vehicle's reaction when the engine is turned off while driving and to develop this reflex.

Off-Road Operation

The very nature of off-road operation is dangerous. Any terrain, which has not been specially prepared to carry vehicles, presents an inherent danger where terrain substance, shape and steepness are unpredictable. The terrain itself presents a continual element of danger, which must be knowingly accepted by anyone venturing over it.

An operator who takes a vehicle off-road should always exercise the utmost care in selecting the safest path and keeping close watch on the terrain ahead of him. The vehicle should never be operated by anyone who is not completely familiar with the driving instructions applicable to the vehicle, nor should it be operated on steep or treacherous terrain.

General Riding Techniques

General Driving Tips

Care, caution, experience and driving skill are the best precautions against the hazards of vehicle operation.

Whenever there is the slightest doubt that the vehicle can safely negotiate an obstacle or a particular piece of terrain, always choose an alternate route.

In off-road operation, power and traction, not speed, are important. Never drive faster than visibility and your own ability to select a safe route permit. Always go slowly and be extra careful when operating on unfamiliar terrain. Always be alert to changing terrain conditions when operating this vehicle. Be especially cautious on excessively rough, slippery, icy or loose terrain.

Constantly watch the terrain ahead for sudden changes in slopes or obstacles, such as rocks or stumps, that may cause loss of stability, resulting in tip over or rollover.

Never operate the vehicle if the controls do not function normally. See an authorized Can-Am dealer.

To maintain proper control it is strongly advised that you keep your hands on the steering wheel and within easy reach of all controls. The same holds true for your feet. To minimize the possibility of any leg or foot injury, keep your left foot on the footrest and right foot on the floor at all times. Staying completely within the cockpit will also help keep you from striking objects outside the vehicle.

Watch for and avoid branches and other objects that could enter the cockpit and strike you or your passenger.

Operating in Reverse

When operating in reverse, check that the path behind the vehicle is free of people or obstacles. Pay attention to blind spots. When it is safe to proceed in reverse, go slowly and avoid sharp turns.

⚠ WARNING

Steering inputs in reverse operation increase the risk of rollover.

NOTE: In reverse operation, the engine RPM is limited thus limiting the vehicle reverse speed.

⚠ WARNING

When driving downhill in reverse, gravity can increase the vehicle speed above the set limited reverse speed.

Crossing Roads

If you have to cross a road, ensure to have complete visibility on both sides for incoming traffic and decide on exit point on other side of road. Drive in a straight line toward that point. Do not make sharp direction changes or abrupt accelerations as it may result in a rollover situation. Do not travel on sidewalks or bicycle trails as they are designated specifically for those uses.

Riding on Paved Surfaces

Avoid paved surfaces. This vehicle is not designed to operate on paved surfaces and is more likely to roll over. If you must drive on pavement, turn gradually, go slowly, and avoid abrupt acceleration and braking.

Shallow Water Crossing

Water can be a unique hazard. If it is too deep the vehicle may "float" and topple. Check the water depth and current before you attempt to cross any water. Water depth should not exceed 30 cm (12 in) for vehicle to safely cross the obstacle. Beware of slippery surfaces such as rocks, grass, logs, etc., both in the water and on its banks. A loss of traction may occur. Do not attempt to enter the water at high speed.

Water will affect the braking ability of your vehicle. Make sure you dry the brakes by applying them several times after the vehicle leaves the water.

Mud or marsh lands may be encountered near water. Be prepared for sudden "holes" or changes in depth. Similarly so, be watchful of hazards such as rocks, logs, etc., partially covered by vegetation.

Riding on Snow or Ice

When performing pre-ride inspection, pay special attention to locations on the vehicle where snow and/or ice accumulations may obstruct visibility of the tail lamp, clog ventilation openings, block the radiator and fan, and interfere with the movement of controls. Before starting with your vehicle, check the steering, accelerator and brake pedals for interference free operation.

Whenever this vehicle is ridden on a snow covered drive path, the tire grip is generally reduced causing the vehicle to react differently to control inputs from the operator. On low grip surfaces, the steering responses are not as crisp and precise, stopping distances are lengthened and acceleration is also affected. Slow down and do not "gun" the accelerator. This will only result in spinning of the tires and possibly in an over steering slide of the vehicle. Avoid hard braking. This will possibly result in a straight line slide of the vehicle. Again, the best advice is to safely reduce speed in anticipation of a maneuver to give yourself time and distance in order to keep control of the vehicle.

As you drive your vehicle over a loose snow covered surface, snow dust will be picked up in the wake turbulence of the moving vehicle and transported to contact and accumulate or melt on some exposed components including rotating parts like brake discs. Water, snow or ice may affect the response time of the brake system of your vehicle. Even when not required to reduce vehicle speed apply brakes frequently to prevent ice or snow accumulation and to dry brake pads and discs. While doing so in low risk driving situations you will test for grip level and keep yourself alerted to how the vehicle reacts to your control inputs. Always

keep brake and accelerator pedals and floor boards free of snow and ice. Frequently wipe snow off seat, steering wheel, headlights and tail lamps.

The depth of the snow cover may hide rocks, tree stumps or other objects and if it is wet may totally impede the drivability as the vehicle becomes bogged down or completely looses traction in slushy snow. Look far ahead and always be watchful of any visible clues that might indicate the presence of such obstacles. In doubt steer clear. Avoid driving on any frozen waterways before checking that the ice will safely support the vehicle, its riders and its load of cargo.

At the end of each ride it is a good practice to clean the vehicle and all moving components (brakes, steering components, drivelines, controls, radiator fan etc.) from any snow or ice accumulations. Wet snow will turn to ice during the shut down period and become more difficult to remove at the next pre-ride inspection.

Riding on Sand

Sand and riding on sand dunes is another unique experience but there are some basic precautions that should be observed. Wet, deep or fine sand may create a loss of traction and cause the vehicle to slide, drop off or become "bogged" down. If this occurs look for a firmer base. Again, the best advice is to slow down and be watchful of the conditions.

When riding in sand dunes it is advisable to equip the vehicle with an antenna type safety flag. This will help make your location more visible to others over the next sand dune. Proceed carefully should you see another safety flag ahead.

Riding on Gravel, Loose Stones or Other Slippery Surfaces

Riding on loose stones or gravel is very similar to riding on ice. They will affect the steering of vehicle, possibly causing it to slide and tip over especially at high speeds. In addition, braking distance may be affected. Remember that "gunning" the throttle or sliding may cause loose stones to be ejected rearwards into the path of another rider's way. Never do it deliberately.

If you do get into a slide or skid, it may help to turn the steering wheel into the direction of the skid until you regain control. Never jam the brakes and lock the wheels.

Crossing Obstacles

Obstacles on the "trail" should be traversed with caution. This includes rocks, fallen trees, and depressions. You should avoid them whenever possible. Remember that some obstacles are too large or dangerous to cross and should be avoided. As a guideline, never attempt to cross an obstacle higher than the ground clearance of the vehicle. Small rocks or small fallen trees may be safely crossed - approach obstacle at low speed and as much as possible at a right angle. Adjust speed without losing momentum and do not accelerate abruptly. Passenger must grasp handholds firmly and brace feet on the floor. Hold steering firmly without closing your fists around it and proceed. Be aware that the obstacle may be slippery or may move while crossing.

Hill Driving Conditions

When driving on hills or slopes, two things are highly important: be prepared for slippery surfaces or terrain variations and obstacles and brace yourself properly inside vehicle. If you climb or descend a hill that is too slippery or has too loose a surface, you can lose control. If you go over the top of a hill at high speed, you may not

have time to prepare for the terrain on the other side. Avoid parking on a slope. Always put the shift lever in PARK when stopped or parked, especially on an incline, to avoid rolling. If you must park on a steep incline, block the wheels using rocks or bricks.

Uphill Driving

Use the low range (L) for uphill driving.

Due to its configuration, this vehicle has very good traction even while climbing, so much so that tip over is possible before traction is lost. For example, it is common to encounter terrain situations where the top of the hill has eroded to a point that the hill peak rises very sharply. This vehicle is not designed to negotiate such a condition. Take an alternate route.

It is also wise to know the terrain condition on the other side of the hill or bank. All too often there exists a sharp drop-off that is impossible to negotiate or descend.

If you feel that the slope is getting too steep to climb, apply brakes to immobilize vehicle. Put shift lever in reverse (R), and back down the hill, barely releasing brakes to remain at low speed. Do not attempt to turn around. Never coast down hill while vehicle is in neutral. Do not perform hard braking as it increases the risk of tipover.

Downhill Driving

This vehicle can climb steeper slopes than it can descend safely. Therefore, it is essential to assure that a safe route exists to descend a slope before you climb it.

Decelerating while negotiating a slippery downhill slope could "toboggan" the vehicle, causing it to slide. Maintain steady speed and/or accelerate slightly to regain control. Never slam brakes and lock the wheels.

Side Hilling

Whenever possible, side hilling (driving across a slope rather than up or down it) should be avoided. If necessary, do so with extreme caution. Side hilling on steep inclines could result in rollover. In addition, slippery or unfirm surfaces could result in uncontrollable side sliding. Avoid all objects or depressions that will intensify the raising of one side of the vehicle higher than the other, thus causing rollover. If you feel the vehicle start to rollover or slide sideways, steer downhill if possible.

⚠ WARNING

Be careful when loading and transporting liquid reservoirs. They can affect vehicle stability when side hilling by pulling downhill and increasing the risk of a roll over.

Drop-Offs

This vehicle is not designed to negotiate drop-offs. It will "bottom-out" and usually stop if either the front or rear wheels are driven over a drop-off. If the drop is sharp or deep, the vehicle will nose dive and tip over.

Avoid negotiating drop-offs. Reverse and select an alternate route.

Recreational, Group and Distance Riding

Respect the rights and limitations of others. Stay away from areas designated for other types of off road use. This includes snowmobile trails, equestrian trails, cross country ski trails, mountain bike trails, etc. Never assume there are no other users on the trail. Always stay to the right of the trail and do not zig zag to one side of the trail then the other. Be prepared to stop or pull off to the side if another trail user appears in front of you.

Join a local side-by-side vehicle club. It will provide you with a map and advice or inform you where you can ride. If a

club does not exist in your area, help to start one. Group riding and club activities provide a pleasurable, social experience. Never use this vehicle with drugs or alcohol, or tired or ill.

Always keep a safe distance from other riders. Your judgment of speed, terrain conditions, weather, mechanical condition of your vehicle and the "trust in judgment" you have in others around you will help you make a better choice of appropriate safe distance. This vehicle, like any other motorized vehicle, cannot stop "on a dime".

Before you ride, tell someone where you are planning to travel and your expected time of return.

Depending on the length of your ride, carry additional tools or emergency equipment. Find out where you can get additional gasoline. Be prepared for the possible conditions you may encounter. An emergency first aid kit should always be a consideration.

Environment

One of the benefits of this vehicle is that it can take you off the beaten path away from most communities. However, you should always respect nature and the rights of others to enjoy it. Do not ride in environmentally sensitive areas. Do not drive over forest crops or shrubs, nor cut down trees or take down fencing, nor spin your wheels and destroy the terrain. "Tread Lightly".

This vehicle can cause OHV wildfires if debris builds up near the exhaust or other engine hot spots and ignites then falls off into dry grass. Avoid riding in wet areas, through muskeg or tall grass, where debris can build up. Should you ride in those areas, inspect and remove all debris from your engine and hot spots. Refer to *MAINTENANCE* section for details.

Chasing wildlife is in many areas illegal. Wildlife can die of exhaustion after being chased by a motorized vehicle. If you encounter animals on the trail, stop and observe quietly and with caution. It will be one of the better memories of your life.

Observe the rule... "what you take in, carry out". Do not litter. Do not start campfires unless you have permission to do so, and then only away from dry areas. The hazards you may create on the trail may cause injury to others or yourself, even at a later date.

Respect farm lands. Always obtain the permission of the landowner before riding on private land. Respect crops, farm animals and property lines.

Finally, do not pollute streams, lakes or rivers and do not modify the engine or exhaust system, or remove any of its components as it will alter the vehicle emissions.

MOVING LOADS AND DOING WORK

Working with your Vehicle

Your vehicle can help you perform a number of different LIGHT tasks ranging from snow removal to pulling wood or carrying cargo. A variety of accessories are available from your authorized Can-Am dealer. To prevent possible injury, follow the instructions and warnings that accompany the accessory. Always respect the load limits of the vehicle. Overloading the vehicle can overstress the components and cause failure. Avoid overexerting yourself if you lift or pull heavy loads or manually push the vehicle.

Carrying Loads

Any load carried on the vehicle will affect the handling, stability and braking distance of the vehicle. Do not exceed the load limits of the vehicle, including the weight of operator, passenger, cargo, accessories and trailer tongue weight.

LOAD LIMIT OF THE VEHICLE	
363 kg (800 lb) (all models except LTD) 340 kg (750 lb) (LTD model)	Includes occupants, cargo, tongue weight and added accessories

Following are examples of suitable total vehicle load distribution:

EXAMPLES OF SUITABLE VEHICLE TOTAL LOADS				
OPERATOR AND PASSENGER	CARGO BOX LOAD	ACCESSORIES	TONGUE WEIGHT	TOTAL VEHICLE LOAD
200 kg (441 lb)	70 kg (154 lb)	25 kg (55 lb)	68 kg (150 lb)	363 kg (800 lb)
100 kg (220 lb)	263 kg (580 lb)	0 kg (0 lb)	0 kg (0 lb)	363 kg (800 lb)

To reduce the risk to lose control or the load carried, follow these recommendations.

Vehicle Settings When Carrying Load

When the total load exceeds 180 kg (400 lb), including weight of operator, passenger, cargo, accessories and trailer tongue weight, inflate the tires to maximum pressure 83 kPa (12 PSI) Front, 152 kPa (22 PSI) Rear.

NOTE: When carrying heavy loads in cargo box readjust suspension accordingly.

NOTE: When carrying heavy loads in cargo box or pulling a trailer operate with the shift lever in L (low range).

Loading the Cargo Box

NOTICE When loading or unloading, do not exceed the weight limit of 100 kg (220 lb) on either tailgate.

Load cargo as low as possible – a higher load can raise the vehicle's center of gravity, which can reduce stability. Position cargo toward the front and center of the cargo box and as evenly as possible.

Secure the load to the tie down hooks inside cargo box. Use only the tie down hooks on the bottom of the cargo box; do not secure cargo to the cage or other part of the vehicle. If it is not properly secured, a load may slide or fall off, possibly striking occupants or bystanders; or it may shift during riding, affecting the handling of the vehicle.

Objects that are higher than the walls of the cargo bed may affect visibility for the driver and may act as projectiles in case of an accident. Loads that protrude sideways can get snagged or caught in bush, branches or other obstacles. Avoid covering and obstructing the brake lights with the cargo. Ensure no cargo protrudes outside the box and that cargo will not interfere with your visibility or control of the vehicle.

Do not overload cargo box.

Close both tailgates before operating.

MAXIMUM CARGO BOX LOADS		
CARGO BOX (TOTAL)	272 kg (600 lb)	Evenly distributed and safely secured. Loaded as low as possible to reduce height of center of gravity.
LOWER CARGO BOX	272 kg (600 lb)	Evenly distributed.
TOP CARGO BOX	181 kg (400 lb)	Evenly distributed on floor separator.
UPPER TAILGATE	100 kg (220 lb)	Only while loading cargo into cargo box. Never operate with tailgate open.
LOWER TAILGATE	100 kg (220 lb)	Only while loading cargo into cargo box. Never operate with tailgate open.

Following are examples of cargo box loading limits:

EXAMPLES OF CARGO BOX TOTAL LOADS		
CARGO BOX UPPER SECTION LOAD	CARGO BOX LOWER SECTION LOAD	TOTAL CARGO BOX LOAD
0 kg (0 lb)	272 kg (600 lb)	272 kg (600 lb)
100 kg (220 lb)	172 kg (380 lb)	272 kg (600 lb)
181 kg (400 lb)	91 kg (200 lb)	272 kg (600 lb)

Operating While Carrying a Load

Reduce your speed when carrying cargo and turn gradually. Avoid hills and rough terrain. Allow more distance for braking. This vehicle may require additional stopping distance if carrying heavy loads, especially on inclined surfaces.

Tilting the Cargo Box

The cargo box can be tilted to ease unloading. Use release handles on either side of cargo box.

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1. RH release handle

NOTICE Always turn off engine when tilting the cargo box.

⚠ WARNING

- Always ensure no one is standing behind the cargo box before you actuate the release handle.
- The load weight may affect the operation of the cargo box tilting feature (tilting or lowering).

Be very careful with the operation of the tail gates and the cargo box as the load may have moved during transport.

To lower the cargo box, simply push it down into place.

⚠ WARNING

- Keep yourself and others clear of the cargo box and vehicle frame junction when lowering cargo box.
- Ensure to properly latch the cargo box and the tailgates before riding.
- Make sure you do not leave objects between lifted cargo box and vehicle frame to ensure proper latching of the cargo box when lowered.

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FRONT SECTION OF INCLINED CARGO BOX FREE OF ANY OBJECTS

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PUSH TO CLOSE
1. Hand guard

Hauling a Load

Never pull a load by attaching it to the cage; this can cause the vehicle to tip over. Use only the trailer hitch or winch (if installed) to pull a load.

When pulling loads with a chain or cable, ensure that there is no slack before starting and maintain tension while pulling.

When hauling a load, respect the maximum hauling capacity. See *PULLING A TRAILER* subsection.

⚠ WARNING

Slack can cause the chain or cable to break and snap back.

When pulling another vehicle, be sure that someone is controlling the pulled vehicle. They must brake and steer to prevent the vehicle from going out of control.

Before pulling loads with a winch, refer to the winch manufacturer's instructions.

Reduce your speed when hauling a load and turn gradually. Avoid hills and rough terrain. Never attempt steep hills. Allow more distance for braking, especially on inclined surfaces. Be careful not to skid or slide.

Pulling a Trailer

If a trailer is used behind the vehicle make sure that its hitch is compatible with the one on the vehicle. Make sure the trailer is horizontal with the vehicle. (In some instances a special extension may have to be installed on the vehicle hitch). Use security chains or cables to secure the trailer with the vehicle.

Improperly loading a trailer may cause loss of control. Respect the recommended maximum hauling capacity and maximum tongue load (Refer to *MAXIMUM HAULING CAPACITY* table). Make sure there is at least some weight on the tongue.

Always make sure load is evenly distributed and safely secured on the trailer; an evenly balanced trailer is easier to control.

Always put the shift lever to L (low range) for hauling a trailer – in addition to providing more torque, operating in low range helps account for the increased load on the rear tires.

When stopped or parked, block the vehicle and trailer wheels from possible movement.

Use caution when disconnecting a loaded trailer; it or its load may topple on you or others.

When hauling a trailer, respect the following maximum hauling capacity.

MAXIMUM HAULING CAPACITY

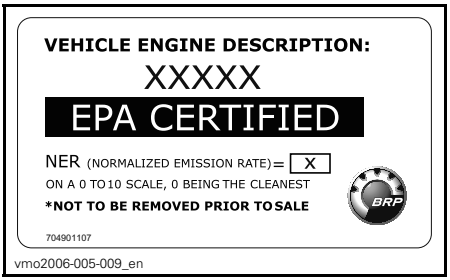
TYPE OF ATTACHMENT	TRAILER LOAD ALLOWED	TONGUE WEIGHT ALLOWED	NOTE
50.8 mm (2 in) X 50.8 mm (2 in) hitch ball support	680 kg (1,500 lb)	68 kg (150 lb)	Includes trailer and trailer load. Ensure to properly load the trailer so that tongue is always pushing on hitch support and not pulling on hitch ball.
38 mm (1.5 in) X 38 mm (1.5 in) hitch ball support and the appropriate hitch adapter	400 kg (882 lb)	40 kg (88 lb)	

IMPORTANT ON-PRODUCT LABELS

Hang Tag

This vehicle comes with a hang tag and labels containing important safety information.

Any person who rides this vehicle should read and understand this information before riding.



TYPICAL

ATTACHED TO COMPRESSOR HOSE

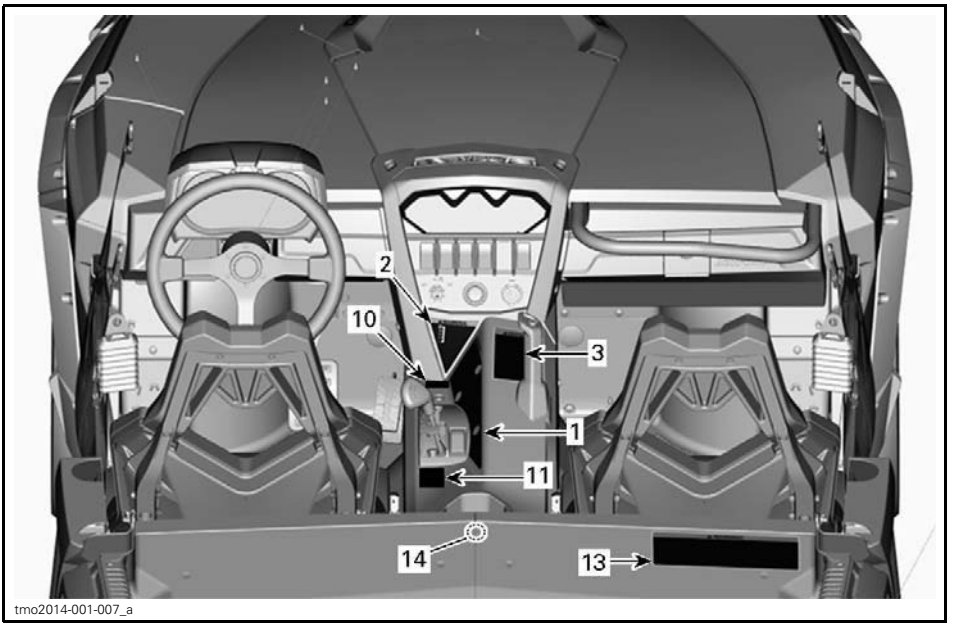
Safety Labels

Read and understand all the safety labels on your vehicle.

These labels are affixed to the vehicle for the safety of the operator, passenger or bystanders.

The following labels are on your vehicle, and they should be considered permanent parts of the vehicle. If missing or damaged, they can be replaced free of charge. See an authorized Can-Am dealer.

NOTE: In the event of any discrepancy between this guide and the vehicle, the safety labels on the vehicle have precedence over the labels in this guide.



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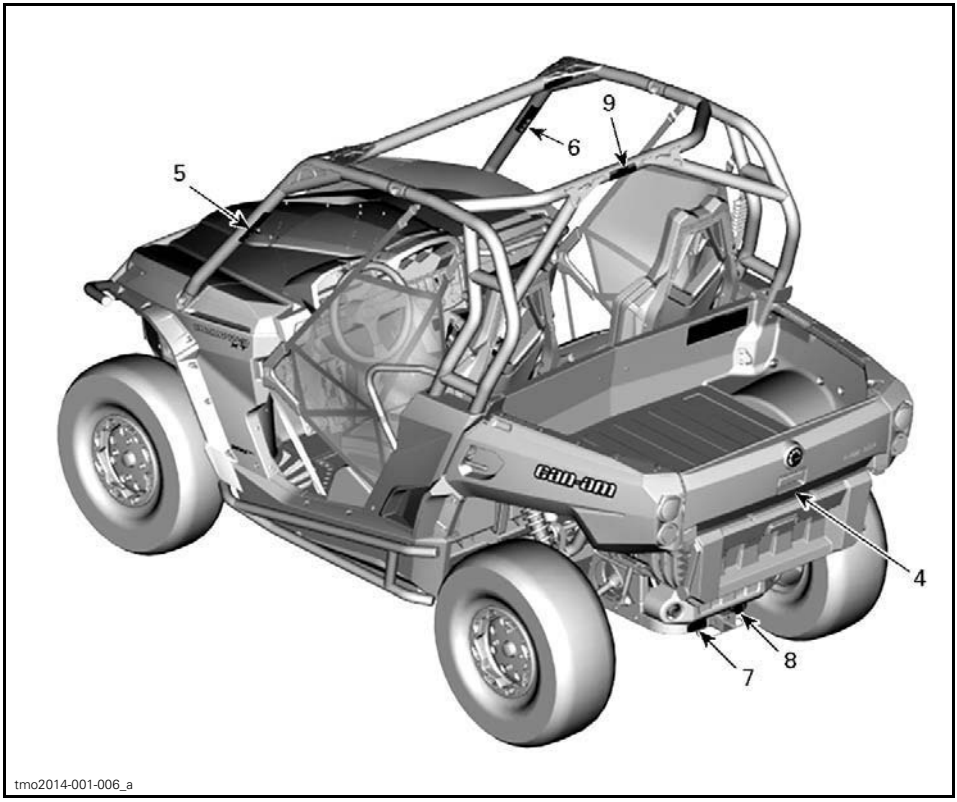

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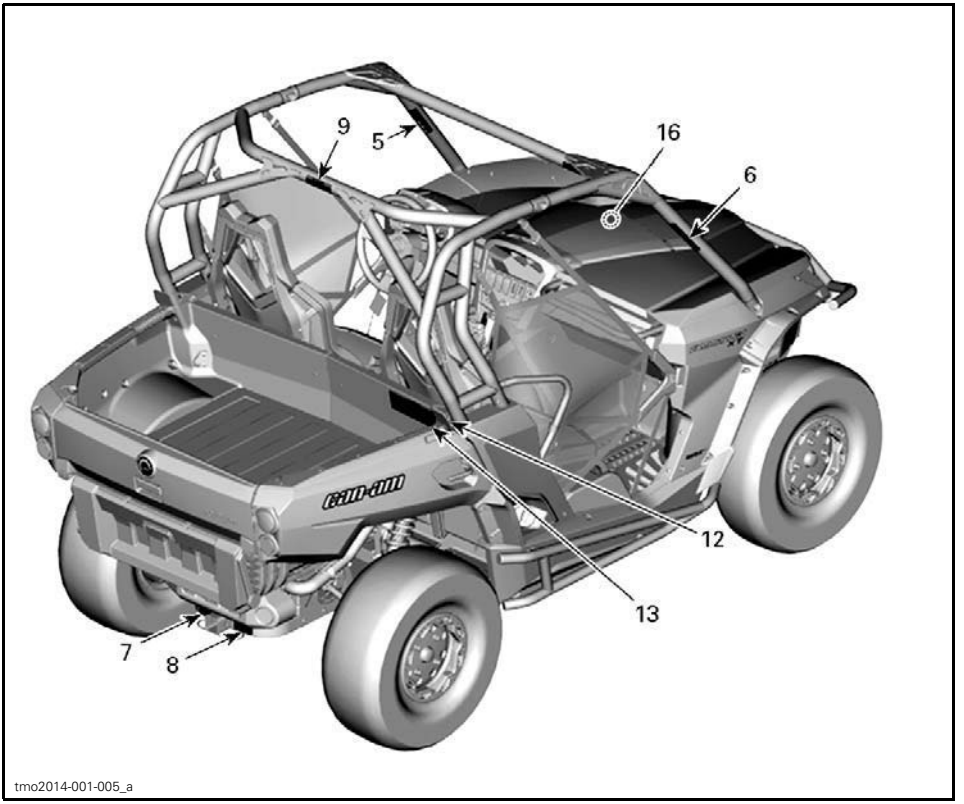

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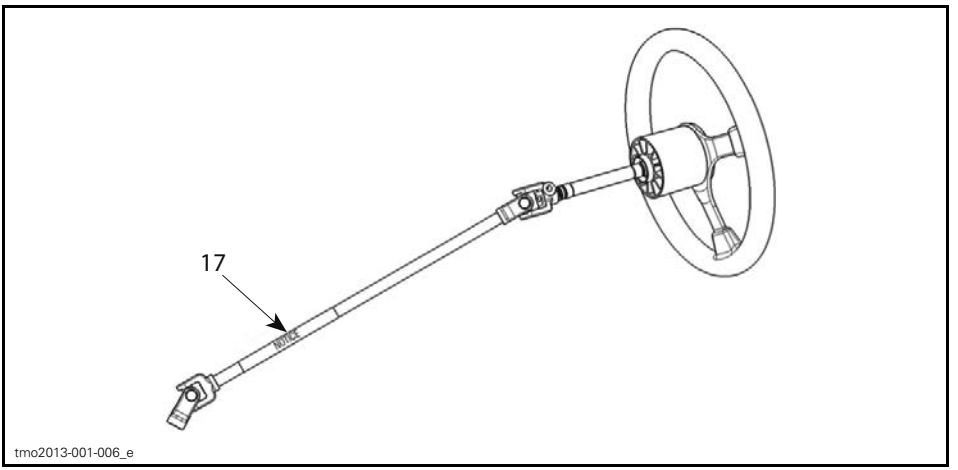

LABEL 1

LABEL 2

LABEL 3

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LABEL 4

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LABEL 5

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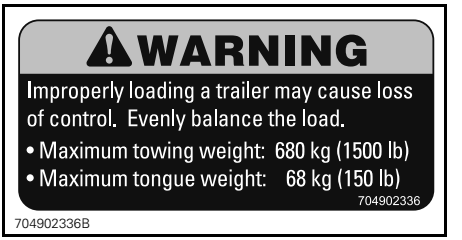
LABEL 6



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LABEL 7

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LABEL 8

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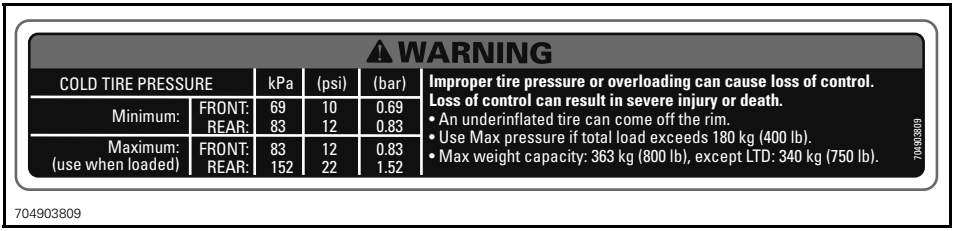
LABEL 9



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LABEL 10

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LABEL 11

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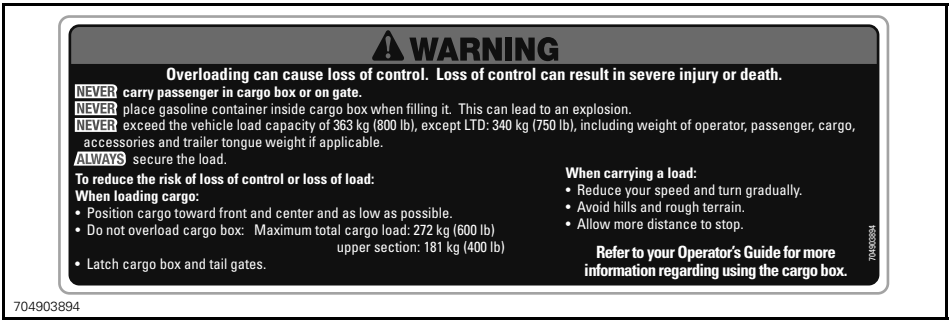
LABEL 12



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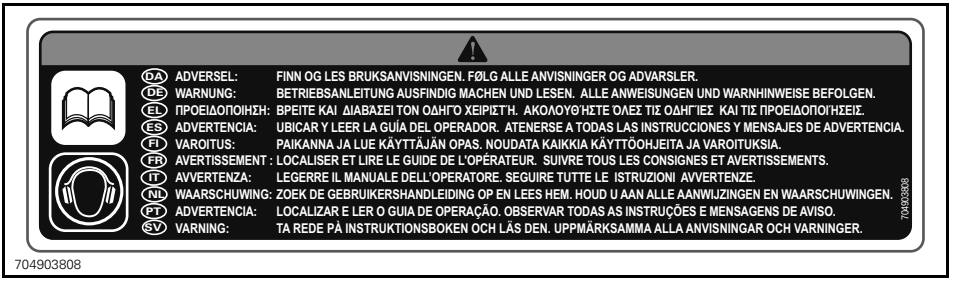
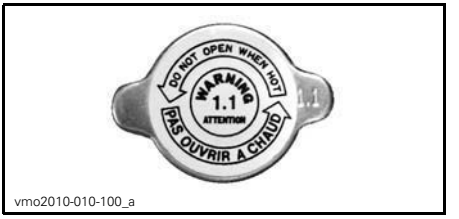
LABEL 13

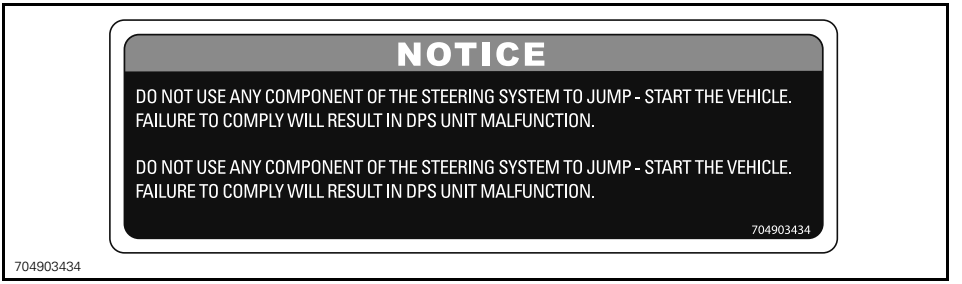


LABEL 14 - OUTSIDE CAN - US

LABEL 15



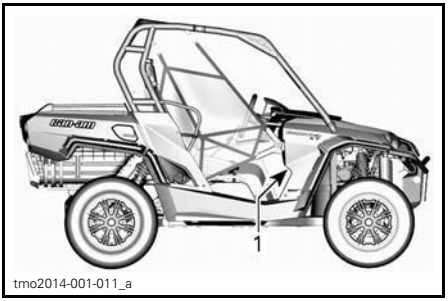
LABEL 16



LABEL 17

Compliance Labels

These labels indicate vehicle's compliance.



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TYPICAL

1. *Compliance labels located under glove box*

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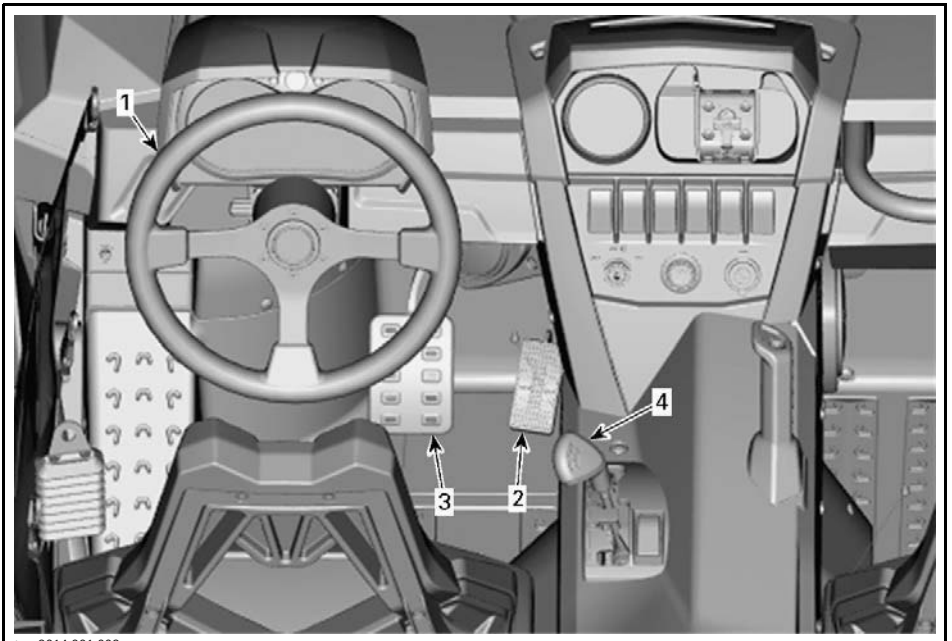
VEHICLE INFORMATION

PRIMARY CONTROLS

It is important to know the location and operation of all controls, and to develop and practice smooth and coordinated use of them.



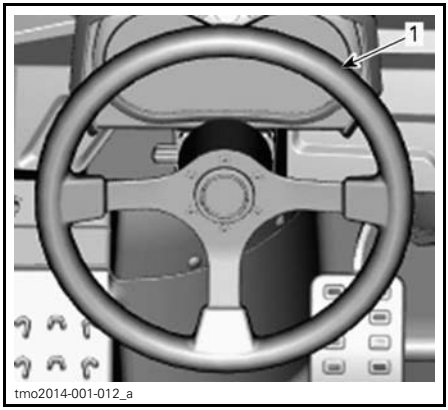
TYPICAL - PRIMARY CONTROLS

1) Steering Wheel

The steering wheel is located in front of the driver's seat.

The steering wheel steers the vehicle to the left or right.

Steer the steering wheel in the direction you want to go.



TYPICAL
1. Steering wheel

Grip the steering wheel with both hands, without having thumbs rolled around the steering wheel.

⚠ CAUTION Under rough trail conditions or when crossing an obstacle, the steering wheel could suddenly jerk on one side, causing hand or wrist injuries if the thumbs are rolled around the steering wheel.

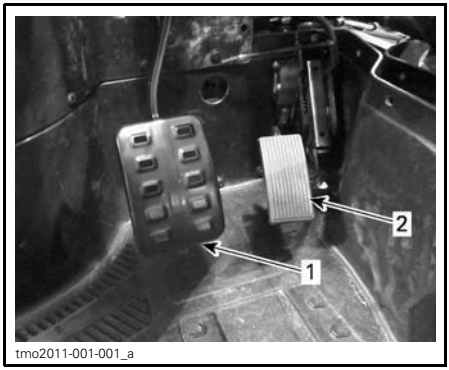
Models with DPS

Those models are equipped with Dynamic Power Steering (DPS) system. The DPS reduces the effort to turn the steering wheel.

2) Accelerator Pedal

The accelerator pedal is located on the right side of the brake pedal.

The accelerator pedal controls the engine speed.



1. Brake pedal
2. Accelerator pedal

To increase or maintain vehicle speed, press on the accelerator pedal with your right foot.

To decrease vehicle speed, release the accelerator pedal.

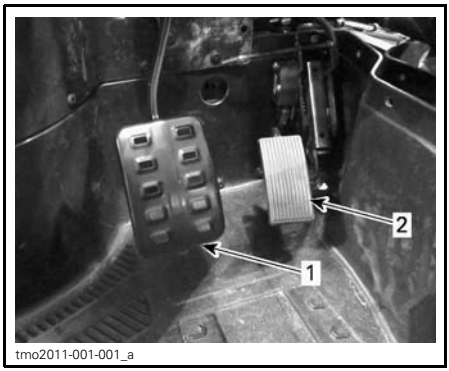
The accelerator pedal is spring loaded and should return to rest position (idle) when not pressed.

NOTE: The accelerator pedal should never be disassembled.

3) Brake Pedal

The brake pedal is located on the left side of the accelerator pedal.

The brake pedal function is to slow down or stop the vehicle.



1. Brake pedal
2. Accelerator pedal

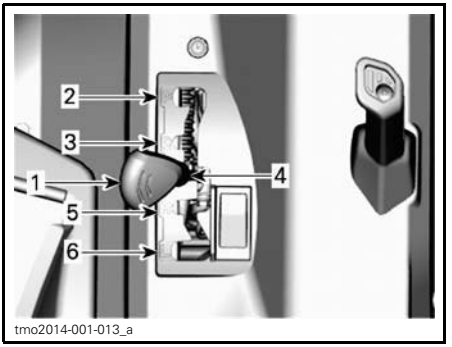
To decrease vehicle speed or to stop vehicle, press down the brake pedal with your right foot.

The brake pedal is spring loaded and should return to rest position when not pressed.

4) Shift Lever

The shift lever is located on the lower console.

The shift lever is used to change the gearbox position.



1. *Shift lever*
2. *Park*
3. *Reverse*
4. *Neutral*
5. *High range (forward)*
6. *Low range (forward)*

The vehicle must be stopped and brakes applied prior to selecting any gear.

NOTICE This gearbox is not designed to shift while vehicle is moving.

Park

The park position locks the gearbox to help prevent vehicle movement.

⚠ WARNING

Always use the PARK (P) position when the vehicle is not in operation. The vehicle can roll if the shift lever is not set to P (PARK).

Reverse

The reverse position allows the vehicle to go backwards.

NOTE: In reverse operation, the engine's RPM is limited, thus limiting the vehicle reverse speed.

⚠ WARNING

When driving downhill in reverse, gravity can increase the vehicle speed above the set limited reverse speed.

Neutral

The neutral position disengages the gearbox.

High Range (Forward)

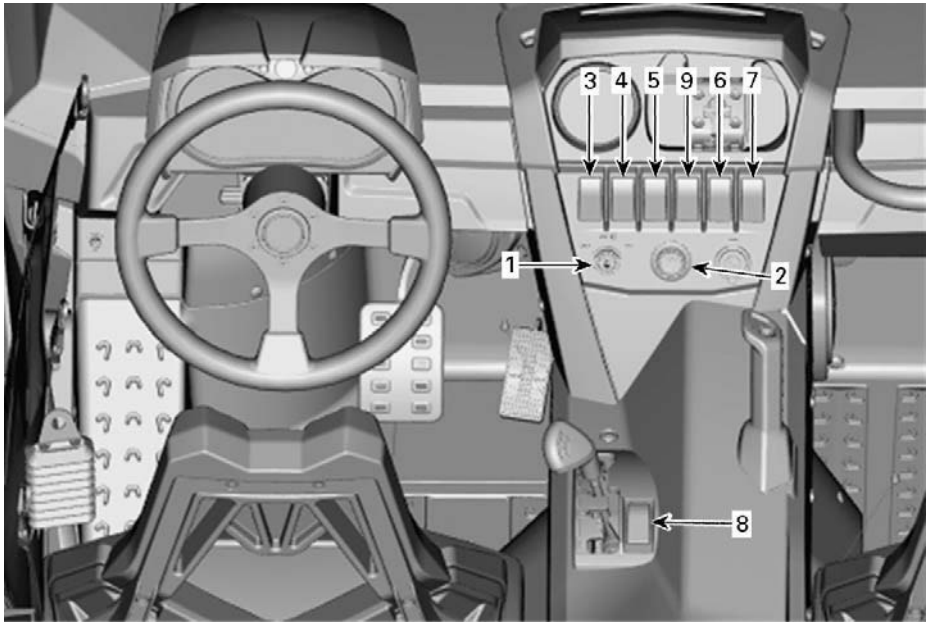
This position selects the high speed range of the gearbox. It is the normal driving speed range. It allows the vehicle to reach its maximum speed.

Low Range (Forward)

This position selects the low speed range of the gearbox. It allows the vehicle to move slowly with maximum torque at the wheels.

NOTICE Use the low speed range to pull a trailer, carry heavy cargo, go over obstacles or drive uphill and downhill.

SECONDARY CONTROLS



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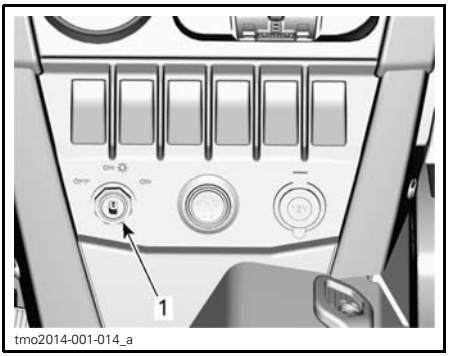
TYPICAL - SECONDARY CONTROLS

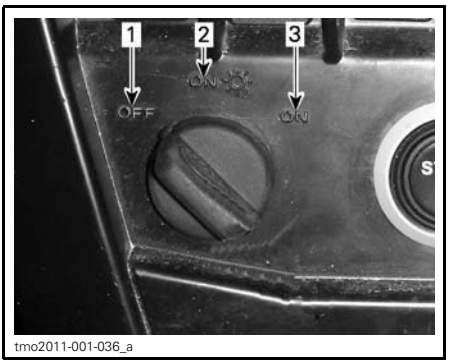
1) Ignition Switch and Keys

Ignition Switch

The ignition switch is located on the upper console area.



1. Ignition switch



IGNITION SWITCH POSITION
1. *OFF*
2. *ON with lights*
3. *ON*

OFF

The key can be inserted or removed in this position only.

In OFF position, the electrical system of the vehicle is disabled.

The engine is shut down by turning the ignition switch to OFF position.

ON with Lights

When the key is turned in this position, the electrical system of the vehicle is activated.

The gauge should wake-up.

The vehicle lights are turned on.

The engine can be started.

ON

This position offers the same functions as ON with lights position, except the vehicle lights are turned off.

Ignition Keys

Digitally Encoded Security System (D.E.S.S.)

The ignition keys contain an electronic circuit that gives it a unique electronic serial number.

The D.E.S.S. system reads the key code and allows engine starting for keys it recognizes.

Types of Keys

This vehicle can be operated using 3 different types of ignition keys:

– Normal key (grey)
– Performance key (black)
– Optional Work key (orange).

The key type is differentiated by its color.

⚠ WARNING

Rollovers, tipovers, collisions and loss of control resulting in serious injury or death are possible with the performance, normal or optional work keys. Using the work key or normal key is not a substitute for the operator being prepared, qualified, and operating with care.

Normal Key

The vehicle is delivered with a normal key.

The normal key limits the overall performance to 70% of maximum engine torque and vehicle speed to 70 km/h (43 MPH).

⚠ WARNING

On steep downhills, the engine speed limiter may not prevent the vehicle from accelerating beyond this speed.

This key may be useful for riders who prefer more gradual acceleration, or for riding in environments where full speed and high acceleration are not desirable. For example, in narrow, winding trails, operators may prefer the normal key.

Performance Key

The vehicle is delivered with a performance key, which allows the user to access the full torque of the engine as well as the top speed of the vehicle.

This may be useful for riders who prefer greater acceleration, and for environments where higher speeds and greater acceleration are appropriate. For example, in wide-open, straight trails, operators may prefer the performance key.

Optional Work Key

A work key is also available at your dealership.

The work key limits the overall performance to 50% of maximum engine torque and vehicle speed to 40 km/h (25 MPH).

⚠ WARNING

On steep downhills, the engine speed limiter may not prevent the vehicle from accelerating beyond this speed.

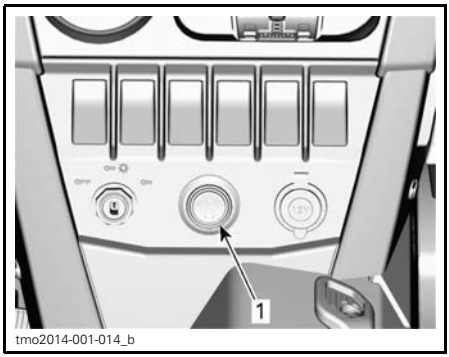
This may be useful for riders who use this vehicle in a workplace environment where lower speeds and acceleration are a requirement.

2) Engine Start Button

The engine start button is located on the upper console. When pressed and held, it starts the engine.

NOTE: The ignition switch must be in the **ON or ON with lights position** to allow engine start.

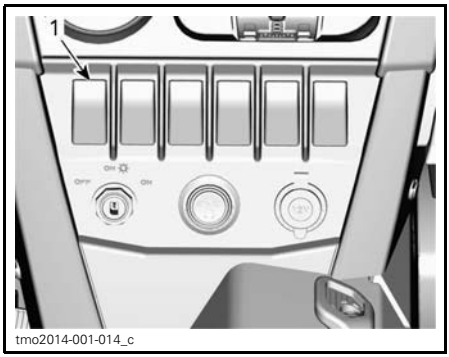
NOTE: If the ignition switch is left ON for more than 15 minutes, engine will not start unless ignition switch is turned OFF, then ON again.



1. Engine start button

3) Low/High Beam Headlight Switch

The low/high beam headlight switch is located on the upper console.

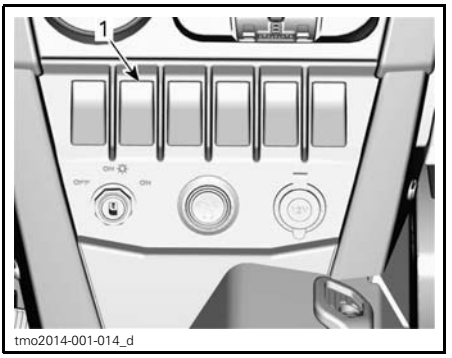


1. Low/High beam headlight switch

This switch is used to select either the headlights low or high beams.

4) 2WD/4WD Switch

The 2WD/4WD switch is located on the upper console.



1. 2WD/4WD switch

This switch selects 2 wheel drive or 4 wheel drive mode when the vehicle is stopped and the engine is running.

NOTICE **The vehicle must be stopped to engage or disengage 2WD/4WD switch. Mechanical damage may occur if switch is engaged or disengaged while driving.**

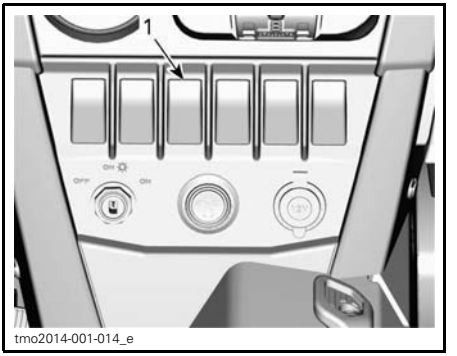
The 4WD mode is engaged when the switch is pushed upwards.

The 2WD mode is engaged when the switch is pushed downwards. The vehicle is then rear wheel drive only.

5) Sport/ECO Mode Switch

The sport/ECO switch is located on the upper console.

It is used to activate or deactivate either the sport or ECO mode.



1. Sport/ECO switch

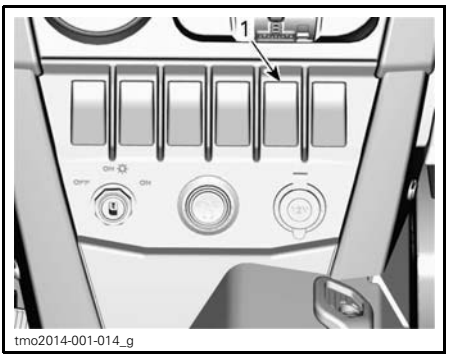
The sport mode provides a crisper throttle response. Even when the sport mode is activated by the switch, the ECO mode will be used in low and reverse gear.

The ECO (fuel economy mode) setting reduces fuel consumption by limiting throttle response and maximum throttle opening to maintain an optimal cruising setting.

NOTE: The sport mode can be activated with all key types and provides the maximum power with the used key.

6) ACS Switch (LTD Models Only)

The ACS switch is located on the upper console.



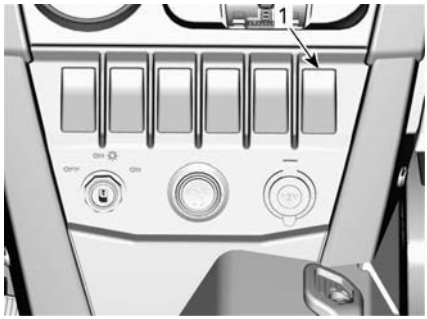
1. ACS switch

The ACS switch function is to adjust the ACS suspension.

To adjust the ACS suspension setting, refer to *SUSPENSION* subsection.

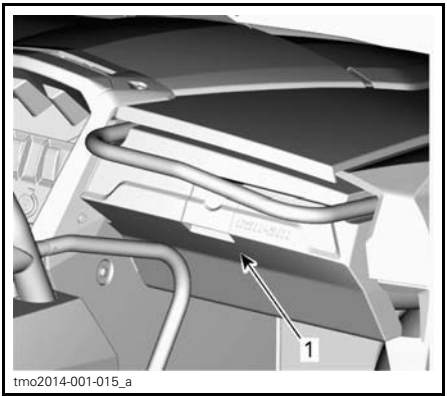
7) Winch Switch (Models with Winch)

The winch can be controlled from inside the vehicle with the winch control switch located in the upper console.



1. Winch switch

The winch also comes with a remote control located in the glove box.

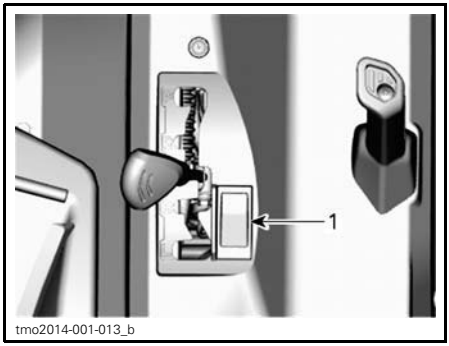


1. Glove box

Refer to your *BASIC GUIDE TO WINCHING TECHNIQUES* included with your vehicle for proper winch operation.

8) Override Switch

The override switch is located on the lower console beside the shift lever.



1. Override switch

The override switch main function is to bypass the engine speed limiter in reverse operation by allowing maximum engine torque.

⚠ WARNING

Only use the override to help get the vehicle unstuck from mud or other soft terrain. Do not use the override for normal operation in reverse. This would allow driving in reverse at excessive speeds and can increase the risk of losing control.

To engage the override function, proceed as follows:

While the shift lever is set to REVERSE position.

1. Ensure that the vehicle is stopped.
2. Press and hold the override switch then press the accelerator pedal gradually.

NOTE: When using the override function, the gauge will scroll an OVERRIDE message to confirm that the function is activated.

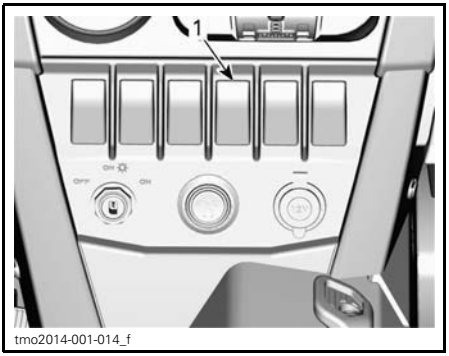
3. To disengage the override function, simply release the override switch.

The override switch is also used for two more functions:

– To reset the MAINTENANCE SOON message (refer to *MULTIFUNCTION GAUGE (LCD)* or *MULTIFUNCTION GAUGE (ANALOG/DIGITAL)* subsections).
– To move vehicle in case of a pedal accelerator failure (refer to *TROUBLESHOOTING GUIDELINES* subsection).

9) DPS Switch (All Models Except Base)

The DPS switch is used to change the DPS (Dynamic Power Steering) mode.



1. DPS switch

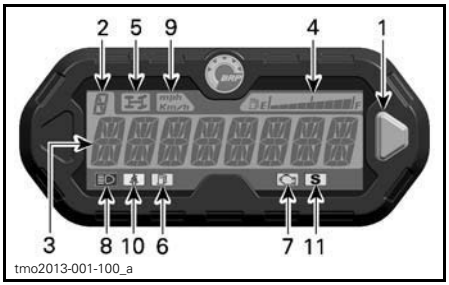
MULTIFUNCTION GAUGE (LCD) (BASE AND DPS MODELS)

The multifunction gauge (LCD) is located on the steering column.

⚠ WARNING

Do not adjust the display while riding . You could lose control.

Multifunction Gauge Description



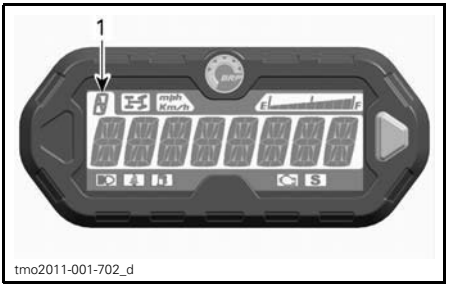
1. *Selector button*
2. *Transmission position display*
3. *Main screen*
4. *Fuel level display*
5. *4WD indicator lamp*
6. *Low fuel level indicator lamp*
7. *Check engine indicator lamp*
8. *High beam indicator lamp*
9. *MPH and KM/H indicator lamp*
10. *Seat belt indicator lamp*
11. *Sport mode indicator lamp*

1) Selector Button

The selector button is used to navigate or change settings in the multifunction gauge.

2) Transmission Position Display

This display will show transmission position.



1. *Transmission position*

DISPLAY	FUNCTION
P	Park
R	Reverse
N	Neutral
H	High range
L	Low range

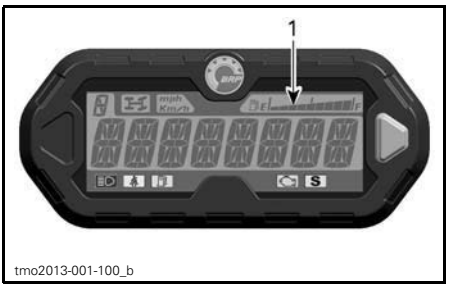
3) Main Screen

The main screen is used to display numerous functions of the multifunction gauge.

Refer to *MULTIFUNCTION GAUGE MODES* for the different available modes:

4) Fuel Level Display

Bar gauge continuously indicates the level of fuel in the fuel tank while riding.



1. *Fuel level display*

5) 4WD Indicator Lamp

When this indicator is ON, it indicates the 4WD system is activated.

6) Low Fuel Level Indicator Lamp

When this indicator is ON, it indicates that there is approximately 12 L (3.2 U.S. gal.) of fuel left in fuel tank.

7) Check Engine Indicator Lamp

When this indicator is ON, it indicates an engine fault code, look for a message at the LCD display.

When this indicator blinks, it indicates that the LIMP HOME mode is activated.

Refer to *TROUBLESHOOTING* section for more details.

8) High Beam Indicator Lamp

When this indicator is ON, it indicates that high beam is selected on the headlights and that ignition key is in ON with lights position.

9) KM/H or MPH Indicator Lamp

mph
Km/h

The proper lamp turns on to indicate the unit the speedometer uses.

10) Seat Belt Indicator Lamp

When this indicator is ON, the driver's seat belt is not buckled.

11) Sport Mode Indicator Lamp

S

When this indicator is ON, the sport mode is active.

Multifunction Gauge Modes

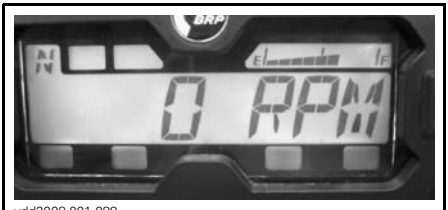
Speed Mode

In this mode, the main screen shows the speed of the vehicle either in km/h or in MPH.

vdd2008-001-084

RPM Mode

In this mode, the main screen shows the engine RPM.



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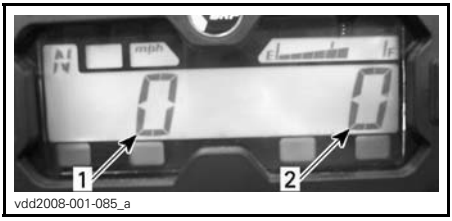
Combined Mode

In this mode, the main screen shows the speed of the vehicle and the engine RPM.



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1. *Vehicle speed*
2. *Engine RPM*

Odometer (OD)

Odometer records the total distance travelled either in miles or kilometers.

vsi2009-018-030

Clock

Shows current time.

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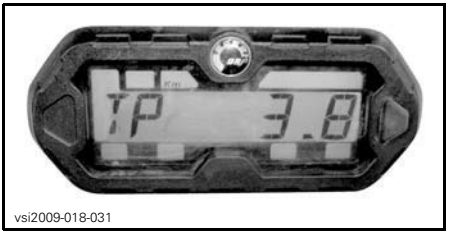
Refer to *GAUGE SETUP* to set current time.

Trip Meter (TP)

The trip meter records the travelled distance since it has been reset. Distance travelled is displayed either in kilometers or miles.


vsi2009-018-031

It can be used to establish a fuel tank range or distance between 2 way points.

Press and HOLD the selector button for 2 seconds to reset the trip meter.

Trip Hour Meter (TH)

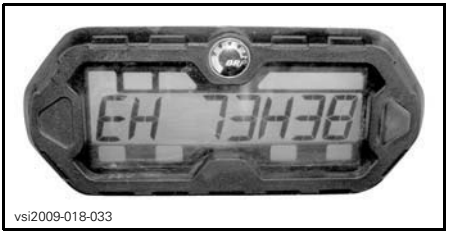
The trip hour meter records vehicle running time when the electrical system is activated. It can be used to establish traveling time between 2 way points .

vsi2009-018-032

Press and HOLD the selector button for 2 seconds to reset the hour meter.

Engine Hour Meter (EH)

The engine hour meter records engine running time.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Message Display Mode

Important messages can be displayed in the main screen. Refer to table below.

If an abnormal engine condition occurs, a message may scroll across the main screen in conjunction with a pilot lamp. Refer to *TROUBLESHOOTING* section for details.

MESSAGE (NORMAL OPERATION)	DESCRIPTION
BRAKE	Message displayed when the brakes are applied continuously for 15 seconds.
PERFORMANCE KEY	Displayed at power up when a the performance key is used.
WORK KEY	Displayed at power up when the work key is used.
OVERRIDE	Override is displayed when the override switch is pressed and the shift lever is set to reverse gear.
SEAT BELT	When the seat belt is not buckled and the vehicle speed is less than 10 km/h (6 MPH), the message is displayed and the pilot lamp will be lit. No engine torque limitation engaged.
ENGINE LIMITATION ENGAGED FASTEN SEAT BELT	When the seat belt is not buckled and the vehicle speed is above 10 km/h (6 MPH), the message is displayed and the pilot lamp stays on. The engine management will engage a torque limitation that will limit the vehicle speed to approximately 20 km/h (12 MPH).
SPORT MODE ACTIVE	Displayed when sport mode is activated.
ECO MODE	Displayed when ECO mode is activated.
MAINTENANCE SOON (1)	Displayed in gauge when vehicle is due for a maintenance.

(1) To erase the MAINTENANCE SOON message, proceed as follows:

1. Select PARK.
2. Turn ignition switch to ON. Do NOT start engine.

NOTE: The steps 3 through 9 must be completed within **5 seconds**.

3. Press override switch and HOLD.
4. Press and release brake pedal.
5. Release override switch.
6. Press and release brake pedal.
7. Press override switch and HOLD.
8. Press and release brake pedal.
9. Release override switch.
10. Turn ignition switch to OFF

NOTE: Do not turn ignition switch to ON before the multifunction gauge turns off.

Fault Code Mode

Press and hold mode button while switching high and low beam (three cycles) to access diagnostic fault codes.

Navigating in the LCD Gauge

Default Display Mode

After vehicle startup, the default display mode is either:

– Vehicle speed
– Engine revolutions per minute (RPM)
– Both parameters simultaneously (combined mode).

To change from one display to the other, proceed as follows.

1. Turn ignition key to ON to power-up the system up.
2. Wait until the "greeting message" has been displayed.
3. Press and release selector button once to display OD (odometer).
4. Press the selector button again, this time for 2 seconds.

This will change the Mode to either Speed, RPM or Combined.

vdd2008-001-083

5. To select another mode, repeat steps 3 and 4 until the desired mode is displayed.

Temporary Display Mode

In the temporary display mode, the following functions are available:

– Odometer
– Clock
– Trip meter (resettable)
– Trip Hour meter (resettable)
– Engine hour meter.

Press and release selector button to change the default display mode to the temporary mode.

tmo2011-001-702_c

1. Selector button

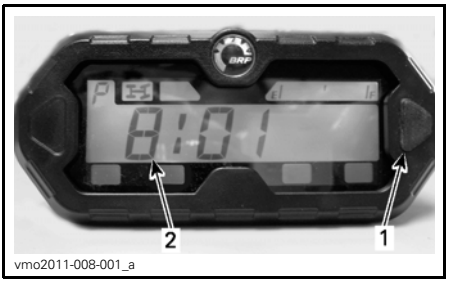
The gauge will display the selected mode for 10 seconds then will return to the normal display mode.

While in a resettable mode, push and HOLD selector button for 2 seconds to reset it.

Gauge Setup

Clock Setting

Once clock display as been selected, use the display selector button to set clock as follows:



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1. Selector button
2. Time

1. Press and HOLD button (Display will flash).

2. Choose the 12-hour (12H) or 24-hour (24H) format by pressing button.
3. If the 12-hour format was selected, choose Am ("A") or Pm ("P") by pressing button.
4. Press and HOLD button.
5. Choose hour first digit by pressing button.
6. Press and HOLD button.
7. Choose hour second digit by pressing button.
8. Press and HOLD button.
9. Choose minutes first digit by pressing button.
10. Press and HOLD button.
11. Choose minutes second digit by pressing button.
12. Press button to enter settings (CLOCK will appear on display).

NOTE: The gauge will display the current time for 10 seconds then will return to the normal display mode.

Unit Selection (km/h vs MPH)

The speedometer, odometer and trip meter are factory preset in **miles** but it is possible to change them to **kilometer** reading. Contact an authorized Can-Am dealer.

Language Selection

The gauge display language can be changed. Refer to an authorized Can-Am dealer for language availability and setup the gauge to your preference.

MULTIFUNCTION GAUGE (ANALOG/DIGITAL) (XT, XT-P AND LTD MODELS)

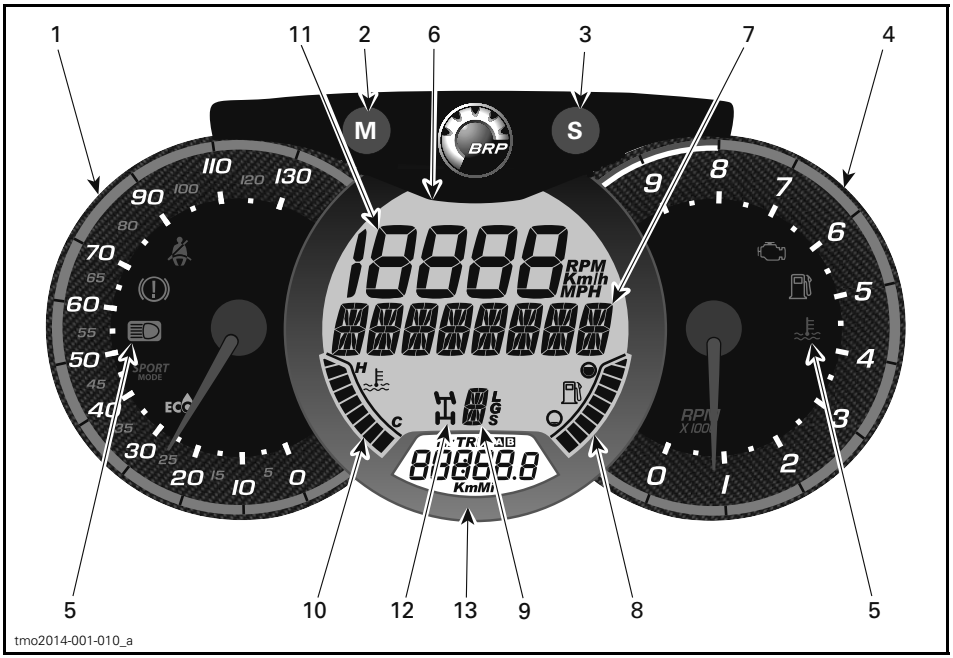
Multifunction Gauge Description

The multifunction gauge (analog/digital) is located on the steering column.

The multifunction gauge (analog/digital) is comprised of a digital gauge and two analog gauges (speedometer and tachometer).

The engine temperature and fuel level bar graphs are comprised in the digital gauge.

The indicators lamps are comprised in both analog gauges.



⚠ WARNING

Do not adjust the display while riding. You could lose control.

1) Analog Speedometer

Measures vehicle speed in km/h or mph.

2) MODE (M) Button

Pressing the MODE (M) button will scroll through the functions of the main digital display.

FUNCTION SEQUENCE	OPTIONS
Air Suspension (LTD model only)	Press ACS switch to change setting (1 to 6)
Numerical Display is flashing	Press SET (S) to scroll and select desired function and press MODE (M) to confirm
Multifunction display is flashing	Press SET (S) to scroll and select desired function and press MODE (M) to confirm

3) SET (S) Button

Pressing the SET (S) button will scroll through the functions of the secondary digital display.

FUNCTION SEQUENCE	INFORMATION DISPLAYED
Clock	XX:XX (24:00 time base) XX:XX A or P (12:00 AM/PM time base)
Cumulative distance odometer	XXXXX.X km or mi
Trip distance — odometer A (TRIP A)	XXXXX.X km or mi
Trip distance — odometer B (TRIP B)	XXXXX.X km or mi
Engine time chronometer (Hr)	XXXXX.X
Trip time chronometer (HrTRIP)	XXXXX.X

To reset any trip functions, push and hold the SET (S) button for three seconds.

4) Analog Tachometer (RPM)

Measures engine revolutions per minute (RPM). Multiply by 1000 to obtain actual revolutions.

5) Indicator Lamps

Indicator lamps will inform you of various conditions or problems.

An indicator lamp can flash alone or in combination with another lamp.

INDICATOR LAMP(S)		DESCRIPTION
All indicator lamps	On	All indicator lamps are activated when ignition switch is ON and the engine is not started
	On	Low fuel
	On	Check engine
	On	High engine temperature
	On	Headlights in the HIGH beam position
	Flash	Operator seat belt is not properly latched. Engine output will be limited, reducing the speed and operability of the vehicle. Main digital display: FASTEN SEAT BELT
	On	Sport mode activated
	On	ECO mode activated

6) Main Digital Display

Displays useful real-time information to the rider.

7) Multifunction Display

The vehicle speed or the engine revolutions (RPM) can be displayed. See *MODE (M) BUTTON* in this section.

Important messages can also be displayed. Refer to table below.

If an abnormal engine condition occurs, a message can be combined with a pilot lamp. Refer to *TROUBLESHOOTING* section for details.

MESSAGE	DESCRIPTION
BRAKE	Message displayed when the brakes are applied continuously for 15 seconds.
PERFORMANCE KEY	Displayed at power up when a the performance key is used.
WORK KEY	Displayed at power up when the work key is used.
OVERRIDE	Override is displayed when the override switch is pressed and the shift lever is set to reverse gear.
SEAT BELT	When the seat belt is not buckled and the vehicle speed is less than 10 km/h (6 MPH), the message is displayed and the pilot lamp will be lit. No engine torque limitation engaged.
ENGINE LIMITATION ENGAGED FASTEN SEAT BELT	When the seat belt is not buckled and the vehicle speed is above 10 km/h (6 MPH), the message is displayed and the pilot lamp stays on. The engine management will engage a torque limitation that will limit the vehicle speed to approximately 20 km/h (12 MPH).
SPORT MODE ACTIVE	Displayed when sport mode is activated.
ECO MODE	Displayed when ECO mode is activated.
MAINTENANCE SOON(1)	Displayed in gauge when vehicle is due for a maintenance.

(1) To erase the MAINTENANCE SOON message, proceed as follows:

1. Select PARK.
2. Turn ignition switch to ON. Do NOT start engine.

NOTE: The steps 3 through 9 must be completed within **5 seconds**.

3. Press override switch and HOLD.
4. Press and release brake pedal.
5. Release override switch.
6. Press and release brake pedal.
7. Press override switch and HOLD.
8. Press and release brake pedal.
9. Release override switch.

10. Turn ignition switch to OFF

NOTE: Do not turn ignition switch to ON before the multifunction gauge turns off.

8) Fuel Level Indicator

Bar graph that continuously indicates the level of fuel left in the fuel tank.

As a second function, the bar graph will indicate the ACS setting when the ACS is in manual mode.

9) Gearbox Position Indicator

Displays the selected gearbox position.

As a second function, will indicate the current ACS position setting in automatic and manual modes.

10) Engine Temperature Indicator

Bar graph that continuously indicates the engine coolant temperature.

As a second function, the bar graph will indicate the ACS setting when the ACS is in manual mode.

11) Numerical Display

The vehicle speed or the engine revolutions (RPM) can be displayed. See *MODE (M) BUTTON* in this section.

12) 2WD/4WD Indicator

When this indicator is ON, the 4WD system is activated.

13) Secondary Digital Display

Displays useful real time information to the rider. For display function informations, refer to *SET (S) BUTTON*.

Gauge Setup

Setting Metric/Imperial Units

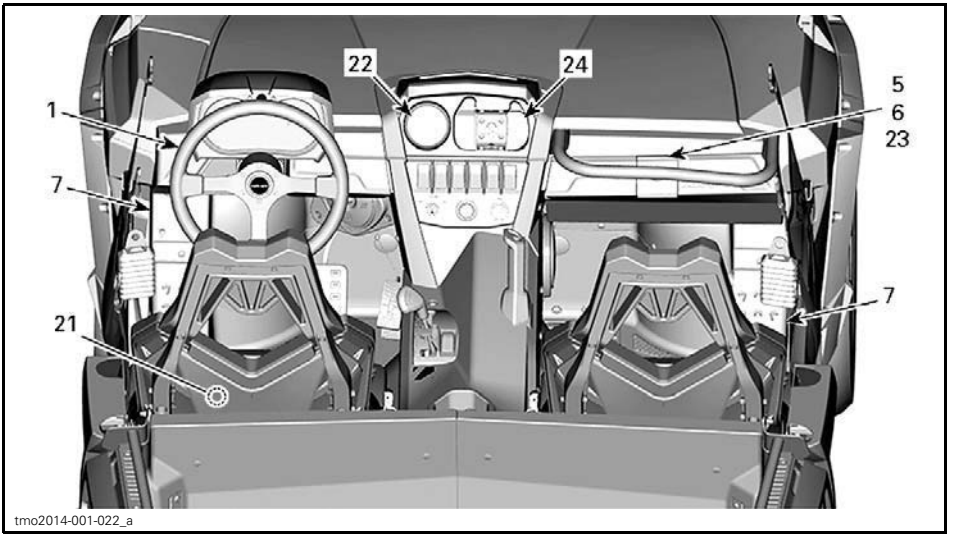
See a Can-Am dealer for adjustments.

Setting Clock

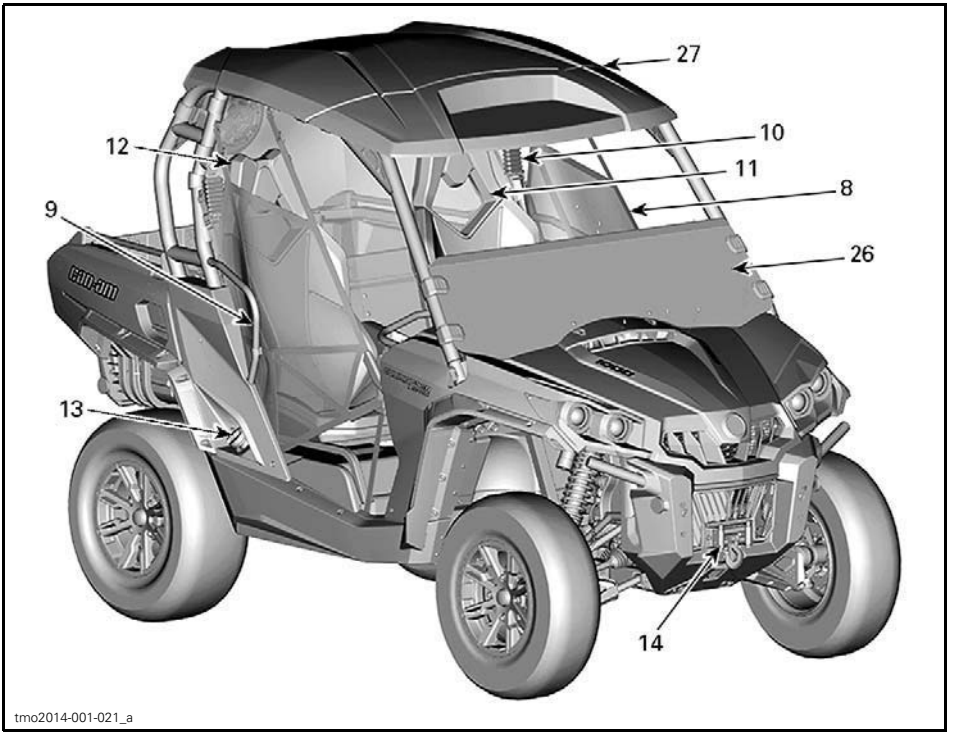
1. Press MODE (M) button to select clock display.
2. Push and hold MODE (M) button for three seconds.
3. Press MODE (M) button to select 12:00 AM PM or 24:00 time base.
4. If 12:00 AM PM time base is selected, A or P flashes. Press MODE (M) button to select A (AM) or P (PM).
5. Press SET (S) button to change hours.
6. Press MODE (M) button to switch to minutes (minutes flash).
7. Press SET (S) button to change minutes.
8. Press MODE (M) button.

Setting Language

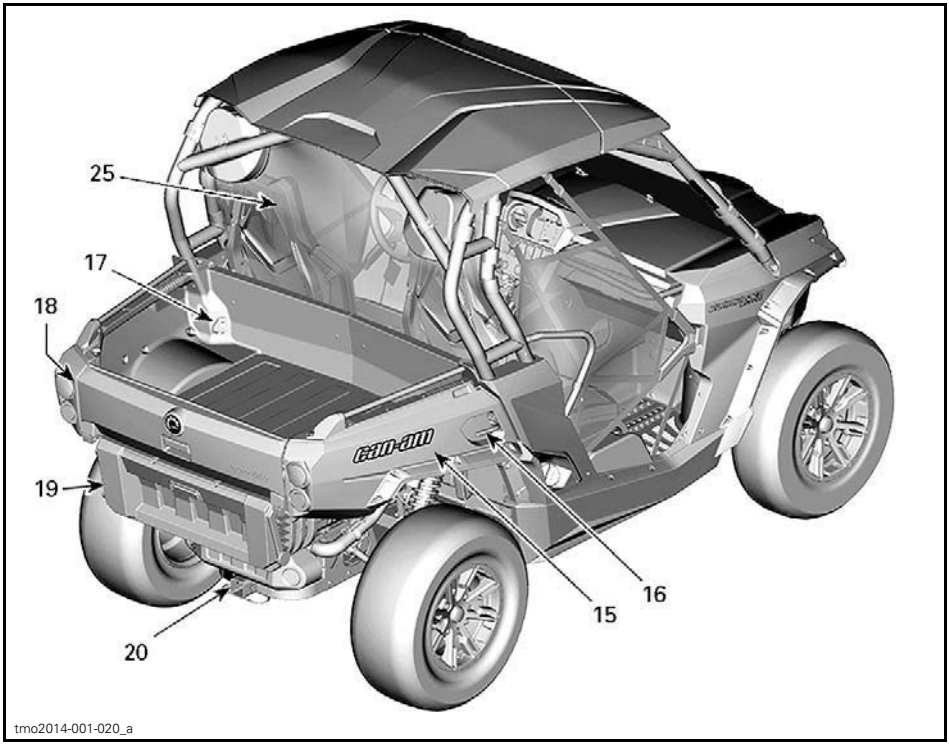
The gauge display language can be changed. Refer to an authorized Can-Am dealer for language availability and setup the gauge to your preference.



TYPICAL



TYPICAL



TYPICAL

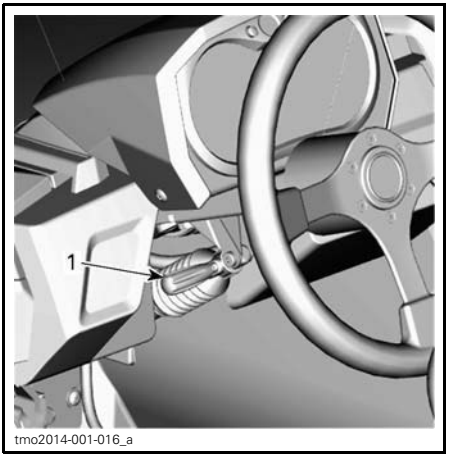
1) Tilt Steering

The steering wheel height is adjustable.

Adjust the steering wheel height to face your chest, not your head.

To adjust steering wheel height:

1. Unlock steering by pulling the tilt lever toward you.
2. Move steering wheel to the desired position.
3. Release tilt lever to lock steering wheel in position.



1. Tilt lever

⚠ WARNING

Never adjust the steering wheel height while riding. You may lose control.

2) Cup Holders

Two cup holders are located at the rear of the lower console.

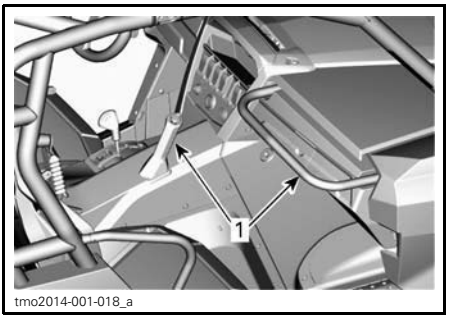
1. Cup holders

NOTE: Do not use cup holders while riding in rough conditions.

3) Passenger Handholds

The passenger has access to a front handhold located in front of seat above glove box.

A left hand handhold located in the center of the vehicle on the lower console is also accessible.



1. Passenger handholds

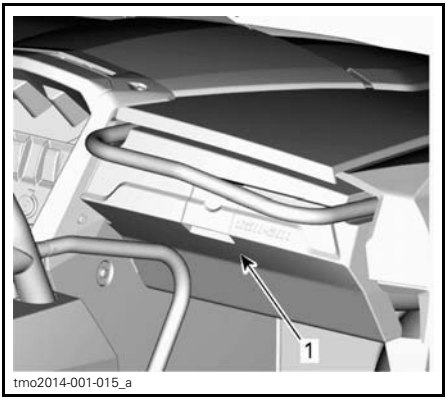
Holding the handholds helps the passenger brace against the movement of the vehicle and helps keep hands and body inside the cockpit in the event of a rollover.

⚠ WARNING

Never use any part of vehicle cage as handholds. Hands can be struck by objects outside the cockpit or crushed in a rollover.

4) Glove Box

The vehicle is equipped with a closed glove box made to carry light objects.



1. Glove box latch

GLOVE BOX CAPACITY	
MAXIMUM LOAD	5 kg (11 lb)

5) Tool Kit

A tool kit with basic tools is provided. It is located in the glove box.

6) Winch Remote Control (Models with Winch)

A remote control is provided to operate the winch. It is located in the glove box.

To use the remote control, connect the remote control to the 12 V outlet in the glove box. Refer to your *BASIC GUIDE TO WINCHING TECHNIQUES* manual included with your vehicle for proper winch operation.

7) Footrests

The vehicle is equipped with driver and passenger footrests to allow firmly planting feet on vehicle floor, which helps to maintain proper body position while riding.

The footrests help minimize the risk of leg or foot injury.

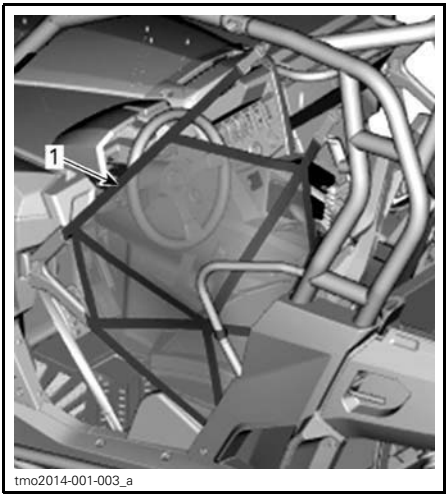
Always wear appropriate footwear. See *RIDING GEAR* subsection.

8) Side Nets

A side net is provided on each side of the cockpit to help arms, legs or shoulders stay inside the vehicle, thus reducing the risk of injuries. Side Nets may also keep brush or debris out of cockpit.

⚠ WARNING

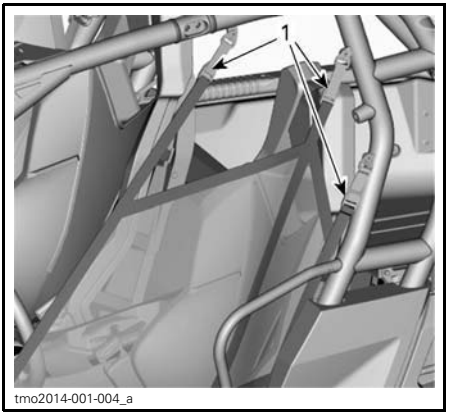
Never operate the vehicle unless both side nets are in place and buckled.



1. Side net

Side nets are adjustable and must be kept as tight as possible. To adjust side nets proceed as follows:

1. Secure side net with buckle.
2. Pull on three adjustment straps to tighten.



1. Adjustment straps

9) Shoulder Guards

The vehicle is equipped with shoulder guards to help restrain the entire body of driver and passenger inside vehicle.

10) Seat Belts

This vehicle is equipped with 3 points seat belts to help protect driver and passenger in the event of collisions, rollovers, or tipovers to help keep passengers in the cockpit.

⚠ WARNING

Wear seat belts properly at all times. Seat belts reduce the risk of injury in a crash and help keep limbs inside the cockpit in a rollover or any accidents.

If driver's seat belt is not fastened when:

– The ignition is turn ON, the seat belt indicator lamp will flash.
– The engine is started and shift lever is moved out of PARK, vehicle speed will be limited to a maximum of approximately 20 km/h (12 MPH) on flat ground.

⚠ WARNING

The vehicle may reach higher or lower speed depending on inclines.

To remind you to fasten the seat belt, the multifunction gauge will display the following message: ENGINE LIMITATION ENGAGED FASTEN SEAT BELT.

⚠ WARNING

There is no indicator light or message for the passenger seat belt. The driver is responsible of the passenger safety and should ensure the passenger buckles the seat belt.

Fastening and Adjusting the Seat Belt

The seat belt is equipped with a slide locking tab.

SEAT BELT ENGAGED
1. Slide locking tab

Insert the seat belt latch plate into the buckle, then pull the belt to ensure it is properly fastened.

To lock: adjust the seat belt tightly against your body and raise or move the lap belt upward.

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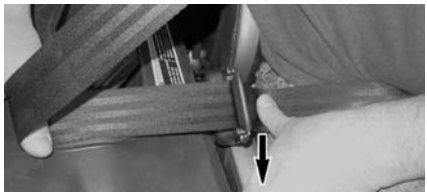
⚠ WARNING

Wear seat belt properly. Make sure it is not twisted or defective.

To unlock: place seat belt as shown and push down on the lap belt where indicated.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To release the seat belt, push on the red button on the seat belt buckle.

11) Driver's Seat

The driver's seat can be adjusted forward and backward.

To adjust seat, move the seat lever to unlock the seat. Release the lever to lock the seat into desired position.

⚠ WARNING

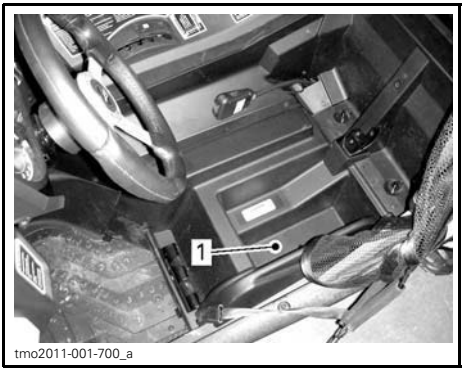
Never adjust the seat position while driving.

The driver's seat can be removed easily:

– Tilt seat forward by releasing latch between seat cushion and backrest.
– Pull seat upwards.

All Models Except LTD

A convenient storage compartment is located under the driver's seat.



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1. Storage compartment

LTD Models

The ACS compressor is located under the driver's seat.

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ACS COMPRESSOR

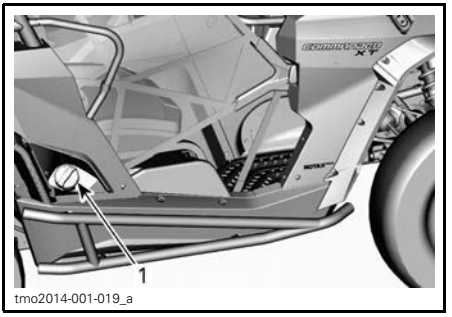
12) Passenger Seat

The passenger seat is not adjustable.

The passenger seat can be tilted forward for removal by releasing the latch located between the seat cushion and the backrest. Once tilted forward the seat can be removed by pulling upwards.

13) Fuel Reservoir Cap

The fuel reservoir cap is located on the right hand side of the vehicle behind the passenger seat.

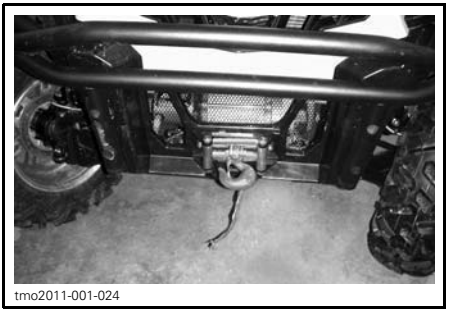


1. Fuel reservoir cap

Refer to *FUEL* subsection for information on fueling procedure and fuel requirements.

14) Winch (Models with Winch)

The winch can be actuated inside the vehicle using the winch control switch on the upper console or with the included remote control.



WINCH

Refer to your *BASIC GUIDE TO WINCHING TECHNIQUES* manual included with your vehicle for winch operation.

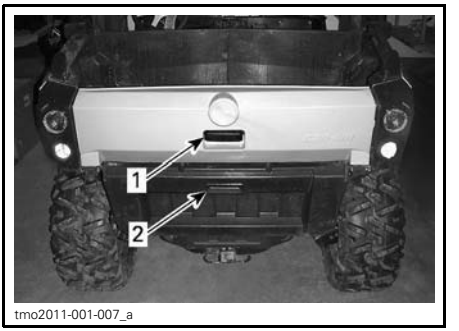
15) Cargo Box

The vehicle is equipped with a 2 level inclinable cargo box. The cargo box may be used for various types of cargo.

⚠ WARNING

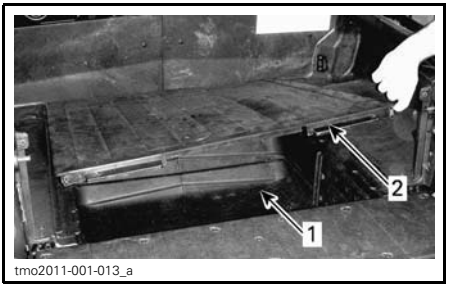
To reduce the risk of loss of control or loss of load, use the cargo box only in accordance with *CARRYING LOADS* in the *SAFETY INFORMATION* section.

The cargo box is split into an upper and lower sections to provide more compartments for carrying separate loads.



1. Cargo box upper section
2. Cargo box lower section

The floor separating both sections can be easily removed to make a single cargo area. Both the upper and lower tailgates must be opened to allow the floor separator to be removed.



1. Increased cargo volume
2. Floor/Separator

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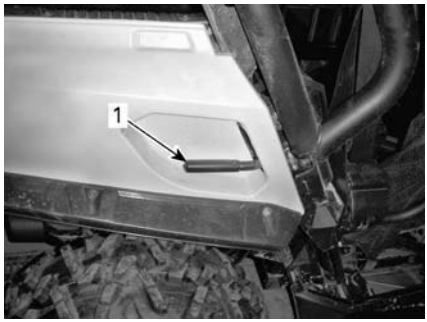
CARGO AREA WITHOUT FLOOR/SEPARATOR

The lower section can be further split into two subsections by inserting a plywood piece into the vertical slots.

16) Cargo Box Tilt Release Handles

The latching mechanism of the cargo box can be actuated from either side of the vehicle through a release handle.



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1. Cargo box release handle

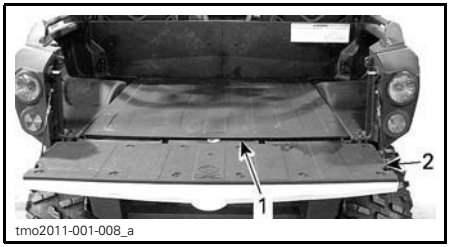
Refer to *CARRYING LOADS* in the *SAFETY INFORMATION* section.

17) Anchoring Hooks

To provide anchoring point in order to secure cargo inside the cargo box, 4 anchoring hooks are located inside the cargo area.

18) Upper Tailgate

The upper section of the cargo box can be closed with a tailgate.



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CARGO BOX UPPER SECTION
1. Floor section separator
2. Upper tailgate

NOTICE Do not exceed 100 kg (220 lb) of weight on the upper tailgate during loading or unloading. Always close the upper tailgate before operating to reduce the risk of loss of load.

Upper Tailgate Removal

The upper tailgate can easily be removed by inclining and pulling out of hinges, then removing the retaining cables.

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1. Upper tailgate hinge

19) Lower Tailgate

The lower section of the cargo box has a lower tailgate.

LOWER SECTION WITH LOWER TAILGATE

The upper tailgate must be closed in order to open or close the lower tailgate.

1. Lower tailgate
2. Lower section

NOTICE Do not exceed 100 kg (220 lb) of weight on the lower tailgate during loading or unloading. Always close the lower tailgate before operating to reduce the risk of loss of load.

20) Hitch support

The vehicle comes equipped with a 51 mm x 51 mm (2 in x 2 in) box size standard hitch support.

For the proper usage of the hitch support, refer to *MOVING LOADS AND DOING WORK* in the *SAFETY INFORMATION* section.

⚠ WARNING

To reduce the risk of loss of control or loss of load, always respect the maximum hauling capacity.

21) ACS Compressor (LTD Models Only)

The ACS compressor main function is to provide air pressure for the suspensions. Refer to *SUSPENSION* subsection for more details.

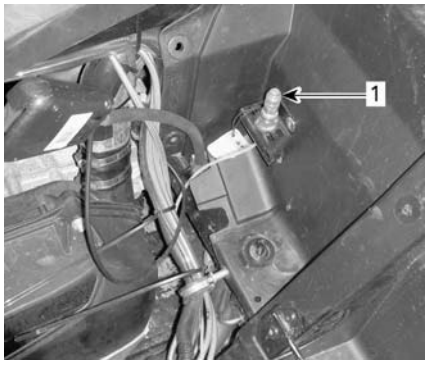
The ACS compressor may be also used as a convenient feature to inflate your Commander tires.

NOTE: The engine must be running to allow for the compressor to start.

NOTICE Do not use the ACS compressor for more than 2 minutes to avoid overheating.

To inflate tires, proceed as follows:

1. Ensure that the shift lever is set in PARK position.
2. Start engine and let it run at idle.
3. Remove seat.
4. Connect supplied hose located in the glove box into the compressor fitting.



1. Compressor fitting

5. Inflate tire.

NOTE: For your convenience, a pressure gauge is supplied in tool kit.

⚠ WARNING

Always inflate tires to recommended air pressure.

22) Radio (LTD Models Only)

The radio controls are located in the upper console.

TYPICAL
1. Radio controls

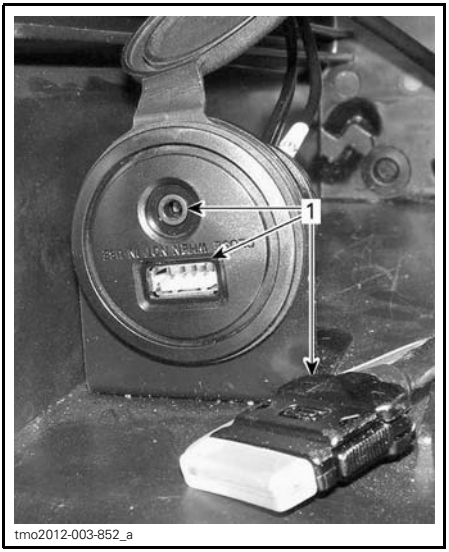
⚠ WARNING

- Adjusting radio or reading radio display can distract from the operation of the vehicle, particularly from constantly scanning the environment.
- Before adjusting radio or reading radio display, ensure your environment is clear and free from obstacle, and bring the vehicle to a low speed.

Refer to radio owner manual for operating instruction.

23) Radio AUX Output (LTD Models Only)

These sockets are used to connect portable audio devices.

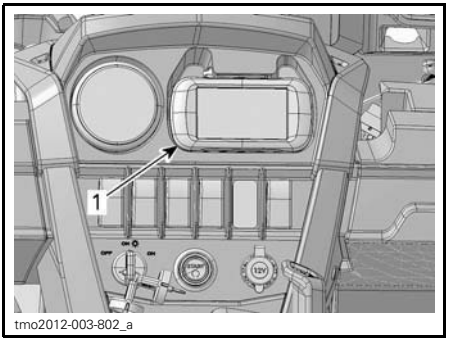


INSIDE GLOVE BOX
1. Portable audio device sockets

Refer to radio owner manual for operating instruction.

24) GPS Receiver (Global Positioning System) (LTD Models Only)

The GPS receiver is located on the upper control console.



TYPICAL
1. GPS receiver

⚠ WARNING

- Reading the GPS receiver can distract from the operation of the vehicle, particularly from constantly scanning the environment.
- Before reading the GPS receiver, ensure your environment is clear and free from obstacle, and bring the vehicle to a low speed.

The GPS receiver is powered via the vehicle electrical system when installed on its support (with ignition switch to ON position), or via batteries when removed from its support.

GPS receiver can be activated using the ON/OFF button on the receiver or with the vehicle ignition switch when turned to ON or OFF position (when installed on the vehicle).

The following is provided with the GPS receiver:

- Lithium-ion battery pack
- USB cable
- AC charger
- Owner's manual on disk
- Quick start manual.

NOTE: Always refer to manufacturer's documentation supplied with the GPS receiver for proper use.

NOTE: For more details about the GPS receiver, available maps or accessories, contact an authorized Can-Am dealer or visit Garmin website at www.garmin.com.

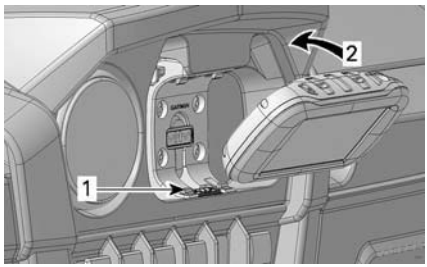
⚠ WARNING

Remember, the data provided by the GPS receiver is for reference only. For your safety, NEVER rely solely on this information.

GPS Receiver Installation

Insert GPS receiver onto the lower tab of support.

Lock GPS receiver onto its support by pushing it towards locking tab.

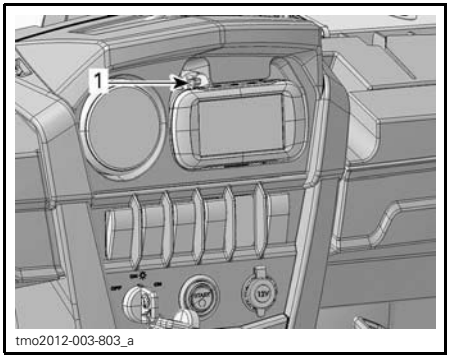


1. Lower tab
2. Push toward locking tab

NOTICE To prevent weather damage or theft to your GPS receiver, always remove it from its support when leaving the vehicle.

GPS Receiver Removal

Push on locking tab to release GPS.



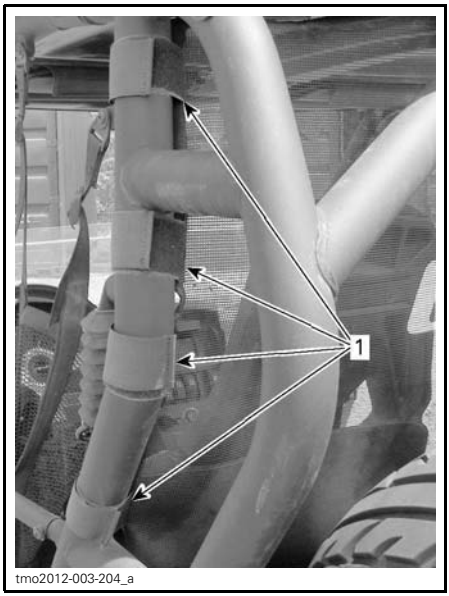
1. Locking tab

25) Rear Net (LTD Models Only)

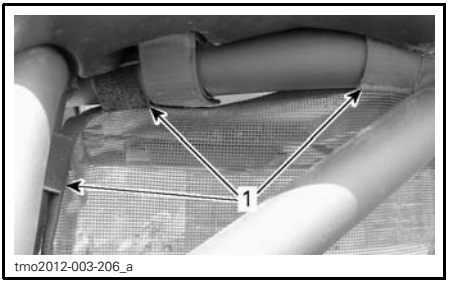
The vehicle comes equipped with a rear net.

Rear Net Removal

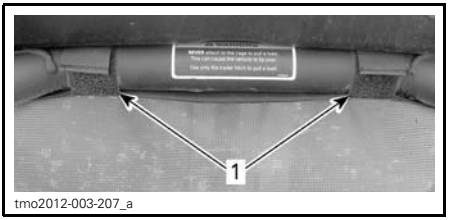
Undo straps securing rear net to cage.



TYPICAL - LH SIDE
1. Straps



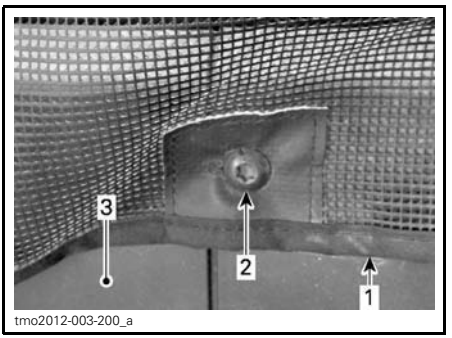
TYPICAL - LH SIDE
1. Straps



TYPICAL - CENTER
1. Straps

Remove rear net hooks from cage junction.

Remove and keep screw, washer and nut located on the lower section of net.



LH BULKHEAD
1. Rear wind screen
2. Bulkhead retaining screw
3. LH rear bulkhead

Remove rear net.

Reinstall screw, washer and nut located on the lower section of net.

Rear Net Installation

Installation is the reverse of the removal. However pay attention to the following.

Torque retaining nut to specification.

TORQUE	
Retaining nut	7.5 N•m ± 1.0 N•m (66 lbf•**in** ± 9 lbf•**in**)

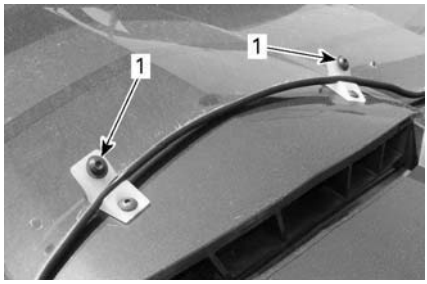
26) Half Windshield (LTD Models Only)

The vehicle comes equipped with a half windshield.

Half Windshield Removal

1. Undo the 4 straps securing half windshield to the cockpit tubular structure.

2. Remove and keep retaining nut, washer and screw securing windshield to bracket.



1. Retaining screw securing windshield to bracket

3. Remove windshield from vehicle.

NOTICE Make sure half windshield is resting on a clean non abrasive surface with the interior facing up.

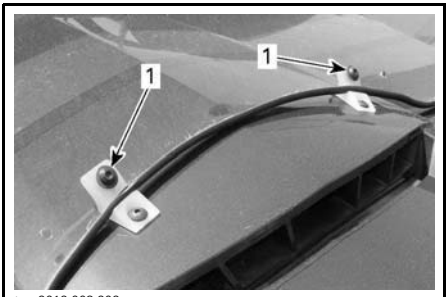
Half Windshield Installation

Install windshield onto vehicle, making sure screw holes in the lower section of windshield align with bracket holes.

Fasten the 4 straps.

Install retaining screws in windshield and torque retaining screws to specification.

TORQUE	
Retaining screw	2.5 N•m ± .5 N•m (22 lbf•**in** ± 4 lbf•**in**)



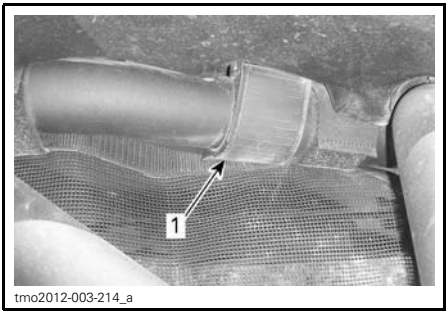
1. Brackets with retaining screws and washers installed

27) Full Roof (LTD Models Only)

The vehicle comes equipped with a full roof.

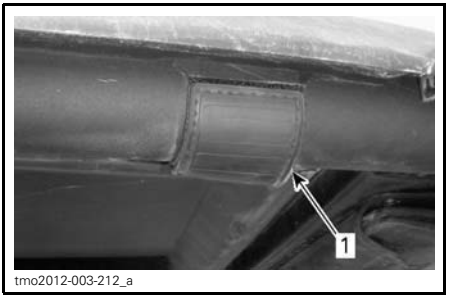
Full Roof Removal

1. Remove top mid section.
   1.1 Undo rear straps securing top mid section to cage.



RH SIDE SHOWN
1. Rear strap

   1.2 Undo lateral straps securing top mid section to cage.

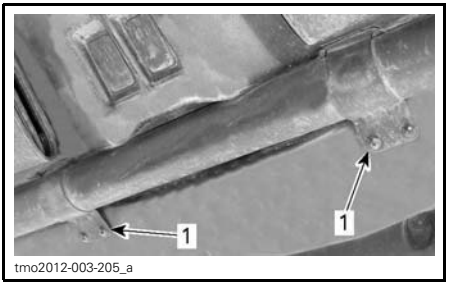


RH SIDE SHOWN
1. Lateral strap

1.3 Remove top mid section from vehicle.

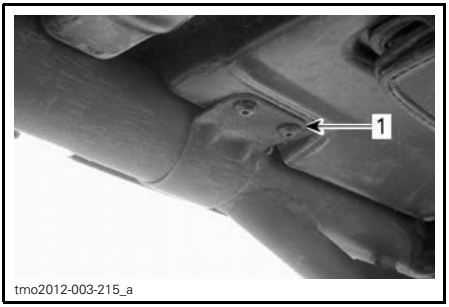
2. Remove sport visor from vehicle.

2.1 Remove and keep screws securing front of sport visor clamps to cage.



SPORT VISOR FRONT CLAMPS
1. Clamps secured with screws

2.2 Remove and keep screws securing sides of sport visor clamps to cage.



RH SIDE SHOWN
1. Lateral clamp secured with screws

2.3 Undo clamps and remove sport visor from vehicle.

NOTE: Top mid section needs to be removed before sport visor.

Full Roof Installation

Installation is the reverse of removal. However pay attention to the following.

TORQUE	
Roof clamps retaining screws	2.5 N•m ± .5 N•m (22 lbf•**in** ± 4 lbf•**in**)

TUNE YOUR RIDE

Suspension Adjustment Guidelines

Your vehicle handling and comfort depend upon suspension adjustments.

⚠ WARNING

Suspension adjustment could affect vehicle handling. Always take time to familiarize yourself with the vehicle's behavior after any suspension adjustment has been made.

Choice of suspension adjustments vary with vehicle load, personal preference, riding speed and terrain condition.

The best way to set up the suspension, is to start from factory settings, then customize each adjustment one at a time.

Front and rear adjustments are interrelated. It may be necessary to readjust the rear shock absorbers after adjusting front shock absorbers for instance.

Test run the vehicle under the same conditions; trail, speed, load, etc. Change one adjustment and retest. Proceed methodically until you are satisfied.

Suspension Factory Settings

FRONT SUSPENSION FACTORY SETTINGS		
ADJUSTMENT	MODEL	FACTORY SETTING
Spring preload	Base DPS XT	Cam position 1 (soft)
	XT-P	Spring length 310 mm (12.2 in)
	LTD	Not adjustable
Compression damping (low speed)	XT-P	12 positions
	LTD	10 positions
Compression damping (high speed)	XT-P	12 positions
Rebound damping	XT-P	12 positions

REAR SUSPENSION FACTORY SETTINGS		
ADJUSTMENT	MODEL	FACTORY SETTING
Spring preload	Base DPS XT	Cam position 1 (soft)
	XT-P	Spring length 362 mm (14.3 in)
	LTD	Not adjustable
Compression damping (low speed)	XT-P	12 positions
	LTD	10 positions
Compression damping (high speed)	XT-P	12 positions
Rebound damping	XT-P	12 positions

Suspension Adjustments

Spring Preload Adjustment (All Models Except LTD)

Shorten the spring for a firmer ride and rough riding condition or when pulling a trailer.

Lengthen the spring for a softer ride and smooth riding condition.

⚠ WARNING

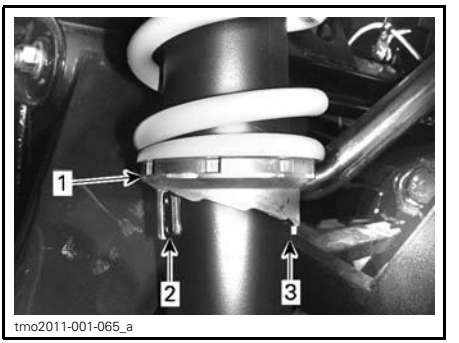
The left and right shock adjustment on front or rear suspension must always be set to the same position. Never adjust one shock only. Uneven adjustment can cause poor handling and loss of stability, which could lead to an accident.

Lift the vehicle. Spring length should be measured without load on the wheels.

Spring length should be equal on both sides.

All Models Except XT-P

Adjust by turning adjusting cam. Use tool from vehicle tool kit.



TYPICAL
1. *Turn adjusting cams*
2. *Smooth adjustment*
3. *Hard adjustment*

XT-P Model

Adjust by loosening lock ring and turning adjuster ring accordingly. Use tool from vehicle tool kit.

TYPICAL - SPRING NOT SHOWN
1. *Loosen top lock ring*
2. *Turn adjuster ring accordingly*

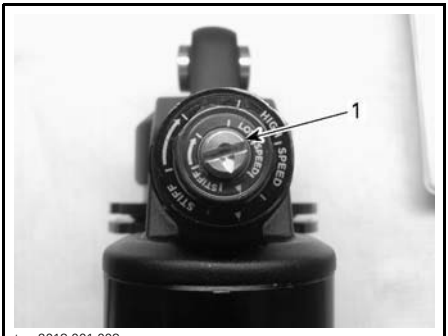
Shock Damping Adjustments (XT-P and LTD Models)

Low Speed Compression Damping

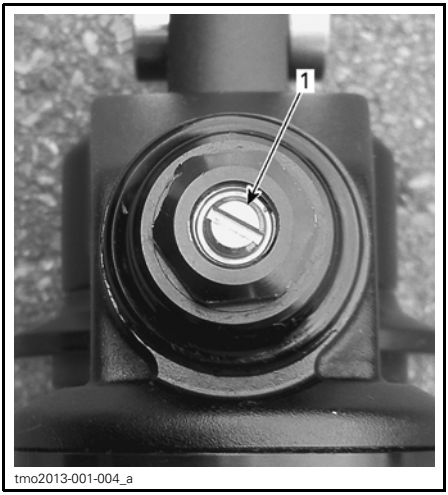
Low speed compression damping controls how the shock absorber reacts to a low suspension velocity (slow compression strokes, in most cases when riding at lower speeds).

ACTION	RESULT ON BIG BUMPS
Increasing low speed compression damping force	Firmer compression damping (slow compression)
Decreasing low speed compression damping force	Softer compression damping (slow compression)

Use a flat screwdriver to adjust it.



TYPICAL - XT-P MODEL
1. *Low speed compression adjuster*



TYPICAL - LTD MODEL
1. *Low speed compression adjuster*

Turning it clockwise (H) **increases** shock damping action (stiffer).

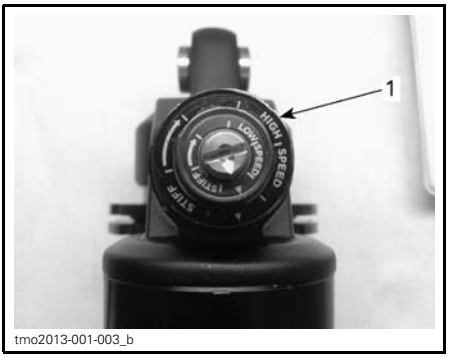
Turning it counterclockwise (S) **decreases** shock damping action (softer).

High Speed Compression Damping (XT-P Model)

High speed compression damping controls how the shock absorber reacts to a high suspension velocity (quick compression strokes, in most cases when riding at higher speeds).

ACTION	RESULT ON SMALL BUMPS
Increasing high speed compression damping force	Firmer compression damping (fast compression)
Decreasing high speed compression damping force	Softer compression damping (fast compression)

Use a 17 mm wrench to adjust it.



TYPICAL

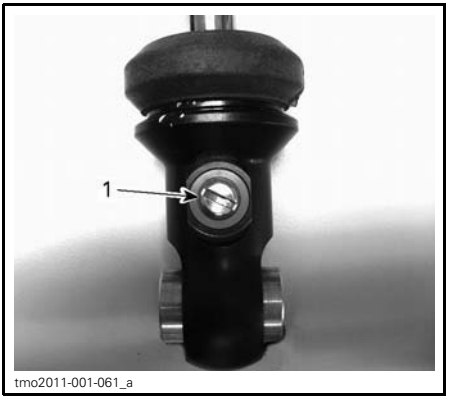
1. *High speed compression adjuster (17 mm socket)*

Turning it clockwise (H) **increases** shock damping action (harder).

Turning it counterclockwise (S) **decreases** shock damping action (softer).

Rebound Damping (XT-P Model)

Use a flat screwdriver to adjust it.



1. *Rebound adjuster*

Turning it clockwise (H) **increases** shock damping action (harder).

Turning it counterclockwise (S) **decreases** shock damping action (softer).

Shock Air Pressure Adjustment (LTD Models Only)

The Air Controlled Suspension (ACS) system allows the operator to adjust the air pressure in the front and rear shock absorbers simultaneously or separately using controls without having to get off the vehicle. By changing the ACS setting, air pressure in the front and rear shock absorbers will change to provide a multitude of different suspension adjustments.

The ACS indicator can be accessed by pressing the ACS switch or Mode button.

NOTICE **ACS setting will change when using the ACS switch to access the air controlled (ACS) indicator.**

NOTE: The ACS suspension will NOT self-adjust unless the engine is running.

The ACS has 2 modes for suspension adjustment;

- Automatic mode
- Manual mode.

Automatic Mode

The automatic mode allows for simultaneous adjustments on the front and rear suspensions.

To Enter Automatic Mode:

Press the MODE button until either ACS AUTO or ACS MAN is displayed.

Press SET button to have current ACS mode blink on screen

Press SET button to select ACS AUTO mode.

NOTE: Selected ACS Setting from ACS1 to ACS6 displayed through gearbox position indicator.

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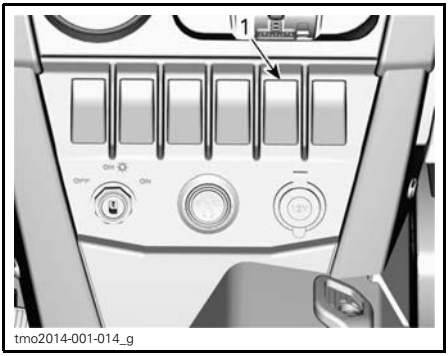
Press and hold SET button to confirm selection.

To Adjust ACS in the Automatic Mode:

Use the ACS switch to select desired ACS setting for both front and rear suspensions.



tmo2014-001-014_g

1. ACS switch

Refer to table to select appropriate ACS setting.

ACS SUSPENSION SETTINGS		
SETTING	RIDING COMFORT	RIDING CONDITION
ACS 1	Softest	Trail riding
ACS 2	Soft	
ACS 3	Semi-soft	Trail riding with cargo
ACS 4	Semi-firm	
ACS 5	Firm with high ground clearance	Soft terrain riding (muddy, watery) and obstacles
ACS 6	Firmest and highest ground clearance	Soft terrain riding (muddy, watery) and obstacles or Carrying heavy loads

⚠ WARNING

Always adjust the ACS suspension setting according to load, riding condition, and speed.

Manual Mode

The manual mode allows for independent adjustments on the front and rear suspensions.

To Enter Manual Mode:

Press the MODE button until either ACS AUTO or ACS MAN is displayed.

Press SET button to have current ACS mode blink on screen.

Press SET button to select ACS MAN mode.

NOTE: ACS set points and actual settings displayed through fuel, temp and gearbox position indicators.

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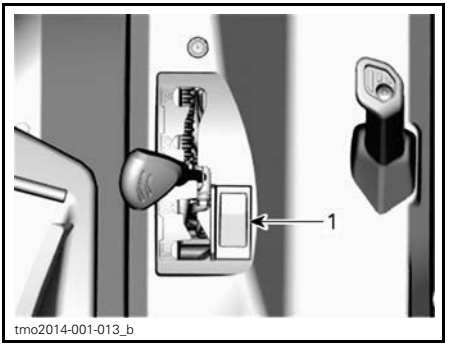
Press and hold SET button to confirm selection.

To Adjust Front Suspension:

Press on the OVERRIDE switch until front (F) is blinking to select front (F) suspension setting.



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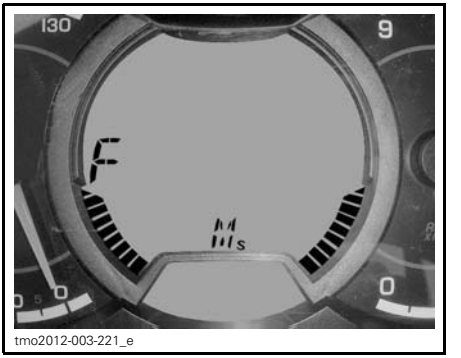
1. Override switch



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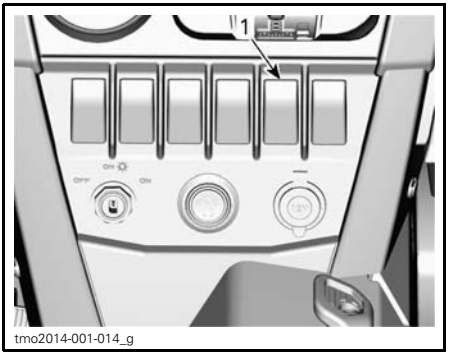
Press and hold ACS switch to lower or raise the front suspension until desired setting is achieved.

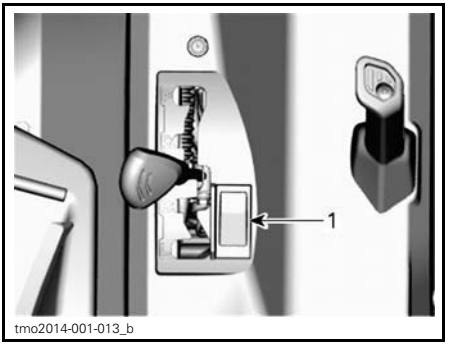


tmo2014-001-014_g

1. ACS switch

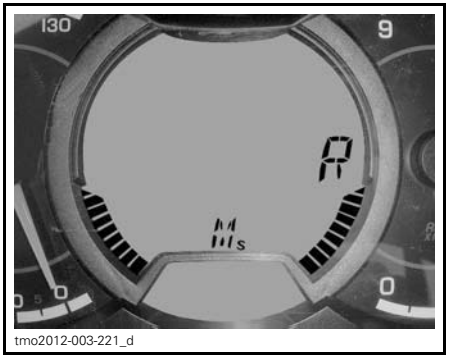
To Adjust Rear Suspension:

Press on the OVERRIDE switch until rear (R) is blinking to select rear (R) suspension setting.



tmo2014-001-013_b

1. Override switch



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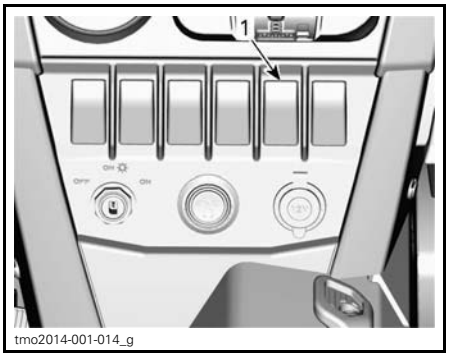
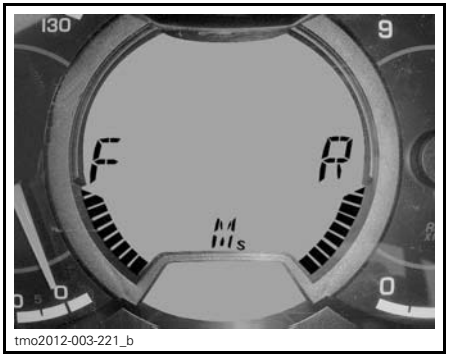
Use the ACS switch to lower or raise the rear suspension.



tmo2014-001-014_g

1. ACS switch

NOTE: Fuel and temperature indicators will respectively become front and rear ACS setting indicators.



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Quick Mode Selection

The last setting utilized in each mode is stored in the system. This allows for quick selections between the stored automatic mode setting and the stored manual mode setting.

To Enter Quick Mode Selection:

Press the MODE button until either ACS AUTO or ACS MAN is displayed.

Press SET button to have current ACS mode blink on screen.

Press SET button to select desired mode.

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Press and hold SET button to confirm selection.

ACS system will adjust to the last settings.

DPS Function

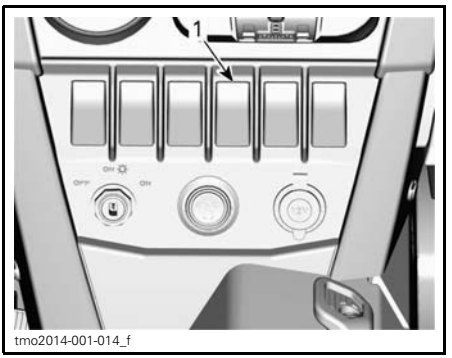
The applicable models are equipped with a Dynamic Power Steering (DPS) system. The DPS reduces the effort to turn the steering wheel.

The following DPS modes are preset in the vehicle.

DPS MODE	
DPS MAX.	Maximum steering assist
DPS MED.	Medium steering assist
DPS MIN.	Minimum steering assist

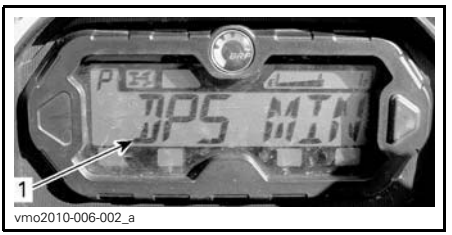
To show the active DPS mode, proceed as follows:

1. Press and release **DPS** switch.



1. DPS switch

2. Check the multifunction gauge to confirm the active DPS mode.



1. DPS mode display

ANALOG/DIGITAL GAUGE

1. DPS mode display

To change the DPS mode, proceed as follows:

1. Press and hold **DPS** switch for 2 seconds to go to the next setting.
2. Release **DPS** switch.
3. Repeat until desired setting is selected.

NOTE: The DPS adjustment will not be possible if the vehicle transmission is set to **REVERSE** or if the ACS mode (LTD model) is displayed in the multifunction gauge.

Fuel Requirements

NOTICE Always use fresh gasoline. Gasoline will oxidize; the result is loss of octane, volatile compounds, and the production of gum and varnish deposits which can damage the fuel system.

Alcohol fuel blending varies by country and region. Your vehicle has been designed to operate using the recommended fuels, however, be aware of the following:

- Use of fuel containing alcohol above the percentage specified by government regulations is not recommended and can result in the following problems in the fuel system components:
  - Starting and operating difficulties.
  - Deterioration of rubber or plastic parts.
  - Corrosion of metal parts.
  - Damage to internal engine parts.
- Inspect frequently for the presence of fuel leaks or other fuel system abnormalities if you suspect the presence of alcohol in gasoline exceeds the current government regulations.
- Alcohol blended fuels attract and hold moisture which may lead to fuel phase separation and can result in engine performance problems or engine damage.

Recommended Fuel

Use common unleaded gasoline with an AKI (R+M)/2 octane rating of 87, or an RON octane rating of 92.

NOTICE Never experiment with other fuels. Engine or fuel system damages may occur with the use of an inadequate fuel.

Inside North America Only

NOTICE Do NOT use fuel from fuel pumps labeled E85.

Use of fuel labeled E15 is prohibited by U.S. EPA Regulations.

Vehicle Fueling Procedure

⚠ WARNING

- Fuel is flammable and explosive under certain conditions.
- Never use an open flame to check fuel level.
- Never smoke or allow flame or spark in vicinity.
- Always work in a well-ventilated area.

1. Stop engine.

⚠ WARNING

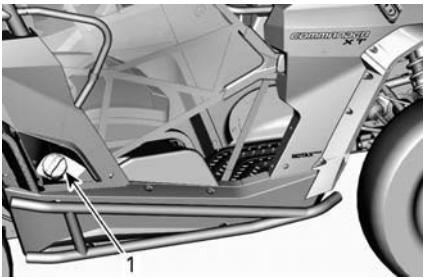
Always stop engine before refueling.

2. Have driver and passenger get out of vehicle.

⚠ WARNING

Do not allow anyone to remain in the vehicle while fueling. If there is a fire or explosion during fueling, a vehicle occupant could be unable to quickly leave the area.

3. Unscrew slowly the fuel reservoir cap counterclockwise to remove it.



1. Fuel reservoir cap

⚠ WARNING

If a differential pressure condition is noticed (whistling sound heard when loosening fuel reservoir cap) have vehicle inspected and/or repaired before further operation.

4. Insert the spout into the filler neck.
5. Pour fuel slowly so that air can escape from the tank and prevent fuel flow back. Be careful not to spill fuel.
6. Stop filling when the fuel reaches the bottom of filler neck. Do not overfill.

⚠ WARNING

Never top up the fuel tank before placing the vehicle in a warm area. As temperature increases, fuel expands and may overflow.

7. Fully tighten fuel reservoir cap clockwise.

⚠ WARNING

Always wipe off any fuel spillage from the vehicle.

Fueling a Gasoline Container

⚠ WARNING

- Use only an approved gasoline container to store fuel.
- Never fill the gasoline container in the vehicle cargo box or on-the vehicle - an electrical static discharge may ignite the fuel.

BREAK-IN PERIOD

Operation During Break-In

A break-in period of 10 operating hours or 300 km (200 mi) is required for the vehicle.

After the break-in period, the vehicle should be inspected by an authorized Can-Am dealer. Refer to *MAINTENANCE* section.

Engine

During the break-in period:

– Avoid full throttle operation.
– Avoid pressing accelerator pedal more than 3/4 of the stroke.
– Avoid sustained accelerations.
– Avoid prolonged cruising speeds.

However, brief accelerations and speed variations contribute to a good break-in.

Brakes

⚠ WARNING

New brakes will not operate at their maximum efficiency until their break-in is completed. Braking performance may be reduced, so use extra caution.

Belt

A new belt requires a break in period of 50 km (30 mi).

During the break-in period:

– Avoid strong acceleration and deceleration.
– Avoid pulling a load.
– Avoid high speed cruising.

Starting the Engine

Insert key in ignition switch and turn to one of the ON position.

Press the brake pedal.

NOTE: If shift lever is not set to PARK (P), the brake pedal must be pressed to allow engine starting.

Press the engine start button and hold until the engine starts.

NOTE: Do not press the accelerator pedal. If the accelerator pedal is pressed at least 20%, the engine will not start.

Release the engine start button immediately when the engine has started.

NOTICE If engine does not start after a few seconds, do not hold the engine start button more than 10 seconds. Refer to *TROUBLESHOOTING* section.

Shifting the Transmission

Apply brakes and select the desired shift lever position.

Release brakes.

NOTICE When changing gear selection, always completely stop the vehicle and apply the brakes prior to shifting. Damage to the transmission may occur.

Stopping the Engine and Parking the Vehicle

⚠ WARNING

Avoid parking on steep slope as the vehicle may roll away.

⚠ WARNING

Always put the vehicle in PARK when stopped or parked to prevent rolling.

⚠ WARNING

Avoid parking in places where hot parts can start a fire.

When stopped or parked always bring shift lever to park position. This is especially important when parking on a slope. On very steep inclines or if the vehicle is carriyng a cargo, the wheels should be blocked using rocks or bricks.

Select the flattest terrain available for parking.

Release accelerator pedal and use brakes to completely stop the vehicle.

Set shift lever in PARK position.

Turn key in ignition switch to OFF position.

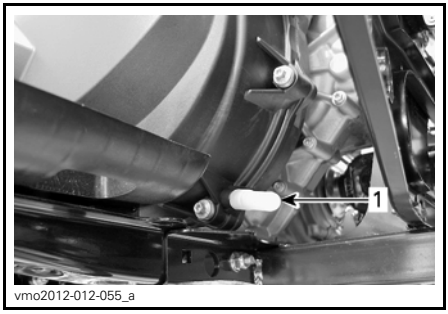
Remove key from ignition switch.

If you must park on a steep incline or if the vehicle is carrying cargo, block the wheels using rocks or bricks.

What to do if Water is Suspected to be in the CVT

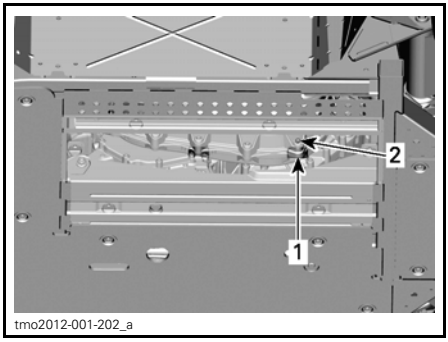
If water is present in the CVT, the engine will accelerate but the vehicle will remain still.

NOTICE Stop the engine and drain the water to avoid damage to the CVT.



1. CVT drain

CVT drain is accessible through access hole in skid plate under the LH side of the vehicle.



ACCESS HOLE UNDER VEHICLE
1. Access hole in skid plate
2. CVT drain location

See an authorized Can-Am dealer to have the CVT inspected and cleaned.

What to do if Battery is Drained out

The vehicle can be jump started by using the red (+) cable to the battery positive pole and the black (-) cable to the vehicle chassis.

NOTICE Do not connect any electrical source to the steering column.

What to do if Vehicle Rolled Over

Abrupt maneuvers, sharp turns, side hilling or accident may cause vehicle to rollover.

Should the vehicle be rolled over, it will be necessary to have it transported to an authorized Can-Am dealer as soon as possible. NEVER START THE ENGINE!

What to do if Vehicle is Submerged

Should the vehicle become immersed, it will be necessary to have it transported to an authorized Can-Am dealer as soon as possible.

NOTICE Never start the engine as immersion of the vehicle can cause serious damage to the engine if the correct restart procedure is not followed.

TRANSPORTING THE VEHICLE

If your vehicle needs to be transported, it should be carried inside a full size pick-up box or on a flatbed trailer of the proper size and capacity.

NOTICE **Do not tow this vehicle — towing can seriously damage the vehicle's drive system.**

When contacting a towing or transporting service, be sure to ask if they have a flatbed trailer, loading ramp or power ramp to safely lift the vehicle and tie-down straps. Ensure the vehicle is properly transported as specified in this section.

NOTICE **Avoid using chains to tie the vehicle — they may damage the surface finish or plastic components.**

⚠ WARNING

If the vehicle is equipped with a windshield, transport it facing forward to avoid damaging the windshield.

To load the vehicle on a platform for transport, proceed as follow:

1. Shift the vehicle into NEUTRAL (N).
2. If the vehicle is equipped with a winch, use the winch to roll the vehicle on the platform.
3. If the vehicle is not equipped with a winch, proceed as follows:
   - 3.1 Put a strap around the lower arm of each front suspension.
   - 3.2 Attach the straps to the winch cable of the towing vehicle.
   - 3.3 Pull the vehicle on the flatbed trailer with the winch.
4. Remove the key from the ignition switch.
5. Strap the front tires by using tire towing straps.
6. Pass a tie-down strap inside each rear wheel.
7. Firmly attach the rear wheels tie-down straps to both sides of the rear of the trailer with ratchets.
8. Ensure that both the front and rear wheels are firmly attached to the trailer.

⚠ WARNING

Make sure no loose objects are present inside vehicle or in cargo box during vehicle transportation.

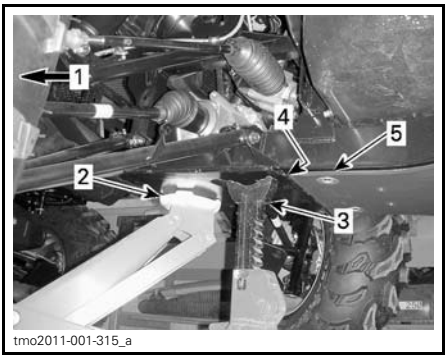
Front of Vehicle

Place vehicle on a flat non slippery ground.

Ensure vehicle shift lever is set to PARK.

Install an hydraulic jack under front skid plate.

Lift front of vehicle and install a jack stand on each side under frame section in front of the lip for center skid plate.



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1. *Front of vehicle*
2. *Hydraulic jack*
3. *Jack stand*
4. *Lip for center skid plate*
5. *Center skid plate*

Lower hydraulic lift and ensure vehicle is supported safely onto both jack stands.

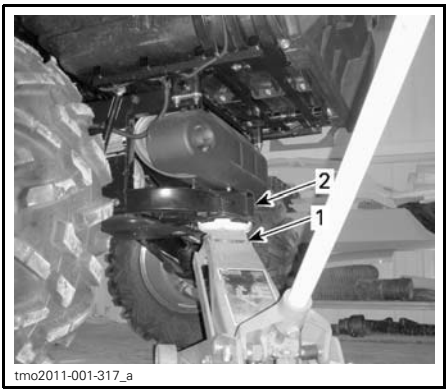
Rear of Vehicle

Place vehicle on a flat non slippery ground.

Activate 4WD mode.

Ensure vehicle shift lever is set to PARK.

Install an hydraulic jack under the trailer hitch.



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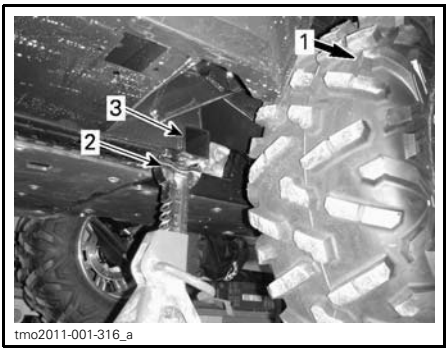
1. *Hydraulic jack*
2. *Trailer hitch*

Lift rear of vehicle and install a jack stand on each side under frame section in front of rear wheel.



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1. *Rear of vehicle*
2. *Jack stand*
3. *Frame section*

Lower hydraulic lift and ensure vehicle is supported safely onto both jack stands.

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MAINTENANCE

BREAK-IN INSPECTION

This vehicle should be serviced after the first 10 hours or 300 km (200 mi) of operation, whichever comes first, by an authorized Can-Am dealer. The break-in inspection is very important and must not be neglected.

NOTE: The break-in inspection is at the expense of the vehicle owner.

Date of inspection	Authorized dealer signature
	Dealer name

BREAK-IN INSPECTION CHART	INSPECT	CLEAN	LUBRICATE	TIGHTEN	ADJUST	REPLACE
ENGINE						
Engine oil and filter						X
Valve clearance	X				X	
Engine Air Filter	X					
Engine seals	X					
Engine mounting fasteners	X					
Exhaust system	X					
COOLING SYSTEM						
Radiator/cooling system leak (leak test)	X	X				
FUEL SYSTEM						
Fuel lines, fuel rails, connections, check valves and fuel tank leak test	X					
ELECTRICAL SYSTEM						
Battery connections	X					
CVT TRANSMISSION						
CVT air inlet/outlet	X	X				
CVT air filter	X	X				
GEARBOX						
Gearbox oil						X
Vehicle speed sensor		X				
DRIVE SYSTEM						
Front differential/rear final drive oil						X
Front differential/rear final drive (seals and vents)	X					
Front and rear propeller shaft joints	X		X			

BREAK-IN INSPECTION CHART	INSPECT	CLEAN	LUBRICATE	TIGHTEN	ADJUST	REPLACE
WHEEL						
Wheel nuts/studs	X			X		
Wheel bearings	X			X		
Wheel beadlock (XT-P model)				X		
STEERING SYSTEM						
Steering system (column, bearing, etc.)	X					
Front wheel alignment	X					
BRAKES						
Brake fluid	X					
OCCUPANT RESTRAINT SYSTEM						
Seat belts	X					
Side nets	X				X	
BODY/CHASSIS						
Cage fasteners	X			X		
Upper and lower tailgates latches	X					
Seats latch	X					

MAINTENANCE SCHEDULE

Maintenance is very important for keeping your vehicle in safe operating condition. Proper maintenance is the owner's responsibility. The vehicle should be serviced as per the maintenance schedule.

The following message appears in the gauge after every 50 hours of operation, to remind you of maintenance requirements: MAINTENANCE SOON. To erase message, refer to *MULTIFUNCTION GAUGE (LCD)* or *MULTIFUNCTION GAUGE (ANALOG/DIGITAL)* subsections.

The maintenance schedule does not exempt the pre-ride inspection.

⚠ WARNING

Failure to properly maintain the vehicle according to the maintenance schedule and procedures can make it unsafe to operate.

EVERY 750 KM (500 MI) OR 25 HOURS OF OPERATION (WHICHEVER COMES FIRST)
Replace engine air filter (when riding in severe conditions)
Clean the CVT air inlet/outlet
Inspect and clean the CVT air filter
Inspect the brake pads
Tighten the wheel lug nuts
Inspect the drive shaft boots and protectors
Inspect passenger grab handles condition
Inspect hitch condition
Inspect driver and passenger seat latch operation
Inspect tailgates latch operation
Inspect and clean the ACS compressor air filter (service more often if required under severe use such as dusty area, sand, snow, wet or muddy conditions)
Tighten cage fasteners

EVERY 1 500 KM (1,000 MI) OR 50 HOURS OF OPERATION (WHICHEVER COMES FIRST)
Replace the engine air filter (when riding in normal conditions)
Verify battery condition
Inspect the front differential/rear final drive oil level
Inspect the drive shaft joints condition
Inspect the front/rear propeller shaft joint condition
Grease the front/rear propeller shaft joints

EVERY 1 500 KM (1,000 MI) OR 50 HOURS OF OPERATION (WHICHEVER COMES FIRST)
Inspect the tie rod ends
Inspect shock absorbers for any leaks
Lubricate shock absorber spherical bearings (XT-P and LTD model)
Inspect and lubricate front suspension arms
Inspect brake fluid level
Replace the ACS compressor air filter (service more often if required under severe use such as dusty area, sand, snow, wet or muddy conditions)
Clean exhaust area

EVERY 3 000 KM (2,000 MI) OR 100 HOURS OF OPERATION OR 1 YEAR (WHICHEVER COMES FIRST)
Inspect and clean seat belts (check for any damages and proper operation)
Inspect and adjust side nets (check for any damages and they must buckle properly)
Replace the engine oil and filter
Inspect and adjust the valve clearance
Inspect and clean the muffler spark arrester
Check engine coolant strength
Inspect throttle body
Clean the fuel pump pre-filter
Inspect the fuel pump pressure
Replace fuel vent breather filter
Inspect the drive belt
Inspect, clean and lubricate the drive and driven pulleys (including the one-way bearing)
Inspect the gearbox oil level and condition
Inspect wheel bearings
Inspect the steering system (column, bearing, etc.)
Inspect and clean the brake system
Inspect frame for any damage
Replace rear final drive oil
Inspect centrifugal levers and rollers of drive pulley
Inspect ACS shock absorbers hoses and fittings

EVERY 6 000 KM (4,000 MI) OR 200 HOURS OF OPERATION OR 2 YEARS (WHICHEVER COMES FIRST)
Replace the engine coolant
Verify the cooling system and proceed with a cooling system leak test and a pressure cap test
Verify the fuel system and perform a leak test
Replace spark plugs
Replace the front differential oil
Replace gearbox oil
Clean the vehicle speed sensor
Replace the brake fluid

This section includes instructions for basic maintenance procedures. If you have the necessary mechanical skills and the required tools, you can perform these procedures. If not, see your authorized Can-Am dealer.

Other important items in the maintenance schedule that are more difficult and require special tools are best performed by your authorized Can-Am dealer.

NOTE: Maintenance message can be removed by alternately pressing the override switch and brake pedal 3 times at power up.

⚠ WARNING

Unless otherwise indicated, always turn ignition switch to the OFF position before performing any maintenance and remove key.

⚠ WARNING

Should removal of a locking device be required (e.g. lock tab, self-locking fastener, etc.) , always replace it with a new one.

Engine Air Filter

NOTICE Never modify the air intake system. Otherwise, engine performance degradation or damage can occur. The engine is calibrated to operate specifically with these components.

Engine Air Filter Replacement Guideline

Engine Air filter replacement frequency should be adjusted according to riding conditions as it is critical to ensure proper engine performance and life span.

Engine Air filter replacement frequency must be increased for the following severe riding conditions:

– Riding on dry sand.
– Riding on dry dirt covered surfaces.
– Riding on dry gravel trails or similar conditions.
– Riding in areas with high concentration of seeds or crop husks.
– Riding in severe snow conditions.

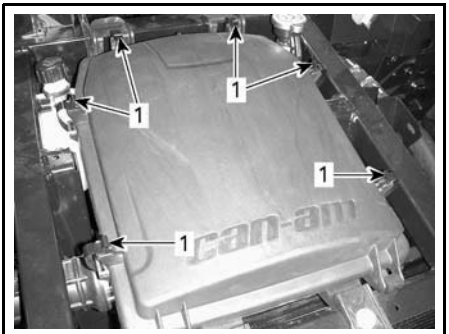
NOTE: Riding in a group under these conditions would increase even more the air filter replacement frequency.

Engine Air Filter Removal

1. Remove service cover.

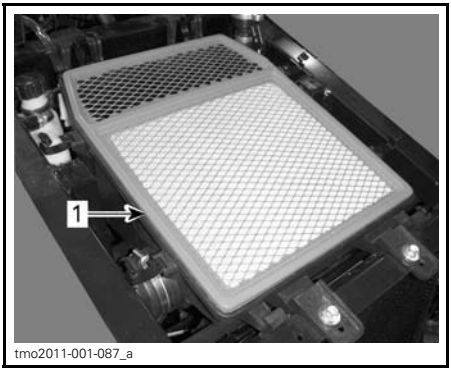
1. Service cover

2. Release clamps and remove the engine air filter housing cover.



1. Release clamps

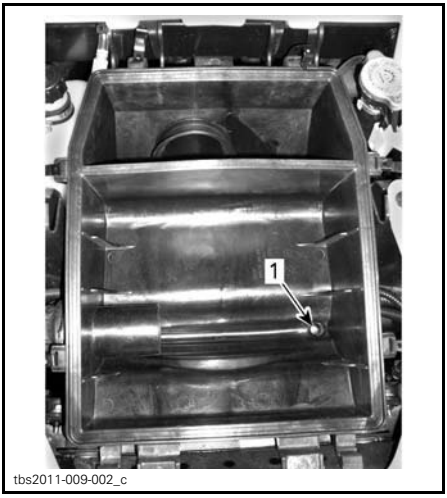
3. Remove engine air filter.



1. Engine air filter

Engine Air Filter Housing Cleaning

1. If there is water in the first air chamber, remove the drain plug, from underneath to expel water.

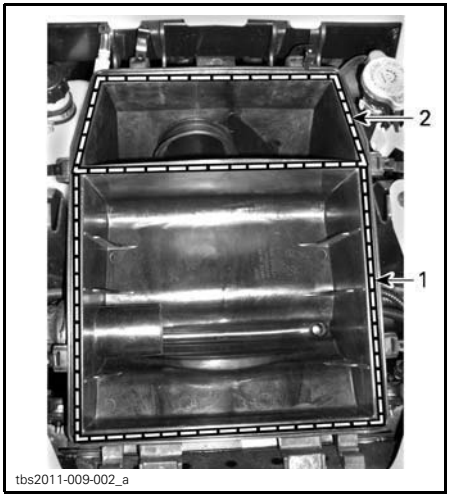


1. Drain hole

DRAIN PLUG ACCESS FROM LH SIDE OF VEHICLE

1. Remove drain plug to expel water

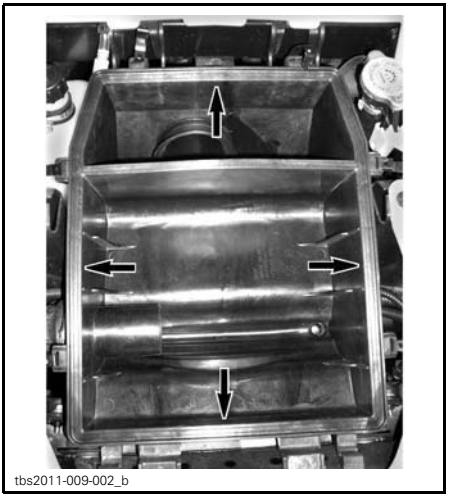
2. Clean both sections of the engine air filter housing with a vacuum cleaner.



1. First section
2. Second section (clean chamber)

Engine Air Filter Housing Inspection

Verify that the engine air filter housing edges to hold the filter are straight and not damaged or warped.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Engine Air Filter Cleaning

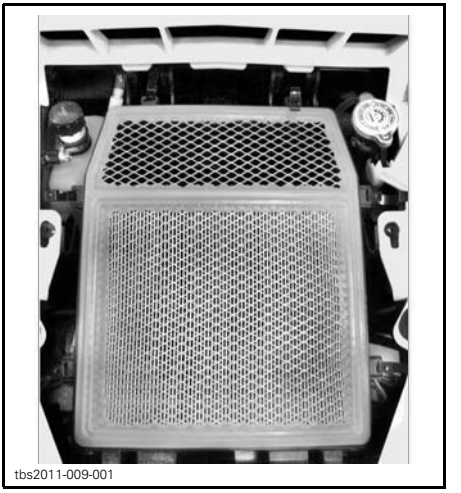
Clean engine air filter by tapping out heavy dust from paper element, this will allow dirt and dust to get out of the paper filter.

NOTICE It is not recommended to blow compressed air on the paper element; this could damage the paper fibers and reduce its filtration ability when used in dusty environments. If engine air filter is too dirty and cannot be cleaned following the recommended procedure, it should be replaced.

Engine Air Filter Installation

1. Install engine air filter.
2. Verify that engine air filter rubber seal has no gap with the engine air filter housing.

NOTICE If the fit is not good, dust may bypass the engine air filter.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3. Verify that the cover fits well on the engine air filter housing before closing clamps.

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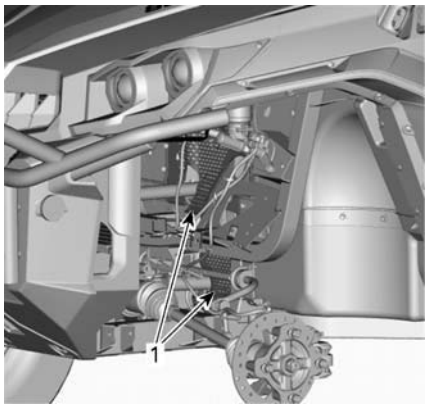
Front Grill Kit

1. Remove debris from front grill kit.



FRONT OF VEHICLE - COMPONENTS REMOVED FOR CLARITY
1. Front grill kit

2. Clean front grill kit with water.

CVT Air Filter

CVT air filter inspection and cleaning frequency should be adjusted according to riding conditions as it is critical to ensure proper engine performance and life span.

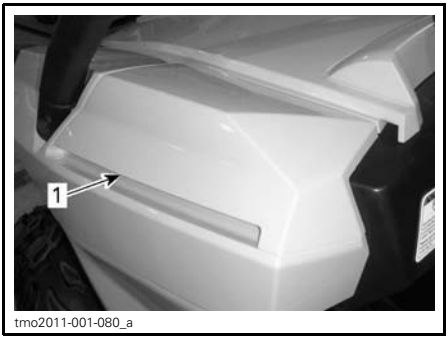
CVT Air filter inspection and cleaning frequency must be increased for the following severe riding conditions:

- Riding on dry sand.
- Riding on dry dirt covered surfaces.
- Riding on dry gravel trails or similar conditions.
- Riding in areas with high concentration of seeds or crop husks.
- Riding in severe snow conditions.

NOTE: Riding in a group in these conditions would increase even more the air filter replacement requirement.

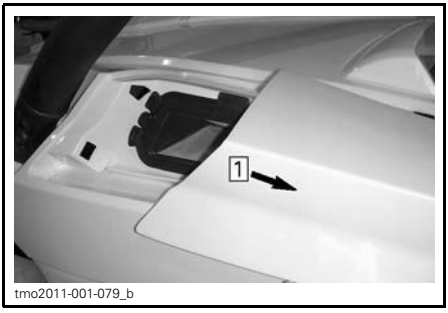
CVT Air Filter Removal

1. Remove CVT air filter plastic cover located on left hand side of hood near driver.



1. CVT air filter plastic cover

2. Slide the cover rearward.



Step 1: Slide rearward

3. Pull CVT air filter out.

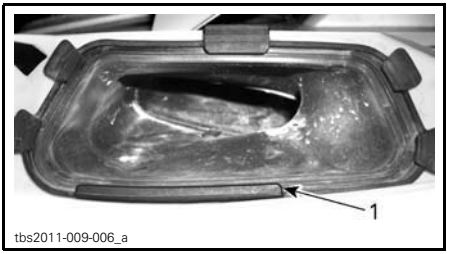
1. CVT air filter

CVT Air Filter Inspection and Cleaning

1. Inspect filter and replace if damaged.

1. CVT air filter

2. Clean filter, using soft soap and water, then water rinse.
3. Gently shake off excess water and allow filter to dry at room temperature.
4. Clean inside the CVT air inlet with a vacuum cleaner.



1. CVT air inlet

CVT Air Filter Installation

Reinstall CVT air filter and cover.

NOTE: Maintaining a clean CVT air filter will maximize air flow for an optimum CVT components lifespan.

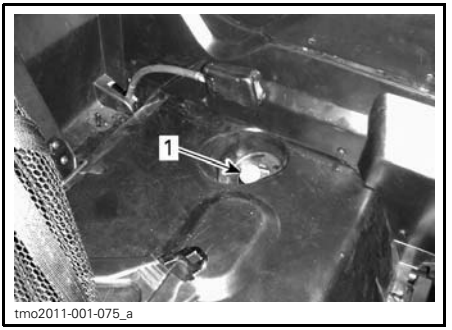
Engine Oil

Engine Oil Level Verification

NOTICE **Operating the engine with an improper level may severely damage engine.**

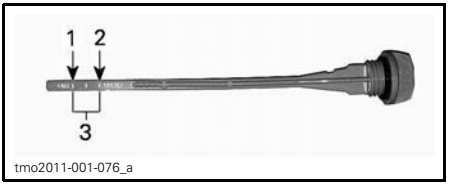
With vehicle on a level surface and engine cold, check the oil level as follows:

1. Remove passenger seat.
2. Unscrew dipstick then remove it and wipe clean.



1. Dipstick

3. Reinstall dipstick, screw in it completely.
4. Remove dipstick and check oil level. It should be near or equal to the upper mark.



TYPICAL
1. MIN
2. MAX
3. Operating range

To add oil, remove the dipstick. Place a funnel into the dipstick tube.

Add a small amount of recommended oil and recheck oil level.

Repeat the above procedures until oil level reaches the dipstick's upper mark.

NOTE: Do not overfill. Wipe off any spillage.

Properly tighten dipstick.

Install passenger seat.

Recommended Engine Oil

RECOMMENDED ENGINE OIL	
SEASON	TYPE
Summer	XPS 4-STROKE SYNTH. BLEND OIL (SUMMER) (P/N 293 600 121)
Winter	XPS 4-STROKE SYNTHETIC OIL (ALL CLIMATE) (P/N 293 600 112)

NOTE: The XPS oil is specially formulated to meet the lubrication requirements of this engine. BRP strongly recommends the use of its XPS 4-stroke oil.

NOTICE Damages caused by the use of oil not suitable for this engine will not be covered by the BRP limited warranty.

If XPS engine oil is not available, use a 4-stroke SAE 5W 40 engine oil that meets or exceeds the requirements for API service classification SM, SL or SJ. Always check the API service label certification on the oil container it must contain at least one of the above standards.

Engine Oil Change

Place vehicle on a level surface.

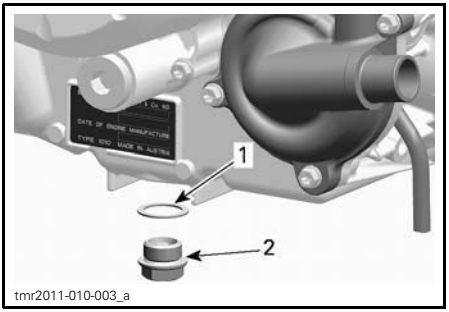
Oil change and oil filter replacement should be done with a warm engine.

CAUTION The engine oil can be very hot. Wait until engine oil is warm.

Place a drain pan under the engine drain plug area.

Clean the drain plug area.

Unscrew drain plug and discard the gasket ring.



1. Gasket ring
2. Drain plug

Remove dipstick.

Allow oil to drain completely from the crankcase.

Clean the magnetic drain plug from metal shavings and residue. Presence of debris gives an indication of internal engine damage.

Install a NEW gasket ring on the drain plug.

NOTICE Never use the gasket ring a second time. Always replace by a new one.

Install and tighten drain plug to the recommended torque.

DRAIN PLUG TIGHTENING TORQUE
30 N•m ± 2 N•m (22 lbf•ft ± 1 lbf•ft)

Replace oil filter. Refer to *OIL FILTER* in this subsection.

Refill engine with recommended engine oil.

ENGINE OIL CAPACITY
2 L (2.1 qt (U.S. liq.))

Oil Filter

Oil Filter Access

Remove the passenger seat.

Remove the right hand side engine console panel.

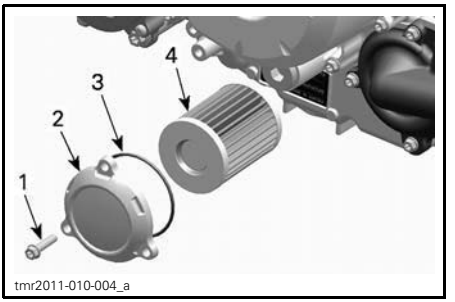
Oil Filter Removal

Clean oil filter area.

Remove oil filter cover screws.

Remove oil filter cover.

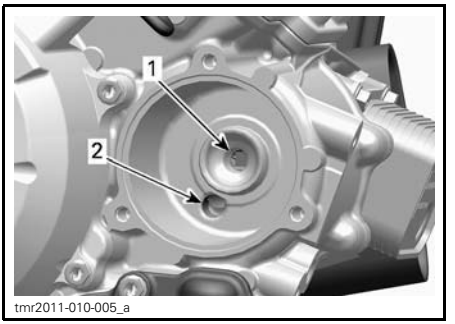
Remove oil filter.



1. Oil filter screw
2. Oil filter cover
3. O-ring
4. Oil filter

Oil Filter Installation

Check and clean the oil filter inlet and outlet area for dirt and other contaminations.

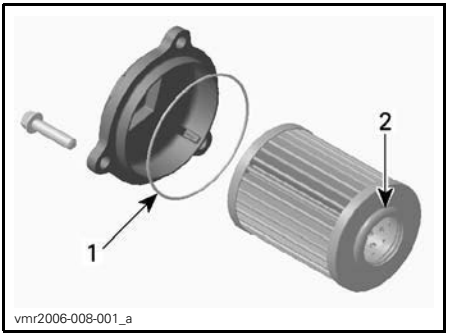


1. Outlet to the engine oil providing system
2. Inlet from the oil pump to the oil filter

Install a NEW O-ring on oil filter cover.

Install the filter into the cover.

Apply engine oil on O-ring and grease on the end of filter.



1. Slightly oil
2. Slightly oil

Install the cover on the engine.

Tighten oil filter cover screws to recommended torque.

OIL FILTER COVER SCREWS TIGHTENING TORQUE
10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

Radiator

Radiator Inspection and Cleaning

Periodically check the radiator area for cleanliness.

1. Radiator

Inspect radiator and hoses for leaks or any damage.

Inspect radiating fins. They must be clean, free of mud, dirt, leaves and any other deposit that would prevent the radiator to cool properly.

If available, use a garden hose to rinse the radiating fins.

⚠ CAUTION Never clean radiator with your hands when it is hot. Let the radiator cool down before cleaning.

NOTICE Be careful not to damage the radiating fins when cleaning. Do not use any object/tool that could damage the fins. When hosing, use low pressure only. Never use a HIGH PRESSURE washer.

Engine Coolant

Engine Coolant Level Verification

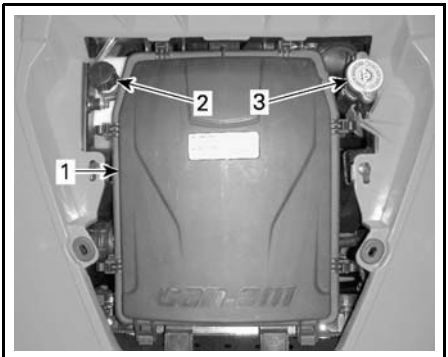
⚠ WARNING

Check coolant level with engine cold.

1. Place vehicle on a level surface.
2. Open service cover.
3. Remove the pressure cap.

⚠ WARNING

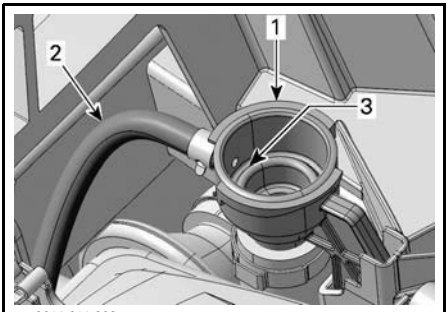
In order to avoid potential burns, do not remove the pressure cap if the engine is hot.



tmo2011-001-313_b

1. Air filter housing cover
2. Coolant expansion tank cap
3. Pressure cap

4. Ensure cooling system is full up to the pressure cap seat.



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1. Cooling system refill adapter
2. Expansion tank hose
3. Coolant system full level (pressure cap seat)

5. Add coolant in system as necessary.
6. Properly reinstall pressure cap on refill adapter.
7. Check coolant level in expansion tank.

NOTE: Coolant level can be checked by looking at the side of the coolant expansion tank under the RH front fender.

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COOLANT EXPANSION TANK
1. *MAX. level*
2. *MIN. level*
3. *Operating range*

8. Add coolant if level is below MIN. mark. Use a funnel to avoid spillage. **Do not overfill.**
9. Properly reinstall coolant expansion tank cap.
10. Reinstall service cover.

NOTE: A cooling system that frequently requires addition of coolant is an indication of leaks or engine problems.

Recommended Engine Coolant

COOLANT	
BRP recommended product	BRP PREMIXED COOLANT (P/N 219 700 362)
Alternative, or if not available	Distilled water and antifreeze solution (50% distilled water, 50% antifreeze)

NOTICE **Always use ethylene-glycol antifreeze containing corrosion inhibitors specifically for internal combustion aluminum engines.**

Engine Coolant Replacement

Cooling System Draining

⚠ WARNING

In order to avoid potential burns, do not remove the pressure cap or loosen the coolant drain plug if the engine is hot.

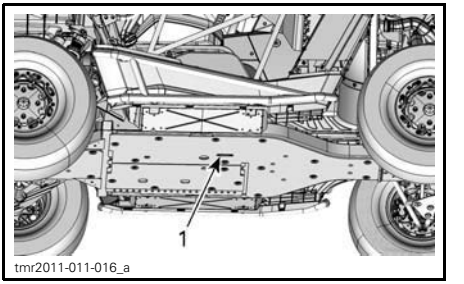
1. Remove service cover.
2. Remove the cooling system pressure cap.

tmo2011-001-313_a

1. Pressure cap

3. Unscrew coolant drain plug and drain the coolant into a suitable container.

NOTE: The drain plug is accessible from underneath the vehicle.



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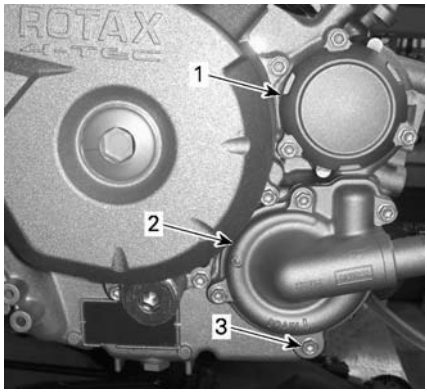
1. Cooling system drain plug access

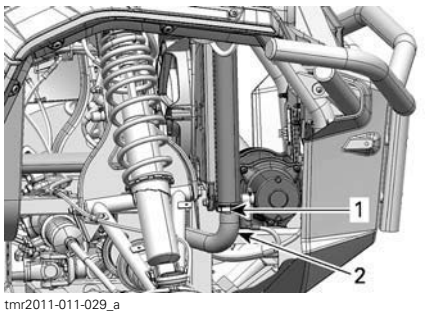
NOTE: Do not unscrew the coolant drain plug completely.



1. Oil filter cover
2. Water pump cover
3. Coolant drain plug

4. Disconnect the lower radiator hose and drain the remaining coolant into a suitable container.

NOTE: Take note of the position of the hose clamp on the lower radiator hose at the radiator.



1. Hose clamp position to note
2. Lower radiator hose to remove

5. Drain cooling system completely.
6. Reinstall cooling system drain plug.

COOLING SYSTEM DRAIN PLUG TORQUE
9 N•m to 11 N•m (80 lbf•**in** to 97 lbf•**in**)

7. Reinstall radiator hose as noted prior to removal.

RADIATOR HOSE CLAMP
2.5 N•m to 3.5 N•m (22 lbf•**in** to 31 lbf•**in**)

8. Siphon the cooling system expansion tank.
9. Fill cooling system with coolant, refer to *COOLING SYSTEM BLEEDING* procedure.

Cooling System Bleeding

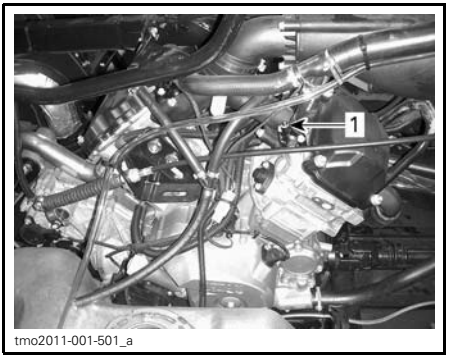
800R Models

1. Unscrew bleed screw on thermostat housing cover of front cylinder.

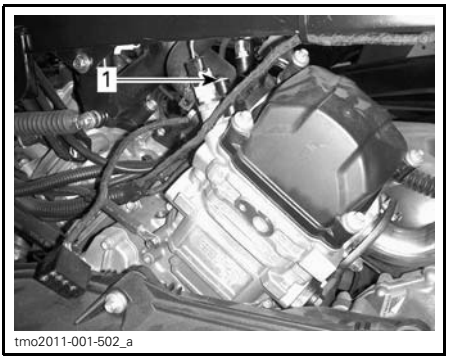
TYPICAL
1. Bleed screw

1000 Models

2. Unscrew bleed screws on thermostat housing covers of both front and rear cylinders.



1. Front cylinder bleed screw



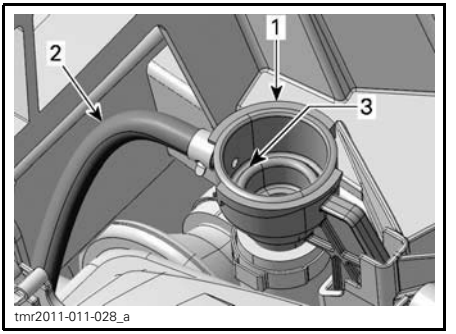
1. Rear cylinder bleed screw

All Models

3. Remove the pressure cap.
4. Fill the cooling system until coolant comes out of the bleed screw(s).
5. Install the bleed screw(s) using NEW gasket ring(s) and torque as per following chart.

BLEED SCREW INSTALLATION	
GASKET RING	TORQUE
New	4.4 N•m to 5.6 N•m (39 lbf•**in** to 50 lbf•**in**)

6. Continue adding coolant until system is full up to the pressure cap seat in the refill adapter.

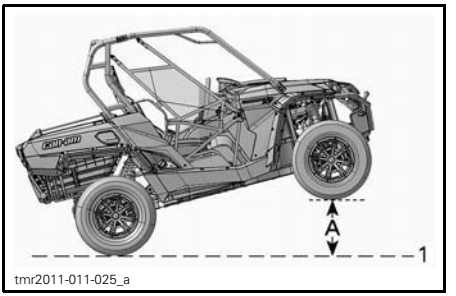


1. Cooling system refill adapter
2. Expansion tank hose
3. Coolant system full level (pressure cap seat)

7. Install pressure cap.

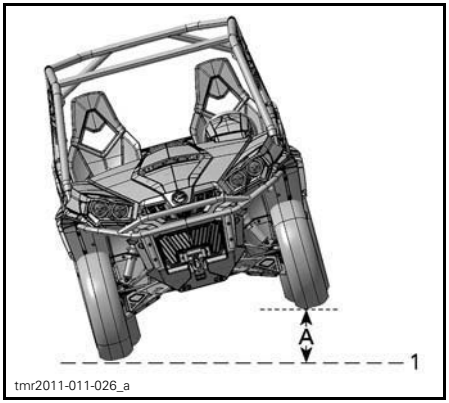
NOTICE **The following steps must be carried out as specified to ensure proper cooling system bleeding in addition to the previous steps.**

8. Lift the entire front end of the vehicle so the front tires are 60 cm (2 ft) above the ground for at least 1 minute.



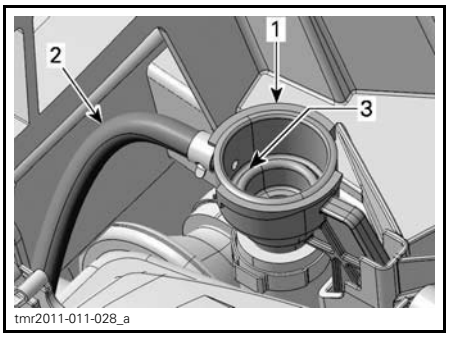
ENTIRE FRONT END LIFTED
1. Ground level
A. 60 cm (24 in)

9. Lower vehicle to the ground.
10. Remove pressure cap and add coolant as required.
11. Install pressure cap.
12. Lift driver's side of vehicle 60 cm (2 ft) above it's horizontal position for at least 1 minute.



DRIVER'S SIDE LIFTED
1. Ground level
A. 60 cm (24 in)

13. Lower vehicle to the ground.
14. Remove pressure cap and add coolant as required up to the pressure cap seat in the refill adapter.



1. Cooling system refill adapter
2. Expansion tank hose
3. Coolant system full level (pressure cap seat)

15. Install the pressure cap.
16. Check coolant level in the coolant expansion tank and fill to the MIN. level (as required).
17. Run engine at idle with the pressure cap ON until the cooling fan cycles on for a second time.
18. Stop the engine and let it cool down.

⚠ WARNING

In order to avoid potential burns, do not remove the pressure cap if the engine is hot.

19. When the engine is cool, remove pressure cap and add coolant if required.
20. Install pressure cap.
21. Check coolant level in the expansion tank. Add coolant as required. Refer to *ENGINE COOLANT LEVEL VERIFICATION* in this subsection.

Muffler Spark Arrester

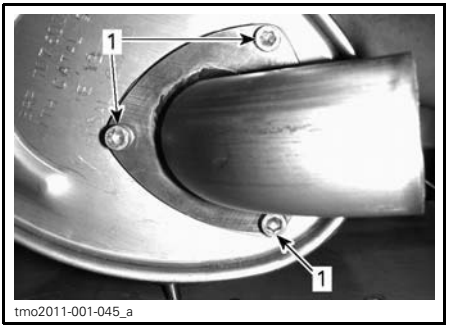
Muffler Spark Arrester Cleaning and Inspection

⚠ CAUTION **Never perform this operation immediately after the engine has been running as exhaust system is very hot.**

Remove the muffler cover.

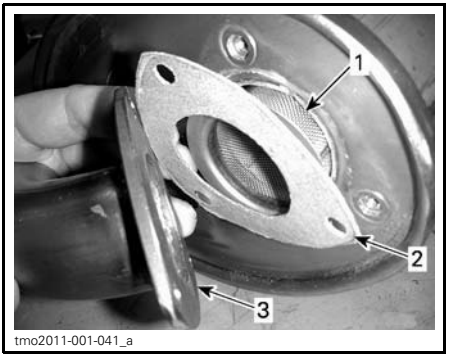
1. Muffler cover
2. Exhaust tail pipe

Remove and discard the tail pipe retaining screws.



1. Retaining screws

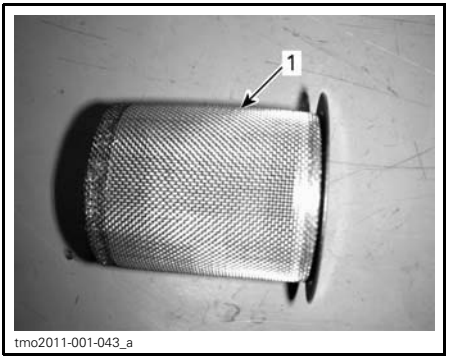
Remove exhaust tail pipe, gasket (discard) and spark arrester.



1. Spark arrester
2. Gasket
3. Exhaust tail pipe

Remove carbon deposits from the spark arrester using a brush.

NOTICE **Use a soft brush and be careful to avoid damaging spark arrester mesh.**



1. Clean spark arrester

Inspect mesh of spark arrester for any damage. Replace as required.

Inspect spark arrester chamber in muffler. Remove any debris as required.

Reinstall the muffler spark arrester in the reverse of the removal procedure. However pay attention to the following.

Install new gasket and retaining screws. Torque to specification.

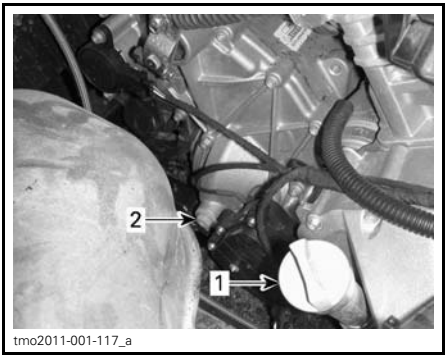
TORQUE	
Tailpipe retaining screw	11 N•m ± 1 N•m (97 lbf•**in** ± 9 lbf•**in**)

Gearbox Oil

Gearbox Oil Level Verification

Place the vehicle on a level surface. Select PARK position.

Check the gearbox oil level by removing the gearbox oil level plug.



1. Engine oil dipstick
2. Gearbox oil level plug

The oil should be level with the bottom of the oil level hole.

NOTICE Operating the gearbox with an improper oil level may severely damage gearbox.

Recommended Gearbox Oil

Use the following gearbox oil.

RECOMMENDED GEARBOX OIL
XPS synthetic gear oil (P/N 293 600 140)

NOTE: The XPS oil is specially formulated to meet the lubrication requirements of this gearbox. BRP strongly recommends the use of its XPS oil. However, if the XPS synthetic gear oil is not available, use the following lubricant:

GEARBOX OIL REQUIREMENT
75W 140 API GL-5 synthetic gear oil

NOTICE Do not use another type of oil when servicing.

Gearbox Oil Change

NOTE: When replacing the gearbox oil, it is recommended to clean the vehicle speed sensor (VSS) at the same time.

Place the vehicle on a level surface.

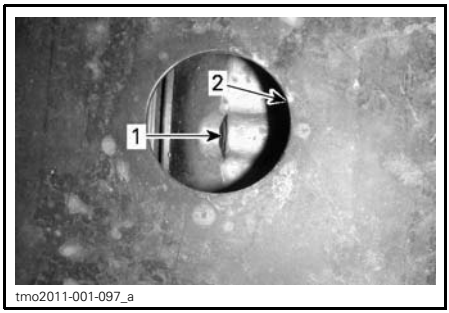
Clean drain plug area.

Clean the oil level plug area.

Under the vehicle, place a drain pan underneath the oil drain plug area.

Remove the oil level plug.

Remove the gearbox drain plug.



1. Oil drain plug
2. Skid plate opening

Let oil completely drain from gearbox.

Install the drain plug.

NOTE: Clean drain plug from any metallic particles prior to installation.

Refill gearbox.

NOTICE Use ONLY the recommended type of oil.

The oil should be level with the bottom of the oil level orifice.

NOTICE Do not overfill.

Reinstall oil level plug.

Wipe off any spillage.

Spark Plugs

Access to Spark Plugs

1. Remove both seats.
2. Remove upper console retaining screws and plastic rivets.
3. Slightly lift upper console to allow removal of lower console.
4. Remove lower console plastic rivets.
5. Pull lower console out of location.

Spark Plug Removal

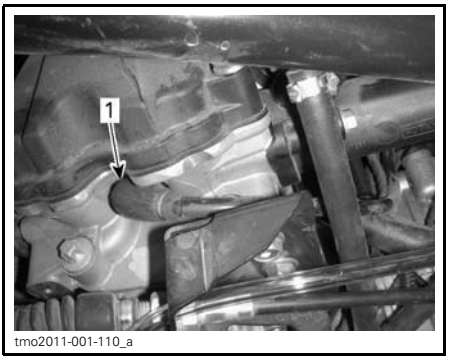
Unplug spark plug cable.

NOTE: Spark plug removal procedure is the same for both cylinders.

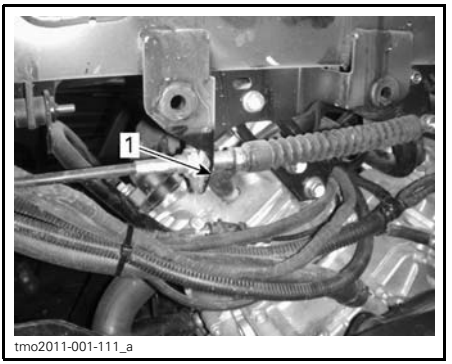
Clean spark plug and cylinder head with pressurized air.

⚠ CAUTION Always wear safety goggles when using pressurized air.

Unscrew spark plug completely then remove it.



RH SIDE — REAR CYLINDER
1. Spark plug



LH SIDE — FRONT CYLINDER
1. Spark plug

Spark Plug Installation

Prior to installation make sure that contact surface of cylinder head and spark plug is free of grime.

Using a feeler gauge, set the spark plug gap.

SPARK PLUG GAP
0.7 mm - 0.8 mm (.028 in - .031 in)

Apply a small amount of copper-based anti-seize lubricant over spark plug threads.

Screw spark plug into cylinder heads by hand and tighten with a torque wrench and a proper socket.

TORQUE	
Spark plug	20 N•m ± 2.4 N•m (15 lbf•ft ± 2 lbf•ft)

CVT Cover

NOTE: For a better understanding, some illustrations are taken with engine out of vehicle. To perform the following instructions, it is not necessary to remove engine.

This CVT is lubrication free. Never lubricate any components except drive pulley one-way clutch.

⚠ WARNING

Never touch CVT while engine is running. Never drive vehicle when CVT cover is removed.

⚠ WARNING

Engine must be cool before cover is removed. Always wear protective gloves when removing cover.

Place the vehicle on a level surface. Select PARK position.

CVT Cover Access

1. Remove LH seat.
2. Remove nine plastic rivets to remove LH lateral console panel.

NOTE: Use flat head screwdriver supplied in tool kit to remove plastic rivets.

3. Carefully pull out the panel.
4. Remove eight plastic rivets to remove under seat storage compartment.

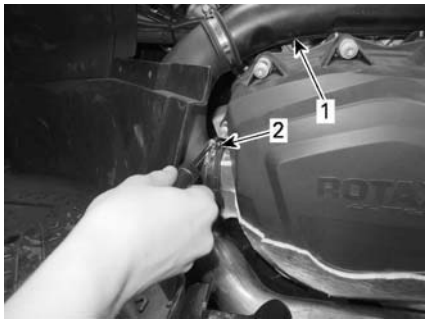
tmo2013-003-047_a

1. LH console panel
2. Under seat storage compartment
3. Plastic rivets

NOTE: This part will still be attached to the vehicle by the seat belt. Do not detach.

CVT Cover Removal

Loosen CVT outlet hose clamp.



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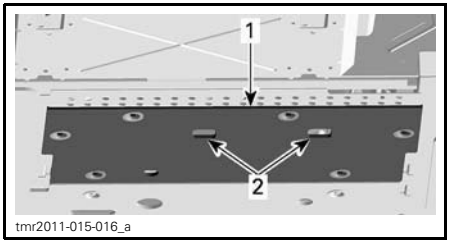
1. CVT outlet hose
2. Clamp

Remove the thirteen CVT cover screws.

NOTE: The CVT cover lower screws are accessible through the square holes in the central skid plate.



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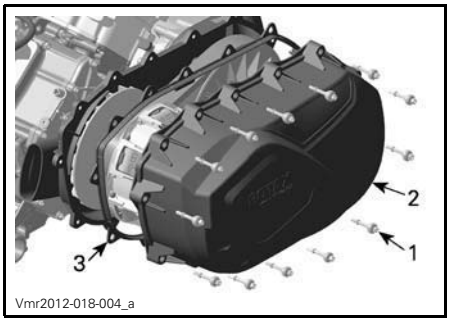
1. Central skid plate
2. Access holes

NOTE: Remove the center top screw last to support the cover during removal.

NOTE: Do not use and impact tool to remove CVT cover screws.

Remove the CVT cover and its gasket.



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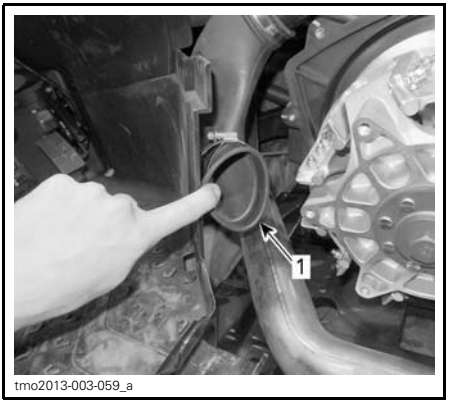
1. CVT cover lower screws
2. CVT cover screws
3. CVT cover

Check inside front and rear CVT outlet hose to make sure there are no debris.

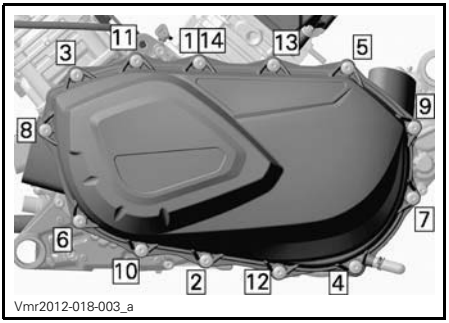


TYPICAL
1. Inside CVT outlet hose

CVT Cover Installation

Install the center top screw of first.

Tighten the CVT cover screws as per following sequence.



CVT COVER TIGHTENING SEQUENCE

CVT COVER SCREWS	
Tightening torque	7 N•m ± 0.8 N•m (62 lbf•**in** ± 7 lbf•**in**)

Drive Belt

Drive Belt Removal

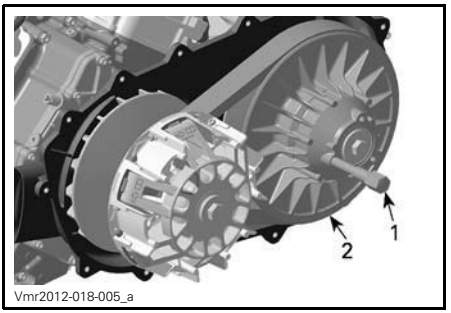
NOTICE **In case of a drive belt failure, the CVT, cover and air outlet must be cleaned.**

Remove *CVT COVER*.

Open driven pulley.

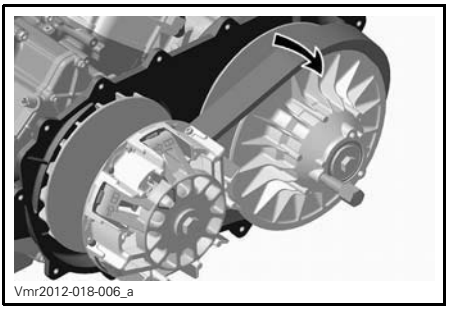
REQUIRED TOOL	
PULLER/LOCKING TOOL (P/N 529 036 098)	

Screw tool in the threaded hole of driven pulley and tighten to open the pulley.



TYPICAL
1. Puller/locking tool
2. Fixed sheave of driven pulley

To remove belt, slip the belt over the top edge of fixed sheave, as shown.



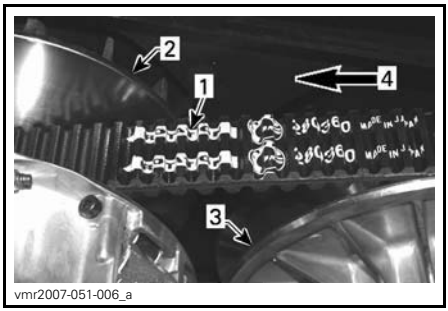
Drive Belt Inspection

For drive belt inspection refer to *DRIVE BELT INSPECTION* in the *PERIODIC MAINTENANCE PROCEDURES* subsection.

Drive Belt Installation

For installation, reverse the removal procedure. Pay attention to following details.

The maximum drive belt life span is obtained when the drive belt has the proper rotation direction. Install it so that the arrow printed on belt is pointing towards front of the vehicle, viewed from top.



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1. *Arrow printed on belt*
2. *Drive pulley (front)*
3. *Driven pulley (rear)*
4. *Rotation direction*

NOTE: Turn the driven pulley until the lowest portion of the cogs on the external surface of drive belt is even with the driven pulley edge.

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1. *Lowest portion of cogs even with external surface of drive belt*

Exhaust Area

Exhaust Area Access

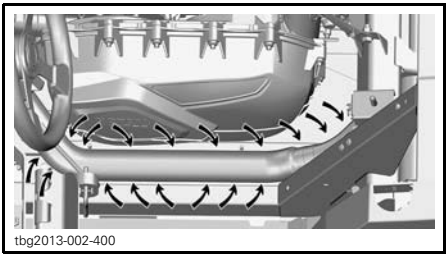
To access exhaust area, refer to *CVT COVER ACCESS* for removal of LH lateral console panel and underseat compartment on driver's side

Exhaust Area Cleaning

⚠ WARNING

Engine and exhaust must be cool before removing debris. Always wear protective gloves when removing debris.

1. Wearing gloves, hand remove all excess debris around exhaust.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2. Using a garden hose, thoroughly clean the area so that no more debris can be in contact with the exhaust.

Battery

Battery Maintenance

NOTICE **Never charge a battery while installed in vehicle.**

These vehicles are equipped with a VRLA battery (Valve Regulated Lead Acid). It is a maintenance-free type battery, there is no need to add water to adjust electrolyte level.

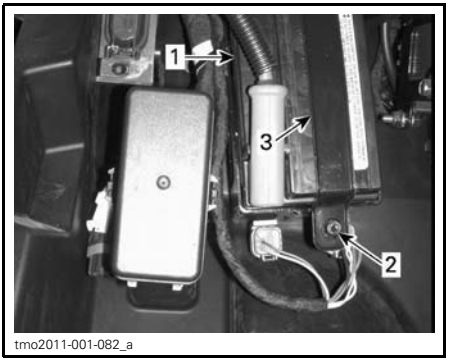
NOTICE **Never remove the battery sealing cap.**

Battery Removal

Disconnect BLACK (-) cable first then RED (+) cable.

NOTICE **Always respect this order for disassembly; disconnect BLACK (-) cable first.**

Remove battery holder retaining screw.



1. *Battery*
2. *Battery holder retaining screw*
3. *Battery holder*

Remove battery holder.

Remove battery.

Battery Cleaning

Clean battery, battery casing and battery posts using a solution of baking soda and water.

Remove corrosion from battery cable terminals and battery posts using a firm wire brush. Battery casing should be cleaned by soft brush and baking soda solution.

Battery Installation

Battery installation is the reverse of the removal procedure.

NOTICE Improper orientation of the battery cables (reverse polarity) will result in damage to the voltage regulator.

⚠ **CAUTION** Always connect RED (+) cable first then BLACK (-) cable.

Fuses

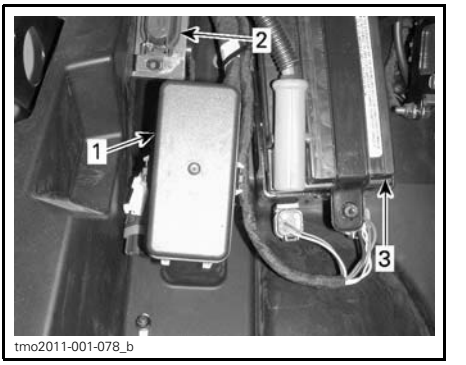
Fuse Replacement

If a fuse is burnt, replace it by one of the same rating.

NOTICE Do not use a higher rated fuse as this can cause severe damage.

Fuse Box Location

The vehicle is equipped with two fuse boxes. They are both located under the console on the driver's side next to the battery.



1. *Main fuse box*
2. *Auxiliary fuse box*
3. *Battery*

Fuse Box Description

AUXILIARY FUSE BOX		
NO	DESCRIPTION	RATING
F1	Main	40 A
F2	Accessories (main)	50 A
F3	Dynamic power steering (DPS) and air controlled suspension (ACS) (LTD model)	50 A

MAIN FUSE BOX		
NO	DESCRIPTION	RATING
F4	Speedo/tail lamp	10 A
F5	Ignition/injection/speed sensor	7.5 A
F6	Engine Control Module (ECM)	5 A
F7	4WD Actuator (winch if equipped)	5 A
F8	Key switch/starter solenoid/clock	30 A
F9	Fan	25 A
F10	European component	5 A
F11	Head lamp	30 A
F12	DC Outlet	15 A
F13	Relay driver	5 A
F14	Accessories	15 A
F15	Fuel pump	5 A

NOTE: Fuses are identified inside fuse box cover.

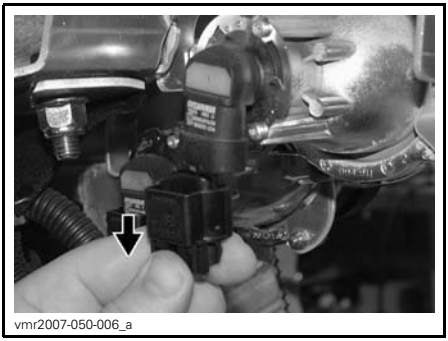
Lights

Always check light operation after replacement.

Headlight Bulb Replacement

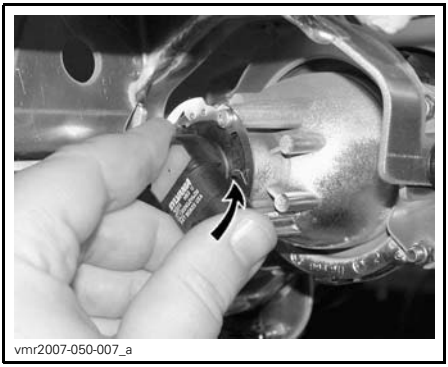
NOTICE Never touch glass portion of a halogen bulb with bare fingers, it shortens its operating life. If glass is touched, clean it with isopropyl alcohol which will not leave a film on the bulb.

Unplug connector from bulb.



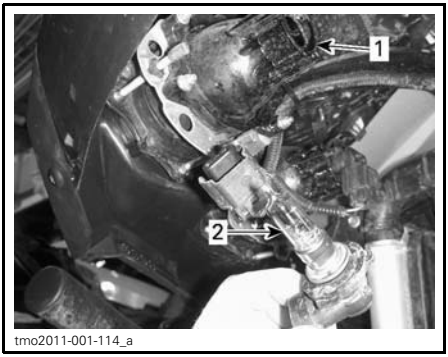
TYPICAL

Rotate bulb.



TYPICAL

Pull out bulb.



1. *Light bulb socket*
2. *Light bulb*

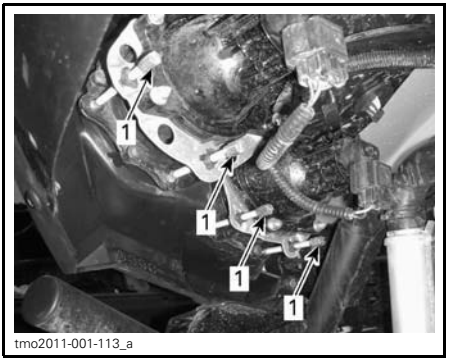
Properly reinstall removed parts in the reverse order of their removal.

Validate headlights operation.

Headlight Beam Aiming

Turn adjustment screws to adjust beam height to your convenience.

NOTE: Adjust headlights evenly.

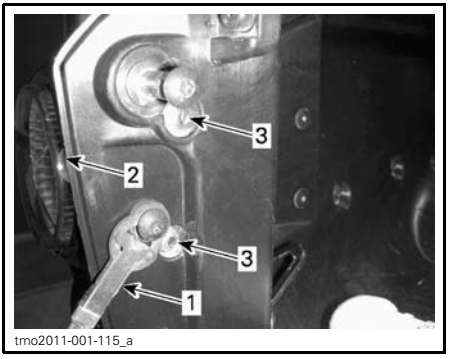


1. Adjustment screws

Taillight Bulbs Replacement

Open upper tailgate.

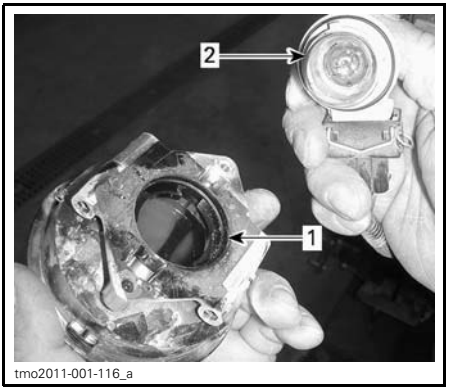
Remove both taillight retaining screws.



TYPICAL
1. Tailgate cable
2. Tail light
3. Retaining screws

Pull tail light out of its location.

Remove bulb socket from taillight.



1. Tail light
2. Light bulb and socket

Push the bulb in and hold while turning counterclockwise to release.

Installation is the reverse of the removal procedure.

Position Lights Bulbs Replacement

Pull bulb out.

Installation is the reverse of removal.

Drive Shaft Boot and Protector

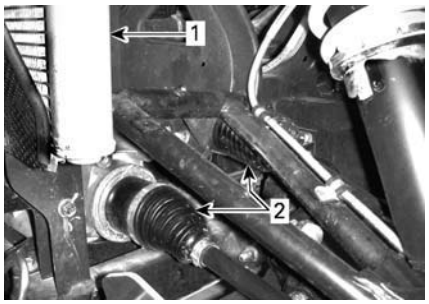
Drive Shaft Boot and Protector Inspection

Visually inspect drive shaft protectors and boots conditions.

Check protectors for damage or rubbing against shafts.

Check boots for cracks, tears, leaking grease, etc.

Repair or replace damaged parts as necessary.



FRONT OF VEHICLE
1. *Radiator*
2. *Inner drive shaft boots*

FRONT OF VEHICLE
1. *Outer drive shaft boot*

REAR OF VEHICLE
1. *Inner drive shaft boot*

REAR OF VEHICLE
1. *Outer drive shaft boot*

Wheel Bearing

Wheel Bearing Inspection

Lift and support vehicle. Refer to *LIFTING AND SUPPORTING THE VEHICLE* in *VEHICLE INFORMATION SECTION*.

Push and pull the wheels from the upper edge to feel the play.

See an authorized Can-Am dealer if there is any play.

TYPICAL

Wheels and Tires

Wheel Removal

Loosen nuts then lift and support vehicle. Refer to *LIFTING AND SUPPORTING VEHICLE* in *VEHICLE INFORMATION*.

Remove nuts then remove wheel.

Wheel Installation

At installation, it is recommended to apply anti-seize lubricant on threads.

The tires are unidirectional and their rotation must be kept in a specific direction for proper operation.

Torque wheel nuts in accordance with the following illustration.

TORQUE	
WHEEL LUG NUTS	100 N•m ± 10 N•m (74 lbf•ft ± 7 lbf•ft)

tmo2011-001-081_a

TIGHTENING SEQUENCE

NOTICE Always use the recommended wheel nuts for the type of wheel. Using a different nut could cause damages to the rim or studs.

Tire Pressure

⚠ WARNING

Tire pressure greatly affects vehicle handling and stability. Under pressure may cause tire to deflate and rotate on wheel. Overpressure may burst the tire. Always follow recommended pressure. NEVER set tire pressure below minimum. It could cause the tire to dislodge from the rim.

Check pressure when tires are **cold** before using the vehicle. Tire pressure changes with temperature and altitude. Recheck pressure if one of these conditions has changed.

For your convenience, a pressure gauge is supplied in tool kit.

TIRE PRESSURE		
	FRONT	REAR
MIN.	69 kPa (10 PSI)	83 kPa (12 PSI)
MAX. (Use when total load is greater than 180 kg (400 lb))	83 kPa (12 PSI)	152 kPa (22 PSI)

NOTE: Although the tires are specifically designed for off-road use, a flat may still occur. Therefore, it is recommended to carry a tire pump and a repair kit.

Tire Inspection

Check tire for damage and wear. Replace if necessary.

⚠ WARNING

Do not rotate tires. The front and rear tires have a different size. The left and right tires have different unidirectional tread patterns.

Tire Replacement

Tires replacement should be performed by an authorized Can-Am dealer.

⚠ WARNING

- Replace tires only with the same type and size as original tires.
- For unidirectional tread pattern, ensure that the tires are installed in the correct direction of rotation.
- Tires should be replaced, by an experienced person, in accordance with tire industry standards and tools.

Tire Mounting on Beadlock Wheels (XT-P Models Only)

1. Mount the tire on wheel.
   1.1 On the opposite side of beadlock, apply tire mounting lube on inner bead of tire and wheel to ensure proper seat when inflating. Mount the inner bead over the wheel like normal.

   NOTICE Mount tire from beadlock side only.

   1.2 Seat tire outer bead in the shoulder of the beadlock inner ring and center the tire.

vbs2010-007-002_a

TYPICAL
1. *Tire outer bead*
2. *Beadlock inner ring shoulder*

2. Place the beadlock clamp ring on the tire. Align the valve opening with valve.

vbs2010-007-003_a

TYPICAL
1. *Clamp ring valve opening*

3. Lubricate all beadlock screws with LOCTITE 767 (ANTISEIZE LUBRICANT) (P/N 293 800 070) or an equivalent product to prevent screws sticking.
4. Install all beadlock screws. To avoid cross threading, start all screws by hand.

NOTICE Do not use an impact wrench for installing beadlock screws. The risk of screw breaking or screw stripping is high when using an impact wrench.

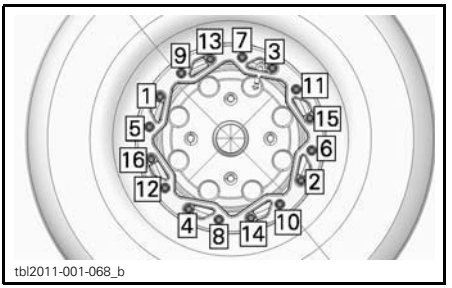
vbs2010-007-004

TYPICAL

5. Tighten beadlock screws as per following specification and sequence.

NOTE: To ensure even pressure on the beadlock clamp ring, tighten screws a few turns at a time.

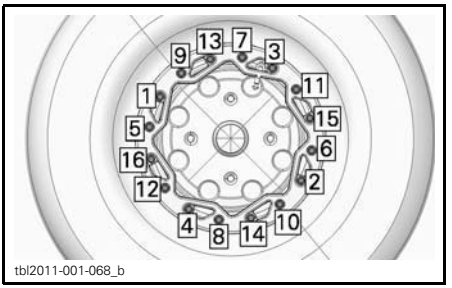
TIGHTENING TORQUE	
Beadlock screws (FIRST TORQUE)	3 N•m ± 1 N•m (27 lbf•**in** ± 9 lbf•**in**)



TIGHTENING SEQUENCE

6. At this time check if the tire is still centered on wheel. Reposition it if necessary.
7. Tighten beadlock screws as per the **second** torque using the same sequence.

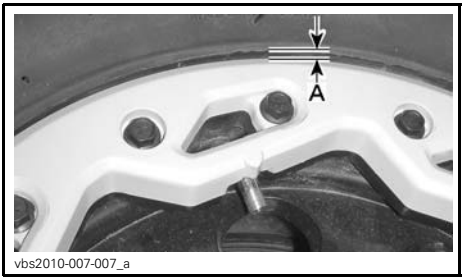
TIGHTENING TORQUE	
Beadlock screws (SECOND TORQUE)	8 N•m ± 1 N•m (71 lbf•**in** ± 9 lbf•**in**)



TIGHTENING SEQUENCE

NOTE: The beadlock clamp ring should be in contact with the beadlock inner ring. The beadlock clamp ring can flex slightly to match the tire bead. IT IS NORMAL.

8. Verify the gap between tire and beadlock clamp ring, it should be practically equal all around the ring.

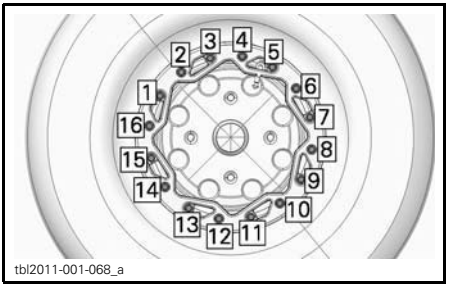


A. Gap equal all around beadlock clamp ring

If the gap is not acceptable,
- Loosen all screws.
- Check tire position on wheel and reposition it if necessary.
- Restart the torquing sequence as detailed.

9. Torque beadlock screws a **final** time following the indicated sequence.

TIGHTENING TORQUE	
Beadlock screws (FINAL TORQUE)	8 N•m ± 1 N•m (71 lbf•**in** ± 9 lbf•**in**)



FINAL TIGHTENING SEQUENCE

10. Inflate tire to seat the inner bead on wheel. Always use safe practices, such as a tire safety cage.

⚠ WARNING

Never exceed tire's recommended maximum pressure for seating beads.

Suspensions

Front Suspension Lubrication

Use SUSPENSION GREASE (P/N 293 550 033) or an equivalent.

Lubricate front A-arms.

There are three grease fittings on each A-arm oriented downwards.

FRONT SUSPENSION - TYPICAL
1. Grease fittings

Suspension Inspection

See an authorized Can-Am dealer if any problem is detected.

Shock Absorbers

Inspect shock absorber for leaks, bump stop wear out or other damages. Verify fasteners are still well tightened.

Front A-Arms

Check A-arms for cracks, bending or other damages.

Rear Trailing Arms

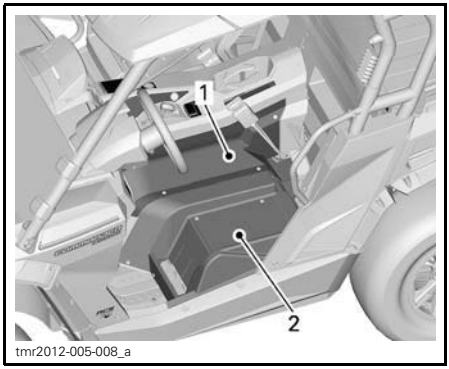
Check trailing arms for distortion, cracks or bending.

ACS Air Filter

ACS Air Filter Access

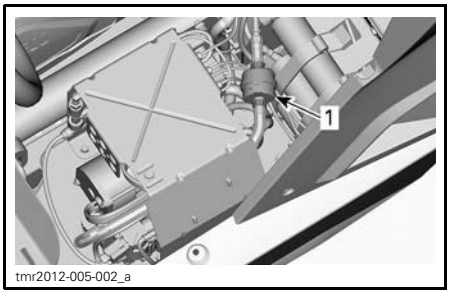
To access to ACS air filter, remove the following:

– Driver's seat
– LH lateral console panel
– Floor panel.



SIDE NET REMOVED FOR CLARITY
1. LH lateral console panel
2. Floor panel

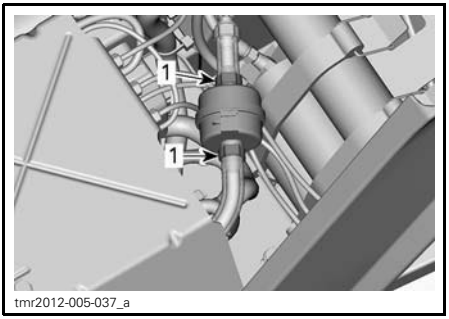
The ACS compressor is located in front of air reservoirs.



1. ACS air filter

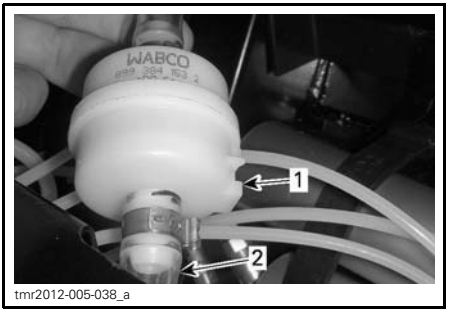
ACS Air Filter Replacement

1. Remove and discard clamps securing hoses to air filter.



1. Clamps to be removed

2. Remove the air filter.
3. Install the new air filter with its attachment towards the compressor.
4. Secure air filter using **new** clamps.



1. Air filter attachment
2. Air hose from compressor

ACS Hoses and Fittings

ACS Hoses and Fittings Inspection

Check shock hoses for damage.

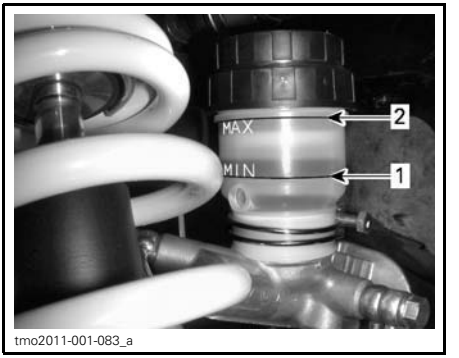
Check shock fittings for damage.

Check hoses and fittings for air leaks.

Brakes

Brake Fluid Reservoir Level Verification

With vehicle on a level surface, check brake fluid in reservoir for proper level. Brake fluid level should be between MIN.and MAX. marks.



TYPICAL
1. MIN
2. MAX

NOTE: A low level may indicate leaks or worn brake pads.

Adding Brake Fluid

Clean filler cap before removing.

Add fluid as required. **Do not overfill.**

NOTE: Ensure filler cap diaphragm is pushed inside before to close the cap on brake fluid reservoir.

Recommended Brake Fluid

Always use brake fluid meeting the specification DOT 4 only.

⚠ WARNING

To avoid serious damage to the braking system, do not use fluids other than the recommended one, nor mix different fluids for topping up.

Brake Inspection

The brake inspection, maintenance and repair should be performed by an authorized Can-Am dealer.

However, verify the following between visits to your dealer:

– Brake fluid level
– Brake system for fluid leaks
– Brake cleanliness.

⚠ WARNING

The brake fluid replacement or brake system maintenance and repairs should be performed by an authorized Can-Am dealer.

Seat Belts

Seat Belt Cleaning

To clean dirt and debris from the seat belts, sponge the straps with mild soap and water. Do not use bleach, dye, or household detergents.

⚠ WARNING

Do not use pressure washer to clean seat belt components. Use of pressure washer can permanently damage seat belt components.

Post-Operation Care

When vehicle is used in salt-water environment rinsing the vehicle with fresh water is necessary to preserve vehicle and its components. Metallic parts lubrication is highly recommended. Use XPS LUBE (P/N 293 600 016) or an equivalent. This must be performed at the end of each operating day.

When vehicle is operated in muddy conditions, rinsing the vehicle is recommended to preserve vehicle and its components.

Vehicle Cleaning and Protection

Never use a high pressure washer to clean the vehicle. USE LOW PRESSURE ONLY (like a garden hose). High pressure can cause damage to electrical or mechanical components.

Pay attention to certain areas where mud or debris can accumulate and potentially cause wear, interferences or promote corrosion. The list includes but is not limited to:

- Around exhaust system and between muffler and muffler cover
- Under and around the fuel tank
- Radiator
- Shock absorbers
- Around front and rear differentials
- Around and underneath engine and gearbox
- Inside wheels
- On top of skid plates.

Painted parts which are damaged should be properly repainted to prevent rust.

When required, wash the body with warm water and soap (only use mild detergent). Apply non-abrasive wax.

NOTICE Never clean plastic parts with strong detergent, degreasing agent, paint thinner, acetone, etc.

STORAGE AND PRESEASON PREPARATION

When a vehicle is not in use for more than 4 months, proper storage is a necessity.

When using your vehicle after storage, a preparation is required.

See an authorized Can-Am dealer to have your vehicle prepared for either storage or the preseason.

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TECHNICAL INFORMATION

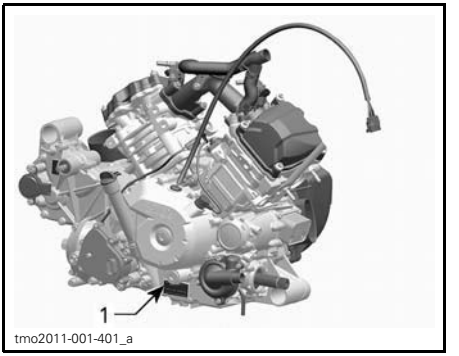
VEHICLE IDENTIFICATION

The main components of your vehicle (engine and frame) are identified by different serial numbers. It may sometimes become necessary to locate these numbers for warranty purposes or to trace your vehicle in the event of loss. These numbers are required by the authorized Can-Am dealer to complete warranty claims properly. No warranty will be allowed by BRP Inc. if the engine identification number (EIN) or vehicle identification number (VIN) is removed or mutilated in any way. We strongly recommend that you take note of all the serial numbers on your vehicle and supply them to your insurance company.

Vehicle Identification Number

TYPICAL — VEHICLE SERIAL NUMBER LABEL UNDER GLOVE BOX

Engine Identification Number



TYPICAL — ENGINE SERIAL NUMBER LABEL
1. EIN (Engine Identification Number)

NOISE EMISSION CONTROL SYSTEM REGULATION

USA and Canada Only

Tampering with Noise Control System Is Prohibited!

U.S. Federal law and Canadian provincial laws may prohibit the following acts or the causing there of:

1. The removal or rendering inoperative by any person other than for purposes of maintenance, repair or replacement of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use or
2. The use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Among those Acts Presumed to Constitute Tampering Are the Acts Listed Below:

1. Removal or alteration or the puncturing of the muffler or any engine component which conducts removal of engine exhaust gases.
2. Removal or alteration or the puncturing of any part of the intake system.
3. Replacing any moving parts of the vehicle or parts of the exhaust or intake system, with parts other than those specified by the manufacturer.
4. Lack of proper maintenance.

The EC-Declaration of Conformity does not appear in this version of the Operator's Guide.

Please refer to the printed version that was delivered with your vehicle.

SPECIFICATIONS

MODEL		800R	1000
ENGINE			
Engine type		ROTAX® 810	ROTAX® 1010
		4-stroke, Single Over Head Camshaft (SOHC), liquid cooled	
Number of cylinders		2	
Number of valves		8 valves (mechanical adjustment)	
Bore		91 mm (3.58 in)	91 mm (3.58 in)
Stroke		61.5 mm (2.42 in)	75 mm (2.95 in)
Displacement		799.9 cm^3 (48.81 in^3)	976 cm^3 (59.56 in^3)
Exhaust system		Spark arrester approved by USDA Forest Service	
Engine air filter		Synthetic paper filter	
LUBRICATION SYSTEM			
Type		Wet sump. Replaceable oil filter	
Oil filter		BRP Rotax® paper type, replaceable	
Engine oil	Capacity (oil change with filter)	2 L (2.1 qt (U.S. liq.))	
	Recommended	For the summer season, use XPS 4-STROKE SYNTH. BLEND OIL (SUMMER) (P/N 293 600 121). For the winter season, use XPS 4-STROKE SYNTHETIC OIL (ALL CLIMATE) (P/N 293 600 112). If not not available, use a 5W 40 motor oil that meets the requirements for API service classification SM, SL or SJ	
COOLING SYSTEM			
Coolant	Type	Ethyl glycol/water mix (50% coolant, 50% water). Use premixed coolant sold by BRP (P/N 219 700 362) or coolant specifically designed for aluminum engines	
	Capacity	3.85 L (1.02 U.S. gal.)	4.25 L (1.12 U.S. gal.)
CVT TRANSMISSION			
Type		CVT (Continuously Variable Transmission)	
Engagement RPM		1800 RPM	

MODEL		800R	1000
GEARBOX			
Type		Dual range (HI-LO) with PARK, neutral and reverse	
Gearbox oil	Capacity	450 ml (15 U.S. oz)	
	Recommended	XPS synthetic gear oil (P/N 293 600 140) or a 75W 140 API GL-5	
ELECTRICAL SYSTEM			
Magneto generator output		625 W @ 6000 RPM	
Ignition system type		IDI (Inductive Discharge Ignition)	
Ignition timing		Not adjustable	
Spark plug	Quantity	2	
	Make and type	NGK DCPR8E	
	Gap	0.7 mm to 0.8 mm (.028 in to .031 in)	
Engine RPM limiter setting		8000 RPM	
Battery	Type	Dry battery type	
	Voltage	12 volts	
	Nominal rating	18 A•h	
	Power starter output	0.7 KW	
Headlights		4 x 60 W	
Taillight		2 x 5/21 W	

MODEL		800R	1000
ELECTRICAL SYSTEM (cont'd)			
Fuses	Main	40 A	
	Accessories (main)	50 A	
	ACS/DPS (if equipped)	50 A	
	Speedometer/tail lamp	10 A	
	Ignition/injection/speed sensor	7.5 A	
	Engine control module (ECM)	5 A	
	4WD Actuator (winch if equipped)	5 A	
	Key switch	5 A	
	Fan (fuse breaker)	25 A	
	European component	5 A	
	Head lamp	30 A	
	DC Outlet	15 A	
	Relay Driver	5 A	
	Accessories	15 A	
	Fuel pump	5 A	
FUEL SYSTEM			
Fuel delivery	Type	Electronic fuel injection (EFI) with iTC	
Throttle body		54 mm with ETA	
Fuel pump	Type	Electric (in fuel tank)	
Idle speed		1250 ± 100 RPM (not adjustable)	
Fuel	Type	Regular unleaded gasoline	
	Minimum octane	87 Pump Posted AKI (92 RON) - Refer to *FUEL REQUIREMENTS*	
Fuel tank capacity		37.8 L (10 U.S. gal.)	
Fuel remaining when low fuel light turns ON		± 12 L (3.2 U.S. gal.)	

MODEL			800R	1000
DRIVE SYSTEM				
Drive system type			Selectable 2WD/4WD	
Front Differential oil/rear final drive oil	Capacity	Front	500 ml (17 U.S. oz)	
		Rear	280 ml (9.5 U.S. oz)	
	Type	Front	XPS Synthetic gear oil (75W 90 API GL-5) (P/N 293 600 043) or synthetic oil 75W 90 API GL5	
		Rear	XPS Synthetic gear oil (P/N 293 600 140) or a 75W 140 API GL-5 synthetic gear oil	
Front drive			Visco-lok† front differential	
Front drive ratio			3.6:1	
Rear drive			Spiral bevel gear/final drive	
Rear drive ratio			3.6:1	
CV joint grease			CV joint grease (P/N 293 550 019)	
Propeller shaft grease			Propeller shaft grease (P/N 293 550 063)	
STEERING				
Steering wheel			Adjustable tilt steering	
Turning radius			240 cm (94.5 in)	
Total toe (vehicle on ground)			0° ± 0.2° (±)	
Camber angle (vehicle on ground)			0.7° positive	
FRONT SUSPENSION				
Suspension type		Base DPS XT	Double suspension-arm with dive-control geometry	
		XT-P	Double suspension-arm with dive-control geometry with external sway-bar	
		LTD	Double suspension-arm with dive-control geometry with ACS	
Suspension travel			254 mm (10 in)	
Shock absorber	Qty		2	
	Type	Base	Oil/5 spring preload settings	
		DPS	Oil/5 spring preload settings	
		XT	Oil/5 spring preload settings	
		XT-P	HPG shock with remote reservoir. Dual speed compression damping and rebound damping adjustments	
		LTD	HPG shock with remote reservoir. Compression damping (low speed) and air pressure adjustments	

MODEL			800R	1000
REAR SUSPENSION				
Suspension type		Base DPS XT XT-P	Torsional Trailing arm Independant (TTI) with external sway bar	
		LTD	Torsional Trailing arm Independant (TTI) with external sway bar with ACS	
Suspension travel			254 mm (10 in)	
Shock absorber	Qty		2	
	Type	Base	Oil/5 spring preload settings	
		DPS	Oil/5 spring preload settings	
		XT	Oil/5 spring preload settings	
		XT-P	HPG shock with remote reservoir. Dual speed compression damping and rebound damping adjustments	
		LTD	HPG shock with remote reservoir. Compression damping (low speed) and air pressure adjustments	
BRAKES				
Front brake	Type		Dual 214mm ventilated disc brakes with hydraulic twin-piston calipers	
Rear brake	Type		Single 214mm ventilated disc brake with hydraulic twin-piston caliper	
Brake fluid	Capacity		250 ml (8.5 U.S. oz)	
	Type		DOT 4	
Caliper			Floating	
Brake pad material	Front		Metallic	
	Rear		Metallic	
Minimum brake pad thickness			1 mm (.039 in)	
Minimum brake disc thickness	Front		4 mm (.157 in)	
	Rear		4 mm (.157 in)	
Maximum brake disc warpage			0.2 mm (.001 ft)	

MODEL			800R	1000
TIRES				
Pressure	Front		Maximum: 83 kPa (12 PSI) Minimum: 69 kPa (10 PSI)	
	Rear		Maximum: 152 kPa (22 PSI) Minimum: 83 kPa (12 PSI)	
Minimum tire thread depth			3 mm (.118 in)	
Tire size	Front	Base/XT-P	27 x 9 x 12 (in)	
		DPS/XT/LTD	27 x 9 x 14 (in)	
	Rear	Base/XT-P	27 x 11 x 12 (in)	
		DPS/XT/LTD	27 x 11 x 14 (in)	
WHEELS				
Type		Base	Steel	
		XT-P	Aluminum beadlock wheels	
		DPS/XT/LTD	Cast Aluminum	
Rim size	Front	Base	12 x 6 (in)	
		XT-P	12 x 6 (in)	
		DPS/XT/LTD	14 x 7 (in)	
	Rear	Base	12 x 8 (in)	
		XT-P	12 x 7.5 (in)	
		DPS/XT/LTD	14 x 8.5 (in)	
Wheel nuts torque			100 N•m ± 10 N•m (74 lbf•ft ± 7 lbf•ft)	
CHASSIS				
Cage type			50 mm (2 in) diameter, high strength steel, ROPS-approved cage	
DIMENSIONS				
Overall length			300.4 cm (118.3 in)	
Overall width			148.9 cm (58.6 in)	
Overall height			182.9 cm (72 in)	
Wheelbase			192.4 cm (75.7 in)	
Wheel track	Front		125.7 cm (49.5 in)	
	Rear		121.9 cm (48 in)	
Ground clearance			27.9 cm (11 in)	

MODEL			800R	1000
LOADING CAPACITY AND WEIGHT				
Dry weight			584 kg (1,287 lb)	587 kg (1,295 lb)
Weight distribution (front/rear)			44/56	
Cargo box capacity	Total		272 kg (600 lb)	
	Upper		181 kg (400 lb)	
	Lower		272 kg (600 lb)	
Total vehicle load allowed (including driver, passenger, all other loads and added accessories)		All models except LTD	363 kg (800 lb)	
		LTD model	340 kg (750 lb)	
Gross vehicle weight rating			990 kg (2,183 lb)	
Towing capacity			680 kg (1,500 lb)	
Hitch support			50.8 mm (2 in) x 50.8 mm (2 in)	

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TROUBLESHOOTING

TROUBLESHOOTING GUIDELINES

CVT BELT IS SLIPPING

1. Water has entered in the CVT.
   – *Refer to SPECIAL PROCEDURES subsection.*

E IS DISPLAYED ON TRANSMISSION POSITION DISPLAY

1. Shift lever is between 2 positions.
   – *Properly position the shift lever in the desired position.*
2. Shift lever is not properly adjusted.
   – *Contact an authorized Can-Am dealer.*
3. Electrical communication error.
   – *Contact an authorized Can-Am dealer.*

ENGINE DOES NOT TURN

1. Ignition switch is in the OFF position.
   – *Place switch to either ON position.*
2. Shift lever is not set on PARK or NEUTRAL.
   – *Set shift lever to either in PARK or in NEUTRAL or press the brake pedal.*
3. Burnt fuse.
   – *Check fuses.*
4. Weak battery or loose connections.
   – *Check charging system fuse.*
   – *Check fault message in cluster.*
   – *Check battery connections and terminals condition.*
   – *Have the battery checked by an authorized Can-Am dealer.*
5. Defective engine start button.
   – *Contact an authorized Can-Am dealer.*
6. Defective starter solenoid.
   – *Contact an authorized Can-Am dealer.*

ENGINE TURNS OVER BUT FAILS TO START

1. Flooded engine (spark plug wet when removed).
   – *(If the engine does not start and it is fuel-flooded, the drowned mode can be activated to prevent fuel injection and to cut ignition while cranking. Proceed as follows:*
   • Insert key in ignition switch and turn to either ON position.
   • Press completely and HOLD accelerator pedal.
   • Press the engine START button.
   The engine should be cranked for 10 seconds. Release engine START button.
   Release accelerator pedal and start/crank engine again to allow starting.
   If it does not work:
   • Remove the spark plugs (tools are supplied in tool kit). Refer to SPARK PLUGS in the MAINTENANCE PROCEDURES section.
   • Crank engine several times.
   • Install new spark plugs if possible or clean and dry spark plugs.
   • If engine does not start, see an authorized Can-Am dealer.

2. No fuel to the engine (spark plug dry when removed).
   – *Check fuel tank level.*
   – *Check fuel pump fuse.*
   – *Obstructed fuel pump pre-filter or fuel pump failure. See an authorized Can-Am dealer.*
3. Spark plug/ignition (no spark).
   – *Check ignition fuse.*
   – *Remove spark plug then reconnect to ignition coil.*
   – *Start engine with spark plug grounded to the engine away from spark plug hole. If no spark appears, replace spark plug.*
   – *If trouble persists, contact an authorized Can-Am dealer.*

ENGINE LACKS ACCELERATION OR POWER

1. Seat belt not buckled properly. Check cluster message.
   – *Buckle up seat belt.*
2. Fouled or damaged spark plug.
   – *Replace spark plugs.*
3. Engine air filter plugged or dirty.
   – *Check air filter and replace if necessary.*
   – *Check deposits in engine air filter housing.*
4. Water in CVT
   – *Drain water from CVT. Refer to SPECIAL PROCEDURES subsection.*
5. CVT dirty or worn-out.
   – *Contact an authorized Can-Am dealer.*
6. Lack of fuel
   – *Dirty or clogged fuel pump pre-filter. See an authorized Can-Am dealer.*

ENGINE LACKS ACCELERATION OR POWER (cont'd)

7. Engine is in limp home mode.
   - *Check multifunction gauge display for messages.*
   - *Multifunction gauge CHECK ENGINE indicator lamp is on and display shows LIMP HOME, contact an authorized Can-Am dealer.*

ENGINE OVERHEATS

1. Low coolant level in cooling system.
   - *Check coolant level and refill. See MAINTENANCE PROCEDURES. See an authorized Can-Am dealer as soon as possible.*
2. Cooling fan is not working.
   - *Ensure cooling fan is not jammed and working properly.*
   - *Check fan fuse. See FUSES in the MAINTENANCE PROCEDURES subsection.*
3. Dirty radiators fins.
   - *Check and clean radiator fins. See MAINTENANCE PROCEDURES subsection.*

ENGINE MISFIRE

1. Fouled/damaged/worn spark plug.
   - *Replace spark plugs as required.*
2. Water in fuel.
   - *Drain fuel system and refill with fresh fuel.*

THE RPM INCREASES BUT THE VEHICLE DOES NOT MOVE

1. Water in the CVT.
   - *Drain water from CVT. See SPECIAL PROCEDURES subsection.*
2. CVT dirty or worn-out or belt failure.
   - *Contact an authorized Can-Am dealer.*

PARTIAL OR NO RESPONSE FROM THE ACCELERATOR PEDAL INPUTS (CHECK ENGINE IS ON AND PPS FAULT MESSAGE IS DISPLAYED)

1. Partial failure of the accelerator pedal sensors (PPS).
   - *Use the override switch to retrieve accelerator pedal normal operation. Contact an authorized Can-Am dealer.*
2. Total failure of the accelerator pedal sensors (PPS).
   - *Use the override switch to bypass the accelerator pedal in order to move vehicle. Contact an authorized Can-Am dealer.*

ACS OVERHEAT IS DISPLAYED IN GAUGE

1. ACS compressor was used too much over a short period of time.
   - *Wait for overheat message* ACS OVERHEAT *to disappear from display.*
   - *If message does not disappear, contact an authorized Can-Am dealer.*

ACS FAULT IS DISPLAYED IN GAUGE

1. A leak or problem in the ACS system is detected.
   – *Contact an autorized Can Am dealer.*

MESSAGES IN MULTIFUNCTION GAUGE

If an abnormal engine condition occurs, the following messages can be combined with a pilot lamp.

MESSAGE	DESCRIPTION
CHECK ENGINE	All active or previously activated faults that require attention. No engine limitation engaged.
LIMP HOME	Critical faults requiring diagnostic as soon as possible. An engine limitation is engaged and/or the engine behavior is modified.
ECM CRC ERROR	Error message from ECM.
TPS FAULT	Throttle body fault, generally followed by a Limp Home message.
BRAKE SWITCH FAULT	Brake signal fault.
ECM NOT RECOGNIZED	Message displayed when the gauge is unable to identify the ECM.
CHECK DPS (models with DPS)	Check engine pilot light on. Indicates that the DPS (Dynamic Power Steering) does not work properly. See an authorized Can-Am dealer.
DPS OVERHEAT (models with DPS)	Indicates that DPS module is lowering its assist level to protect itself against extreme temperature.
TRANSMISSION SIGNAL FAULT	Gearbox position sensor fault active. «E» is also displayed in the gear display.
PPS FAULT	When one or both sensor of the PPS is/are faulty, erratic or out of range or that the ratio between the two is incorrect, the message will be displayed and the check engine will be lit.
MANUAL LIMP HOME	When the PPS Limp Home is engaged, the message will be displayed.
FUEL SENDER RANGE PERFORMANCE	When the fuel sender resistor value is out of range the multifunction gauge (analog/digital) will detect it and display the message.
GEAR POSITION SENSOR FAULT	When the Gear signal is erroneous the gauge will display the message.
USE LOW GEAR	When a slope is too steep for high gear, the message will be displayed. Change for low gear.
ACS FAULT (LTD model only)	Leak or problem detected in the ACS system.
ACS OVERHEAT (LTD model only)	ACS compressor overheated. Do not run compressor for more than 2 minutes. Let compressor cool down.

WARRANTY

BRP LIMITED WARRANTY USA AND CANADA: 2014 CAN-AM® SSV

1) SCOPE OF THE LIMITED WARRANTY

Bombardier Recreational Products Inc. ("BRP")* warrants its 2014 Can-Am side-by-side vehicles ("SSV") sold by authorized Can-Am SSV dealers (as hereinafter defined) in the United States of America ("USA") and in Canada from defects in material or workmanship for the period and under the conditions described below. This limited warranty will become null and void if: (1) the SSV was used for racing or any other competitive activity, at any point, even by a previous owner; or (2) the SSV has been altered or modified in such a way so as to adversely affect its operation, performance or durability, or has been altered or modified to change its intended use.

Except if otherwise specified, all genuine Can-Am SSV parts and accessories installed by an authorized BRP dealer on a 2014 Can-Am SSV at the time of delivery are covered under this limited warranty.

2) LIMITATIONS OF LIABILITY

THIS WARRANTY IS EXPRESSLY GIVEN AND ACCEPTED IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE EXPRESS WARRANTY. INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. SOME STATES/ PROVINCES DO NOT ALLOW FOR THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE, AS A RESULT, THEY MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH MAY VARY FROM STATE TO STATE, OR PROVINCE TO PROVINCE.

Neither the distributor, any BRP dealer nor any other person has been authorized to make any affirmation, representation or warranty regarding the product, other than those contained in this limited warranty, and if made, shall not be enforceable against BRP. BRP reserves the right to modify this warranty at any time, being understood that such modification will not alter the warranty conditions applicable to the products sold while this warranty is in effect.

3) EXCLUSIONS – ARE NOT WARRANTED

The following are not warranted under any circumstances:

- Normal wear and tear;
- Routine maintenance items, tune ups, adjustments;
- Damage caused by failure to provide proper maintenance and/or storage, as described in the Operator's Guide;
- Damage resulting from removal of parts, improper repairs, service, maintenance, modifications or use of parts not manufactured or approved by BRP or resulting from repairs done by a person that is not an authorized servicing Can-Am SSV dealer;
- Damage caused by abuse, abnormal use, neglect or operation of the product in a manner inconsistent with the recommended operation described in the Can-Am SSV Operator's Guide;

– Damage resulting from accident, submersion, fire, theft, vandalism or any act of God;
– Operation with fuels, oils or lubricants which are not suitable for use with the product (see the Operator's Guide);
– Damages from rust, corrosion or exposure to the elements;
– Damage resulting from water or snow ingestion;
– Incidental or consequential damages, or damages of any kind including without limitation towing, storage, telephone, rental, taxi, inconvenience, insurance coverage, loan payments, loss of time, loss of income.

4) WARRANTY COVERAGE PERIOD

This warranty will be in effect from (1) the date of delivery to the first retail consumer or (2) the date the product is first put into use, whichever occurs first and for the following period:

– SIX (6) CONSECUTIVE MONTHS, for private use or commercial use owners, except that emission-related components installed on EPA certified SSVs registered in the USA are covered for 5000 km or thirty (30) consecutive months whichever comes first; and evaporative emission related components are warranted for twenty-four (24) consecutive months. To obtain a list of the current warranted emission-related components, please see an authorized Can-Am SSV dealer.

The repair or replacement of parts or the performance of service under this warranty does not extend the life of this warranty beyond its original expiration date.

5) CONDITIONS TO HAVE WARRANTY COVERAGE

This warranty coverage is available **only** if **each** of the following conditions has been fulfilled:

– The 2014 Can-Am SSV must be purchased as new and unused by its first owner from a Can-Am SSV dealer authorized to distribute Can-Am SSV's in the country in which the sale occurred ("Can-Am SSV dealer");
– The BRP specified pre-delivery inspection process must be completed and documented and signed by the purchaser;
– The 2014 Can-Am SSV must have undergone proper registration by an authorized Can-Am SSV dealer;
– The 2014 Can-Am SSV must be purchased in the country in which the purchaser resides;
– Routine maintenance outlined in the Operator's Guide must be timely performed in order to maintain warranty coverage. BRP reserves the right to make warranty coverage contingent upon proof of proper maintenance.

BRP will not honor this limited warranty to any private use owner or commercial use owner if one of the preceding conditions has not been met. Such limitations are necessary in order to allow BRP to preserve both the safety of its products, and also that of its consumers and the general public.

6) WHAT TO DO TO OBTAIN WARRANTY COVERAGE

The customer must cease using the SSV upon the appearance of an anomaly. The customer must notify a servicing BRP dealer within three (3) days of the appearance of a defect, and provide it with reasonable access to the product and

reasonable opportunity to repair it. The customer must also present to the authorized BRP dealer, proof of purchase of the product and must sign the repair/work order prior to starting the repair in order to validate the warranty repair. All parts replaced under this limited warranty become the property of BRP.

7) WHAT BRP WILL DO

BRP's obligations under this warranty are limited to, at its sole discretion, repairing parts found defective under normal use, maintenance and service, or replacing such parts with new genuine Can-Am SSV parts without charge for parts and labor, at any authorized BRP dealer during the warranty coverage period under the conditions described herein. BRP's responsibility is limited to making the required repairs or replacements of parts. No claim of breach of warranty shall be cause for cancellation or rescission of the sale of the SSV to the owner.

In the event that service is required outside of the country of original sale, the owner will bear responsibility for any additional charges due to local practices and conditions, such as, but not limited to, freight, insurance, taxes, license fees, import duties, and any and all other financial charges, including those levied by governments, states, territories and their respective agencies.

BRP reserves the right to improve or modify products from time to time without assuming any obligation to modify products previously manufactured.

8) SUPPLIER WARRANTIES

A GPS receiver may be supplied by BRP as standard equipment on certain 2014 Can-Am SSV. The GPS receiver is covered under the limited warranty issued by the GPS receiver's manufacturer and is not covered under this limited warranty. Please contact the following distributors if in Canada or the manufacturer if in the USA:

In the USA:
Garmin International Inc.
U.S.: 913 397-8200
U.S. Toll Free: 1 800 800-1020

Website: www.garmin.com

In Canada (one or the other):
Raytech Électronique
Tel.: 450 975-1015
Fax: 800 975-0025/450 975-0817
Contact: raytech@raytech.qc.ca
Web Site: www.raytech.qc.ca
Coord. GPS: N45o35.25' - W73o42.95'

Naviclub Ltd
Tel.: 418 835-9279
Fax: 418 835-6681
Contact: naviclub@naviclub.com
Web Site: www.naviclub.com

Your 2014 Can-Am SSV could be originally equipped with Carlisle† branded SSV tires. The tires are warranted separately by the tire manufacturer and are not covered under this limited warranty. Please contact the manufacturer or ask your authorized Can-Am SSV dealer for assistance.

Carlisle Tire & Wheel Company
23 Windham Boulevard
Aiken SC 29805
Warranty Information:
USA: 1 800 260-7959
Canada: 1 800 265-6155
Quebec: 1 877 997-4999

9) TRANSFER

If the ownership of a product is transferred during the warranty coverage period, this warranty shall also be transferred and be valid for the remaining coverage period provided that BRP is notified of such transfer of ownership in the following way:

1. The former owner contacts BRP (at the phone number provided below) or an authorized BRP dealer and gives the coordinates of the new owner; or
2. BRP or an authorized BRP dealer receives a proof that the former owner agreed to the transfer of ownership, in addition to the coordinates of the new owner.

10) CONSUMER ASSISTANCE

In the event of a controversy or a dispute in connection with this limited warranty, BRP suggests that you try to resolve the issue at the dealership level. We recommend discussing the issue with the authorized dealer's service manager or owner.

If the issue has not yet been resolved, please submit your complaint in writing or call the appropriate number below:

IN CANADA:

BOMBARDIER RECREATIONAL PRODUCTS INC.
CAN-AM SSV
CUSTOMER ASSISTANCE CENTER
75 J.-A. Bombardier Street
Sherbrooke, QC J1L 1W3
Tel.: 819 566-3366

IN USA:

BRP US Inc.
CAN-AM SSV
CUSTOMER ASSISTANCE CENTER
7575 Bombardier Court
Wausau WI 54401
Tel.: 715 848-4957

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† Carlisle is a trademark owned by or licensed to Carlisle Tire & Wheel Company.

BRP INTERNATIONAL LIMITED WARRANTY: 2014 CAN-AM® SSV

1) SCOPE OF THE LIMITED WARRANTY

Bombardier Recreational Products Inc. ("BRP")* warrants its 2014 Can-Am SSV sold by Can-Am SSV distributors or dealers authorized by BRP to distribute Can-Am SSVs ("Can-Am SSV Distributor/Dealer") outside of the fifty United States, Canada, member states of the European Economic Area (which is comprised of the states of the European Union plus Norway, Iceland and Liechtenstein) ("EEA"), member states of the Commonwealth of the Independent States (including Ukraine and Turkmenistan) ("CIS") and Turkey, from defects in material or workmanship for the period and under the conditions described below.

All genuine Can-Am SSV parts and accessories, installed by an authorized Can-Am SSV Distributor/Dealer at the time of delivery of the 2014 Can-Am SSV, carry the same warranty as that of the Can-Am SSV.

This limited warranty will become null and void if: (1) The SSV was used for racing or any other competitive activity, at any point, even by a previous owner; or (2) the SSV has been altered or modified in such a way so as to adversely affect its operation, performance or durability, or has been altered or modified to change its intended use.

2) LIMITATIONS OF LIABILITY

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY IS EXPRESSLY GIVEN AND ACCEPTED IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE EXPRESS WARRANTY. INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. SOME JURISDICTIONS DO NOT ALLOW FOR THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE, AS A RESULT, THEY MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH MAY VARY FROM COUNTRY TO COUNTRY. (FOR PRODUCTS PURCHASED IN AUSTRALIA SEE CLAUSE 4 BELOW).

Neither the Can-Am SSV Distributor/Dealer nor any other person has been authorized to make any affirmation, representation or warranty regarding the product, other than those contained in this limited warranty, and if made, shall not be enforceable against BRP.

BRP reserves the right to modify this warranty at any time, being understood that such modification will not alter the warranty conditions applicable to the products sold while this warranty is in effect.

3) EXCLUSIONS ARE NOT WARRANTED

The following are not warranted under this limited warranty under any circumstances:

- Normal wear and tear;
- Routine maintenance items, tune ups, adjustments (parts and labor);
- Damage caused by negligence or failure to provide proper maintenance and/or storage, as described in the Operator's Guide;

– Damage resulting from removal of parts, improper repairs, service, maintenance, modifications or use of parts not manufactured or approved by BRP or resulting from repairs done by a person that is not an authorized servicing Can-Am SSV Distributor/Dealer;
– Damage caused by abuse, abnormal use, neglect or operation of the product in a manner inconsistent with the recommended operation described in the Operator's Guide;
– Damage resulting from accident, submersion, fire, theft, vandalism or any act of God;
– Operation with fuels, oils or lubricants which are not suitable for use with the product (see the Operator's Guide);
– Damage resulting from rust, corrosion or exposure to the elements;
– Damage resulting from water or snow ingestion;
– Incidental or consequential damages, or damages of any kind including without limitation towing, transportation expenses, storage, telephone, rental, taxi, inconvenience, insurance coverage, loan payments, loss of time, loss of income or time missed for downtime experience due to service work.

4) WARRANTY COVERAGE PERIOD

This warranty will be in effect from (1) the date of delivery to the first retail consumer or (2) the date the product is first put into use, whichever occurs first and for a period of:

– SIX (6) CONSECUTIVE MONTHS for private use or commercial use.

The repair or replacement of parts or the performance of service under this warranty does not extend the life of this warranty beyond its original expiration date.

FOR PRODUCTS SOLD IN AUSTRALIA ONLY

Nothing in these Warranty terms and conditions should be taken to exclude, restrict or modify the application of any condition, warranty, guarantee, right or remedy conferred or implied under the Competition and Consumer Act 2010 (Cth), including the Australian Consumer Law or any other law, where to do so would contravene that law, or cause any part of these terms and conditions to be void. The benefits given to you under this limited warranty hereto are in addition to other rights and remedies that you have under Australian law.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

5) CONDITIONS TO HAVE WARRANTY COVERAGE

This warranty coverage is available **only** if **each** of the following conditions has been fulfilled:

– The 2014 Can-Am SSV must be purchased as new and unused by its first owner from a Can-Am SSV Distributor/Dealer authorized to distribute Can-Am SSVs in the country in which the sale occurred;
– The BRP specified pre-delivery inspection process must be completed and documented;

– The product must have undergone proper registration by an authorized Can-Am SSV Distributor/Dealer;
– The 2014 Can-Am SSV must be purchased in the country or union of countries in which the purchaser resides; and
– Routine maintenance outlined in the Operator's Guide must be timely performed in order to maintain warranty coverage. BRP reserves the right to make warranty coverage contingent upon proof of proper maintenance.

BRP will not honor this limited warranty to any private use owner or commercial use owner if one of the preceding conditions has not been met. Such limitations are necessary in order to allow BRP to preserve both the safety of its products, and also that of its consumers and the general public.

6) WHAT TO DO TO OBTAIN WARRANTY COVERAGE UNDER THIS WARRANTY

The customer must cease using the SSV upon the appearance of an anomaly. The customer must notify a servicing Can-Am SSV Distributor/Dealer within two (2) days of the appearance of a defect, and provide it with reasonable access to the product and reasonable opportunity to repair it. The customer must also present to the authorized Can-Am SSV Distributor/Dealer proof of purchase of the product and must sign the repair/work order prior to starting the repair in order to validate the warranty repair. All parts replaced under this limited warranty become the property of BRP.

Note that the notification period is subject to the applicable national or local legislation in customer's country.

7) WHAT BRP WILL DO

To the extent permitted by law, BRP's obligations under this warranty are limited to, at its sole discretion, repairing parts found defective under normal use, maintenance and service; or replacing such parts with new genuine Can-Am SSV parts without charge for parts and labour, at any authorized Can-Am SSV Distributor/Dealer during the warranty coverage period under the conditions described herein. BRP's responsibility is limited to making the required repairs or replacements of parts. No claim of breach of warranty shall be cause for cancellation or rescission of the sale of the Can-Am SSV to the owner. You may have other legal rights which may vary from country to country.

In the event that service is required outside of the country of original sale, the owner will bear responsibility for any additional charges due to local practices and conditions, such as, but not limited to, freight, insurance, taxes, license fees, import duties, and any and all other financial charges, including those levied by governments, states, territories and their respective agencies.

BRP reserves the right to improve or modify products from time to time without assuming any obligation to modify products previously manufactured.

8) TRANSFER

If the ownership of a product is transferred during the warranty coverage period, this limited warranty, subject to its terms and conditions, shall also be transferred and be valid for the remaining coverage period provided BRP or an authorized Can-Am SSV Distributor/Dealer receives a proof that the former owner agreed to the transfer of ownership, in addition to the coordinates of the new owner.

9) CONSUMER ASSISTANCE

1. In the event of a controversy or a dispute in connection with this limited warranty, BRP suggests that you try to resolve the issue at the Can-Am SSV Distributor/Dealer level. We recommend discussing the issue with the authorized Can-Am SSV Distributor/Dealer's service manager or owner.
2. If further assistance is required, the Can-Am SSV Distributor/Dealer service department should be contacted in order to resolve the matter.
3. If the matter still remains unresolved then contact BRP by writing to us at the address listed below.

For countries within Middle East, Africa, Turkey and Russia please contact our European office:

BRP EUROPE N.V.
Customer Assistance Center
Skaldenstraat 125
9042 Gent
Belgium
Tel.: + 32-9-218-26-00

For all other countries, please contact your local Can-Am SSV Distributor/Dealer (visit our website at www.brp.com for contact information), or contact our North America office at:

BOMBARDIER RECREATIONAL PRODUCTS INC.
Customer Assistance Center
75, J.-A. Bombardier Street
Sherbrooke, Québec J1L 1W3

Canada
Tel.: +1 819 566-3366

* For the territory covered by this limited warranty, products are distributed and serviced by Bombardier Recreational Products Inc. or its affiliates.

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BRP LIMITED WARRANTY FOR THE EUROPEAN ECONOMIC AREA, THE COMMONWEALTH OF THE INDEPENDANT STATES AND TURKEY: 2014 CAN-AM® SSV

1) SCOPE OF THE LIMITED WARRANTY

Bombardier Recreational Products Inc. ("BRP")* warrants its 2014 Can-Am SSVs sold by Can-Am SSV distributors or dealers authorized by BRP to distribute Can-Am SSVs ("Can-Am SSV Distributor/Dealer").in member states of the European Economic Area (which is comprised of the member states of the European Union plus Norway, Iceland and Liechtenstein) ("EEA"), in member states of the Commonwealth of the Independent States (including Ukraine and Turkmenistan) ("CIS") and Turkey from defects in material or workmanship for the period and under the conditions described below.

All genuine Can-Am SSV parts and accessories, installed by an authorized Can-Am SSV Distributor/Dealer at the time of delivery of the 2014 Can-Am SSV, carry the same warranty as that of the SSV.

This limited warranty will become null and void if: (1) The SSV was used for racing or any other competitive activity, at any point, even by a previous owner; or (2) the SSV has been altered or modified in such a way so as to adversely affect its operation, performance or durability, or has been altered or modified to change its intended use.

2) LIMITATIONS OF LIABILITY

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY IS EXPRESSLY GIVEN AND ACCEPTED IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE EXPRESS WARRANTY. INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. SOME JURISDICTIONS DO NOT ALLOW FOR THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE, AS A RESULT, THEY MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH MAY VARY FROM COUNTRY TO COUNTRY.

Neither the Can-Am SSV Distributor/Dealer nor any other person has been authorized to make any affirmation, representation or warranty regarding the product, other than those contained in this limited warranty, and if made, shall not be enforceable against BRP.

BRP reserves the right to modify this warranty at any time, being understood that such modification will not alter the warranty conditions applicable to the products sold while this warranty is in effect.

3) EXCLUSIONS – ARE NOT WARRANTED

The following are not warranted under this limited warranty under any circumstances:

– Normal wear and tear;
– Routine maintenance items, tune ups, adjustments (parts and labor);

– Damage caused by negligence or failure to provide proper maintenance and/or storage, as described in the Operator's Guide;
– Damage resulting from removal of parts, improper repairs, service, maintenance, modifications or use of parts not manufactured or approved by BRP or resulting from repairs done by a person that is not an authorized servicing Can-Am SSV Distributor/Dealer;
– Damage caused by abuse, abnormal use, neglect or operation of the product in a manner inconsistent with the recommended operation described in the Operator's Guide;
– Damage resulting from accident, submersion, fire, snow or water ingestion, theft, vandalism or any act of God;
– Operation with fuels, oils or lubricants which are not suitable for use with the product (see the Operator's Guide);
– Damage resulting from rust, corrosion or exposure to the elements;
– Incidental or consequential damages, or damages of any kind including without limitation towing, transportation expenses, storage, telephone, rental, taxi, inconvenience, insurance coverage, loan payments, loss of time, loss of income or time missed for downtime experience due to service work.

4) WARRANTY COVERAGE PERIOD

This warranty will be in effect from (1) the date of delivery to the first retail consumer or (2) the date the product is first put into use, whichever occurs first and for a period of:

– TWENTY-FOUR (24) CONSECUTIVE MONTHS for private use.
– SIX (6) CONSECUTIVE MONTHS for commercial use or rental use.

The product is used commercially when it is used in connection with any work or employment that generates income during any part of the warranty period. The product is also used commercially when, at any point during the warranty period, it is licensed for commercial use.

The repair or replacement of parts or the performance of service under this warranty does not extend the life of this warranty beyond its original expiration date.

Note that the duration and any other modalities of the warranty coverage are subject to the applicable national or local legislation in your country.

5) CONDITIONS TO HAVE WARRANTY COVERAGE

This warranty coverage is available **only** if **each** of the following conditions has been fulfilled:

– The 2014 Can-Am SSV must be purchased as new and unused by its first owner from a Can-Am SSV Distributor/Dealer authorized to distribute Can-Am SSVs in the country in which the sale occurred;
– The BRP specified pre-delivery inspection process must be completed and documented;
– The product must have undergone proper registration by an authorized Can-Am SSV Distributor/Dealer;

– The 2014 Can-Am SSV must be purchased within the EEA by an EEA resident; and
– Routine maintenance outlined in the Operator's Guide must be timely performed in order to maintain warranty coverage. BRP reserves the right to make warranty coverage contingent upon proof of proper maintenance.

BRP will not honor this limited warranty to any private use owner or commercial use owner if one of the preceding conditions has not been met. Such limitations are necessary in order to allow BRP to preserve both the safety of its products, and also that of its consumers and the general public.

6) WHAT TO DO TO OBTAIN WARRANTY COVERAGE UNDER THIS WARRANTY

The customer must cease using the SSV upon the appearance of an anomaly. The customer must notify a servicing Can-Am SSV Distributor/Dealer within two (2) months of the appearance of a defect and provide it with reasonable access to the product and reasonable opportunity to repair it. The customer must also present to the authorized Can-Am SSV Distributor/Dealer, proof of purchase of the product and must sign the repair/work order prior to starting the repair in order to validate the warranty repair. All parts replaced under this limited warranty become the property of BRP.

Note that the notification period is subject to the applicable national or local legislation in your country.

7) WHAT BRP WILL DO

To the extent permitted by law, BRP's obligations under this warranty are limited to, at its sole discretion, repairing parts found defective under normal use, maintenance and service, or replacing such parts with new genuine Can-Am SSV parts without charge for parts and labor, at any authorized Can-Am SSV Distributor/Dealer during the warranty coverage period under the conditions described herein. BRP's responsibility is limited to making the required repairs or replacements of parts. No claim of breach of warranty shall be cause for cancellation or rescission of the sale of the Can-Am SSV to the owner. You may have other legal rights which may vary from country to country.

In the event that service is required outside of the EEA, the owner will bear responsibility for any additional charges due to local practices and conditions, such as, but not limited to, freight, insurance, taxes, license fees, import duties, and any and all other financial charges, including those levied by governments, states, territories and their respective agencies.

BRP reserves the right to improve or modify products from time to time without assuming any obligation to modify products previously manufactured.

8) TRANSFER

If the ownership of a product is transferred during the warranty coverage period, this warranty shall also be transferred and be valid for the remaining coverage period provided BRP or an authorized Can-Am SSV Distributor/Dealer receives a proof that the former owner agreed to the transfer of ownership, in addition to the co-ordinates of the new owner.

9) CONSUMER ASSISTANCE

1. In the event of a controversy or a dispute in connection with this limited warranty, BRP suggests that you try to resolve the issue at the Can-Am SSV Distributor/Dealer level. We recommend discussing the issue with the authorized Can-Am SSV Distributor/Dealer's service manager or owner.
2. If further assistance is required, the Can-Am SSV Distributor/Dealer service department should be contacted in order to resolve the matter.
3. If the matter still remains unresolved then contact BRP at the address listed below.

For countries within EEA, CIS or Turkey, except Scandinavian countries please contact our European office:

BRP EUROPE N.V.
Customer Assistance Center
Skaldenstraat 125
9042 Gent
Belgium
Tel.: + 32-9-218-26-00

For Scandinavian countries, please contact our Finland office:

BRP FINLAND OY
Service Department
Isoaavantie 7
FIN-96320 Rovaniemi
Finland
Tel.: + 358 16 3208 111

You can find your Can-Am Distributor/Dealer's coordinates on **www.brp.com**.

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ADDITIONAL TERMS AND CONDITIONS FOR FRANCE ONLY

The following terms and conditions are applicable to products sold in France only:

The seller shall deliver goods that are complying with the contract and shall be responsible for defects existing upon delivery. The seller shall also be responsible for defects resulting from packaging, assembling instructions or the installation when it is its responsibility per the contract or if accomplished under its responsibility. To be compliant with the contract, the good shall:

1. Be fit for normal use for goods similar thereto and, if applicable:
   - Correspond to the description provided by the seller and have the qualities presented to the buyer though sample or model;
   - Have the qualities that a buyer may legitimately expect considering the public declarations of the seller, the manufacturer of its representative, including in advertising or labeling; or
2. Have the characteristics mutually agreed upon as between the parties or be fit for the specific use intended by the buyer and brought to the attention of the seller and which accepted.

The action for failure to comply is prescribed after two years after delivery of the goods. The seller is responsible for the warranty for hidden defects of the goods sold if such hidden defects are rendering the good unfit for the intended use, or if they diminish its use in such a way that the buyer would not have acquired the good or would have given a lesser price, had he known. The action for such hidden defects shall be taken by the buyer within 2 years of the discovery of the defect.

CUSTOMER INFORMATION

PRIVACY INFORMATION

BRP wishes to inform you that your coordinates will be used for safety and warranty related purposes. Furthermore, BRP and its affiliates may use its customer list to distribute marketing and promotional information about BRP and related products.

To exercise your right to consult or correct your data, or to be removed from the addressee-list for direct marketing, please contact BRP.

BY E-MAIL: privacyofficer@brp.com

BY MAIL: BRP
Senior Legal Counsel-Privacy Officer
726 St-Joseph
Valcourt, Quebec
Canada,
J0E 2L0

CHANGE OF ADDRESS/OWNERSHIP

If your address has changed or if you are the new owner of the vehicle, be sure to notify BRP by either:

- Mailing one of the following card below;
- North America Only: calling at 715 848-4957 (USA) or 819 566-3366 (Canada);
- Notifying an authorized Can-Am dealer.

In case of change of ownership, please join a proof that the former owner agreed to the transfer.

Notifying BRP, even after the expiration of the limited warranty, is very important as it enables BRP to reach the vehicle owner if necessary, like when safety recalls are initiated. It is the owner's responsibility to notify BRP.

STOLEN UNITS: If your personal vehicle is stolen, you should notify BRP or an authorized Can-Am dealer. We will ask you to provide your name, address, phone number, the vehicle identification number and the date it was stolen.

In North America

BOMBARDIER RECREATIONAL
PRODUCTS INC.
Warranty Department
75 J.-A. Bombardier Street
Sherbrooke, QC J1L 1W3
Canada

In Other Countries in the World

BRP EUROPEAN DISTRIBUTION
Warranty Department
Chemin de Messidor 5-7
1006 Lausanne
Switzerland

In Scandinavian Countries

BRP FINLAND OY
Service Department
Isoaavantie 7
Fin-96320 Rovaniemi
Finland
Tel.: + 358 16 3208 111

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CHANGE OF ADDRESS ☐ CHANGE OF OWNERSHIP ☐

VEHICLE IDENTIFICATION NUMBER

Model Number | Vehicle Identification Number (V.I.N.)

OLD ADDRESS OR PREVIOUS OWNER:

NAME

NO. STREET APT

CITY STATE/PROVINCE ZIP/POSTAL CODE

COUNTRY TELEPHONE

NEW ADDRESS OR NEW OWNER:

NAME

NO. STREET APT

CITY STATE/PROVINCE ZIP/POSTAL CODE

COUNTRY TELEPHONE

E-MAIL ADDRESS

V00A2F

CHANGE OF ADDRESS ☐ CHANGE OF OWNERSHIP ☐

VEHICLE IDENTIFICATION NUMBER

Model Number | Vehicle Identification Number (V.I.N.)

OLD ADDRESS OR PREVIOUS OWNER:

NAME

NO. STREET APT

CITY STATE/PROVINCE ZIP/POSTAL CODE

COUNTRY TELEPHONE

NEW ADDRESS OR NEW OWNER:

NAME

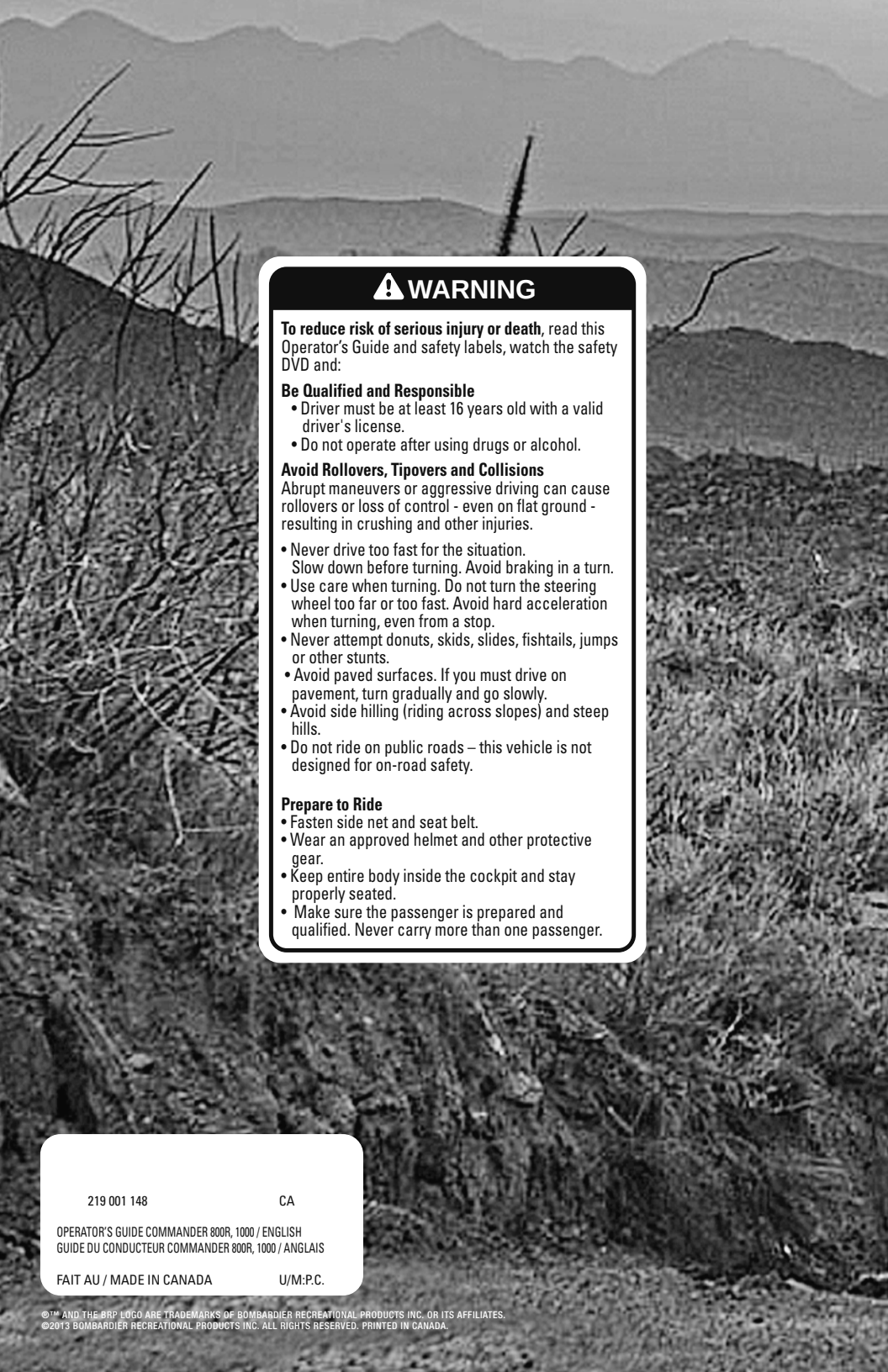
NO. STREET APT

CITY STATE/PROVINCE ZIP/POSTAL CODE

COUNTRY TELEPHONE

E-MAIL ADDRESS

V00A2F



⚠ WARNING

To reduce risk of serious injury or death, read this Operator's Guide and safety labels, watch the safety DVD and:

Be Qualified and Responsible

- Driver must be at least 16 years old with a valid driver's license.
- Do not operate after using drugs or alcohol.

Avoid Rollovers, Tipovers and Collisions

Abrupt maneuvers or aggressive driving can cause rollovers or loss of control - even on flat ground - resulting in crushing and other injuries.

- Never drive too fast for the situation. Slow down before turning. Avoid braking in a turn.
- Use care when turning. Do not turn the steering wheel too far or too fast. Avoid hard acceleration when turning, even from a stop.
- Never attempt donuts, skids, slides, fishtails, jumps or other stunts.
- Avoid paved surfaces. If you must drive on pavement, turn gradually and go slowly.
- Avoid side hilling (riding across slopes) and steep hills.
- Do not ride on public roads – this vehicle is not designed for on-road safety.

Prepare to Ride

- Fasten side net and seat belt.
- Wear an approved helmet and other protective gear.
- Keep entire body inside the cockpit and stay properly seated.
- Make sure the passenger is prepared and qualified. Never carry more than one passenger.

219 001 148 CA

OPERATOR'S GUIDE COMMANDER 800R, 1000 / ENGLISH
GUIDE DU CONDUCTEUR COMMANDER 800R, 1000 / ANGLAIS

FAIT AU / MADE IN CANADA U/M:P.C.

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2014

Operator's Guide

Includes
Safety, Vehicle
and Maintenance Information

COMMANDER™ 800R/1000

⚠ WARNING

Read this guide thoroughly. It contains important safety information.
Minimum age: Operator: 16 or older with a valid driver's license. Keep this Operator's Guide in the vehicle.

219 001 147

CE

⚠ WARNING

YOUR VEHICLE CAN BE HAZARDOUS TO OPERATE. A collision or rollover can occur quickly, if you fail to take proper precautions, even during routine maneuvers such as turning and driving on hills or over obstacles.
For your safety, understand and follow all the warnings contained in this Operator's Guide and on the labels on your vehicle. **Failure to follow these warnings can result in SEVERE INJURY OR DEATH!**
Keep this Operator's Guide with the vehicle at all times.

⚠ WARNING

Disregarding any of the safety precautions and instructions contained in this Operator's Guide, *SAFETY DVD* video and on-product safety labels could result in an injury including the possibility of death!

⚠ WARNING

This vehicle may exceed the performance of other vehicles you may have ridden in the past. Take time to familiarize yourself with your new vehicle.

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FOREWORD

Deutsch	Dieses Handbuch ist möglicherweise in Ihrer Landessprache verfügbar. Bitte wenden Sie sich an Ihren Händler oder besuchen Sie: **www.operatorsguide.brp.com**.
English	This guide may be available in your language. Check with your dealer or go to: **www.operatorsguide.brp.com**.
Español	Es posible que este manual esté disponible en su idioma. Consulte a su distribuidor o visite: **www.operatorsguide.brp.com**.
Français	Ce guide peut être disponible dans votre langue. Vérifier avec votre concessionaire ou aller à: **www.operatorsguide.brp.com**.
日本語	このガイドは、言語によって翻訳版が用意されています。. ディーラーに問い合わせるか、次のアドレスでご確認ください： **www.operatorsguide.brp.com.**
Nederlands	Deze handleiding kan beschikbaar zijn in uw taal. Vraag het aan uw dealer of ga naar: **www.operatorsguide.brp.com**.
Norsk	Denne boken kan finnes tilgjengelig på ditt eget språk. Kontakt din forhandler eller gå til: **www.operatorsguide.brp.com**.
Português	Este manual pode estar disponível em seu idioma. Fale com sua concessionária ou visite o site: **www.operatorsguide.brp.com**.
Suomi	Käyttöohjekirja voi olla saatavissa omalla kielelläsi. Tarkista jälleenmyyjältä tai käy osoitteessa: **www.operatorsguide.brp.com**
Svenska	Denna bok kan finnas tillgänglig på ditt språk. Kontakta din återförsäljare eller gå till: **www.operatorsguide.brp.com**.

Congratulations on your purchase of a new Can-Am™ side-by-side vehicle. It's backed by the BRP limited warranty and a network of authorized Can-Am dealers ready to provide the parts, accessories or service you may require.

At delivery, you were informed of the warranty coverage and signed the *PREDELIVERY CHECK LIST* to ensure your new vehicle was prepared to your entire satisfaction.

Your dealer is committed to your satisfaction. If you need more information, please ask your dealer.

Know Before you Go

To learn how to reduce the risk of accident for you or bystanders, read this Operator's Guide before you operate the vehicle.

Also, read all safety labels on your vehicle and watch the *SAFETY DVD* video.

Failure to follow the warnings contained in this Operator's Guide can result in SERIOUS INJURY or DEATH.

Safety Messages

The types of safety messages, what they look like and how they are used in this guide are explained as follows:

The safety alert symbol ⚠ indicates a potential injury hazard.

⚠ WARNING

Indicates a potential hazard which, if not avoided, could result in serious injury or death.

CAUTION Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE Indicates an instruction which, if not followed, could result in severely damaged vehicle components or other property.

About this Operator's Guide

This Operator's Guide has been prepared to acquaint the owner/operator of a new vehicle with the various vehicle controls, maintenance and safe operating instructions. It is indispensable for the proper use of the product.

Keep this Operator's Guide in the vehicle as you can refer to it for things such as maintenance, troubleshooting and instructing others.

Note that this guide is available in several languages. In the event of any discrepancy, the English version shall prevail.

If you want to view and/or print an extra copy of your Operator's Guide, simply visit the following website **www.operatorsguide.brp.com**.

The information contained in this document is correct at the time of publication. BRP, however, maintains a policy of continuous improvement of its products without imposing upon itself any obligation to install them on products previously manufactured. Due to late changes, some differences between the manufactured product and the descriptions and/or specifications in this guide may occur. BRP reserves the right at any time to discontinue or change specifications, designs, features, models or equipment without incurring any obligation upon itself.

This Operator's Guide and the *SAFETY DVD* video should remain with the vehicle when it is sold.

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SAFETY INFORMATION

Avoid Carbon Monoxide Poisoning

All engine exhaust contains carbon monoxide, a deadly gas. Breathing carbon monoxide can cause headaches, dizziness, drowsiness, nausea, confusion and eventually death.

Carbon monoxide is a colorless, odorless, tasteless gas that may be present even if you do not see or smell any engine exhaust. Deadly levels of carbon monoxide can collect rapidly, and you can quickly be overcome and unable to save yourself. Also, deadly levels of carbon monoxide can linger for hours or days in enclosed or poorly ventilated areas. If you experience any symptoms of carbon monoxide poisoning, leave the area immediately, get fresh air and seek medical treatment.

To prevent serious injury or death from carbon monoxide:

– Never run the vehicle in poorly ventilated or partially enclosed areas such as garages, carports or barns. Even if you try to ventilate engine exhaust with fans or open windows and doors, carbon monoxide can rapidly reach dangerous levels.
– Never run the vehicle outdoors where engine exhaust can be drawn into a building through openings such as windows and doors.

Avoid Gasoline Fires and Other Hazards

Gasoline is extremely flammable and highly explosive. Fuel vapors can spread and be ignited by a spark or flame many feet away from the engine. To reduce the risk of fire or explosion, follow these instructions:

– Use only an approved gasoline container to store fuel.
– Never fill the gasoline container in the vehicle cargo box or on the vehicle - an electrical static discharge may ignite the fuel.
– Strictly adhere to instructions in *FUELING PROCEDURE*.
– Never start or operate the engine if the fuel cap is not properly installed.

Gasoline is poisonous and can cause injury or death.

– Never siphon gasoline by mouth.
– If you swallow gasoline, get any in your eye(s), or inhale gasoline vapor, see a doctor immediately.

If gasoline spills on you, wash with soap and water and change your clothes.

Avoid Burns from Hot Parts

Certain components become hot during operation. Avoid contact with those parts during and shortly after operation to avoid burns.

Accessories and Modifications

Do not make unauthorized modifications, or use attachments or accessories that are not approved by BRP. Since these changes have not been tested by BRP, they may increase the risk of crash or injury, and can render the vehicle illegal. For example, modifications such as different tires can affect the handling and increase the risk of crash.

See your authorized Can-Am dealer for available accessories for your vehicle.

SAFE OPERATION - RESPONSIBILITIES

This is a high performance off-road vehicle. Operators must be responsible and use care to avoid rollovers, tipovers, collisions, and other accidents. Even with vehicle safety features (such as protective structure, seat belts, side nets) and protective gear (such as a helmet), there is always a risk of injury or death in these accidents. To reduce the risk of serious injury or death, follow the rules in this section.

Owner - Be Responsible

Read this Operator's Guide and watch the *SAFETY DVD* video.

Always inspect and confirm the safe operating condition of your vehicle prior to ride. Always follow the maintenance schedule described in this Operator's Guide.

Never allow anyone to operate your vehicle unless they are responsible and can be trusted with a high performance vehicle. Consider supervising new or young operators and setting rules and limits (e.g., whether they can carry a passenger, what they may do with the vehicle, where they may ride, etc.) for anyone using your vehicle.

Select the appropriate key (see *IGNITION SWITCH AND KEYS*) based on the operator's experience, vehicle use, and environment.

Discuss the safety information with anyone who will be using the vehicle. Be sure that all operators and passengers meet the qualifications below and agree to follow the safety information. Help users become familiar with the vehicle.

Operator - Be Qualified and Responsible

Read this Operator's Guide and watch the *SAFETY DVD* video.

Become completely familiar with the operational controls and the general operation of the vehicle.

Take a training course if available (contact an authorized Can-Am dealer to find out about training course availability), and perform the practice exercises in *PRACTICE EXERCISES* section. Practice driving in a suitable area free of hazards and feel the response of each control. Drive at low speeds. Higher speeds require greater experience, knowledge and suitable riding conditions.

Be at least 16 years of age.

Be tall enough to be properly seated: back against the backrest with the seat belt fastened, to hold the steering wheel with both hands and still be able to reach the full stroke of brake and accelerator pedals with the right foot and to firmly plant left foot on the footrest.

Have a proper driver's license in accordance with local laws.

Never use this vehicle with drugs or alcohol, or if tired or ill. These slow reaction time and impair judgment.

Carrying Passenger

Only carry one passenger. The passenger must be properly seated in the cockpit.

The passenger must be tall enough to always be properly seated: back against the backrest with seat belt fastened, holding both handholds, and feet firmly planted - right foot on the footrest and the left foot on the vehicle floor.

Never carry a passenger who has used drugs or alcohol, or is tired or ill. These slow reaction time and impair judgment.

Instruct the passenger to read the vehicle's safety labels.

Never carry a passenger if you judge his ability or judgement insufficient to concentrate on the terrain conditions and adapt accordingly. More specifically for side-by-side vehicles, the pas-

senger must also pay constant attention to the terrain ahead and be able to brace for bumps.

Riding Carefully

- This vehicle handles differently from other vehicles. A collision or rollover can occur quickly, during abrupt maneuvers such as doing sharp turns, acceleration or deceleration and driving on hills or over obstacles, if you fail to take proper precautions.
- Never operate at excessive speeds. Always go at a speed that is proper for the terrain, visibility, and operating conditions, and your experience.
- Never attempt jumps, side slides, donuts or any other stunts.
- Never attempt rapid acceleration or deceleration when performing a sharp turn. This may result in a roll over.
- Never attempt skidding or sliding. If vehicle starts to skid or slide, counter steer in the direction of skidding or sliding. On extremely slippery surfaces, such as ice, go slowly and be very cautious in order to reduce the chance of skidding out of control.
- Always be sure there are no obstacles or people behind the vehicle when you operate in reverse. Pay attention to blind spots. When it is safe to proceed in reverse, go slowly.
- Never exceed the stated load limits for this vehicle. Cargo must be properly secured. Reduce speed, allow for greater braking distance and follow other instructions in *MOVING LOADS AND DOING WORK* subsection.
- Always remember that this vehicle is heavy! Its pure weight alone may entrap you should it tip or rollover.

Occupant Restraint System

- This vehicle is designed to carry one driver and one passenger, both wearing proper protective gears (refer to *RIDING GEAR* in this section).
- The driver and passenger must latch the side nets and wear the seat belts at all times when riding.

Terrain Condition

- Always go slowly and be extra careful when operating on unfamiliar terrain. Always be alert to changing terrain conditions when operating this vehicle. Take the time to learn how the vehicle performs in different environments.
- Never operate on excessively rough, slippery or loose terrain until you have learned and practiced the skills necessary to control this vehicle on such terrain. Always be especially cautious on these kinds of terrain.
- Never operate this vehicle on hills too steep for the vehicle or your abilities. Practice on small inclines.
- Always follow proper procedures for climbing or going down hills as described in *RIDING THE VEHICLE* subsection. Check the terrain carefully before you start up or down any hill. Never climb or descend hills with excessively slippery or loose surfaces. Never go over the top of any hill at high speed.
- Never attempt steep hills or side hilling when pulling a trailer.
- Always check for obstacles before operating in a new area. Always follow proper procedures when operating over obstacles as described in *RIDING THE VEHICLE* subsection.

– Never operate this vehicle in fast flowing water or in water deeper than specified in *RIDING THE VEHICLE* subsection. Remember that wet brakes may have reduced stopping ability. Test your brakes after leaving water. If necessary, apply them several times to let friction dry out the brakes.
– Always ensure to properly park the vehicle on the flattest terrain section available. Put shift lever in PARK, stop engine, remove key, and lock the shift lever before leaving the vehicle.
– Never assume that the vehicle will go everywhere safely. Sudden changes in terrain caused by holes, depressions, banks, softer or harder "ground" or other irregularities may cause the vehicle to topple or become unstable. To avoid this, slow down and always observe the terrain ahead. If the vehicle does begin to topple or rollover, the best advice is to immediately steer in the direction of the rollover! Never attempt to prevent a rollover with your arms or legs. You should keep your limbs inside the cage.

European Community

The following applies only to the European Countries where on road usage is allowed.

– This vehicle is built primarily for OFF-ROAD purposes. Riding on paved surfaces may seriously affect vehicle handling and control. If you must drive on paved surfaces for a short distance, reduce speed and avoid abrupt inputs to steering wheel, accelerator and brake pedals.
– Always respect the road traffic laws when you operate this vehicle on the roadway, even a dirt or gravel road.
– If a front winch is installed, the front winch hook must be removed and stored when riding the vehicle on public trails and/or roads.

PRE-RIDE INSPECTION

Always inspect and confirm the safe operating condition of your vehicle prior to ride. Always follow the maintenance schedule described in this Operator's Guide.

⚠ WARNING

Perform a pre-ride inspection before each ride to detect any potential problem that could occur during operation. The pre-ride inspection can help you monitor component wear and deterioration before they become a problem. Correct any problem that you discover to reduce the risk of a breakdown or crash. See an authorized Can-Am dealer as necessary.

Before using this vehicle, the operator should always perform the following pre-ride inspection check list.

Pre-Ride Inspection Check List

What to Do Before Starting the Engine (Key OFF)

ITEMS TO BE INSPECTED	INSPECTION TO PERFORM	✔
Tires	Check tire pressure and condition. – Front: MIN 69 kPa (.7 bar), LOADED 83 kPa (.8 bar) – Rear: MIN 83 kPa (.8 bar), LOADED 152 kPa (1.5 bar)	
Wheels	Check wheels for damage and for abnormal play, and check lug nuts are tightened.	
Radiator	Check cleanliness of the radiator.	
Front grill kit	Slightly push on top of front left inner fender and inspect front grill kit for cleanliness.	
Engine oil	Check engine oil level.	
Coolant	Check coolant level.	
Engine air filter	Inspect the engine air filter.	
CVT air filter	Inspect the CVT air filter (when vehicle is used in severe riding conditions).	
Drive shaft boots	Check drive shaft boots and protectors condition.	
Cargo and load	**Cargo Load:** If you transport a cargo, respect the maximum load capacity of 272 kg (600 lb). Ensure cargo is properly secured to the rear cargo box. **Vehicle Load:** Ensure that total load on the vehicle (including operator, passenger, cargo, tongue weight and added accessories) does not exceed 363 kg (800 lb).	
	If you are pulling a trailer or another equipment: – Check hitch and trailer ball condition. – Respect the tongue capacity and towing capacity. – Ensure trailer is properly secured to hitch.	

ITEMS TO BE INSPECTED	INSPECTION TO PERFORM	✔
Rear cargo box	Check if the cargo box is properly latched.	
	Check if both tail gates are properly latched.	
Chassis and suspension	Check underneath vehicle for any debris on chassis or suspension and clean them properly.	

What to Do Before Starting the Engine (Key ON)

ITEMS TO BE INSPECTED	INSPECTION TO PERFORM	✔
Gauge	Check operation of indicator lamps in gauge (during first few seconds of key ON).	
	Check for messages in gauge.	
Lights and reflectors	Check cleanliness of headlights, taillights, turn signals, position lights and reflectors.	
	Check operation of headlights (high and low beams), brake lights, turn signals and position lights.	
	Check operation of hazard warning lights.	
Seats, side nets and seat belts	Check if seats are properly latched.	
	Check side nets for any damage. Have the nets replaced if any damage is found. Fasten both side nets and confirm that they latch securely. Use the adjustment strap to tighten the net as required.	
	Check seat belts for any damage. Fasten seat belts and confirm that they latch securely.	
Accelerator pedal	Press on the accelerator pedal a few times to ensure it operates freely and it returns to the rest position when released.	
Brake pedal	Press down on the brake pedal and make sure you feel firm resistance and that it fully returns to position when released.	
Fuel level	Check the fuel level.	
Horn	Check horn operation.	
Mirrors	Adjust mirrors to your preferences.	
Shift lever	Unlock shift lever with shift lever locking key.	

What to Do After the Engine is Started

ITEMS TO BE INSPECTED	INSPECTION TO PERFORM	✔
Steering	Check if steering operates freely by completely turning it from side to side.	
Ignition switch	Turn the ignition switch to OFF to verify if engine will shut down. Restart engine.	
Shift lever	Check operation of shift lever (P, R, N, H and L).	
2WD/4WD selector	Check operation of 2WD/4WD selector.	
Brakes	Drive forward slowly a few feet and apply brakes. The brake pedal must feel firm when applied. The pedal must return to rest position when released. The brakes must respond adequately to the driver's input.	

Before you Ride

Perform pre-ride inspection to confirm the safe operating condition of your vehicle. Refer to *PRE-RIDE INSPECTION* subsection.

Driver and passenger must:

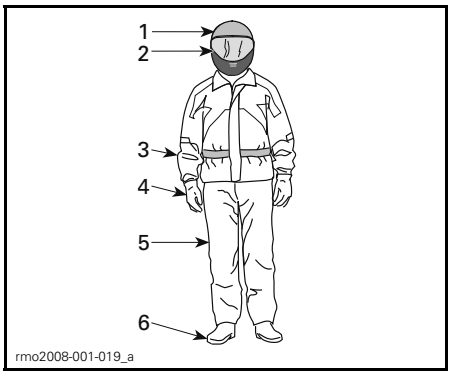
– Be properly seated.
– Latch both side nets and fasten seat belts.
– Wear appropriate riding gear. (Refer to *RIDING GEAR* subsection below.)

Riding Gear

It is important that the operator and passenger always wears appropriate protective clothing and apparel, including:

– An approved helmet
– Eye protection
– Boots
– Gloves
– A long sleeved shirt or jacket
– Long pants.

Depending on conditions, anti-fogging goggles may be required.



RIDING GEAR
1. *Approved helmet*
2. *Eye and face protection*
3. *Long sleeves shirt or jacket*
4. *Gloves*
5. *Long pants*
6. *Boots (over-the-ankle footwear)*

Weather conditions should help you decide how to dress. To maximize comfort and avoid frostbites in winter, dress for the coldest weather expected. Thermal underwear next to the skin also provides good insulation.

Never wear any loose clothing that may get entangled in the vehicle or on tree branches and shrubs.

Helmets and Eye Protection

Helmets protect the head and brain from injury. Even with the vehicle's cage and side nets, objects can enter the cockpit and strike the head, or the head can strike the cage itself or objects outside the vehicle. Even the best helmet is no guarantee against injury, but statistics indicate that helmet use significantly reduces the risk of brain injury. So, be safe and always wear a helmet while riding.

Choosing a Helmet

Helmets should be manufactured to meet the appropriate standard in your state, province or country and should fit properly.

A helmet with face protection is a better choice as it protects also against frontal impacts. It can also protect against debris, stones, insects, the elements, etc.

An open-face helmet does not offer the same protection for the face and chin. If you wear an open-face helmet, you should use a snap-on face shield and/or a pair of goggles. Ordinary glasses or sunglasses are not sufficient eye protection for riders. They can shatter or fly off, and they allow wind and airborne objects to reach the eyes.

For winter riding conditions, a stocking type cap, balaclava and face mask should always be carried or worn.

Use tinted face shields or goggles in the daytime only; do not use them at night or in poor illumination. Do not use them if they impair your ability to discern color.

Other Riding Gear

Footwear

Always wear closed toe footwear. Sturdy over-the-ankle boots with non-slip soles offer more protection and allow you to plant your foot properly on footrest.

Avoid long shoelaces that can be tangled in the accelerator or brake pedals.

For winter riding conditions, rubber soled boots with either a nylon or leather uppers, with removable felt liners are best suited.

Avoid rubber boots. Rubber boots may get trapped behind or between pedals, impairing the proper operation of brake and accelerator pedals.

Gloves

Full-fingered gloves protect hands from the wind, sun, heat, cold and flying objects. Gloves that fit snugly will improve grip on the steering wheel and help reduce hand fatigue. Sturdy, reinforced motorcycle or ATV gloves help protect hands better in the event of an accident or a rollover. If gloves are too bulky, it may be difficult to operate the controls.

For winter riding conditions, hands should be protected by a pair of snowmobile gloves which have sufficient insulation and allow use of thumbs and fingers for operation of controls.

Jackets, Pants and Riding Suits

Wear a jacket or a long sleeved shirt and long pants, or a full riding suit. Quality ATV-type protective gear will provide comfort, and it can help you avoid being distracted by adverse environmental elements. In case of a crash, good quality protective gear made of sturdy material may prevent or reduce injury.

In cool-weather riding, protect yourself against hypothermia. Hypothermia, a condition of low body temperature, can cause loss of concentration, slowed reactions and loss of smooth, precise muscle movement. In cool conditions, proper protective gear like a windproof jacket and insulated layers of clothing are essential. Even while riding at moderate temperatures, you can feel very cold due to the wind.

Protective gear that is appropriate for cold-weather riding may be too hot when stopped. Dress in layers so that clothing can be removed as desired. Topping the protective gear with a windproof outer layer can prevent cold air from reaching the skin.

Rain Gear

If you must ride in wet weather, a rain suit or a waterproof riding suit is recommended. On long rides, it is a good idea to carry rain gear. A dry rider will be much more comfortable and alert.

Hearing Protection

Long-term exposure to wind and engine noise when riding can cause permanent hearing loss. Properly worn hearing protective devices such as earplugs can help prevent hearing loss. Check local laws before using any hearing protective devices.

Avoid Rollovers and Tipovers

Side-by-side vehicles handle differently from other vehicles. Side-by-side vehicles are designed to handle off-road terrain (for example, their wheel base and track width, ground clearance, suspension, drivetrain, tires, etc.), and, as a result, can overturn in situations where vehicles designed for use primarily on paved or smooth terrain may not.

A rollover or other accident can occur quickly during abrupt maneuvers such as sharp turns or hard acceleration or deceleration when turning, or when driving on hills or over obstacles. Abrupt maneuvers or aggressive driving can cause rollovers or loss of control even in flat open areas. If the vehicle rolls over, any part of your body (such as arms, legs, or head) outside of the cockpit can be crushed and trapped by the cage or other parts of the vehicle. You can also be injured by impact with the ground, cockpit or other objects.

To reduce the risk of rollovers:

– Use care when turning.
  - Adjust steering inputs accordingly to your speed and environment.
  - Slow down before entering a turn. Avoid hard braking during a turn.
  - Avoid sudden or hard acceleration when turning, even from a stop or low speed.
– Never attempt donuts, skids, slides, fishtails, jumps, or other stunts. If vehicle starts to skid or slide, steer in the direction of the skid or slide. Never slam the brakes and lock the wheels.
– This vehicle is built primarily for OFF-ROAD purposes. Riding on paved surfaces may seriously affect vehicle handling and control - if you must drive on paved surfaces for a short distance, reduce speed and avoid abrupt inputs to steering wheel, accelerator and brake pedals.

This vehicle can roll over sideways or tip over forward or backwards on slopes or uneven terrain.

– Avoid side hilling (driving along the slope rather than up or down a hill). When possible, drive straight up and down inclines rather than across them. If you must side hill, use extreme caution and avoid slippery surfaces, objects, or depressions. If you feel the vehicle start to rollover or slide sideways, steer downhill if possible.
– Avoid steep hills and follow procedures in this guide for climbing and descending hills.
– Sudden changes in terrain such as holes, depressions, banks, softer or harder ground or other irregularities may cause the vehicle to tip or become unstable. Observe the terrain ahead and slow down in areas of uneven terrain.

This vehicle will handle differently when carrying or pulling a load.

– Reduce speed and follow instructions in this manual for carrying cargo or pulling a trailer.
– Avoid hills and rough terrain.
– Allow more distance to stop.

Be Prepared in Case of Rollover

– Fasten side nets and seat belts to help you avoid sticking out arms or legs.

– Never grab the cage while riding. Hands can be crushed between the cage and the ground in a rollover. Keep hands on the steering wheel or handholds.
– Never try to stop a rollover using your arms or legs. If you think that the vehicle may tip or roll, the driver should keep both hands on the steering wheel and the left foot firmly planted on the footrest. The passenger should keep both hands on the handholds and both feet firmly planted on the floor.

Avoid Collisions

This vehicle can reach high speeds. At higher speeds, there is an increased risk of losing control, particularly in challenging off-road conditions, and the risk of injury in a collision is greater. Never operate at excessive speeds. Always go at a speed that is proper for the terrain, visibility, and operating conditions, and your experience. Consider reserving use of the performance key for situations in which full speed and acceleration capability are appropriate.

This vehicle does not have the same kind of protection for collisions as a car; for example, there are no air bags, the cockpit is not fully enclosed, and it is not designed for collisions with other vehicles. Therefore, it is particularly important to fasten seat belts and side nets and wear an approved helmet.

Practice Exercises

Before you go out for a ride, it is very important to familiarize yourself with the handling of your vehicle by practicing in a controlled environment. If possible, it is also a very good idea to take a more formal training course to sharpen your skills and increase your knowledge of the vehicle.

Find a suitable area to practice and perform the following exercises. It should be at least 45 m (150 ft) by 45 m (150 ft), free of obstacles like trees and rocks. Once you've selected a suitable permitted location, proceed with the following practice exercises.

Turning Exercises

Turning is one of the most frequent causes of accidents. It is easier for the vehicle to lose traction or rollover if you turn too sharply, or go too fast. Slow down when you approach a turn.

- First learn how to perform slight right turns at very low speeds. Release the throttle before turning and slowly reapply the throttle when turning.
- Repeat turning exercise but this time maintain the throttle at the same level while turning.
- Finally, repeat turning exercise while accelerating slowly.
- Practice exercises turning on the other side.

Note how your vehicle reacts in these different exercises. We recommend releasing the throttle before entering a turn to help initiate directional change. You will feel the lateral force increasing with the speed and with your steering input. The lateral force should be maintained as low as possible to make sure it does not cause the vehicle to roll over.

U turn Exercises

Practice doing U turns.

- Accelerate slowly and while remaining at low speed, gradually turn the steering wheel to the right until you have completed the U turn.
- Repeat U turn exercise with different steering inputs and always at a very low speed.
- Repeat U turn exercise on the other side.

As mentioned before in this guide, do not ride on paved surfaces as the vehicle behavior will not be the same, increasing the risk of rollover.

Braking Exercises

Practice braking to get familiar with the brake response.

- Do it at low speed first, then increase the speed.
- Practice braking in straight line at different speeds and different braking force.
- Practice emergency braking; optimal braking is obtained in straight line, with high force applied, without locking the wheels.

Remember, braking distance depends on vehicle speed, load and the type of surface. Also, the tires and brakes conditions play a major role.

Reverse Exercises

The next step involves using the reverse.

- Install 1 cone marker on both sides of the vehicle beside each rear wheel. Move the vehicle forward until you can see the cone markers, then stop the vehicle. Acknowledge the distance required to see obstacles behind you.
- Learn how the vehicle handles itself in reverse and reacts with steering inputs.

– Always perform this reverse exercise at slow speeds.
– Become familiar with the usage of the override function. Do not steer while using the override as it increases the risks of rollover.

Emergency Engine Stopping Exercise

Learn how to stop your engine quickly in an emergency situation.

– While running at low speed, simply turn the ignition key to the off position.

This is to familiarize you with the vehicle's reaction when the engine is turned off while driving and to develop this reflex.

Off-Road Operation

The very nature of off-road operation is dangerous. Any terrain, which has not been specially prepared to carry vehicles, presents an inherent danger where terrain substance, shape and steepness are unpredictable. The terrain itself presents a continual element of danger, which must be knowingly accepted by anyone venturing over it.

An operator who takes a vehicle off-road should always exercise the utmost care in selecting the safest path and keeping close watch on the terrain ahead of him. The vehicle should never be operated by anyone who is not completely familiar with the driving instructions applicable to the vehicle, nor should it be operated on steep or treacherous terrain.

General Riding Techniques

General Driving Tips

Care, caution, experience and driving skill are the best precautions against the hazards of vehicle operation.

Whenever there is the slightest doubt that the vehicle can safely negotiate an obstacle or a particular piece of terrain, always choose an alternate route.

In off-road operation, power and traction, not speed, are important. Never drive faster than visibility and your own ability to select a safe route permit. Always go slowly and be extra careful when operating on unfamiliar terrain. Always be alert to changing terrain conditions when operating this vehicle. Be especially cautious on excessively rough, slippery, icy or loose terrain.

Constantly watch the terrain ahead for sudden changes in slopes or obstacles, such as rocks or stumps, that may cause loss of stability, resulting in tip over or rollover.

Never operate the vehicle if the controls do not function normally. See an authorized Can-Am dealer.

To maintain proper control it is strongly advised that you keep your hands on the steering wheel and within easy reach of all controls. The same holds true for your feet. To minimize the possibility of any leg or foot injury, keep your left foot on the footrest and right foot on the floor at all times. Staying completely within the cockpit will also help keep you from striking objects outside the vehicle.

Watch for and avoid branches and other objects that could enter the cockpit and strike you or your passenger.

Operating in Reverse

When operating in reverse, check that the path behind the vehicle is free of people or obstacles. Pay attention to blind spots. When it is safe to proceed in reverse, go slowly and avoid sharp turns.

⚠ WARNING

Steering inputs in reverse operation increase the risk of rollover.

NOTE: In reverse operation, the engine RPM is limited thus limiting the vehicle reverse speed.

⚠ WARNING

When driving downhill in reverse, gravity can increase the vehicle speed above the set limited reverse speed.

Crossing Roads

If you have to cross a road, ensure to have complete visibility on both sides for incoming traffic and decide on exit point on other side of road. Drive in a straight line toward that point. Do not make sharp direction changes or abrupt accelerations as it may result in a rollover situation. Do not travel on sidewalks or bicycle trails as they are designated specifically for those uses.

Riding on Paved Surfaces

Avoid paved surfaces. This vehicle is not designed to operate on paved surfaces and is more likely to roll over. If you must drive on pavement, turn gradually, go slowly, and avoid abrupt acceleration and braking.

Shallow Water Crossing

Water can be a unique hazard. If it is too deep the vehicle may "float" and topple. Check the water depth and current before you attempt to cross any water. Water depth should not exceed 30 cm (12 in) for vehicle to safely cross the obstacle. Beware of slippery surfaces such as rocks, grass, logs, etc., both in the water and on its banks. A loss of traction may occur. Do not attempt to enter the water at high speed.

Water will affect the braking ability of your vehicle. Make sure you dry the brakes by applying them several times after the vehicle leaves the water.

Mud or marsh lands may be encountered near water. Be prepared for sudden "holes" or changes in depth. Similarly so, be watchful of hazards such as rocks, logs, etc., partially covered by vegetation.

Riding on Snow or Ice

When performing pre-ride inspection, pay special attention to locations on the vehicle where snow and/or ice accumulations may obstruct visibility of the tail lamp, clog ventilation openings, block the radiator and fan, and interfere with the movement of controls. Before starting with your vehicle, check the steering, accelerator and brake pedals for interference free operation.

Whenever this vehicle is ridden on a snow covered drive path, the tire grip is generally reduced causing the vehicle to react differently to control inputs from the operator. On low grip surfaces, the steering responses are not as crisp and precise, stopping distances are lengthened and acceleration is also affected. Slow down and do not "gun" the accelerator. This will only result in spinning of the tires and possibly in an over steering slide of the vehicle. Avoid hard braking. This will possibly result in a straight line slide of the vehicle. Again, the best advice is to safely reduce speed in anticipation of a maneuver to give yourself time and distance in order to keep control of the vehicle.

As you drive your vehicle over a loose snow covered surface, snow dust will be picked up in the wake turbulence of the moving vehicle and transported to contact and accumulate or melt on some exposed components including rotating parts like brake discs. Water, snow or ice may affect the response time of the brake system of your vehicle. Even when not required to reduce vehicle speed apply brakes frequently to prevent ice or snow accumulation and to dry brake pads and discs. While doing so in low risk driving situations you will test for grip level and keep yourself alerted to how the vehicle reacts to your control inputs. Always

keep brake and accelerator pedals and floor boards free of snow and ice. Frequently wipe snow off seat, steering wheel, headlights and tail lamps.

The depth of the snow cover may hide rocks, tree stumps or other objects and if it is wet may totally impede the drivability as the vehicle becomes bogged down or completely looses traction in slushy snow. Look far ahead and always be watchful of any visible clues that might indicate the presence of such obstacles. In doubt steer clear. Avoid driving on any frozen waterways before checking that the ice will safely support the vehicle, its riders and its load of cargo.

At the end of each ride it is a good practice to clean the vehicle and all moving components (brakes, steering components, drivelines, controls, radiator fan etc.) from any snow or ice accumulations. Wet snow will turn to ice during the shut down period and become more difficult to remove at the next pre-ride inspection.

Riding on Sand

Sand and riding on sand dunes is another unique experience but there are some basic precautions that should be observed. Wet, deep or fine sand may create a loss of traction and cause the vehicle to slide, drop off or become "bogged" down. If this occurs look for a firmer base. Again, the best advice is to slow down and be watchful of the conditions.

When riding in sand dunes it is advisable to equip the vehicle with an antenna type safety flag. This will help make your location more visible to others over the next sand dune. Proceed carefully should you see another safety flag ahead.

Riding on Gravel, Loose Stones or Other Slippery Surfaces

Riding on loose stones or gravel is very similar to riding on ice. They will affect the steering of vehicle, possibly causing it to slide and tip over especially at high speeds. In addition, braking distance may be affected. Remember that "gunning" the throttle or sliding may cause loose stones to be ejected rearwards into the path of another rider's way. Never do it deliberately.

If you do get into a slide or skid, it may help to turn the steering wheel into the direction of the skid until you regain control. Never jam the brakes and lock the wheels.

Crossing Obstacles

Obstacles on the "trail" should be traversed with caution. This includes rocks, fallen trees, and depressions. You should avoid them whenever possible. Remember that some obstacles are too large or dangerous to cross and should be avoided. As a guideline, never attempt to cross an obstacle higher than the ground clearance of the vehicle. Small rocks or small fallen trees may be safely crossed - approach obstacle at low speed and as much as possible at a right angle. Adjust speed without losing momentum and do not accelerate abruptly. Passenger must grasp handholds firmly and brace feet on the floor. Hold steering firmly without closing your fists around it and proceed. Be aware that the obstacle may be slippery or may move while crossing.

Hill Driving Conditions

When driving on hills or slopes, two things are highly important: be prepared for slippery surfaces or terrain variations and obstacles and brace yourself properly inside vehicle. If you climb or descend a hill that is too slippery or has too loose a surface, you can lose control. If you go over the top of a hill at high speed, you may not

have time to prepare for the terrain on the other side. Avoid parking on a slope. Always put the shift lever in PARK when stopped or parked, especially on an incline, to avoid rolling. If you must park on a steep incline, block the wheels using rocks or bricks.

Uphill Driving

Use the low range (L) for uphill driving.

Due to its configuration, this vehicle has very good traction even while climbing, so much so that tip over is possible before traction is lost. For example, it is common to encounter terrain situations where the top of the hill has eroded to a point that the hill peak rises very sharply. This vehicle is not designed to negotiate such a condition. Take an alternate route.

It is also wise to know the terrain condition on the other side of the hill or bank. All too often there exists a sharp drop-off that is impossible to negotiate or descend.

If you feel that the slope is getting too steep to climb, apply brakes to immobilize vehicle. Put shift lever in reverse (R), and back down the hill, barely releasing brakes to remain at low speed. Do not attempt to turn around. Never coast down hill while vehicle is in neutral. Do not perform hard braking as it increases the risk of tipover.

Downhill Driving

This vehicle can climb steeper slopes than it can descend safely. Therefore, it is essential to assure that a safe route exists to descend a slope before you climb it.

Decelerating while negotiating a slippery downhill slope could "toboggan" the vehicle, causing it to slide. Maintain steady speed and/or accelerate slightly to regain control. Never slam brakes and lock the wheels.

Side Hilling

Whenever possible, side hilling (driving across a slope rather than up or down it) should be avoided. If necessary, do so with extreme caution. Side hilling on steep inclines could result in rollover. In addition, slippery or unfirm surfaces could result in uncontrollable side sliding. Avoid all objects or depressions that will intensify the raising of one side of the vehicle higher than the other, thus causing rollover. If you feel the vehicle start to rollover or slide sideways, steer downhill if possible.

⚠ WARNING

Be careful when loading and transporting liquid reservoirs. They can affect vehicle stability when side hilling by pulling downhill and increasing the risk of a roll over.

Drop-Offs

This vehicle is not designed to negotiate drop-offs. It will "bottom-out" and usually stop if either the front or rear wheels are driven over a drop-off. If the drop is sharp or deep, the vehicle will nose dive and tip over.

Avoid negotiating drop-offs. Reverse and select an alternate route.

Recreational, Group and Distance Riding

Respect the rights and limitations of others. Stay away from areas designated for other types of off road use. This includes snowmobile trails, equestrian trails, cross country ski trails, mountain bike trails, etc. Never assume there are no other users on the trail. Always stay to the right of the trail and do not zig zag to one side of the trail then the other. Be prepared to stop or pull off to the side if another trail user appears in front of you.

Join a local side-by-side vehicle club. It will provide you with a map and advice or inform you where you can ride. If a

club does not exist in your area, help to start one. Group riding and club activities provide a pleasurable, social experience. Never use this vehicle with drugs or alcohol, or tired or ill.

Always keep a safe distance from other riders. Your judgment of speed, terrain conditions, weather, mechanical condition of your vehicle and the "trust in judgment" you have in others around you will help you make a better choice of appropriate safe distance. This vehicle, like any other motorized vehicle, cannot stop "on a dime".

Before you ride, tell someone where you are planning to travel and your expected time of return.

Depending on the length of your ride, carry additional tools or emergency equipment. Find out where you can get additional gasoline. Be prepared for the possible conditions you may encounter. An emergency first aid kit should always be a consideration.

Environment

One of the benefits of this vehicle is that it can take you off the beaten path away from most communities. However, you should always respect nature and the rights of others to enjoy it. Do not ride in environmentally sensitive areas. Do not drive over forest crops or shrubs, nor cut down trees or take down fencing, nor spin your wheels and destroy the terrain. "Tread Lightly".

This vehicle can cause OHV wildfires if debris builds up near the exhaust or other engine hot spots and ignites then falls off into dry grass. Avoid riding in wet areas, through muskeg or tall grass, where debris can build up. Should you ride in those areas, inspect and remove all debris from your engine and hot spots. Refer to *MAINTENANCE* section for details.

Chasing wildlife is in many areas illegal. Wildlife can die of exhaustion after being chased by a motorized vehicle. If you encounter animals on the trail, stop and observe quietly and with caution. It will be one of the better memories of your life.

Observe the rule... "what you take in, carry out". Do not litter. Do not start campfires unless you have permission to do so, and then only away from dry areas. The hazards you may create on the trail may cause injury to others or yourself, even at a later date.

Respect farm lands. Always obtain the permission of the landowner before riding on private land. Respect crops, farm animals and property lines.

Finally, do not pollute streams, lakes or rivers and do not modify the engine or exhaust system, or remove any of its components as it will alter the vehicle emissions.

MOVING LOADS AND DOING WORK

Working with your Vehicle

Your vehicle can help you perform a number of different LIGHT tasks ranging from snow removal to pulling wood or carrying cargo. A variety of accessories are available from your authorized Can-Am dealer. To prevent possible injury, follow the instructions and warnings that accompany the accessory. Always respect the load limits of the vehicle. Overloading the vehicle can overstress the components and cause failure. Avoid overexerting yourself if you lift or pull heavy loads or manually push the vehicle.

Carrying Loads

Any load carried on the vehicle will affect the handling, stability and braking distance of the vehicle. Do not exceed the load limits of the vehicle, including the weight of operator, passenger, cargo, accessories and trailer tongue weight.

LOAD LIMIT OF THE VEHICLE	
363 kg (800 lb)	Includes occupants, cargo, tongue weight and added accessories

Following are examples of suitable total vehicle load distribution:

EXAMPLES OF SUITABLE VEHICLE TOTAL LOADS				
OPERATOR AND PASSENGER	CARGO BOX LOAD	ACCESSORIES	TONGUE WEIGHT	TOTAL VEHICLE LOAD
150 kg (331 lb)	161 kg (355 lb)	25 kg (55 lb)	27 kg (60 lb) MAX	363 kg (800 lb)
75 kg (165 lb)	272 kg (600 lb)	16 kg (35 lb)	0 kg (0 lb)	363 kg (800 lb)

To reduce the risk to lose control or the load carried, follow these recommendations.

Vehicle Settings When Carrying Load

When the total load exceeds 180 kg (400 lb), including weight of operator, passenger, cargo, accessories and trailer tongue weight, inflate the tires to maximum pressure 83 kPa (.83 bar) Front, 152 kPa (1.52 bar) Rear.

NOTE: When carrying heavy loads in cargo box readjust suspension accordingly

NOTE: When carrying heavy loads in cargo box or pulling a trailer operate with the shift lever in L (low range).

Loading the Cargo Box

NOTICE When loading or unloading, do not exceed the weight limit of 100 kg (220 lb) on either tailgate.

Load cargo as low as possible – a higher load can raise the vehicle's center of gravity, which can reduce stability. Position cargo toward the front and center of the cargo box and as evenly as possible.

Secure the load to the tie down hooks inside cargo box. Use only the tie down hooks on the bottom of the cargo box; do not secure cargo to the cage or other part of the vehicle. If it is not properly secured, a load may slide or fall off, possibly striking occupants or bystanders; or it may shift during riding, affecting the handling of the vehicle.

Objects that are higher than the walls of the cargo bed may affect visibility for the driver and may act as projectiles in case of an accident. Loads that protrude sideways can get snagged or caught in bush, branches or other obstacles. Avoid covering and obstructing the brake lights with the cargo. Ensure no cargo protrudes outside the box and that cargo will not interfere with your visibility or control of the vehicle.

Do not overload cargo box.

Close both tailgates before operating.

MAXIMUM CARGO BOX LOADS		
CARGO BOX (total)	272 kg (600 lb)	Evenly distributed and safely secured. Loaded as low as possible to reduce height of center of gravity.
LOWER CARGO BOX	272 kg (600 lb)	Evenly distributed.
TOP CARGO BOX	181 kg (400 lb)	Evenly distributed on floor separator.
UPPER TAILGATE	100 kg (220 lb)	Only while loading cargo into cargo box. Never operate with tailgate open.
LOWER TAILGATE	100 kg (220 lb)	Only while loading cargo into cargo box. Never operate with tailgate open.

Following are examples of cargo box loading limits:

EXAMPLES OF CARGO BOX TOTAL LOADS		
CARGO BOX UPPER SECTION LOAD	CARGO BOX LOWER SECTION LOAD	TOTAL CARGO BOX LOAD
0 kg (0 lb)	272 kg (600 lb)	272 kg (600 lb)
100 kg (220 lb)	172 kg (379 lb)	272 kg (600 lb)
181 kg (400 lb)	91 kg (201 lb)	272 kg (600 lb)

Operating While Carrying a Load

Reduce your speed when carrying cargo and turn gradually. Avoid hills and rough terrain. Allow more distance for braking. This vehicle may require additional stopping distance if carrying heavy loads, especially on inclined surfaces.

Tilting the Cargo Box

The cargo box can be tilted to ease unloading. Use release handles on either side of cargo box.

tmo2011-001-518_a

1. RH release handle

NOTICE Always turn off engine when tilting the cargo box.

⚠ WARNING

- Always ensure no one is standing behind the cargo box before you actuate the release handle.
- The load weight may affect the operation of the cargo box tilting feature (tilting or lowering).

Be very careful with the operation of the tail gates and cargo box as the load may have moved during transport.

To lower the carbo box, simply push it down into place.

⚠ WARNING

- Keep yourself and others clear of the cargo box and vehicle frame junction when lowering cargo box.
- Ensure to properly latch the cargo box and the tailgates before riding.
- Make sure you do not leave objects between lifted cargo box and vehicle frame to ensure proper latching of the cargo box when lowered.

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FRONT SECTION OF INCLINED CARGO BOX FREE OF ANY OBJECTS

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PUSH TO CLOSE
1. Hand guard

Hauling a Load

Never pull a load by attaching it to the cage; this can cause the vehicle to tip over. Use only the trailer hitch or winch (if installed) to pull a load.

When pulling loads with a chain or cable, ensure that there is no slack before starting and maintain tension while pulling.

When hauling a load, respect the maximum hauling capacity. See *PULLING A TRAILER* subsection.

⚠ WARNING

Slack can cause the chain or cable to break and snap back.

When pulling another vehicle, be sure that someone is controlling the pulled vehicle. They must brake and steer to prevent the vehicle from going out of control.

Before pulling loads with a winch, refer to the winch manufacturer's instructions.

Reduce your speed when hauling a load and turn gradually. Avoid hills and rough terrain. Never attempt steep hills. Allow more distance for braking, especially on inclined surfaces. Be careful not to skid or slide.

Pulling a Trailer

If a trailer is used behind the vehicle make sure that its hitch is compatible with the one on the vehicle. Make sure the trailer is horizontal with the vehicle. (In some instances a special extension may have to be installed on the vehicle hitch). Use security chains or cables to secure the trailer with the vehicle.

Improperly loading a trailer may cause loss of control. Respect the recommended maximum hauling capacity and maximum tongue load (Refer to *MAXIMUM HAULING CAPACITY* table). Make sure there is at least some weight on the tongue.

Always make sure load is evenly distributed and safely secured on the trailer; an evenly balanced trailer is easier to control.

Always put the shift lever to L (low range) for hauling a trailer – in addition to providing more torque, operating in low range helps account for the increased load on the rear tires.

When stopped or parked, block the vehicle and trailer wheels from possible movement.

Use caution when disconnecting a loaded trailer; it or its load may topple on you or others.

When hauling a trailer, respect the following maximum hauling capacity.

MAXIMUM HAULING CAPACITY

TYPE OF ATTACHMENT	TRAILER LOAD ALLOWED	TONGUE WEIGHT ALLOWED	NOTE
50.8 mm (2 in) x 50.8 mm (2 in) hitch ball support	270 kg (595 lb)	27 kg (60 lb)	Includes trailer and trailer load. Ensure to properly load the trailer so that tongue is always pushing on hitch support and not pulling on hitch ball. (1)

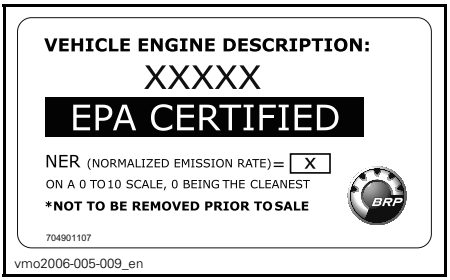
NOTE: (1) Must be used in conjunction with the 50 mm hitch certified adapter kit.

IMPORTANT ON-PRODUCT LABELS

Hang Tag

This vehicle comes with a hang tag and labels containing important safety information.

Any person who rides this vehicle should read and understand this information before riding.



TYPICAL

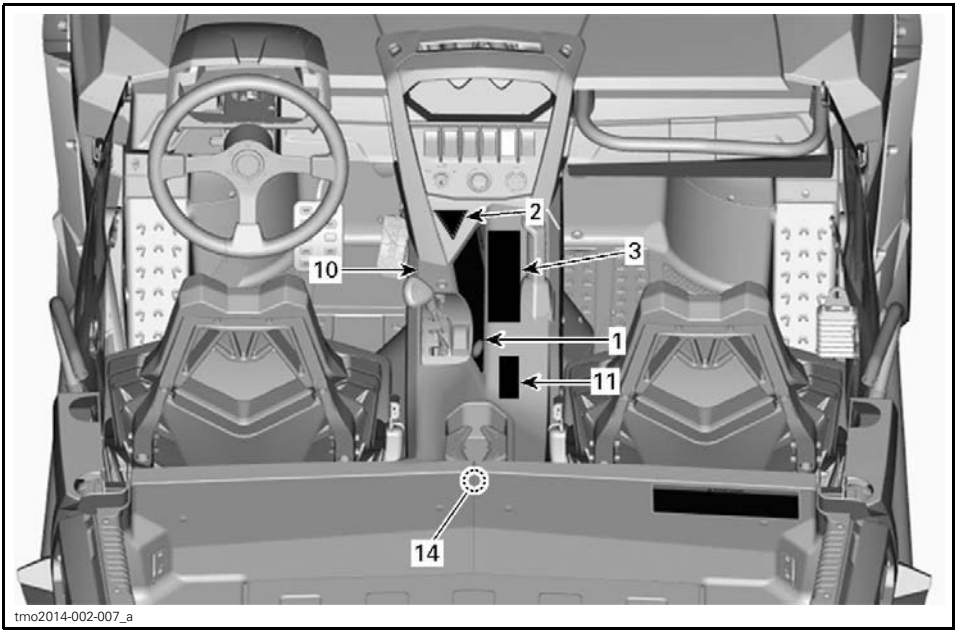
Safety Labels

Read and understand all the safety labels on your vehicle.

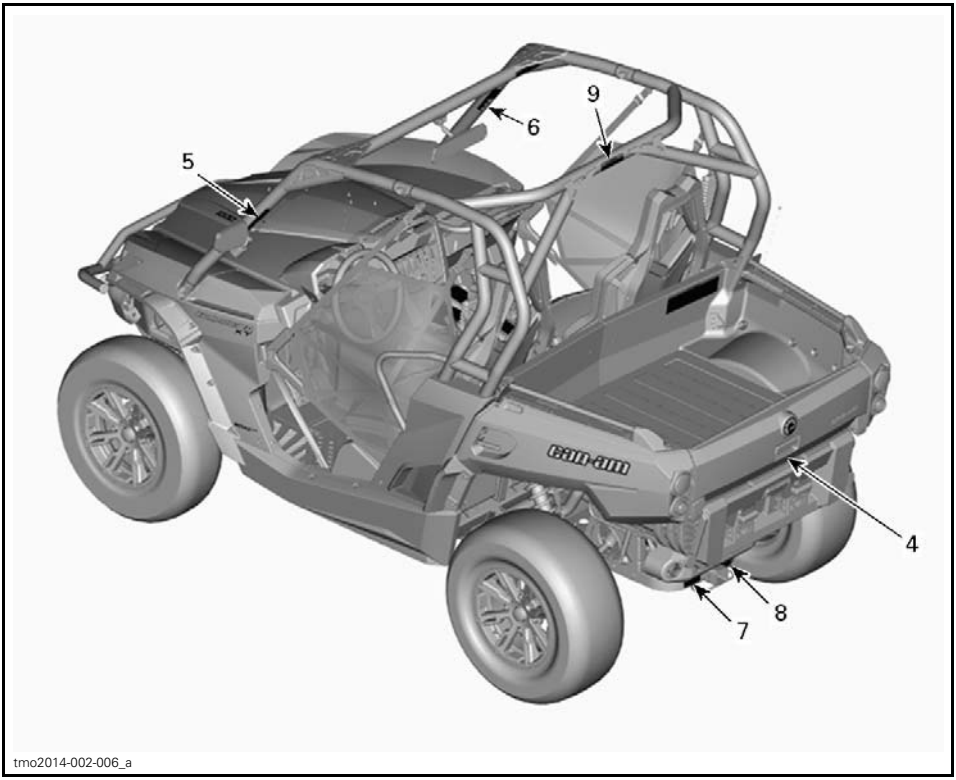
These labels are affixed to the vehicle for the safety of the operator, passenger or bystanders.

The following labels are on your vehicle, and they should be considered permanent parts of the vehicle. If missing or damaged, they can be replaced free of charge. See an authorized Can-Am dealer.

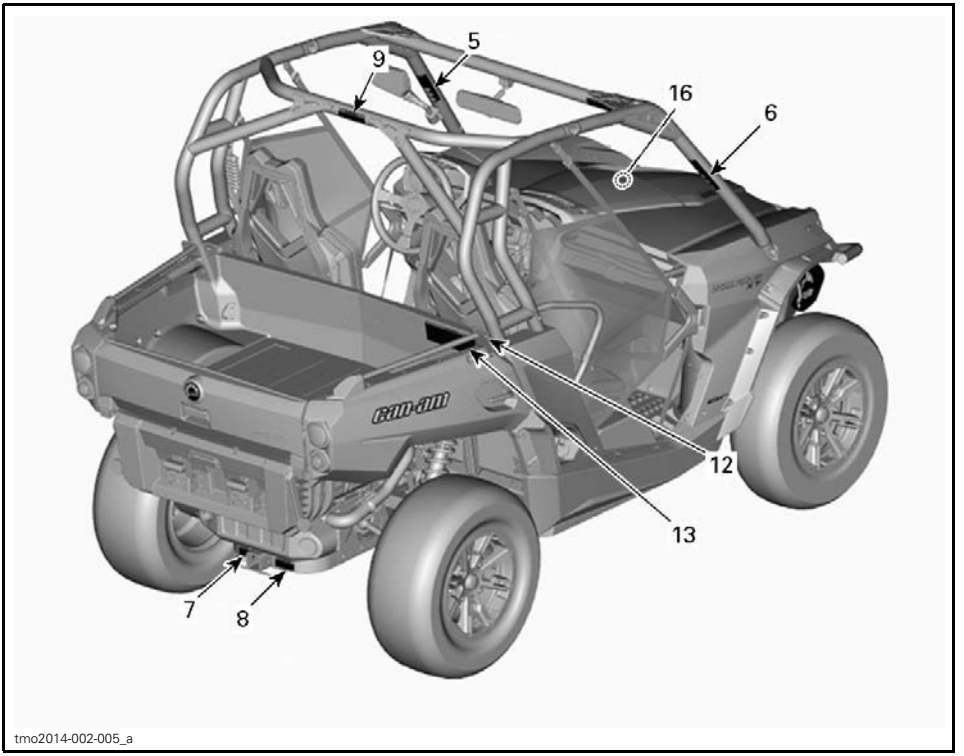
NOTE: In the event of any discrepancy between this guide and the vehicle, the safety labels on the vehicle have precedence over the labels in this guide.



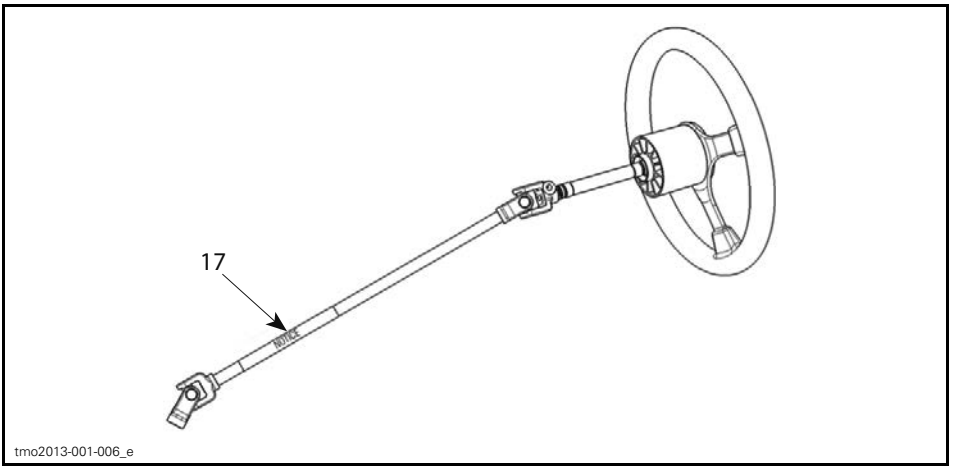
TYPICAL

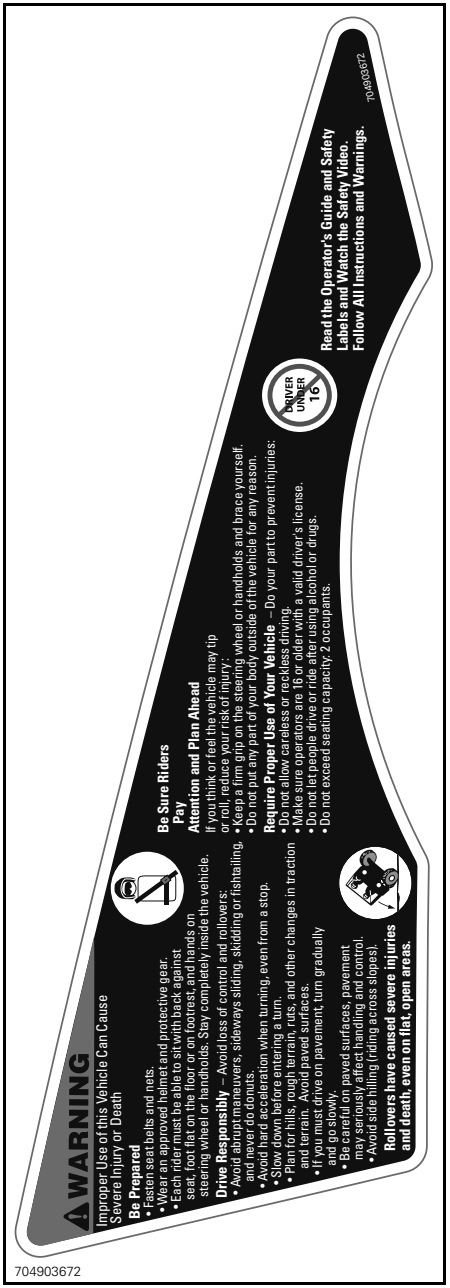


TYPICAL



TYPICAL





LABEL 1

LABEL 2

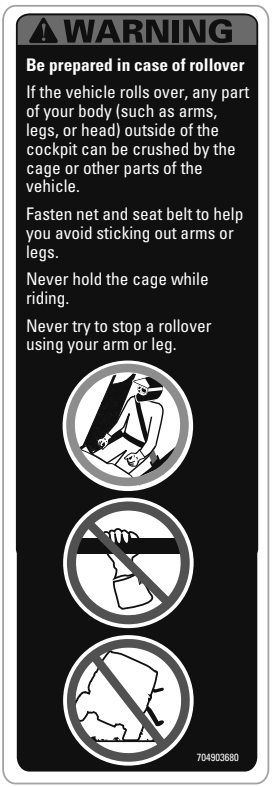
LABEL 3

704902420C

LABEL 4

704903679

LABEL 5



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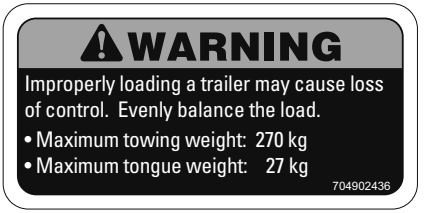
LABEL 6



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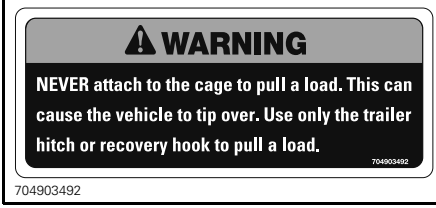
LABEL 7

704902345C

LABEL 8



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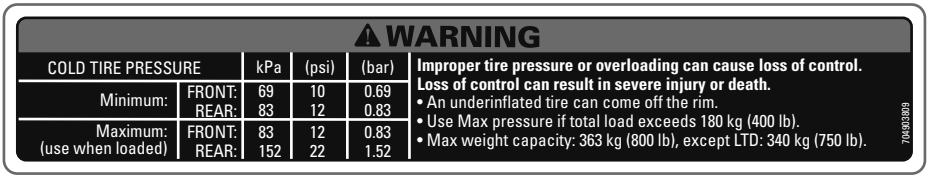
LABEL 9



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LABEL 10

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LABEL 11

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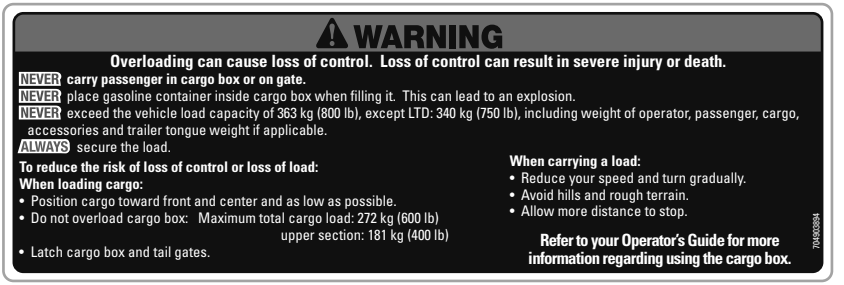
LABEL 12



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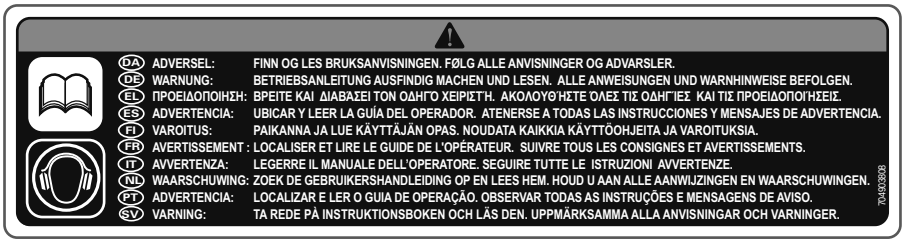
LABEL 13



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LABEL 14

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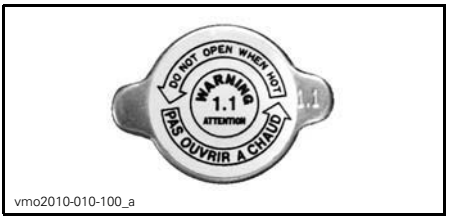
LABEL 15



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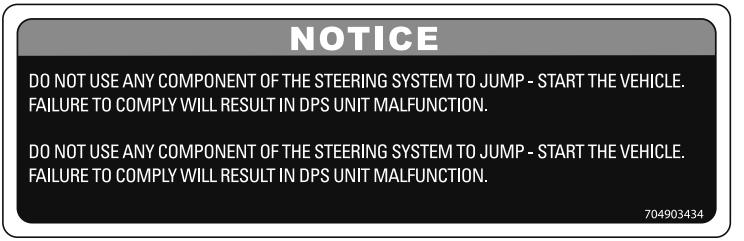
LABEL 16



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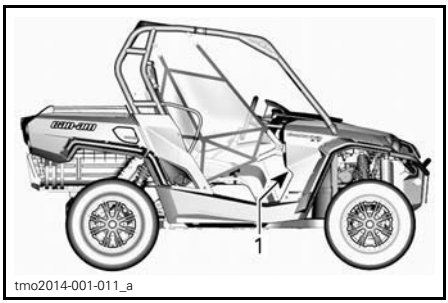
LABEL 17

Compliance Labels

These labels indicate vehicle's compliance.



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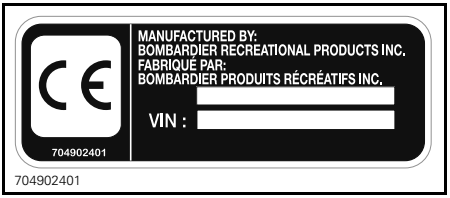
TYPICAL

1. Compliance labels located under glove box



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ON TOP RIGHT OF FRONT BAR OF CAGE

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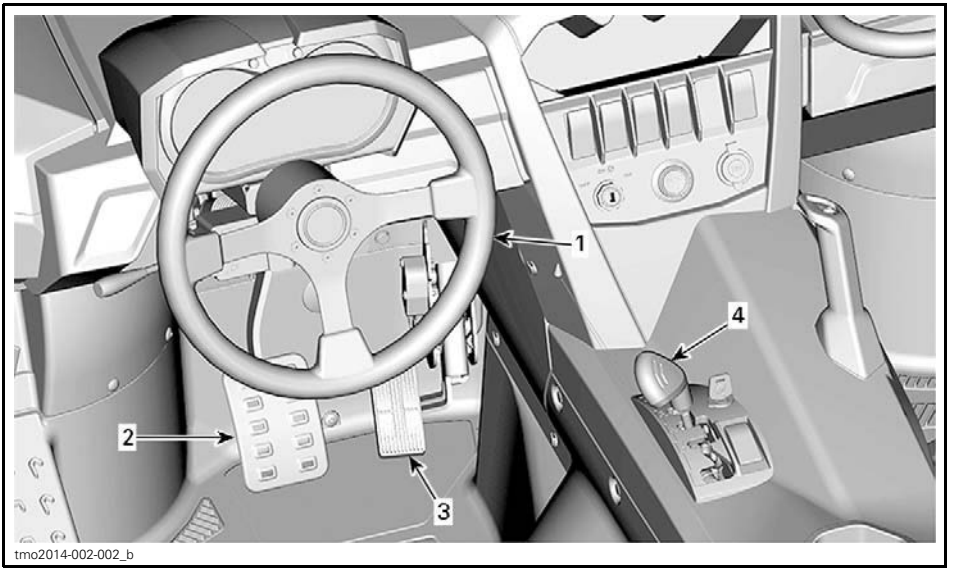
VEHICLE INFORMATION

PRIMARY CONTROLS

It is important to know the location and operation of all controls, and to develop and practice smooth and coordinated use of them.



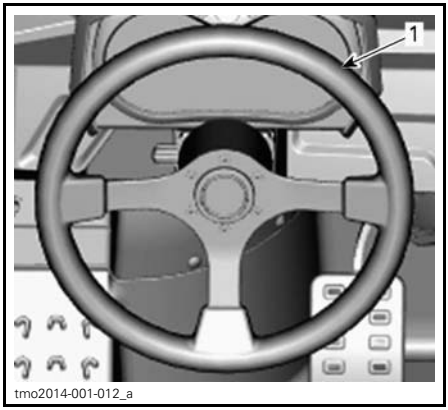
TYPICAL

1) Steering Wheel

The steering wheel is located in front of the driver's seat.

The steering wheel steers the vehicle to the left or right.

Steer the steering wheel in the direction you want to go.



TYPICAL
1. Steering wheel

Grip the steering wheel with both hands, without having thumbs rolled around the steering wheel.

⚠ CAUTION Under rough trail conditions or when crossing an obstacle, the steering wheel could suddenly jerk on one side, causing hand or wrist injuries if the thumbs are rolled around the steering wheel.

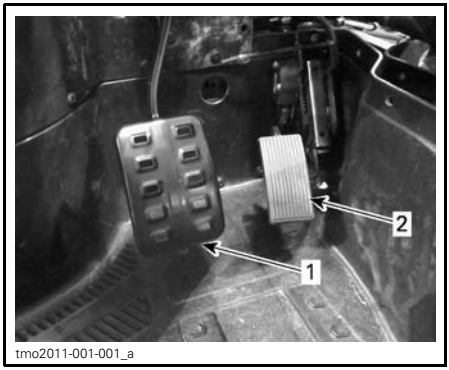
Models with DPS

Those models are equipped with Dynamic Power Steering (DPS) system. The DPS reduces the effort to turn the steering wheel.

2) Brake Pedal

The brake pedal is located on the left side of the accelerator pedal.

The brake pedal function is to slow down or stop the vehicle.



1. Brake pedal
2. Accelerator pedal

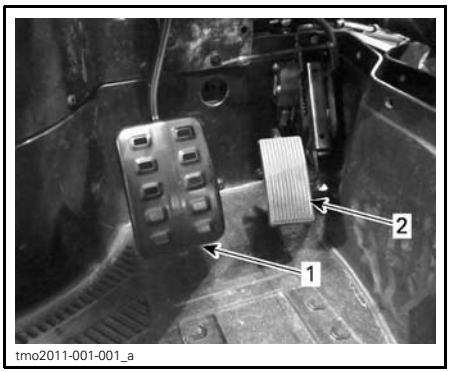
To decrease vehicle speed or to stop vehicle, press down the brake pedal with your right foot.

The brake pedal is spring loaded and should return to rest position when not pressed.

3) Accelerator Pedal

The accelerator pedal is located on the right side of the brake pedal.

The accelerator pedal controls the engine speed.



1. Brake pedal
2. Accelerator pedal

To increase or maintain vehicle speed, press on the accelerator pedal with your right foot.

To decrease vehicle speed, release the accelerator pedal.

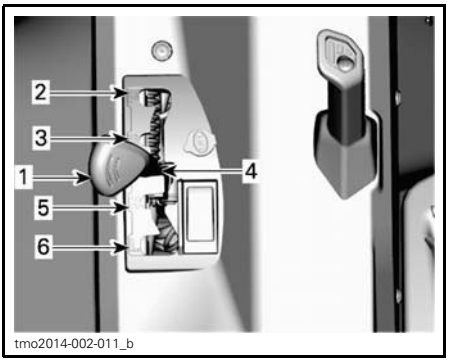
The accelerator pedal is spring loaded and should return to rest position (idle) when not pressed.

NOTE: The accelerator pedal should never be disassembled.

4) Shift Lever

The shift lever is located on the lower console.

The shift lever is used to change the gearbox position.



1. *Shift lever*
2. *Park*
3. *Reverse*
4. *Neutral*
5. *High range (forward)*
6. *Low range (forward)*

The vehicle must be stopped and brakes applied prior to selecting any gear.

NOTICE **This gearbox is not designed to shift while vehicle is moving.**

Park

The park position locks the gearbox to help prevent vehicle movement.

⚠ WARNING

Always use the PARK (P) position when the vehicle is not in operation. The vehicle can roll if the shift lever is not set to P (PARK).

The shift lever can be locked in PARK (P) position with a key to prevent any unauthorized use of the vehicle.

TYPICAL
1. *Shift lever locking key*

Two locking keys are supplied with the vehicle.

⚠ WARNING

The shift lever should be locked whenever the vehicle is in PARK (P) and unattended.

Reverse

The reverse position allows the vehicle to go backwards.

NOTE: In reverse operation, the engine's RPM is limited, thus limiting the vehicle reverse speed.

⚠ WARNING

When driving downhill in reverse, gravity can increase the vehicle speed above the set limited reverse speed.

Neutral

The neutral position disengages the gearbox.

High Range (Forward)

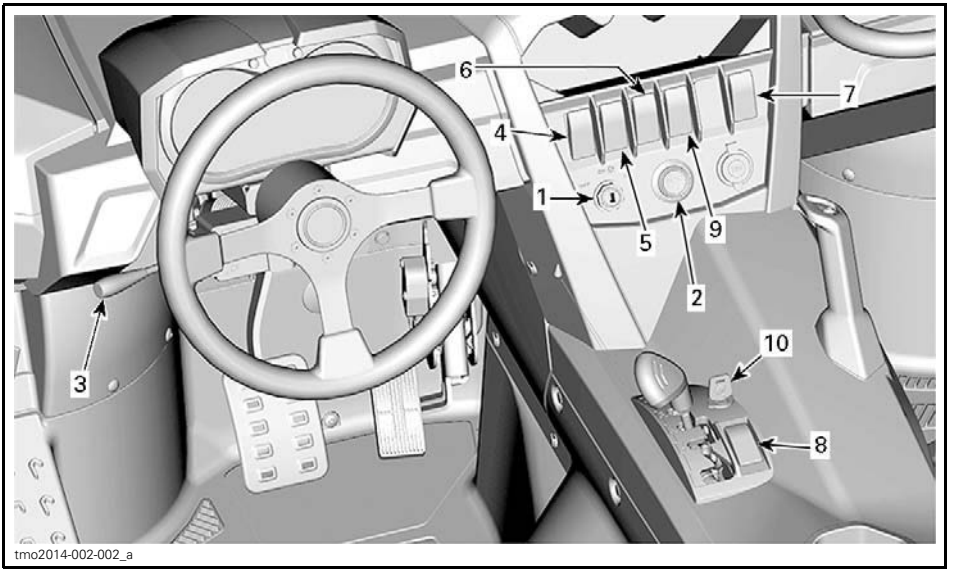
This position selects the high speed range of the gearbox. It is the normal driving speed range. It allows the vehicle to reach its maximum speed.

Low Range (Forward)

This position selects the low speed range of the gearbox. It allows the vehicle to move slowly with maximum torque at the wheels.

NOTICE Use the low speed range to pull a trailer, carry heavy cargo, go over obstacles or drive uphill and downhill.

SECONDARY CONTROLS

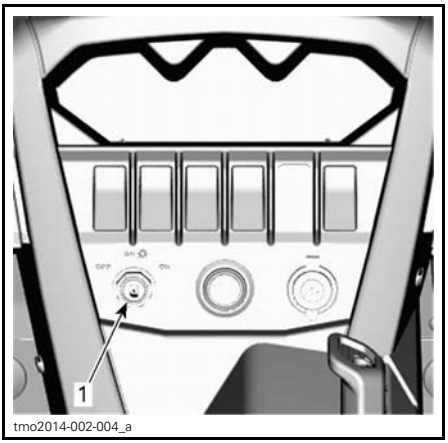


TYPICAL

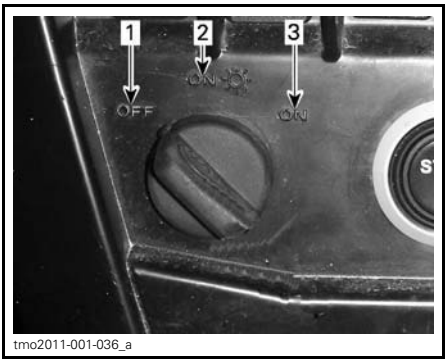
1) Ignition Switch and Keys

Ignition Switch

The ignition switch is located on the upper console area.



TYPICAL
1. Ignition switch



IGNITION SWITCH POSITION
1. OFF
2. ON with lights
3. ON

OFF

The key can be inserted or removed in this position only.

In OFF position, the electrical system of the vehicle is disabled.

The engine is shut down by turning the ignition switch to OFF position.

ON with Lights

When the key is turned in this position, the electrical system of the vehicle is activated.

The gauge should wake-up.

The vehicle lights are turned on.

The engine can be started.

ON

This position offers the same functions as ON with lights position, except the vehicle lights are turned off.

Ignition Keys

Types of Keys

This vehicle can be operated using 3 different types of ignition keys:

– Normal key (grey)
– Performance key (black)
– Optional Work key (orange).

The key type is differentiated by its color.

⚠ WARNING

Rollovers, tipovers, collisions and loss of control resulting in serious injury or death are possible with the performance, normal or optional work keys. Using the work key or normal key is not a substitute for the operator being prepared, qualified, and operating with care.

Normal Key

The vehicle is delivered with a normal key.

The normal key limits the overall performance to 70% of maximum engine torque and vehicle speed to 70 km/h (43 MPH).

⚠ WARNING

On steep downhills, the engine speed limiter may not prevent the vehicle from accelerating beyond this speed.

This key may be useful for riders who prefer more gradual acceleration, or for riding in environments where full speed and high acceleration are not desirable. For example, in narrow, winding trails, operators may prefer the normal key.

Performance Key

The vehicle is delivered with two performance key, which allows the user to access the full torque of the engine as well as the top speed of the vehicle.

This may be useful for riders who prefer greater acceleration, and for environments where higher speeds and greater acceleration are appropriate. For example, in wide-open, straight trails, operators may prefer the performance key.

Optional Work Key

A work key is also available at your dealership.

The work key limits the overall performance to 50% of maximum engine torque and vehicle speed to 40 km/h (25 MPH).

⚠ WARNING

On steep downhills, the engine speed limiter may not prevent the vehicle from accelerating beyond this speed.

This may be useful for riders who use this vehicle in a workplace environment where lower speeds and acceleration are a requirement.

Digitally Encoded Security System (D.E.S.S.)

The ignition keys contain an electronic circuit that gives it a unique electronic serial number.

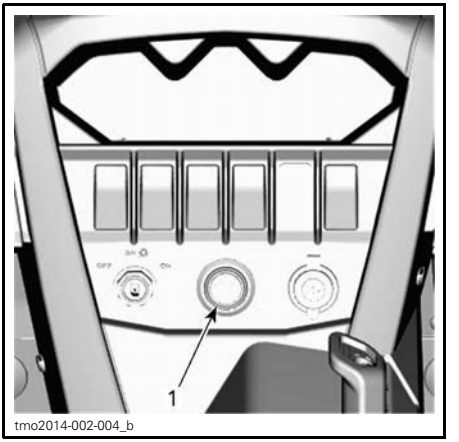
The D.E.S.S. system reads the key code and allows engine starting for keys it recognizes.

2) Engine Start Button

The engine start button is located on the upper console. When pressed and held, it starts the engine.

NOTE: The ignition switch must be in the ON or ON with lights position to allow engine start.

NOTE: If the ignition switch is left ON for more than 15 minutes, engine will not start unless ignition switch is turned OFF, then ON again.



TYPICAL
1. Engine start button

3) Multifunction Lever

Low/High Beam Selection

When the multifunction lever is in the middle position, the low beam is selected.

Push the multifunction lever forward to select high beam.

Pull back the multifunction lever to return to low beam.

NOTE: The ignition switch must be set to ON with lights position to turn on the headlights.

Headlight Flashing

To flash the high beams while in low beams, pull on the multifunction lever.

Horn Activation

The horn can be activated by pushing the end of the multifunction lever toward the steering wheel.

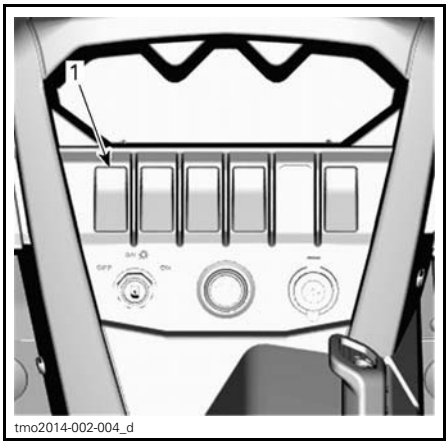
Turn Signal Activation

To activate the LH turn signals, push down the multifunction lever.

To activate the RH turn signals, push up the multifunction lever.

Reposition the multifunction lever in the middle position to stop turn signal.

4) Hazard Warning Switch



TYPICAL
1. Hazard warning switch

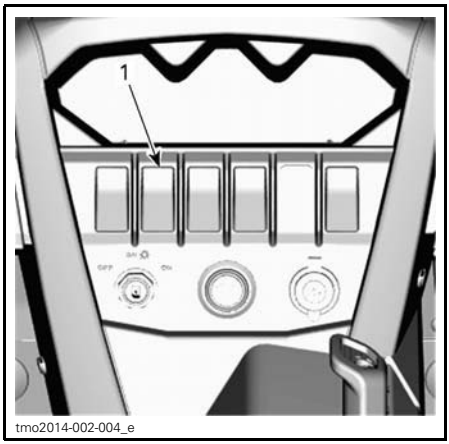
The hazard warning switch is located on the upper console.

When activated, all the turn signal lights will flash.

NOTE: Hazard warning can be activated even when the ignition switch is turned OFF.

5) 2WD/4WD Switch

The 2WD/4WD switch is located on the upper console.



TYPICAL
1. 2WD/4WD switch

This switch selects 2 wheel drive or 4 wheel drive mode when the vehicle is stopped and the engine is running.

NOTICE **The vehicle must be stopped to engage or disengage 2WD/4WD switch. Mechanical damage may occur if switch is engaged or disengaged while driving.**

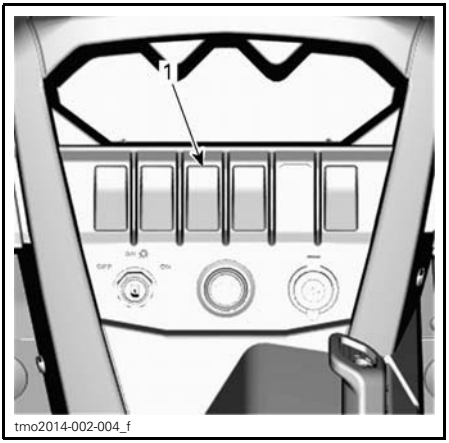
The 4WD mode is engaged when the switch is pushed upwards.

The 2WD mode is engaged when the switch is pushed downwards. The vehicle is then rear wheel drive only.

6) Sport/ECO Mode Switch

The sport/ECO switch is located on the upper console.

It is used to activate or deactivate either the sport or ECO mode.



TYPICAL
1. Sport/ECO switch

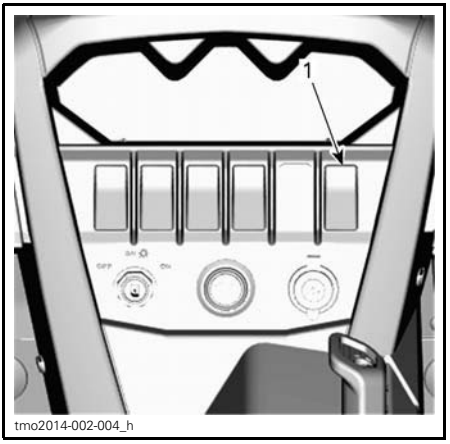
The sport mode provides a crisper throttle response. Even when the sport mode is activated by the switch, the ECO mode will be used in low and reverse gear.

The ECO (fuel economy mode) setting reduces fuel consumption by limiting throttle response and maximum throttle opening to maintain an optimal cruising setting.

NOTE: The sport mode can be activated with all key types and provides the maximum power with the used key.

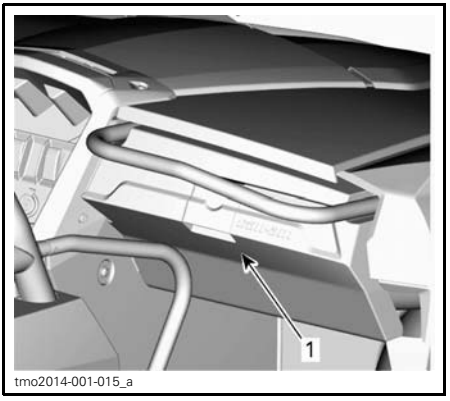
7) Winch Switch (Models with Winch)

The winch can be controlled from inside the vehicle with the winch control switch located in the upper console.



TYPICAL
1. Winch switch

The winch also comes with a remote control located in the glove box.

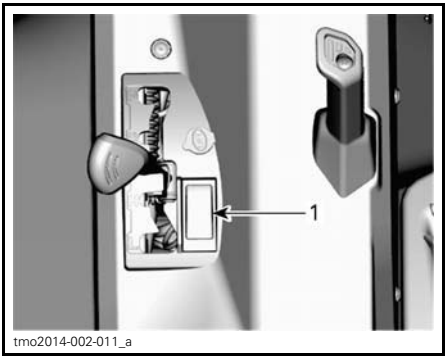


1. Glove box

Refer to your *BASIC GUIDE TO WINCHING TECHNIQUES* included with your vehicle for proper winch operation.

8) Override Switch

The override switch is located on the lower console beside the shift lever.



TYPICAL
1. Override switch

The override switch main function is to bypass the engine speed limiter in reverse operation by allowing maximum engine torque.

⚠ WARNING

Only use the override to help get the vehicle unstuck from mud or other soft terrain. Do not use the override for normal operation in reverse. This would allow driving in reverse at excessive speeds and can increase the risk of losing control.

To engage the override function, proceed as follows:

While the shift lever is set to REVERSE position.

1. Ensure that the vehicle is stopped.
2. Press and hold the override switch then press the accelerator pedal gradually.

NOTE: When using the override function, the gauge will scroll an OVERRIDE message to confirm that the function is activated.

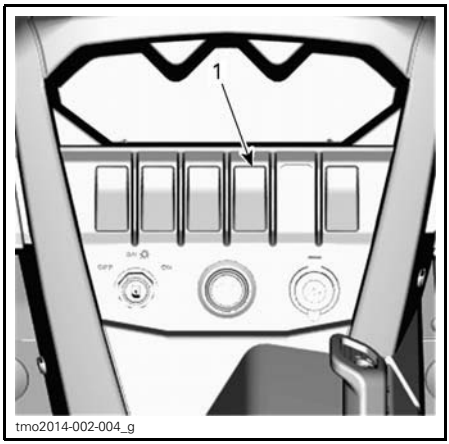
3. To disengage the override function, simply release the override switch.

The override switch is also used for two more functions:

– To reset the MAINT SOON message (refer to *MULTIFUNCTION GAUGE (LCD)* or *MULTIFUNCTION GAUGE (ANALOG/DIGITAL)* subsections).
– To move vehicle in case of a pedal accelerator failure (refer to *TROUBLESHOOTING GUIDELINES* subsection).

9) DPS Switch (Models with DPS)

The DPS switch is used to change the DPS (Dynamic Power Steering) mode.



1. DPS switch

10) Shift Lever Lock

The shift lever can be locked when the vehicle is parked and left unattended.

To unlock shift lever, turn key clockwise.

To lock shift lever, turn key counterclockwise.

TYPICAL
1. Shift lever lock

NOTE: The vehicle will not be locked if the shift lever is not placed in park position when the mechanism is engaged.

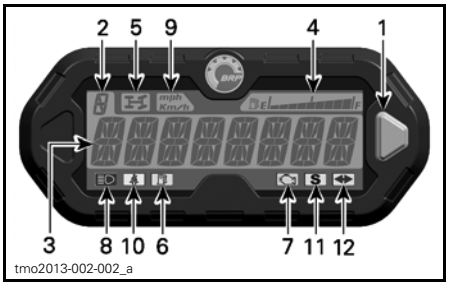
MULTIFUNCTION GAUGE (LCD) (BASE MODEL ONLY)

The multifunction gauge (LCD) is located on the steering column.

⚠ WARNING

Do not adjust the display while riding . You could lose control.

Multifunction Gauge Description



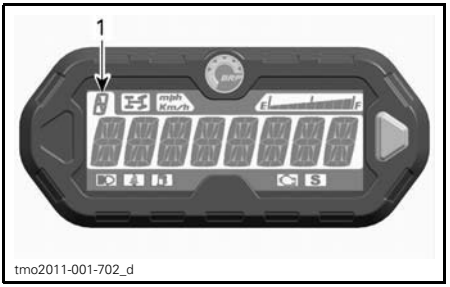
1. *Selector button*
2. *Transmission position display*
3. *Main screen*
4. *Fuel level display*
5. *4WD indicator lamp*
6. *Low fuel level indicator lamp*
7. *Check engine indicator lamp*
8. *High beam indicator lamp*
9. *MPH and KM/H indicator lamp*
10. *Seat belt indicator lamp*
11. *Sport mode indicator lamp*
12. *Turn signal light indicator lamp*

1) Selector Button

The selector button is used to navigate or change settings in the multifunction gauge.

2) Transmission Position Display

This display will show transmission position.



1. *Transmission position*

DISPLAY	FUNCTION
P	Park
R	Reverse
N	Neutral
H	High range
L	Low range

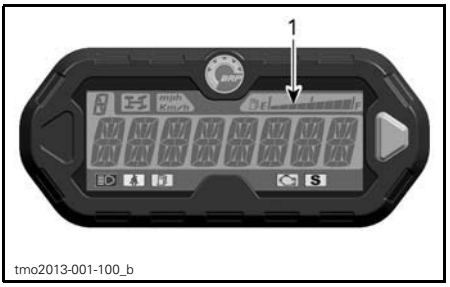
3) Main Screen

The main screen is used to display numerous functions of the multifunction gauge.

Refer to *MULTIFUNCTION GAUGE MODES* for the different available modes:

4) Fuel Level Display

Bar gauge continuously indicates the level of fuel in the fuel tank while riding.



1. *Fuel level display*

5) 4WD Indicator Lamp

When this indicator is ON, it indicates the 4WD system is activated.

6) Low Fuel Level Indicator Lamp

When this indicator is ON, it indicates that there is approximately 12 L (3.2 U.S. gal.) of fuel left in fuel tank.

7) Check Engine Indicator Lamp

When this indicator is ON, it indicates an engine fault code, look for a message at the LCD display.

When this indicator blinks, it indicates that the LIMP HOME mode is activated.

Refer to *TROUBLESHOOTING* section for more details.

8) High Beam Indicator Lamp

When this indicator is ON, it indicates that high beam is selected on the headlights and that ignition key is in ON with lights position.

9) KM/H or MPH Indicator Lamp

mph
Km/h

The proper lamp turns on to indicate the unit the speedometer uses.

10) Seat Belt Indicator Lamp

When this indicator is ON, the driver's seat belt is not buckled.

11) Sport Mode Indicator Lamp

S

When this indicator is ON, the sport mode is active.

12) Turn Signal Light Indicator Lamp

When this indicator is ON, it indicates the turn signal lights are in operation.

Multifunction Gauge Modes

Speed Mode

In this mode, the main screen shows the speed of the vehicle either in km/h or in MPH.

vdd2008-001-084

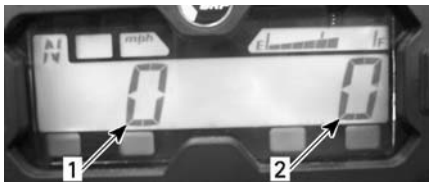
RPM Mode

In this mode, the main screen shows the engine RPM.

vdd2008-001-089

Combined Mode

In this mode, the main screen shows the speed of the vehicle and the engine RPM.



vdd2008-001-085_a

1. *Vehicle speed*
2. *Engine RPM*

Odometer (OD)

Odometer records the total distance travelled either in miles or kilometers.

vsi2009-018-030

Clock

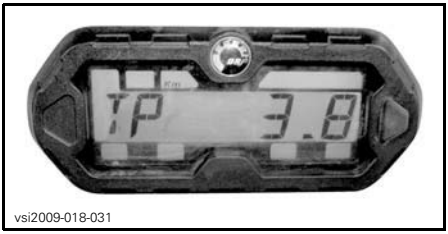
Shows current time.

vmo2011-008-001

Refer to *GAUGE SETUP* to set current time.

Trip Meter (TP)

The trip meter records the travelled distance since it has been reset. Distance travelled is displayed either in kilometers or miles.



vsi2009-018-031

It can be used to establish a fuel tank range or distance between 2 way points.

Press and HOLD the selector button for 2 seconds to reset the trip meter.

Trip Hour Meter (TH)

The trip hour meter records vehicle running time when the electrical system is activated. It can be used to establish traveling time between 2 way points.

vsi2009-018-032

Press and HOLD the selector button for 2 seconds to reset the hour meter.

Engine Hour Meter (EH)

The engine hour meter records engine running time.

vsi2009-018-033

Message Display Mode

Important messages can be displayed in the main screen. Refer to table below.

If an abnormal engine condition occurs, a message can be combined with a pilot lamp. Refer to *TROUBLESHOOTING* section for details.

MESSAGE (NORMAL OPERATION)	DESCRIPTION
BRAKE	Message displayed when the brakes are applied continuously for 15 seconds.
PERFORMANCE KEY	Displayed at power up when a the performance key is used.
WORK KEY	Displayed at power up when the work key is used.
OVERRIDE	Override is displayed when the override switch is pressed and the shift lever is set to reverse gear.
SEAT BELT	When the seat belt is not buckled and the vehicle speed is less than 10 km/h (6 MPH), the message is displayed and the pilot lamp will be lit. No engine torque limitation engaged.
ENGINE LIMITATION ENGAGED FASTEN SEAT BELT	When the seat belt is not buckled and the vehicle speed is above 10 km/h (6 MPH), the message is displayed and the pilot lamp stays on. The engine management will engage a torque limitation that will limit the vehicle speed to approximately 20 km/h (12 MPH).
SPORT MODE ACTIVE	Displayed when the sport mode is activated.
ECO MODE	Displayed when ECO mode is activated.
MAINTENANCE SOON (1)	Displayed in gauge when vehicle is due for a maintenance.

(1) To erase the MAINTENANCE SOON message, proceed as follows:

1. Select PARK.
2. Turn ignition switch to ON. Do NOT start engine.

NOTE: The steps 3 through 9 must be completed within **5 seconds**.

3. Press override switch and HOLD.
4. Press and release brake pedal.
5. Release override switch.
6. Press and release brake pedal.
7. Press override switch and HOLD.
8. Press and release brake pedal.
9. Release override switch.
10. Turn ignition switch to OFF

NOTE: Do not turn ignition switch to ON before the multifunction gauge turns off.

Fault Code Mode

Press and hold mode button while switching high and low beam (three cycles) to access diagnostic fault codes.

Navigating in the LCD Gauge

Default Display Mode

After vehicle startup, the default display mode is either:

– Vehicle speed
– Engine revolutions per minute (RPM)
– Both parameters simultaneously (combined mode).

To change from one display to the other, proceed as follows.

1. Turn ignition key to ON to power up the system up.
2. Wait until the "greeting message" has been displayed.
3. Press and release selector button once to display OD (odometer).
4. Press the selector button again, this time for 2 seconds.

This will change the Mode to either Speed, RPM or Combined.

vdd2008-001-083

5. To select another mode, repeat steps 3 and 4 until the desired mode is displayed.

Temporary Display Mode

In the temporary display mode, the following functions are available:

– Odometer
– Clock
– Trip meter (resettable)
– Trip Hour meter (resettable)
– Engine hour meter.

Press and release selector button to change the default display mode to the temporary mode.

tmo2011-001-702_c

1. Selector button

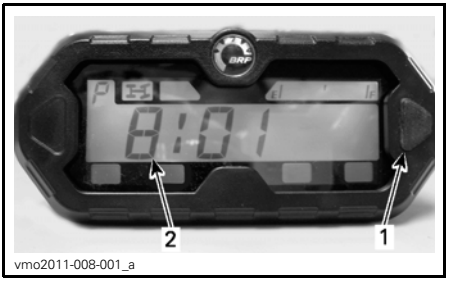
The gauge will display the selected mode for 10 seconds then will return to the normal display mode.

While in a resettable mode, push and HOLD selector button for 2 seconds to reset it.

Gauge Setup

Clock Setting

Once clock display as been selected, use the display selector button to set clock as follows:



1. Selector button
2. Time

1. Press and HOLD button (Display will flash).
2. Choose the 12-hour (12H) or 24-hour (24H) format by pressing button.
3. If the 12-hour format was selected, choose Am ("A") or Pm ("P") by pressing button.
4. Press and HOLD button.
5. Choose hour first digit by pressing button.
6. Press and HOLD button.
7. Choose hour second digit by pressing button.
8. Press and HOLD button.
9. Choose minutes first digit by pressing button.
10. Press and HOLD button.
11. Choose minutes second digit by pressing button.
12. Press button to enter settings (CLOCK will appear on display).

NOTE: The gauge will display the current time for 10 seconds then will return to the normal display mode.

Unit Selection (km/h vs MPH)

The speedometer, odometer and trip meter are factory preset in **miles** but it is possible to change them to **kilometer** reading. Contact an authorized Can-Am dealer.

Language Selection

The gauge display language can be changed. Refer to an authorized Can-Am dealer for language availability and setup the gauge to your preference.

MULTIFUNCTION GAUGE (ANALOG/DIGITAL) (XT AND XT-P MODELS)

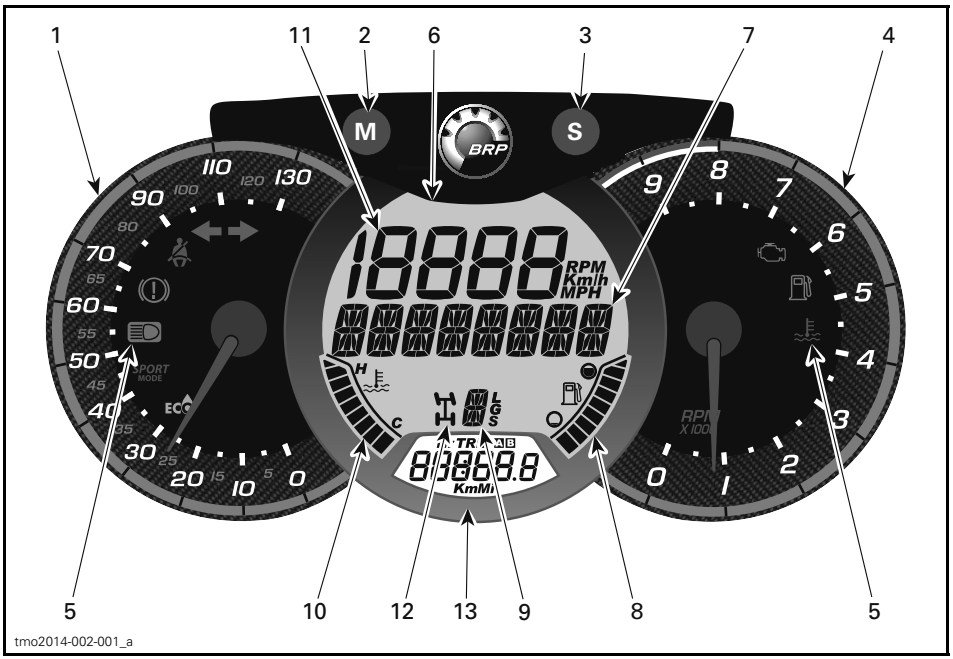
Multifunction Gauge Description

The Multifunction Gauge (Analog/digital) is located on the steering column.

The Multifunction Gauge (Analog/digital) is comprised of a digital gauge and two analog gauges (speedometer and tachometer).

The engine temperature and fuel level bar graphs are comprised in the digital gauge.

The indicators lamps are comprised in both analog gauges.



⚠ WARNING

Do not adjust the display while riding. You could lose control.

1) Analog Speedometer

Measures vehicle speed in km/h or mph.

2) MODE (M) Button

Pressing the MODE (M) button will scroll through the functions of the main digital display.

FUNCTION SEQUENCE	OPTIONS
Numerical Display is flashing	Press SET (S) to scroll and select desired function and press MODE (M) to confirm
Multifunction display is flashing	Press SET (S) to scroll and select desired function and press MODE (M) to confirm

3) SET (S) Button

Pressing the SET (S) button will scroll through the functions of the secondary digital display.

FUNCTION SEQUENCE	INFORMATION DISPLAYED
Clock	XX:XX (24:00 time base) XX:XX A or P (12:00 AM/PM time base)
Cumulative distance odometer	XXXXX.X km or mi
Trip distance — odometer A (TRIP A)	XXXXX.X km or mi
Trip distance — odometer B (TRIP B)	XXXXX.X km or mi
Engine time chronometer (Hr)	XXXXX.X
Trip time chronometer (HrTRIP)	XXXXX.X

To reset any trip functions, push and hold the SET (S) button for three seconds.

4) Analog Tachometer (RPM)

Measures engine revolutions per minute (RPM). Multiply by 1000 to obtain actual revolutions.

5) Indicator Lamps

Indicator lamps will inform you of various conditions or problems.

An indicator lamp can flash alone or in combination with another lamp.

INDICATOR LAMP(S)		DESCRIPTION
All indicator lamps	On	All indicator lamps are activated when ignition switch is ON and the engine is not started
	On	Low fuel
	On	Check engine
	On	High engine temperature
	On	Headlights in the HIGH beam position
	Flash	Operator seat belt is not properly latched. Engine output will be limited, reducing the speed and operability of the vehicle. Main digital display: FASTEN SEAT BELT
	On	Sport mode activated
	On	ECO mode activated
	Flashing	Turn signal or hazard warning lights flashing

6) Main Digital Display

Displays useful real-time information to the rider.

7) Multifunction Display

The vehicle speed or the engine revolutions (RPM) can be displayed. See *MODE (M) BUTTON* in this section.

Important messages can also be displayed. Refer to table below.

If an abnormal engine condition occurs, a message can be combined with a pilot lamp. Refer to *TROUBLESHOOTING* section for details.

MESSAGE	DESCRIPTION
BRAKE	Message displayed when the brakes are applied continuously for 15 seconds.
PERFORMANCE KEY	Displayed at power up when a the performance key is used.
WORK KEY	Displayed at power up when the work key is used.
OVERRIDE	Override is displayed when the override switch is pressed and the shift lever is set to reverse gear.
SEAT BELT	When the seat belt is not buckled and the vehicle speed is less than 10 km/h (6 MPH), the message is displayed and the pilot lamp will be lit. No engine torque limitation engaged.
ENGINE LIMITATION ENGAGED FASTEN SEAT BELT	When the seat belt is not buckled and the vehicle speed is above 10 km/h (6 MPH), the message is displayed and the pilot lamp stays on. The engine management will engage a torque limitation that will limit the vehicle speed to approximately 20 km/h (12 MPH).
SPORT MODE ACTIVE	Displayed when the sport mode is activated.
ECO MODE	Displayed when ECO mode is activated.
MAINTENANCE SOON(1)	Displayed in gauge when vehicle is due for a maintenance.

(1) To erase the MAINTENANCE SOON message, proceed as follows:

1. Select PARK.
2. Turn ignition switch to ON. Do NOT start engine.

NOTE: The steps 3 through 9 must be completed within **5 seconds**.

3. Press override switch and HOLD.
4. Press and release brake pedal.
5. Release override switch.
6. Press and release brake pedal.
7. Press override switch and HOLD.
8. Press and release brake pedal.
9. Release override switch.
10. Turn ignition switch to OFF

NOTE: Do not turn ignition switch to ON before the multifunction gauge turns off.

8) Fuel Level Indicator

Bar graph that continuously indicates the level of fuel left in the fuel tank.

9) Gearbox Position Indicator

Displays the selected gearbox position.

10) Engine Temperature Indicator

Bar graph that continuously indicates the engine coolant temperature.

11) Numerical Display

The vehicle speed or the engine revolutions (RPM) can be displayed. See *MODE (M) BUTTON* in this section.

12) 2WD/4WD Indicator

When this indicator is ON, the 4WD system is activated.

13) Secondary Digital Display

Displays useful real time information to the rider. For display function informations, refer to *SET (S) BUTTON*.

Gauge Setup

Setting Metric/Imperial Units

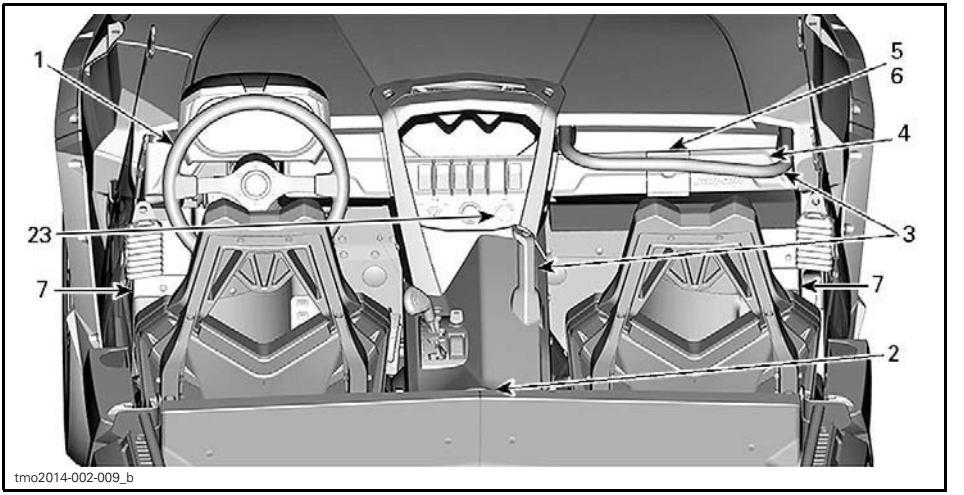
Go see a Can-Am dealer for adjustments.

Setting Clock

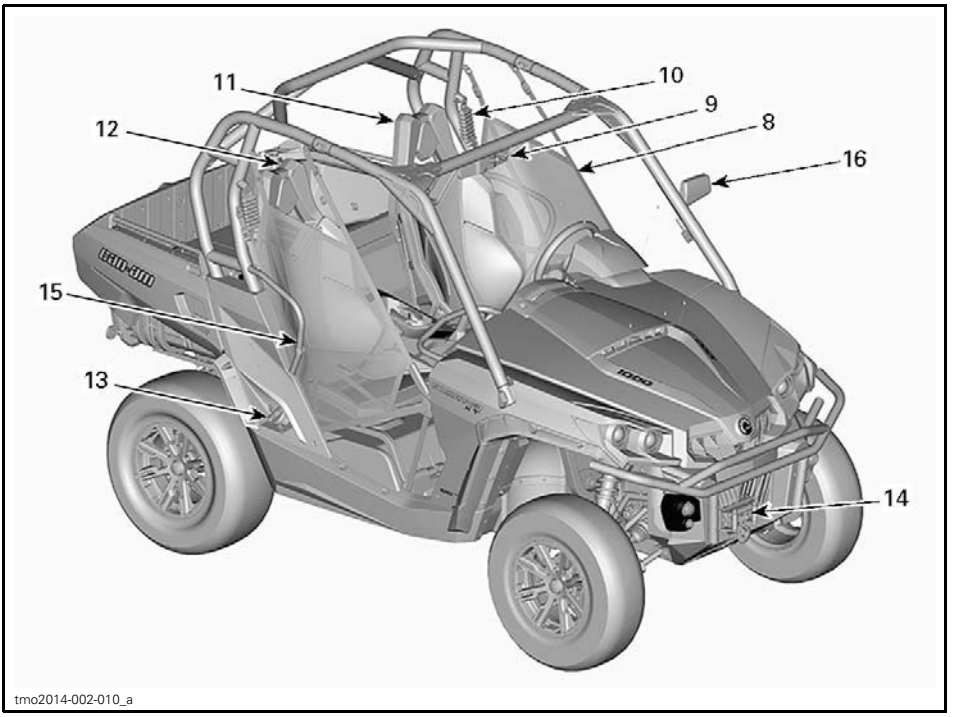
1. Press MODE (M) button to select clock display.
2. Push and hold MODE (M) button for three seconds.
3. Press MODE (M) button to select 12:00 AM PM or 24:00 time base.
4. If 12:00 AM PM time base is selected, A or P flashes. Press MODE (M) button to select A (AM) or P (PM).
5. Press SET (S) button to change hours.
6. Press MODE (M) button to switch to minutes (minutes flash).
7. Press SET (S) button to change minutes.
8. Press MODE (M) button.

Setting Language

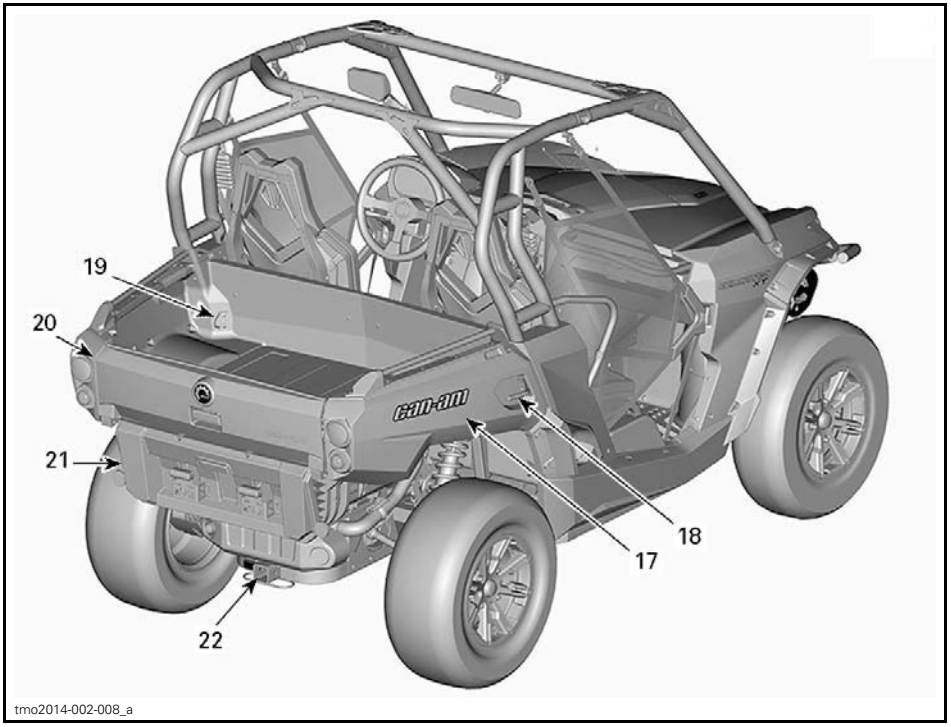
The gauge display language can be changed. Refer to an authorized Can-Am dealer for language availability and setup the gauge to your preference.



TYPICAL



TYPICAL



TYPICAL

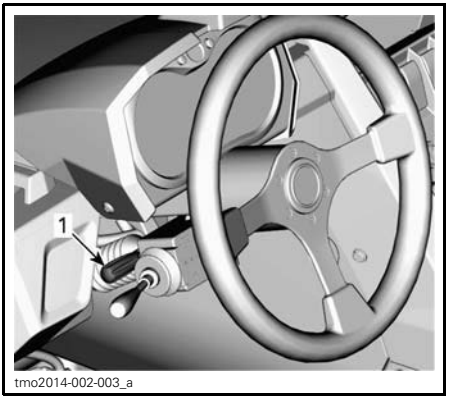
1) Tilt Steering

The steering wheel height is adjustable.

Adjust the steering wheel height to face your chest, not your head.

To adjust steering wheel height:

1. Unlock steering by pulling the tilt lever toward you.
2. Move steering wheel to the desired position.
3. Release tilt lever to lock steering wheel in position.



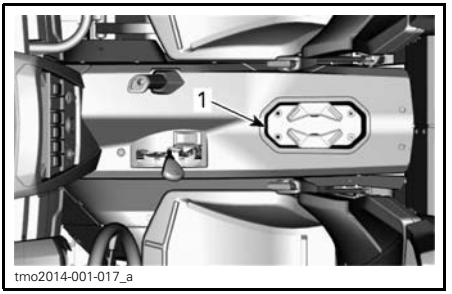
1. Tilt lever

⚠ WARNING

Never adjust the steering wheel height while riding. You may lose control.

2) Cup Holders

Two cup holders are located at the rear of the lower console.



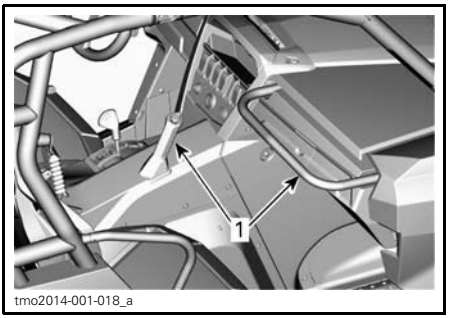
1. Cup holders

NOTE: Do not use cup holders while riding in rough conditions.

3) Passenger Handholds

The passenger has access to a front handhold located in front of seat above glove box.

A left hand handhold located in the center of the vehicle on the lower console is also accessible.



1. Passenger handholds

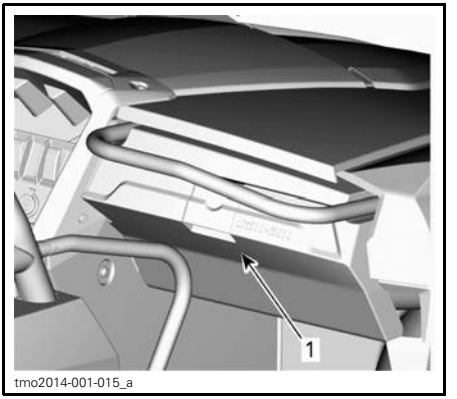
Holding the handholds helps the passenger brace against the movement of the vehicle and helps keep hands and body inside the cockpit in the event of a rollover.

⚠ WARNING

Never use any part of vehicle cage as handholds. Hands can be struck by objects outside the cockpit or crushed in a rollover.

4) Glove Box

The vehicle is equipped with a closed glove box made to carry light objects.



1. Glove box latch

GLOVE BOX CAPACITY	
MAXIMUM LOAD	5 kg (11 lb)

5) Tool Kit

A tool kit with basic tools is provided. It is located in the glove box.

6) Winch Remote Control (Models with Winch)

A remote control is provided to operate the winch. It is located in the glove box.

To use the remote control, connect the remote control to the 12 V outlet in the glove box. Refer to your *BASIC GUIDE TO WINCHING TECHNIQUES* manual included with your vehicle for proper winch operation.

7) Footrests

The vehicle is equipped with driver and passenger footrests to allow firmly planting feet on vehicle floor, which helps to maintain proper body position while riding.

The footrests help minimize the risk of leg or foot injury.

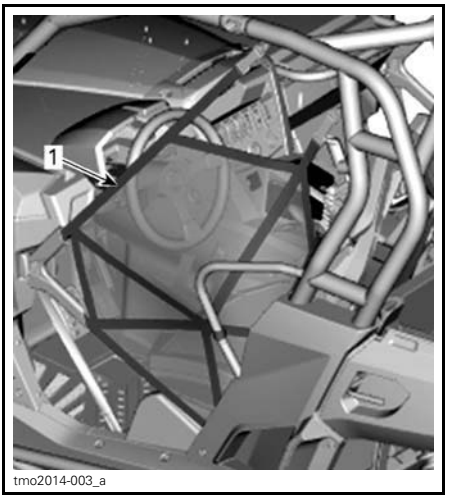
Always wear appropriate footwear. See *RIDING GEAR* subsection.

8) Side Nets

A side net is provided on each side of the cockpit to help arms, legs or shoulders stay inside the vehicle, thus reducing the risk of injuries. Side Nets may also keep brush or debris out of cockpit.

⚠ WARNING

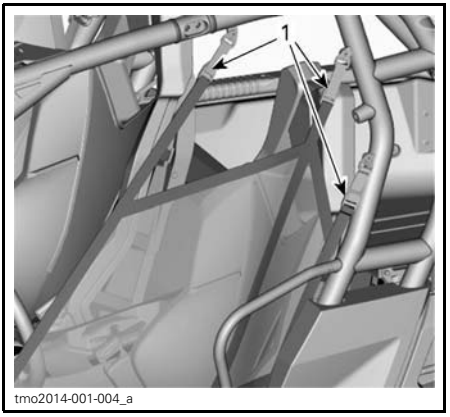
Never operate the vehicle unless both side nets are in place and buckled.



1. Side nets

Side nets are adjustable and must be kept as tight as possible. To adjust side nets proceed as follows:

1. Secure side net with buckle.
2. Pull on three adjustment straps to tighten.



1. Adjustment straps

9) Shoulder Guards

The vehicle is equipped with shoulder guards to help restrain the entire body of driver and passenger inside vehicle.

10) Seat Belts

This vehicle is equipped with 3 points seat belts to help protect driver and passenger in the event of collisions, rollovers or tipovers to help keep passengers in the cockpit.

⚠ WARNING

Wear seat belts properly at all times. Seat belts reduce the risk of injury in a crash and help keep limbs inside the cockpit in a rollover or any accidents.

If driver's seat belt is not fastened when:

– The ignition is turn ON, the seat belt indicator lamp will flash.
– The engine is started and shift lever is moved out of PARK, vehicle speed will be limited to a maximum of approximately 20 km/h (12 MPH) on flat ground.

⚠ WARNING

The vehicle may reach higher or lower speed depending on inclines.

To remind you to fasten the seat belt, the multifunction gauge will display the following message: ENGINE LIMITATION ENGAGED FASTEN SEAT BELT.

⚠ WARNING

There is no indicator light or message for the passenger seat belt. The driver is responsible of the passenger safety and should ensure the passenger buckles the seat belt.

Fastening and Adjusting the Seat Belt

Insert the seat belt latch plate into the buckle, then pull the belt to ensure it is properly locked.

Position the belt as low as possible across your hips. Then, pull the belt against your shoulder for a snug fit.

NOTE: Slide the latch as required to adjust the seat belt.

⚠ WARNING

Wear seat belt properly. Make sure it is not twisted or defective.

To release the seat belt, push on the red button on the seat belt buckle.

11) Driver's Seat

The driver's seat can be adjusted forward and backward.

To adjust seat, move the seat lever to unlock the seat. Release the lever to lock the seat into desired position.

⚠ WARNING

Never adjust the seat position while driving.

The driver's seat can be removed easily:

– Tilt seat forward by releasing latch between seat cushion and backrest.
– Pull seat upwards.

A convenient storage compartment is located under the driver's seat.

1. Storage compartment

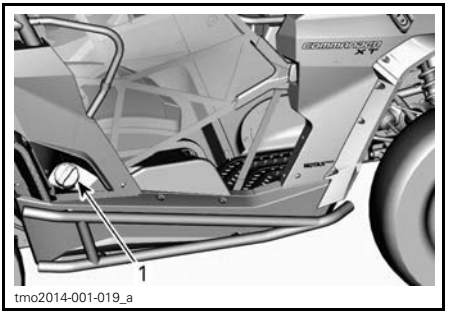
12) Passenger Seat

The passenger seat is not adjustable.

The passenger seat can be tilted forward for removal by releasing the latch located between the seat cushion and the backrest. Once tilted forward the seat can be removed by pulling upwards.

13) Fuel Reservoir Cap

The fuel reservoir cap is located on the right hand side of the vehicle behind the passenger seat.



1. Fuel reservoir cap

Refer to *FUEL* subsection for information on fueling procedure and fuel requirements.

14) Winch (Models with Winch)

The winch can be actuated inside the vehicle using the winch control switch on the upper console or with the included remote control.

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TYPICAL - WINCH

Refer to your *BASIC GUIDE TO WINCHING TECHNIQUES* manual included with your vehicle for winch operation.

⚠ WARNING

Front winch:

- The front winch hook of the so equipped vehicle must be removed and stored when riding the vehicle on public trails and/or roads.
- Failure to do so can increase the risk of injury to bystanders.

15) Central Mirror

This vehicle comes equipped with a central mirror.

The mirror can be adjusted to suit driver's preference.

⚠ WARNING

Do not adjust mirror while riding. You could lose control.

16) LH Side Mirror

This vehicle comes equipped with a LH side mirror.

The mirror can be adjusted to suit driver's preference.

⚠ WARNING

Do not adjust mirror while riding. You could lose control.

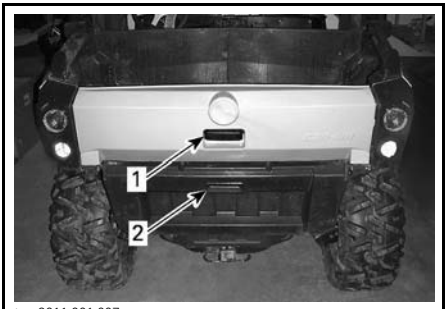
17) Cargo Box

The vehicle is equipped with a 2 level inclinable cargo box. The cargo box may be used for various types of cargo.

⚠ WARNING

To reduce the risk of loss of control or loss of load, use the cargo box only in accordance with *CARRYING LOADS* in the *SAFETY INFORMATION* section.

The cargo box is split into an upper and lower sections to provide more compartments for carrying separate loads.



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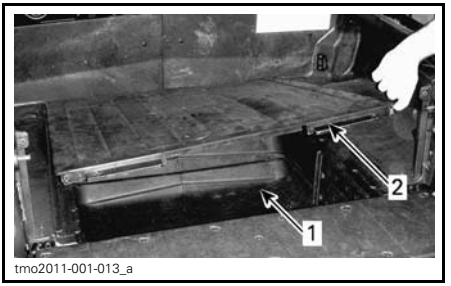
TYPICAL

1. *Cargo box upper section*
2. *Cargo box lower section*

The floor separating both sections can be easily removed to make a single cargo area. Both the upper and lower tailgates must be opened to allow the floor separator to be removed.



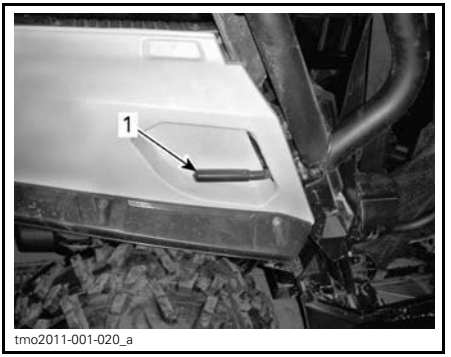
1. *Increased cargo volume*
2. *Floor/separator*

CARGO AREA WITHOUT FLOOR/ SEPARATOR

The lower section can be further split into two subsections by inserting a plywood piece into the vertical slots.

18) Cargo Box Tilt Release Handles

The latching mechanism of the cargo box can be actuated from either side of the vehicle through a release handle.



1. *Cargo box release handle*

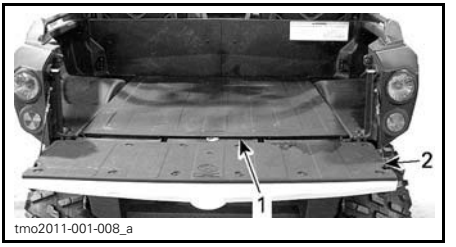
Refer to *CARRYING LOADS* in the *SAFETY INFORMATION* section.

19) Anchoring Hooks

To provide anchoring point in order to secure cargo inside the cargo box, 4 anchoring hooks are located inside the cargo area.

20) Upper Tailgate

The upper section of the cargo box can be closed with a tailgate.



TYPICAL - CARGO BOX UPPER SECTION
1. *Floor section separator*
2. *Upper tailgate*

NOTICE Do not exceed 100 kg (220 lb) of weight on the upper tailgate during loading or unloading. Always close the upper tailgate before operating to reduce the risk of loss of load.

Upper Tailgate Removal

The upper tailgate can easily be removed by inclining and pulling out of hinges, then removing the retaining cables.

TYPICAL
1. Upper tailgate hinge

21) Lower Tailgate

The lower section of the cargo box has a lower tailgate.

TYPICAL - LOWER SECTION WITH LOWER TAILGATE

The upper tailgate must be closed in order to open or close the lower tailgate.

TYPICAL
1. Lower tailgate
2. Lower section

NOTICE Do not exceed 100 kg (220 lb) of weight on the lower tailgate during loading or unloading. Always close the lower tailgate before operating to reduce the risk of loss of load.

22) Hitch Support

The vehicle comes equipped with a 51 mm x 51 mm box size standard hitch support.

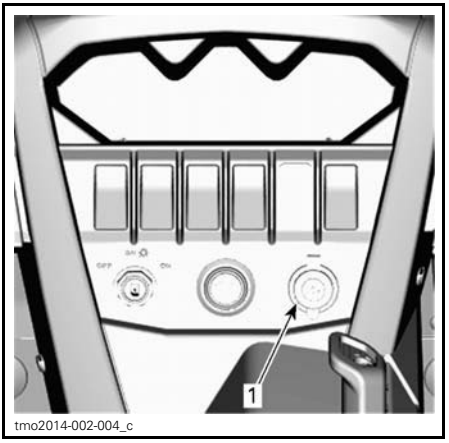
For the proper usage of the hitch support, refer to *MOVING LOADS AND DOING WORK* in the *SAFETY INFORMATION* section.

⚠ WARNING

To reduce the risk of loss of control or loss of load, always respect the maximum hauling capacity.

23) 12-Volt Power Outlet

Convenient for handheld spotlight or other portable equipment.



1. 12 V power outlet

Remove protective cap to use.c.

Do not exceed the rating capacity. Refer to *SPECIFICATIONS* subsection.

TUNE YOUR RIDE

Suspension Adjustment Guidelines

Your vehicle handling and comfort depend upon suspension adjustments.

⚠ WARNING

Suspension adjustment could affect vehicle handling. Always take time to familiarize yourself with the vehicle's behavior after any suspension adjustment has been made.

Choice of suspension adjustments vary with vehicle load, personal preference, riding speed and terrain condition.

The best way to set up the suspension, is to start from factory settings, then customize each adjustment one at a time.

Front and rear adjustments are interrelated. It may be necessary to readjust the rear shock absorbers after adjusting front shock absorbers for instance.

Test run the vehicle under the same conditions; trail, speed, load, etc. Change one adjustment and retest. Proceed methodically until you are satisfied.

Suspension Factory Settings

FRONT SUSPENSION FACTORY SETTINGS		
ADJUSTMENT	MODEL	FACTORY SETTING
Spring preload	Base XT	Cam position 1 (soft)
	XT-P	Spring length 310 mm (12.2 in)
Compression damping (low speed)	XT-P	12 positions
Compression damping (high speed)	XT-P	12 positions
Rebound damping	XT-P	12 positions

REAR SUSPENSION FACTORY SETTINGS		
ADJUSTMENT	MODEL	FACTORY SETTING
Spring preload	Base XT	Cam position 1 (soft)
	XT-P	Spring length 362 mm (14.3 in)
Compression damping (low speed)	XT-P	12 positions
Compression damping (high speed)	XT-P	12 positions
Rebound damping	XT-P	12 positions

Suspension Adjustments

Spring Preload Adjustment

Shorten the spring for a firmer ride and rough riding condition or when pulling a trailer.

Lengthen the spring for a softer ride and smooth riding condition.

⚠ WARNING

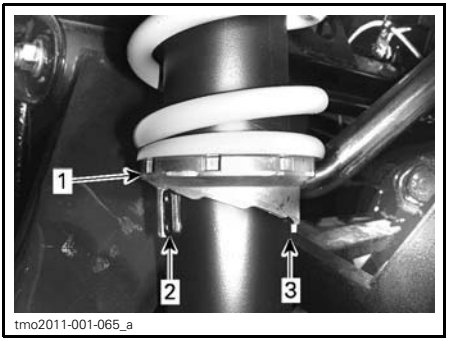
The left and right shock adjustment on front or rear suspension must always be set to the same position. Never adjust one shock only. Uneven adjustment can cause poor handling and loss of stability, which could lead to an accident.

Lift the vehicle. Spring length should be measured without load on the wheels.

Spring length should be equal on both sides.

All Models Except XT-P

Adjust by turning adjusting cam. Use tool from vehicle tool kit.



TYPICAL
1. *Turn adjusting cams*
2. *Smooth adjustment*
3. *Hard adjustment*

XT-P Model

Adjust by loosening lock ring and turning adjuster ring accordingly. Use tool from vehicle tool kit.

TYPICAL - SPRING NOT SHOWN
1. *Loosen top lock ring*
2. *Turn adjuster ring accordingly*

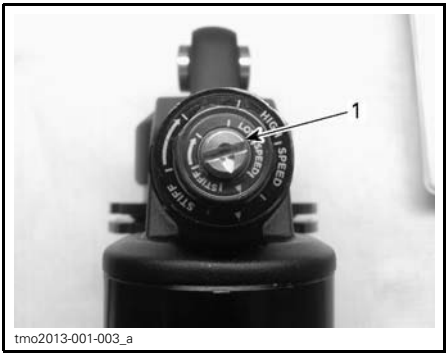
Shock Damping Adjustments (XT-P Model Only)

Low Speed Compression Damping

Low speed compression damping controls how the shock absorber reacts to a low suspension velocity (slow compression strokes, in most cases when riding at lower speeds).

ACTION	RESULT ON BIG BUMPS
Increasing low speed compression damping force	Firmer compression damping (slow compression)
Decreasing low speed compression damping force	Softer compression damping (slow compression)

Use a flat screwdriver to adjust it.



TYPICAL
1. *Low speed compression adjuster*

Turning it clockwise (H) **increases** shock damping action (stiffer).

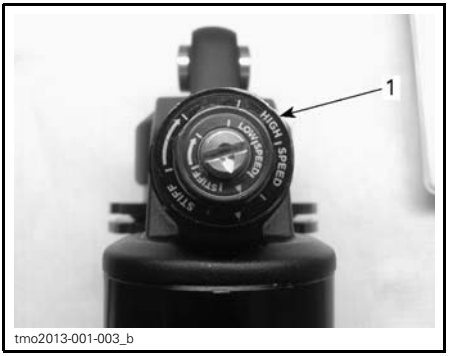
Turning it counterclockwise (S) **decreases** shock damping action (softer).

High Speed Compression Damping

High speed compression damping controls how the shock absorber reacts to a high suspension velocity (quick compression strokes, in most cases when riding at higher speeds).

ACTION	RESULT ON SMALL BUMPS
Increasing high speed compression damping force	Firmer compression damping (fast compression)
Decreasing high speed compression damping force	Softer compression damping (fast compression)

Use a 17 mm wrench to adjust it.



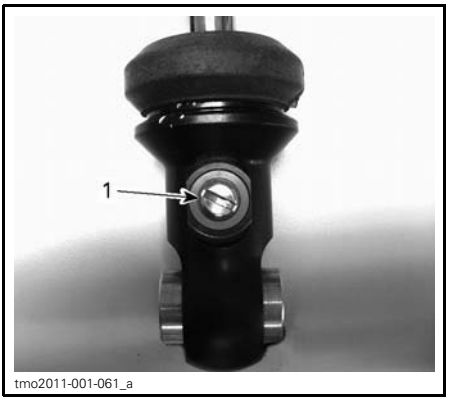
TYPICAL
1. *High speed compression adjuster (17 mm socket)*

Turning it clockwise (H) **increases** shock damping action (harder).

Turning it counterclockwise (S) **decreases** shock damping action (softer).

Rebound Damping

Use a flat screwdriver to adjust it.



1. *Rebound adjuster*

Turning it clockwise (H) **increases** shock damping action (harder).

Turning it counterclockwise (S) **decreases** shock damping action (softer).

DPS Function

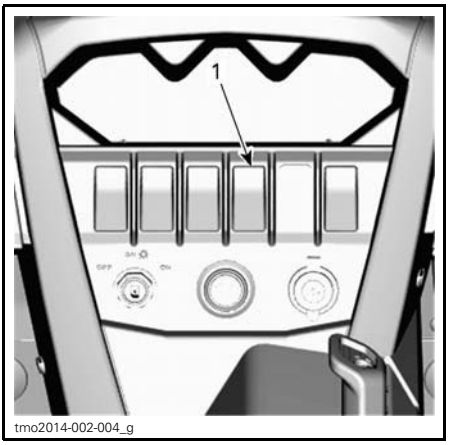
The applicable models are equipped with a Dynamic Power Steering (DPS) system. The DPS reduces the effort to turn the steering wheel.

The following DPS modes are preset in the vehicle.

DPS MODE	
DPS MAX.	Maximum steering assist
DPS MED.	Medium steering assist
DPS MIN.	Minimum steering assist

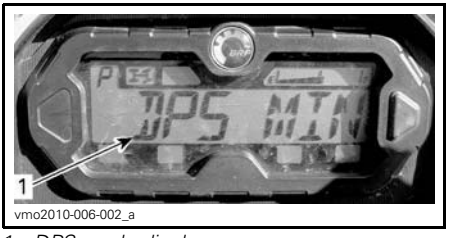
To show the active DPS mode, proceed as follows:

1. Press and release **DPS** switch.



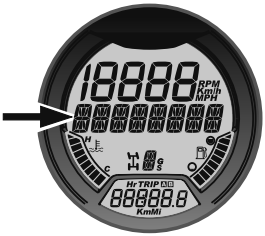
1. *DPS switch*

2. Check the multifunction gauge to confirm the active DPS mode.



1. *DPS mode display*

LCD GAUGE
1. *DPS mode (Display 3)*



ANALOG/DIGITAL GAUGE

1. DPS mode display

To change the DPS mode, proceed as follows:

1. Press and hold DPS switch for 2 seconds to go to the next setting.
2. Release DPS switch.
3. Repeat until desired setting is selected.

NOTE: The DPS adjustment will not be possible if the vehicle transmission is set to REVERSE.

Fuel Requirements

NOTICE Always use fresh gasoline. Gasoline will oxidize; the result is loss of octane, volatile compounds, and the production of gum and varnish deposits which can damage the fuel system.

Alcohol fuel blending varies by country and region. Your vehicle has been designed to operate using the recommended fuels, however, be aware of the following:

- Use of fuel containing alcohol above the percentage specified by government regulations is not recommended and can result in the following problems in the fuel system components:
  - Starting and operating difficulties.
  - Deterioration of rubber or plastic parts.
  - Corrosion of metal parts.
  - Damage to internal engine parts.
- Inspect frequently for the presence of fuel leaks or other fuel system abnormalities if you suspect the presence of alcohol in gasoline exceeds the current government regulations.
- Alcohol blended fuels attract and hold moisture which may lead to fuel phase separation and can result in engine performance problems or engine damage.

Recommended Fuel

Use common unleaded gasoline with an AKI (R+M)/2 octane rating of 87, or an RON octane rating of 92.

NOTICE Never experiment with other fuels. Engine or fuel system damages may occur with the use of an inadequate fuel.

Vehicle Fueling Procedure

⚠ WARNING

- Fuel is flammable and explosive under certain conditions.
- Never use an open flame to check fuel level.
- Never smoke or allow flame or spark in vicinity.
- Always work in a well-ventilated area.

1. Stop engine.

⚠ WARNING

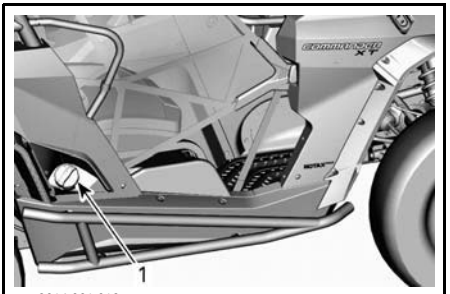
Always stop engine before refueling.

2. Have driver and passenger get out of vehicle.

⚠ WARNING

Do not allow anyone to remain in the vehicle while fueling. If there is a fire or explosion during fueling, a vehicle occupant could be unable to quickly leave the area.

3. Unscrew slowly the fuel reservoir cap counterclockwise to remove it.



1. Fuel reservoir cap

⚠ WARNING

If a differential pressure condition is noticed (whistling sound heard when loosening fuel reservoir cap) have vehicle inspected and/or repaired before further operation.

4. Insert the spout into the filler neck.
5. Pour fuel slowly so that air can escape from the tank and prevent fuel flow back. Be careful not to spill fuel.
6. Stop filling when the fuel reaches the bottom of filler neck. Do not overfill.

⚠ WARNING

Never top up the fuel tank before placing the vehicle in a warm area. As temperature increases, fuel expands and may overflow.

7. Fully tighten fuel reservoir cap clockwise.

⚠ WARNING

Always wipe off any fuel spillage from the vehicle.

Fueling a Gasoline Container

⚠ WARNING

- Use only an approved gasoline container to store fuel.
- Never fill the gasoline container in the vehicle cargo box or on-the vehicle - an electrical static discharge may ignite the fuel.

BREAK-IN PERIOD

Operation During Break-In

A break-in period of 300 km (200 mi) or 10 operating hours is required for the vehicle.

After the break-in period, the vehicle should be inspected by an authorized Can-Am dealer. Refer to *MAINTENANCE* section.

Engine

During the break-in period:

– Avoid full throttle operation.
– Avoid pressing accelerator pedal more than 3/4 of the stroke.
– Avoid sustained accelerations.
– Avoid prolonged cruising speeds.

However, brief accelerations and speed variations contribute to a good break-in.

Brakes

⚠ WARNING

New brakes will not operate at their maximum efficiency until their break-in is completed. Braking performance may be reduced, so use extra caution.

Drive Belt

A new drive belt requires a break in period of 50 km (30 mi).

During the break-in period:

– Avoid strong acceleration and deceleration.
– Avoid pulling a load.
– Avoid high speed cruising.

Starting the Engine

Insert key in ignition switch and turn to one of the ON position.

Press the brake pedal.

NOTE: If shift lever is not set to PARK (P), the brake pedal must be pressed to allow engine starting.

Press the engine start button and hold until the engine starts.

NOTE: Do not press the accelerator pedal. If the accelerator pedal is pressed at least 20%, the engine will not start.

Release the engine start button immediately when the engine has started.

NOTICE **If engine does not start after a few seconds, do not hold the engine start button more than 10 seconds. Refer to *TROUBLESHOOTING* section.**

Shifting the Transmission

Apply brakes and select the desired shift lever position.

Release brakes.

NOTICE **When changing gear selection, always completely stop the vehicle and apply the brakes prior to shifting.**

Stopping the Engine and Parking the Vehicle

⚠ WARNING

Avoid parking on steep slope as the vehicle may roll away.

⚠ WARNING

Always put the vehicle in PARK when stopped or parked to prevent rolling.

⚠ WARNING

Avoid parking in places where hot parts can start a fire.

When stopped or parked always bring shift lever to park position. This is especially important when parking on a slope. On very steep inclines or if the vehicle is carriyng a cargo, the wheels should be blocked using rocks or bricks.

Select the flattest terrain available for parking.

Release accelerator pedal and use brakes to completely stop the vehicle.

Set shift lever in PARK position.

Lock the shift lever using the shift locking key.

Turn key in ignition switch to OFF position.

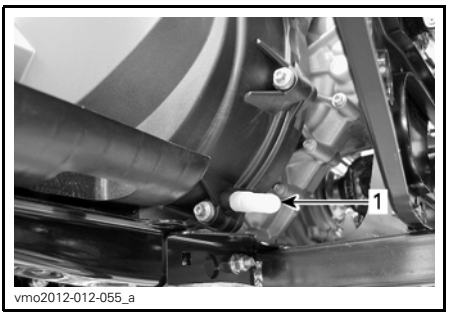
Remove key from ignition switch.

If you must park on a steep incline or if the vehicle is carrying cargo, block the wheels using rocks or bricks.

What to do if Water is Suspected to be in the CVT

If water is present in the CVT, the engine will accelerate but the vehicle will remain still.

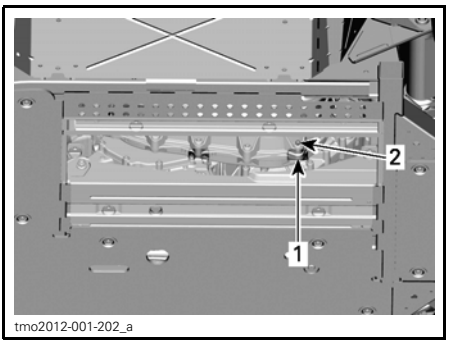
NOTICE Stop the engine and drain the water to avoid damage to the CVT.



1. CVT drain

CVT drain is accessible through access hole in skid plate under the LH side of the vehicle.

NOTE: You can remove the skid plate to facilitate the access.



ACCESS HOLE UNDER VEHICLE
1. Access hole in skid plate
2. CVT drain location

See an authorized Can-Am dealer to have the CVT inspected and cleaned.

What to do if Battery is Drained out

The vehicle can be jump started by using the red (+) cable to the battery positive pole and the black (-) cable to the vehicle chassis.

NOTICE Do not connect any electrical source to the steering column.

What to do if Vehicle Rolled Over

Abrupt maneuvers, sharp turns, side hilling or accident may cause vehicle to rollover.

Should the vehicle be rolled over, it will be necessary to have it transported to an authorized Can-Am dealer as soon as possible. NEVER START THE ENGINE!

What to do if Vehicle is Submerged

Should the vehicle become immersed, it will be necessary to have it transported to an authorized Can-Am dealer as soon as possible.

NOTICE Never start the engine as immersion of the vehicle can cause serious damage to the engine if the correct restart procedure is not followed.

TRANSPORTING THE VEHICLE

If your vehicle needs to be transported, it should be carried inside a full size pick-up box or on a flatbed trailer of the proper size and capacity.

NOTICE **Do not tow this vehicle — towing can seriously damage the vehicle's drive system.**

When contacting a towing or transporting service, be sure to ask if they have a flatbed trailer, loading ramp or power ramp to safely lift the vehicle and tie-down straps. Ensure the vehicle is properly transported as specified in this section.

NOTICE **Avoid using chains to tie the vehicle — they may damage the surface finish or plastic components.**

⚠ WARNING

If the vehicle is equipped with a windshield, transport it facing forward to avoid damaging the windshield.

To load the vehicle on a platform for transport, proceed as follow:

1. Shift the vehicle into NEUTRAL (N).
2. If the vehicle is equipped with a winch, use the winch to roll the vehicle on the platform.
3. If the vehicle is not equipped with a winch, proceed as follows:
   - 3.1 Put a strap around the lower arm of each front suspension.
   - 3.2 Attach the straps to the winch cable of the towing vehicle.
   - 3.3 Pull the vehicle on the flatbed trailer with the winch.
4. Remove the key from the ignition switch.
5. Strap the front tires by using tire towing straps.
6. Pass a tie-down strap inside each rear wheel.
7. Firmly attach the rear wheels tie-down straps to both sides of the rear of the trailer with ratchets.
8. Ensure that both the front and rear wheels are firmly attached to the trailer.

⚠ WARNING

Make sure no loose objects are present inside vehicle or in cargo box during vehicle transportation.

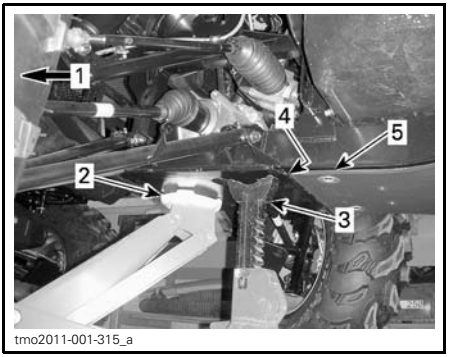
Front of Vehicle

Place vehicle on a flat non slippery ground.

Ensure vehicle shift lever is set to PARK.

Install an hydraulic jack under front skid plate.

Lift front of vehicle and install a jack stand on each side under frame section in front of the lip for center skid plate.



1. *Front of vehicle*
2. *Hydraulic jack*
3. *Jack stand*
4. *Lip for center skid plate*
5. *Center skid plate*

Lower hydraulic lift and ensure vehicle is supported safely onto both jack stands.

Rear of Vehicle

Place vehicle on a flat non slippery ground.

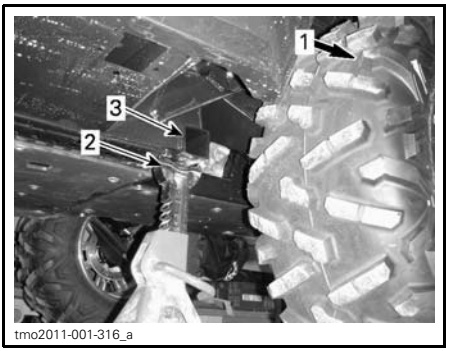
Activate 4WD mode.

Ensure vehicle shift lever is set to PARK.

Install an hydraulic jack under the trailer hitch.

1. *Hydraulic jack*
2. *Trailer hitch*

Lift rear of vehicle and install a jack stand on each side under frame section in front of rear wheel.



1. *Rear of vehicle*
2. *Jack stand*
3. *Frame section*

Lower hydraulic lift and ensure vehicle is supported safely onto both jack stands.

MAINTENANCE

BREAK-IN INSPECTION

This vehicle should be serviced after the first 10 hours or 300 km (200 mi) of operation, whichever comes first, by an authorized Can-Am dealer. The break-in inspection is very important and must not be neglected.

NOTE: The break-in inspection is at the expense of the vehicle owner.

Date of inspection

Authorized dealer signature

Dealer name

BREAK-IN INSPECTION CHART	INSPECT	CLEAN	LUBRICATE	TIGHTEN	ADJUST	REPLACE
ENGINE						
Engine oil and filter						X
Valve clearance	X				X	
Engine Air filter	X					
Engine seals	X					
Engine mounting fasteners	X					
Exhaust system	X					
COOLING SYSTEM						
Radiator/cooling system leak (leak test)	X	X				
FUEL SYSTEM						
Fuel lines, fuel rails, connections, check valves and fuel tank leak test	X					
ELECTRICAL SYSTEM						
Battery connections	X					
CVT TRANSMISSION						
CVT air inlet/outlet	X	X				
CVT air filter	X	X				
GEARBOX						
Gearbox oil						X
Vehicle speed sensor		X				
DRIVE SYSTEM						
Front differential/rear final drive oil						X
Front differential/rear final drive (seals and vents)	X					
Front and rear propeller shaft joints	X		X			
WHEEL						
Wheel nuts/studs	X			X		
Wheel bearings	X			X		
Wheel beadlock (XT-P model)				X		

BREAK-IN INSPECTION CHART	**INSPECT**	**CLEAN**	**LUBRICATE**	**TIGHTEN**	**ADJUST**	**REPLACE**
STEERING SYSTEM						
Steering system (column, bearing, etc.)	X					
Front wheel alignment	X					
BRAKES						
Brake fluid	X					
OCCUPANT RESTRAINT SYSTEM						
Seat belts	X					
Side nets	X				X	
BODY/CHASSIS						
Cage fasteners	X			X		
Upper and lower tailgates latches	X					
Seats latch	X					

MAINTENANCE SCHEDULE

Maintenance is very important for keeping your vehicle in safe operating condition. Proper maintenance is the owner's responsibility. The vehicle should be serviced as per the maintenance schedule.

The following message appears in the gauge after every 50 hours of operation, to remind you of maintenance requirements: MAINTENANCE SOON. To erase message, refer to *MULTIFUNCTION GAUGE (LCD)* or *MULTIFUNCTION GAUGE (ANALOG/DIGITAL)* subsections.

The maintenance schedule does not exempt the pre-ride inspection.

⚠ WARNING

Failure to properly maintain the vehicle according to the maintenance schedule and procedures can make it unsafe to operate.

EVERY 750 KM (500 MI) OR 25 HOURS OF OPERATION (WHICHEVER COMES FIRST)
Replace engine air filter (when riding in severe conditions)
Clean the CVT air inlet/outlet
Inspect and clean the CVT air filter
Inspect the brake pads
Tighten the wheel lug nuts
Inspect the drive shaft boots and protectors
Inspect passenger grab handles condition
Inspect hitch condition
Inspect driver and passenger seat latch operation
Inspect tailgates latch operation
Tighten cage fasteners

EVERY 1 500 KM (1,000 MI) OR 50 HOURS OF OPERATION (WHICHEVER COMES FIRST)
Replace the engine air filter (when riding in normal conditions)
Verify battery condition
Inspect the front differential/rear final drive oil level
Inspect the drive shaft joints condition
Inspect the front/rear propeller shaft joint condition
Grease the front/rear propeller shaft joints
Inspect the tie rod ends
Inspect shock absorbers for any leaks

EVERY 1 500 KM (1,000 MI) OR 50 HOURS OF OPERATION (WHICHEVER COMES FIRST)
Lubricate shock absorber spherical bearings (XT-P model)
Inspect and lubricate the front suspension arms
Inspect brake fluid level
Clean exhaust area

EVERY 3 000 KM (2,000 MI) OR 100 HOURS OF OPERATION OR 1 YEAR (WHICHEVER COMES FIRST)
Inspect and clean seat belts (check for any damages and proper operation)
Inspect and adjust side nets (check for any damages and they must buckle properly)
Replace the engine oil and filter
Inspect and adjust the valve clearance
Inspect and clean the muffler spark arrester
Check engine coolant strength
Inspect throttle body
Clean the fuel pump pre-filter
Inspect the fuel pump pressure
Replace fuel vent breather filter
Inspect the drive belt
Inspect, clean and lubricate the drive and driven pulleys (including the one-way bearing)
Inspect the gearbox oil level and condition
Inspect wheel bearings
Inspect the steering system (column, bearing, etc.)
Inspect and clean the brake system
Inspect frame for any damage
Replace rear final drive oil
Inspect centrifugal levers and rollers of drive pulley

EVERY 6 000 KM (4,000 MI) OR 200 HOURS OF OPERATION OR 2 YEARS (WHICHEVER COMES FIRST)
Replace the engine coolant
Verify the cooling system and proceed with a cooling system leak test and a pressure cap test
Verify the fuel system and perform a leak test
Replace spark plugs
Replace the front differential oil
Replace gearbox oil
Clean the vehicle speed sensor
Replace the brake fluid

This section includes instructions for basic maintenance procedures. If you have the necessary mechanical skills and the required tools, you can perform these procedures. If not, see your authorized Can-Am dealer.

Other important items in the maintenance schedule that are more difficult and require special tools are best performed by your authorized Can-Am dealer.

NOTE: Maintenance message can be removed by alternately pressing the override switch and brake pedal 3 times at power up.

⚠ WARNING

Unless otherwise indicated, always turn ignition switch to the OFF position before performing any maintenance and remove key.

⚠ WARNING

Should removal of a locking device be required (e.g. lock tab, self-locking fastener, etc.) , always replace it with a new one.

Engine Air Filter

NOTICE Never modify the air intake system. Otherwise, engine performance degradation or damage can occur. The engine is calibrated to operate specifically with these components.

Engine Air Filter Replacement Guideline

Engine air filter replacement frequency should be adjusted according to riding conditions as it is critical to ensure proper engine performance and life span.

Engine air filter replacement frequency must be increased for the following severe riding conditions:

– Riding on dry sand.
– Riding on dry dirt covered surfaces.
– Riding on dry gravel trails or similar conditions.
– Riding in areas with high concentration of seeds or crop husks.
– Riding in severe snow conditions.

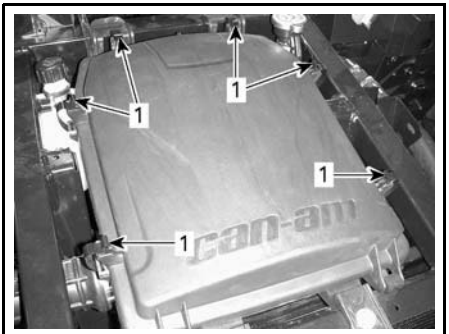
NOTE: Riding in a group under these conditions would increase even more the air filter replacement frequency.

Engine Air Filter Removal

1. Remove service cover.

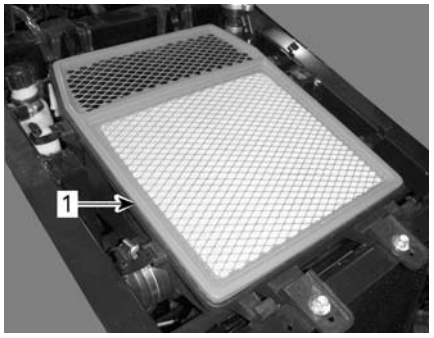
1. Service cover

2. Release clamps and remove the engine air filter housing cover.



1. Release clamps

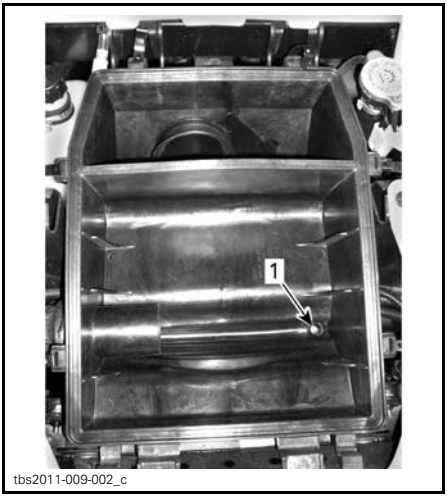
3. Remove engine air filter.



1. Engine air filter

Engine Air Filter Housing Cleaning

1. If there is water in the first air chamber, remove the drain plug, from underneath to expel water.

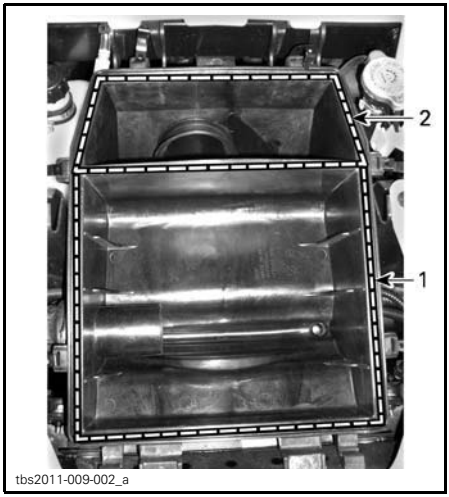


1. Drain hole

DRAIN PLUG ACCESS FROM LH SIDE OF VEHICLE

1. Remove drain plug to expel water

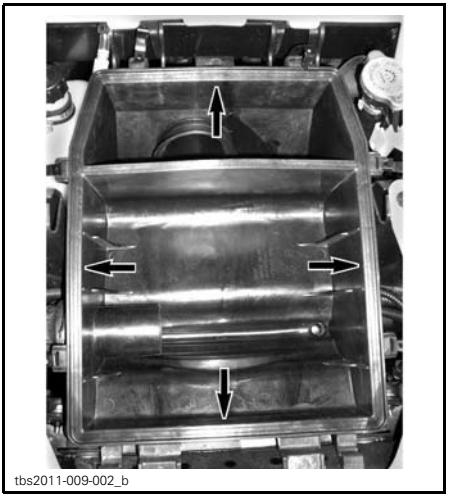
2. Clean both sections of the engine air filter housing with a vacuum cleaner.



1. First section
2. Second section (clean chamber)

Engine Air Filter Housing Inspection

Verify that the engine air filter housing edges to hold the filter are straight and not damaged or warped.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Engine Air Filter Cleaning

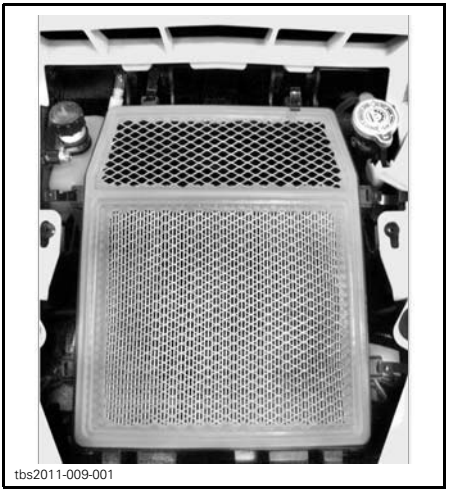
Clean engine air filter by tapping out heavy dust from paper element, this will allow dirt and dust to get out of the paper filter.

NOTICE It is not recommended to blow compressed air on the paper element; this could damage the paper fibers and reduce its filtration ability when used in dusty environments. If engine air filter is too dirty and cannot be cleaned following the recommended procedure, it should be replaced.

Engine Air Filter Installation

1. Install engine air filter.
2. Verify that engine air filter rubber seal has no gap with the engine air filter housing.

NOTICE If the fit is not good, dust may bypass the engine air filter.

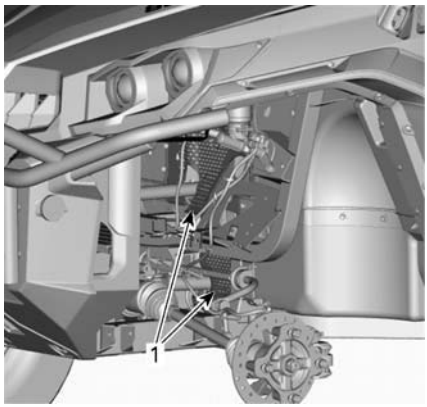

tbs2011-009-001

3. Verify that the cover fits well on the engine air filter housing before closing clamps.

tbs2011-009-003

Front Grill Kit

1. Remove debris from front grill kit.



FRONT OF VEHICLE - COMPONENTS REMOVED FOR CLARITY
1. Front grill kit

2. Clean front grill kit with water.

CVT Air Filter

CVT air filter inspection and cleaning frequency should be adjusted according to riding conditions as it is critical to ensure proper engine performance and life span.

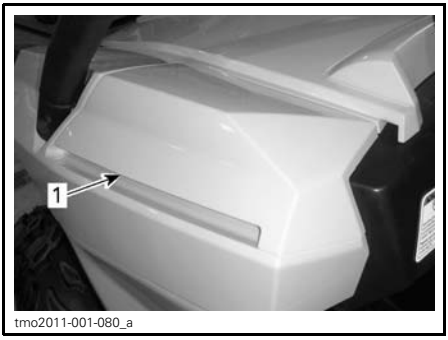
CVT Air filter inspection and cleaning frequency must be increased for the following severe riding conditions:

- Riding on dry sand.
- Riding on dry dirt covered surfaces.
- Riding on dry gravel trails or similar conditions.
- Riding in areas with high concentration of seeds or crop husks.
- Riding in severe snow conditions.

NOTE: Riding in a group in these conditions would increase even more the air filter replacement requirement.

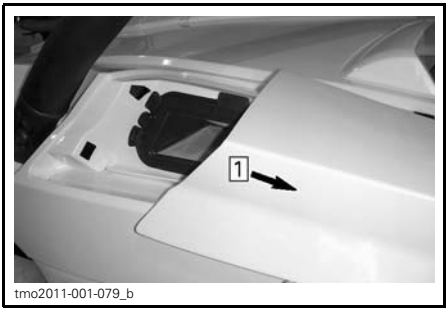
CVT Air Filter Removal

1. Remove CVT air filter plastic cover located on left hand side of hood near driver.



1. CVT air filter plastic cover

2. Slide the cover rearward.



Step 1: Slide rearward

3. Pull CVT air filter out.

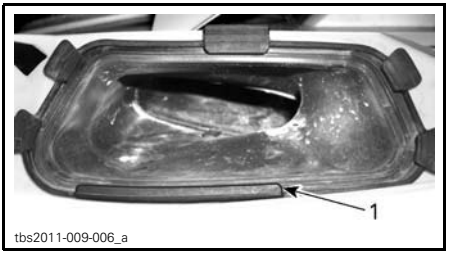
1. CVT air filter

CVT Air Filter Inspection and Cleaning

1. Inspect filter and replace if damaged.

1. CVT air filter

2. Clean filter, using soft soap and water, then water rinse.
3. Gently shake off excess water and allow filter to dry at room temperature.
4. Clean inside the CVT air inlet with a vacuum cleaner.



1. CVT air inlet

CVT Air Filter Installation

Reinstall CVT air filter and cover.

NOTE: Maintaining a clean CVT air filter will maximize air flow for an optimum CVT components lifespan.

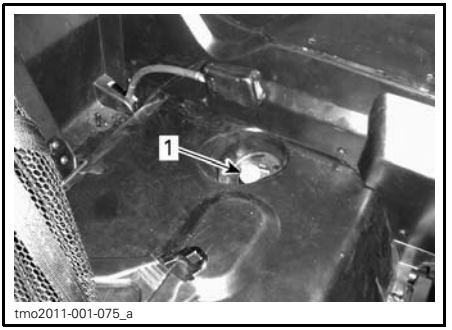
Engine Oil

Engine Oil Level Verification

NOTICE **Operating the engine with an improper level may severely damage engine.**

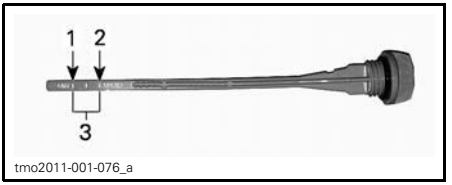
With vehicle on a level surface and engine cold, check the oil level as follows:

1. Remove passenger seat.
2. Unscrew dipstick then remove it and wipe clean.



1. Dipstick

3. Reinstall dipstick, screw in it completely.
4. Remove dipstick and check oil level. It should be near or equal to the upper mark.



TYPICAL
1. MIN
2. MAX
3. Operating range

To add oil, remove the dipstick. Place a funnel into the dipstick tube.

Add a small amount of recommended oil and recheck oil level.

Repeat the above procedures until oil level reaches the dipstick's upper mark.

NOTE: Do not overfill. Wipe off any spillage.

Properly tighten dipstick.

Install passenger seat.

Recommended Engine Oil

RECOMMENDED ENGINE OIL	
SEASON	TYPE
Summer	XPS 4-STROKE SYNTH. BLEND OIL (SUMMER) (P/N 293 600 121)
Winter	XPS 4-STROKE SYNTHETIC OIL (ALL CLIMATE) (P/N 293 600 112)

NOTE: The XPS oil is specially formulated to meet the lubrication requirements of this engine. BRP strongly recommends the use of its XPS 4-stroke oil.

NOTICE **Damages caused by the use of oil not suitable for this engine will not be covered by the BRP limited warranty.**

If XPS engine oil is not available, use a 4-stroke SAE 5W 40 engine oil that meets or exceeds the requirements for API service classification SM, SL or SJ. Always check the API service label certification on the oil container it must contain at least one of the above standards.

Engine Oil Change

Place vehicle on a level surface.

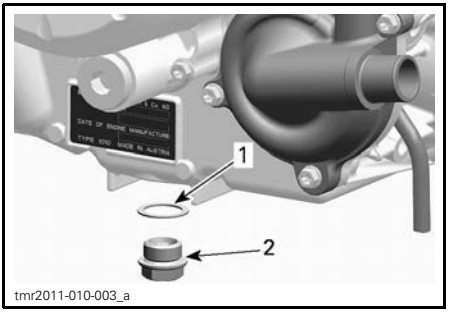
Oil change and oil filter replacement should be done with a warm engine.

⚠ **CAUTION** **The engine oil can be very hot. Wait until engine oil is warm.**

Place a drain pan under the engine drain plug area.

Clean the drain plug area.

Unscrew drain plug and discard the gasket ring.



1. Gasket ring
2. Drain plug

Remove dipstick.

Allow oil to drain completely from the crankcase.

Clean the magnetic drain plug from metal shavings and residue. Presence of debris gives an indication of internal engine damage.

Install a NEW gasket ring on the drain plug.

NOTICE **Never use the gasket ring a second time. Always replace by a new one.**

Install and tighten drain plug to the recommended torque.

TORQUE	
Drain plug	30 N•m ± 2 N•m (22 lbf•ft ± 1 lbf•ft)

Replace oil filter. Refer to *OIL FILTER* in this subsection.

Refill engine with recommended engine oil.

ENGINE OIL CAPACITY
2 L (2.1 qt (U.S. liq.))

Oil Filter

Oil Filter Access

Remove the passenger seat.

Remove the right hand side engine console panel.

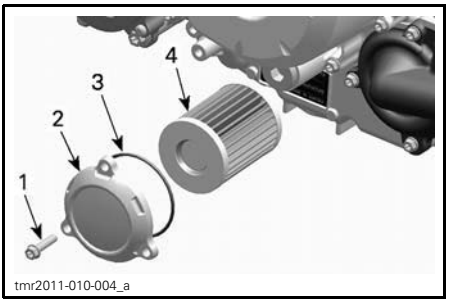
Oil Filter Removal

Clean oil filter area.

Remove oil filter cover screws.

Remove oil filter cover.

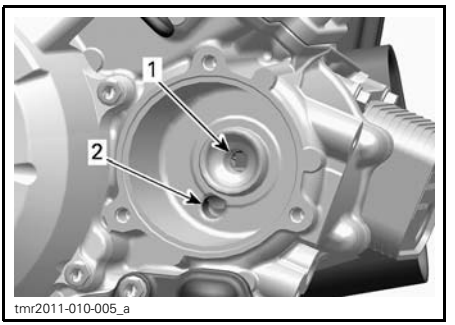
Remove oil filter.



1. *Oil filter screw*
2. *Oil filter cover*
3. *O-ring*
4. *Oil filter*

Oil Filter Installation

Check and clean the oil filter inlet and outlet area for dirt and other contaminations.

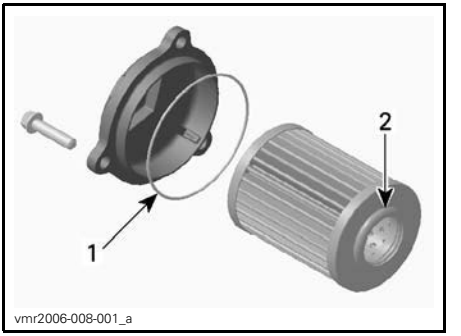


1. *Outlet to the engine oil providing system*
2. *Inlet from the oil pump to the oil filter*

Install a NEW O-ring on oil filter cover.

Install the filter into the cover.

Apply engine oil on O-ring and grease on the end of filter.



1. *Slightly oil*
2. *Slightly oil*

Install the cover on the engine.

Tighten oil filter cover screws to recommended torque.

TORQUE	
Oil filter cover screws	10 N•m ± 1 N•m (89 lbf•**in** ± 9 lbf•**in**)

Radiator

Radiator Inspection and Cleaning

Periodically check the radiator area for cleanliness.

1. *Radiator*

Inspect radiator and hoses for leaks or any damage.

Inspect radiating fins. They must be clean, free of mud, dirt, leaves and any other deposit that would prevent the radiator to cool properly.

If available, use a garden hose to rinse the radiating fins.

⚠ CAUTION Never clean radiator with your hands when it is hot. Let the radiator cool down before cleaning.

NOTICE Be careful not to damage the radiating fins when cleaning. Do not use any object/tool that could damage the fins. When hosing, use low pressure only. Never use a HIGH PRESSURE washer.

Engine Coolant

Engine Coolant Level Verification

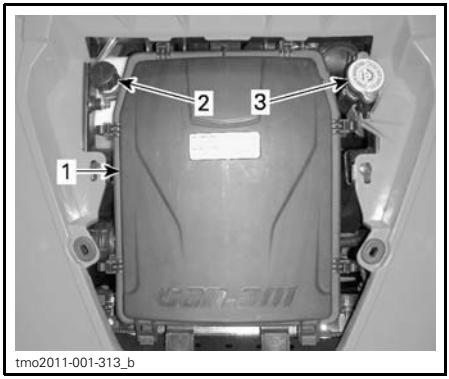
⚠ WARNING

Check coolant level with engine cold.

1. Place vehicle on a level surface.
2. Open service cover.
3. Remove the pressure cap.

⚠ WARNING

In order to avoid potential burns, do not remove the pressure cap if the engine is hot.



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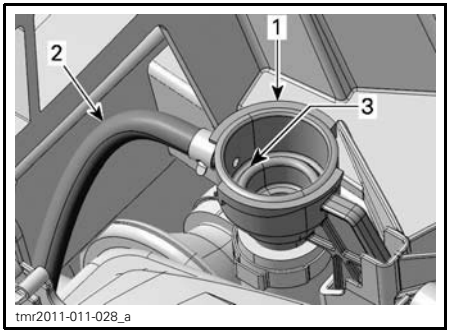
1. Engine air filter housing cover
2. Coolant expansion tank cap
3. Pressure cap

4. Ensure cooling system is full up to the pressure cap seat.



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1. Cooling system refill adapter
2. Expansion tank hose
3. Coolant system full level (pressure cap seat)

5. Add coolant in system as necessary.
6. Properly reinstall pressure cap on refill adapter.
7. Check coolant level in expansion tank.

NOTE: Coolant level can be checked by looking at the side of the coolant expansion tank under the RH front fender.

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COOLANT EXPANSION TANK
1. *MAX level*
2. *MIN level*
3. *Operating range*

8. Add coolant if level is below MIN mark. Use a funnel to avoid spillage. **Do not overfill.**
9. Properly reinstall coolant expansion tank cap.
10. Reinstall service cover.

NOTE: A cooling system that frequently requires addition of coolant is an indication of leaks or engine problems.

Recommended Engine Coolant

COOLANT	
BRP Recommended Product	BRP PREMIXED COOLANT (P/N 219 700 362)
Alternative, or if not available	Distilled water and antifreeze solution (50% distilled water, 50% antifreeze)

NOTICE **Always use ethylene-glycol antifreeze containing corrosion inhibitors specifically for internal combustion aluminum engines.**

Engine Coolant Replacement

Cooling System Draining

⚠ WARNING

In order to avoid potential burns, do not remove the pressure cap or loosen the coolant drain plug if the engine is hot.

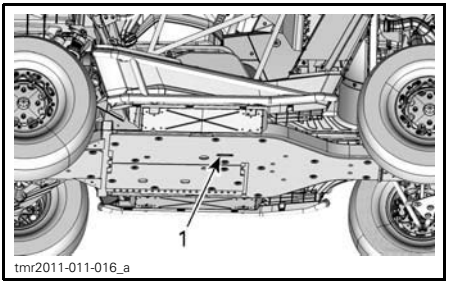
1. Remove service cover.
2. Remove the cooling system pressure cap.

tmo2011-001-313_a

1. Pressure cap

3. Unscrew coolant drain plug and drain the coolant into a suitable container.

NOTE: The drain plug is accessible from underneath the vehicle.



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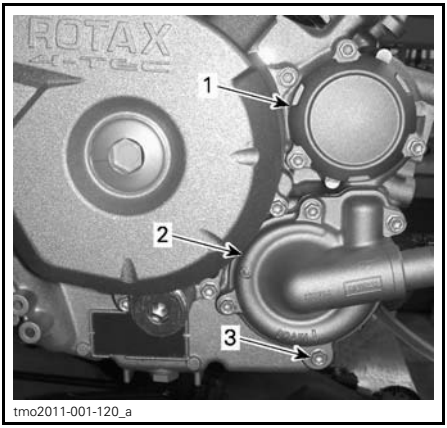
1. Cooling system drain plug access

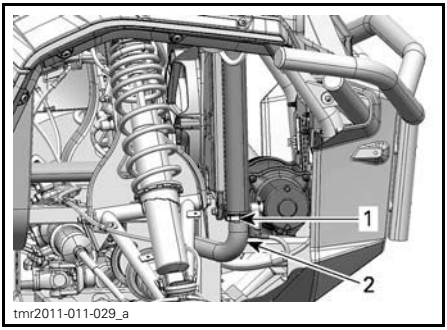
NOTE: Do not unscrew the coolant drain plug completely.



1. Oil filter cover
2. Water pump cover
3. Coolant drain plug

4. Disconnect the lower radiator hose and drain the remaining coolant into a suitable container.

NOTE: Take note of the position of the hose clamp on the lower radiator hose at the radiator.



1. Hose clamp position to note
2. Lower radiator hose to remove

5. Drain cooling system completely.
6. Reinstall cooling system drain plug.

TORQUE	
Cooling system drain plug	9 N•m to 11 N•m (80 lbf•**in** to 97 lbf•**in**)

7. Reinstall radiator hose as noted prior to removal.

TORQUE	
Radiator hose clamp	2.5 N•m to 3.5 N•m (22 lbf•**in** to 31 lbf•**in**)

8. Siphon the cooling system expansion tank.
9. Bleed cooling system, refer to *COOLING SYSTEM BLEEDING*.

Cooling System Bleeding

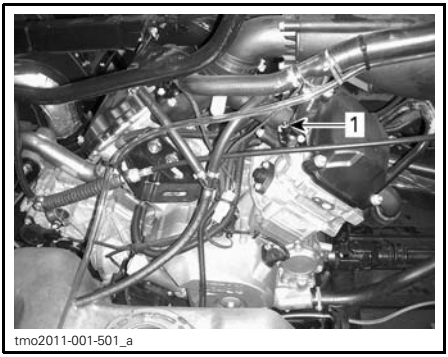
800R Models

1. Unscrew bleed screw on thermostat housing cover of front cylinder.

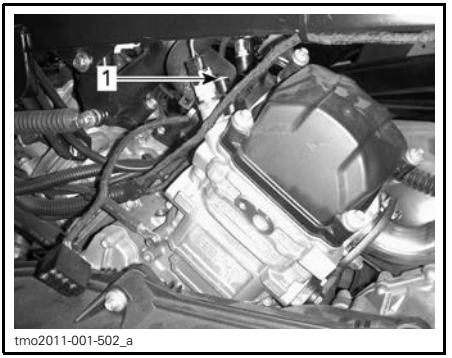
TYPICAL
1. Bleed screw

1000 Models

2. Unscrew bleed screws on thermostat housing covers of both front and rear cylinders.



1. Front cylinder bleed screw



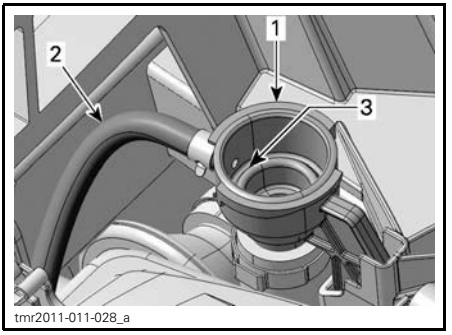
1. Rear cylinder bleed screw

All Models

3. Remove the pressure cap.
4. Fill the cooling system until coolant comes out of the bleed screw(s).
5. Install the bleed screw(s) using NEW gasket rings and torque as per following chart.

TORQUE	
Gasket ring	4.4 N•m to 5.6 N•m (39 lbf•**in** to 50 lbf•**in**)

6. Continue adding coolant until system is full up to the pressure cap seat in the refill adapter.

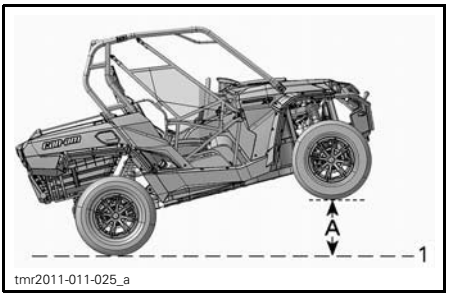


1. Cooling system refill adapter
2. Expansion tank hose
3. Coolant system full level (pressure cap seat)

7. Install pressure cap.

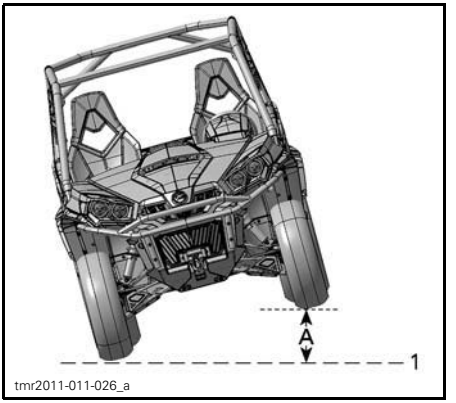
NOTICE The following steps must be carried out as specified to ensure proper cooling system bleeding in addition to the previous steps.

8. Lift the entire front end of the vehicle so the front tires are 60 cm (2 ft) above the ground for at least 1 minute.



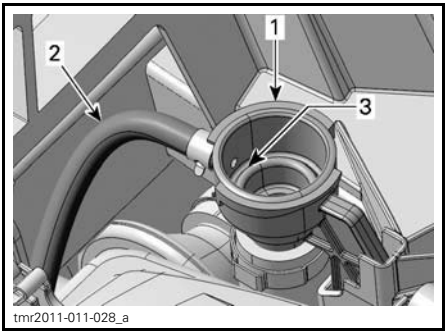
ENTIRE FRONT END LIFTED
1. Ground level
A. 60 cm (24 in)

9. Lower vehicle to the ground.
10. Remove pressure cap and add coolant as required.
11. Install pressure cap.
12. Lift driver's side of vehicle 60 cm (2 ft) above it's horizontal position for at least 1 minute.



DRIVER'S SIDE LIFTED
1. Ground level
A. 60 cm (24 in)

13. Lower vehicle to the ground.
14. Remove pressure cap and add coolant as required up to the pressure cap seat in the refill adapter.



tmr2011-011-028_a

1. Cooling system refill adapter
2. Expansion tank hose
3. Coolant system full level (pressure cap seat)

15. Install the pressure cap.
16. Check coolant level in the coolant expansion tank and fill to the MIN level (as required).
17. Run engine at idle with the pressure cap ON until the cooling fan cycles on for a second time.
18. Stop the engine and let it cool down.

⚠ WARNING

In order to avoid potential burns, do not remove the pressure cap if the engine is hot.

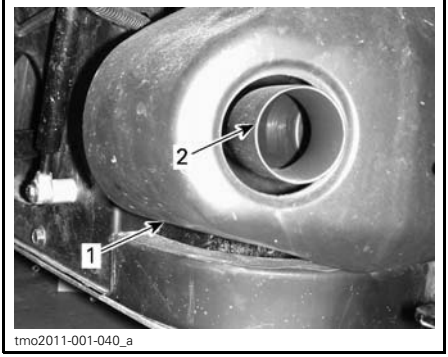
19. When the engine is cool, remove pressure cap and add coolant if required.
20. Install pressure cap.
21. Check coolant level in the expansion tank. Add coolant as required. Refer to *ENGINE COOLANT LEVEL VERIFICATION*.

Muffler Spark Arrester

Muffler Spark Arrester Cleaning and Inspection

⚠ CAUTION Never perform this operation immediately after the engine has been running as exhaust system is very hot.

Remove the muffler cover.



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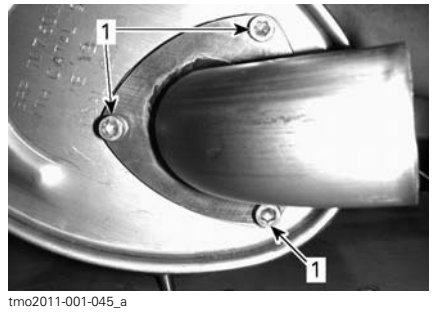
1. Muffler cover
2. Exhaust tail pipe

Remove and discard the tail pipe retaining screws.



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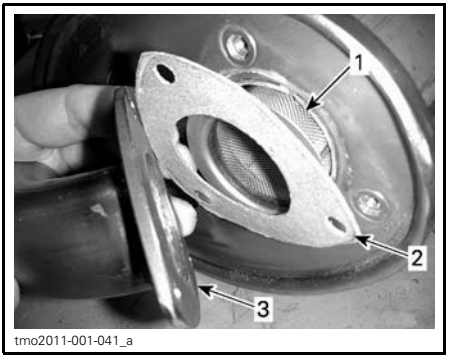
1. Retaining screws

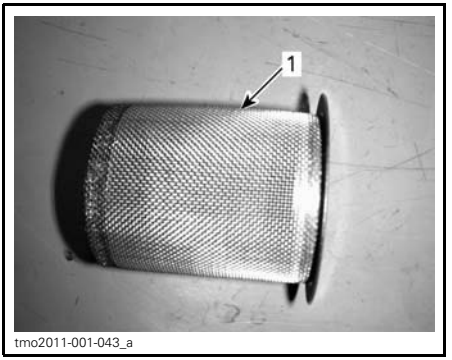
Remove exhaust tail pipe, gasket (discard) and spark arrester.



1. *Spark arrester*
2. *Gasket*
3. *Exhaust tail pipe*

Remove carbon deposits from the spark arrester using a brush.

NOTICE Use a soft brush and be careful to avoid damaging spark arrester mesh.



1. *Clean spark arrester*

Inspect mesh of spark arrester for any damage. Replace as required.

Inspect spark arrester chamber in muffler. Remove any debris as required.

Reinstall the muffler spark arrester in the reverse of the removal procedure. However pay attention to the following.

Install new gasket and retaining screws. Torque to specification.

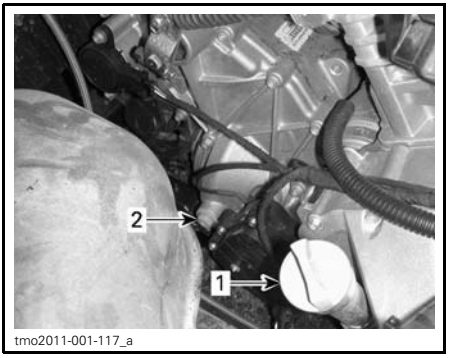
TORQUE	
Tailpipe retaining screw	11 N•m ± 1 N•m (97 lbf•**in** ± 9 lbf•**in**)

Gearbox Oil

Gearbox Oil Level Verification

Place the vehicle on a level surface. Select PARK position.

Check the gearbox oil level by removing the gearbox oil level plug.



1. *Engine oil dipstick*
2. *Gearbox oil level plug*

The oil should be level with the bottom of the oil level hole.

NOTICE Operating the gearbox with an improper oil level may severely damage gearbox.

Recommended Gearbox Oil

Use the following gearbox oil.

RECOMMENDED GEARBOX OIL
XPS synthetic gear oil (P/N 293 600 140)

NOTE: The XPS oil is specially formulated to meet the lubrication requirements of this gearbox. BRP strongly recommends the use of its XPS oil. However, if the XPS synthetic gear oil is not available, use the following lubricant:

GEARBOX OIL REQUIREMENT
75W 140 API GL-5 synthetic gear oil

NOTICE Do not use another type of oil when servicing.

Gearbox Oil Change

NOTE: When replacing the gearbox oil, it is recommended to clean the vehicle speed sensor (VSS) at the same time.

Place the vehicle on a level surface.

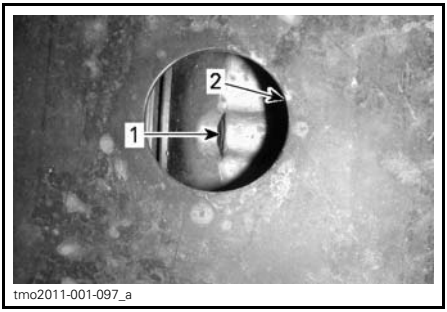
Clean drain plug area.

Clean the oil level plug area.

Under the vehicle, place a drain pan underneath the oil drain plug area.

Remove the oil level plug.

Remove the gearbox drain plug.



1. Oil drain plug
2. Skid plate opening

Let oil completely drain from gearbox.

Install the drain plug.

NOTE: Clean drain plug from any metallic particles prior to installation.

Refill gearbox.

NOTICE Use ONLY the recommended type of oil.

The oil should be level with the bottom of the oil level orifice.

NOTICE Do not overfill.

Reinstall oil level plug.

Wipe off any spillage.

Spark Plugs

Access to Spark Plugs

1. Remove both seats.
2. Remove upper console retaining screws and plastic rivets.
3. Slightly lift upper console to allow removal of lower console.
4. Remove lower console plastic rivets.
5. Pull lower console out of location.

Spark Plug Removal

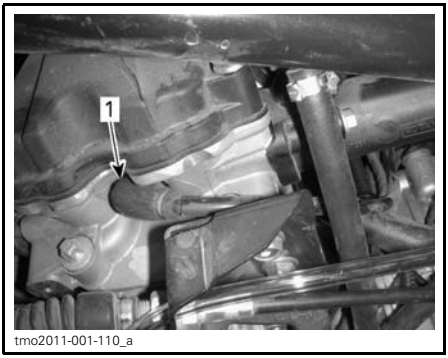
Unplug spark plug cable.

NOTE: Spark plug removal procedure is the same for both cylinders.

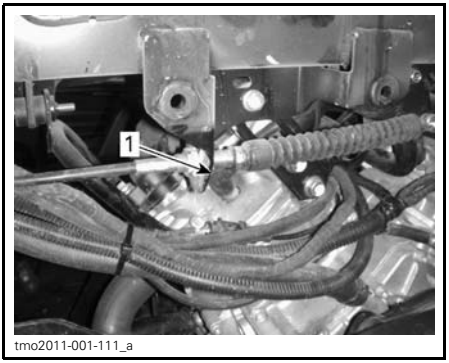
Clean spark plug and cylinder head with pressurized air.

⚠ CAUTION Always wear safety goggles when using pressurized air.

Unscrew spark plug completely then remove it.



RH SIDE — REAR CYLINDER
1. Spark plug



LH SIDE — FRONT CYLINDER
1. Spark plug

Spark Plug Installation

Prior to installation make sure that contact surface of cylinder head and spark plug is free of grime.

Using a feeler gauge, set the spark plug gap.

SPARK PLUG GAP
0.7 mm - 0.8 mm (.028 in - .031 in)

Apply a small amount of copper-based anti-seize lubricant over spark plug threads.

Screw spark plug into cylinder heads by hand and tighten with a torque wrench and a proper socket.

TORQUE	
Spark plug	20 N•m ± 2.4 N•m (15 lbf•ft ± 2 lbf•ft)

CVT Cover

NOTE: For a better understanding, some illustrations are taken with engine out of vehicle. To perform the following instructions, it is not necessary to remove engine.

This CVT is lubrication free. Never lubricate any components except drive pulley one-way clutch.

⚠ WARNING

Never touch CVT while engine is running. Never drive vehicle when CVT cover is removed.

⚠ WARNING

Engine must be cool before cover is removed. Always wear protective gloves when removing cover.

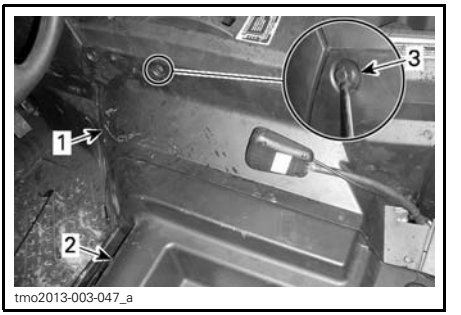
Place the vehicle on a level surface. Select PARK position.

CVT Cover Access

1. Remove LH seat.
2. Remove nine plastic rivets to remove LH lateral console panel.

NOTE: Use flat head screwdriver supplied in tool kit to remove plastic rivets.

3. Carefully pull out the panel.
4. Remove eight plastic rivets to remove under seat storage compartment.

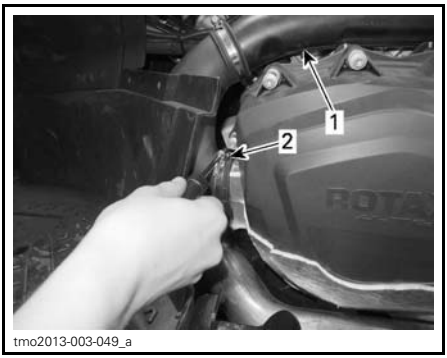


1. LH console panel
2. Under seat storage compartment
3. Plastic rivets

NOTE: This part will still be attached to the vehicle by the seat belt. Do not detach.

CVT Cover Removal

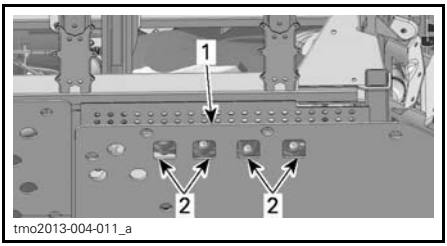
Loosen CVT outlet hose clamp.



1. CVT outlet hose
2. Clamp

Remove the thirteen CVT cover screws.

NOTE: The four CVT cover lower screws are accessible through the square holes in the central skid plate.

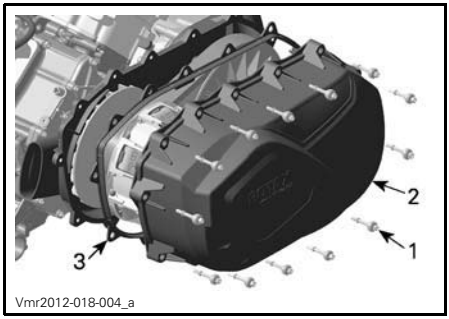


1. Central skid plate
2. Access holes

NOTE: Remove the center top screw last to support the cover during removal.

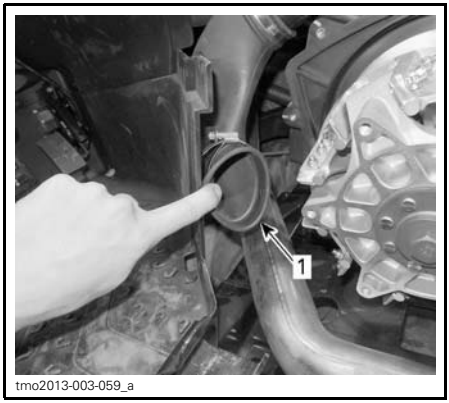
NOTE: Do not use and impact tool to remove CVT cover screws.

Remove the CVT cover and its gasket.



1. CVT cover lower screws
2. CVT cover screws
3. CVT cover

Check inside front and rear CVT outlet hose to make sure there are no debris.

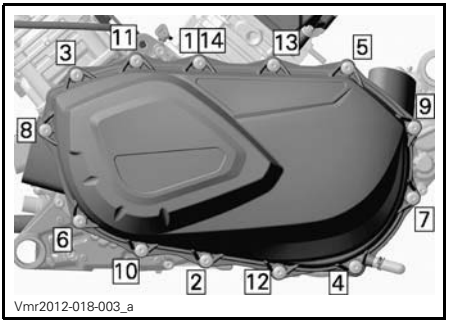


TYPICAL
1. Inside CVT outlet hose

CVT Cover Installation

Install the center top screw of first.

Tighten the CVT cover screws as per following sequence.



CVT COVER TIGHTENING SEQUENCE

CVT COVER SCREWS	
Tightening torque	7 N•m ± 0.8 N•m (62 lbf•**in** ± 7 lbf•**in**)

Drive Belt

Drive Belt Removal

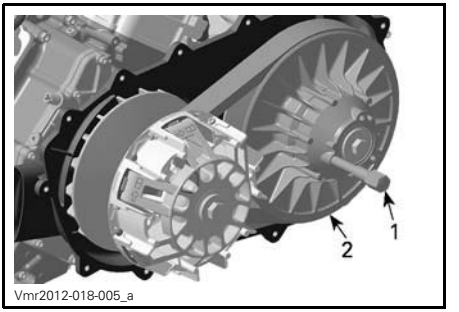
NOTICE In case of a drive belt failure, the CVT, cover and air outlet must be cleaned.

Remove *CVT COVER*.

Open driven pulley.

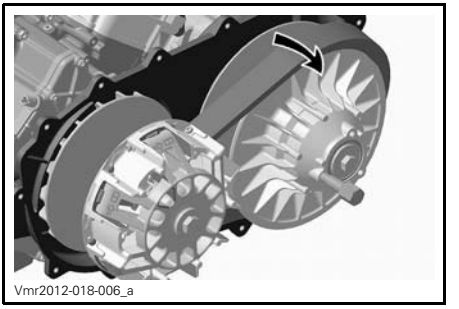
REQUIRED TOOL	
PULLER/LOCKING TOOL (P/N 529 036 098)	

Screw tool in the threaded hole of driven pulley and tighten to open the pulley.



TYPICAL
1. *Puller/locking tool*
2. *Fixed sheave of driven pulley*

To remove belt, slip the belt over the top edge of fixed sheave, as shown.



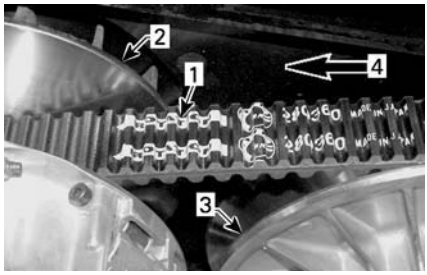
Drive Belt Inspection

For drive belt inspection refer to *DRIVE BELT INSPECTION* in the *PERIODIC MAINTENANCE PROCEDURES* subsection.

Drive Belt Installation

For installation, reverse the removal procedure. Pay attention to following details.

The maximum drive belt life span is obtained when the drive belt has the proper rotation direction. Install it so that the arrow printed on belt is pointing towards front of the vehicle, viewed from top.



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1. Arrow printed on belt
2. Drive pulley (front)
3. Driven pulley (rear)
4. Rotation direction

NOTE: Turn the driven pulley until the lowest portion of the cogs on the external surface of drive belt is even with the driven pulley edge.

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1. Lowest portion of cogs even with external surface of drive belt

Exhaust Area

Exhaust Area Access

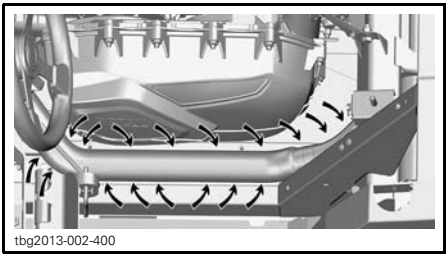
To access exhaust area, refer to *CVT COVER ACCESS* for removal of LH lateral console panel and underseat compartment on driver's side

Exhaust Area Cleaning

⚠ WARNING

Engine and exhaust must be cool before removing debris. Always wear protective gloves when removing debris.

1. Wearing gloves, hand remove all excess debris around exhaust.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2. Using a garden hose, thoroughly clean the area so that no more debris can be in contact with the exhaust.

Battery

Battery Maintenance

NOTICE Never charge a battery while installed in vehicle.

These vehicles are equipped with a VRLA battery (Valve Regulated Lead Acid). It is a maintenance-free type battery, there is no need to add water to adjust electrolyte level.

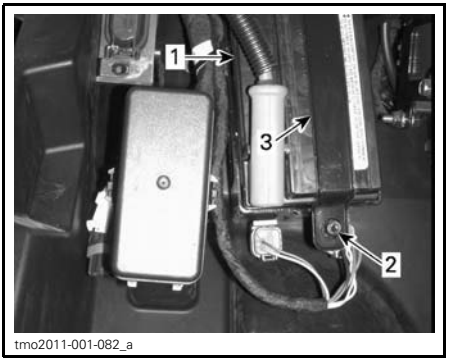
NOTICE Never remove the battery sealing cap.

Battery Removal

Disconnect BLACK (-) cable first then RED (+) cable.

NOTICE Always respect this order for disassembly; disconnect BLACK (-) cable first.

Remove battery holder retaining screw.



1. *Battery*
2. *Battery holder retaining screw*
3. *Battery holder*

Remove battery holder.

Remove battery.

Battery Cleaning

Clean battery, battery casing and battery posts using a solution of baking soda and water.

Remove corrosion from battery cable terminals and battery posts using a firm wire brush. Battery casing should be cleaned by soft brush and baking soda solution.

Battery Installation

Battery installation is the reverse of the removal procedure.

NOTICE Improper orientation of the battery cables (reverse polarity) will result in damage to the voltage regulator.

CAUTION Always connect RED (+) cable first then BLACK (-) cable.

Fuses

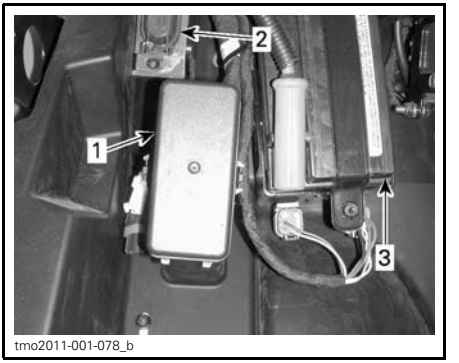
Fuse Replacement

If a fuse is burnt, replace it by one of the same rating.

NOTICE Do not use a higher rated fuse as this can cause severe damage.

Fuse Box Location

The vehicle is equipped with two fuse boxes. They are both located under the console on the driver's side next to the battery.



1. *Main fuse box*
2. *Auxiliary fuse box*
3. *Battery*

Fuse Box Description

AUXILIARY FUSE BOX		
NO	DESCRIPTION	RATING
F1	Main	40 A
F2	Accessories (main)	50 A
F3	DPS	50 A

MAIN FUSE BOX		
NO	DESCRIPTION	RATING
F4	Speedo/tail lamp	10 A
F5	Ignition/injection/speed sensor	7.5 A
F6	Engine control module (ECM)	5 A
F7	4WD actuator (winch if equipped)	5 A
F8	Key switch	5 A
F9	Fan	25 A
F10	European component	5 A
F11	Head lamp	30 A
F12	DC Outlet	15 A
F13	Relay driver	5 A
F14	Accessories	15 A
F15	Fuel pump	5 A

NOTE: Fuses are identified inside fuse box cover.

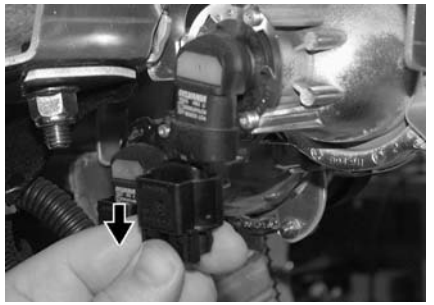
Lights

Always check light operation after replacement.

Headlight and Front Turn Signal Bulb Replacement

NOTICE Never touch glass portion of a halogen bulb with bare fingers, it shortens its operating life. If glass is touched, clean it with isopropyl alcohol which will not leave a film on the bulb.

Unplug connector from bulb.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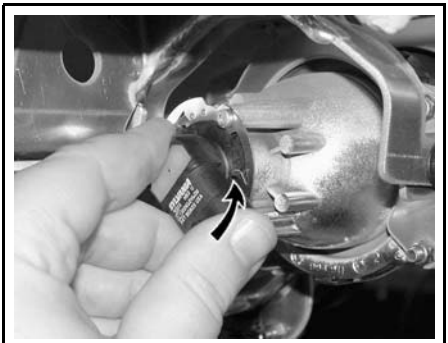
TYPICAL

Rotate bulb.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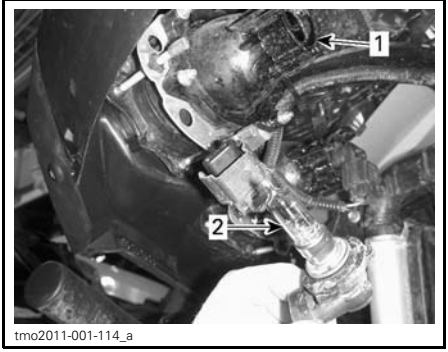
TYPICAL

Pull out bulb.



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1. *Light bulb socket*
2. *Light bulb*

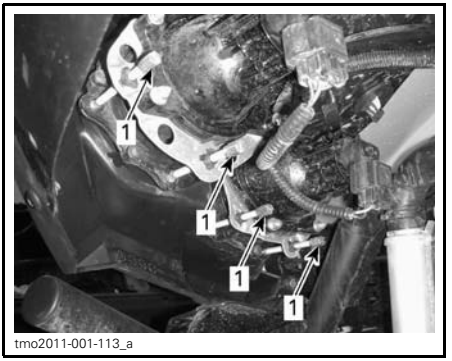
Properly reinstall removed parts in the reverse order of their removal.

Validate headlights operation.

Headlight Beam Aiming

Turn adjustment screws to adjust beam height to your convenience.

NOTE: Adjust headlights evenly.

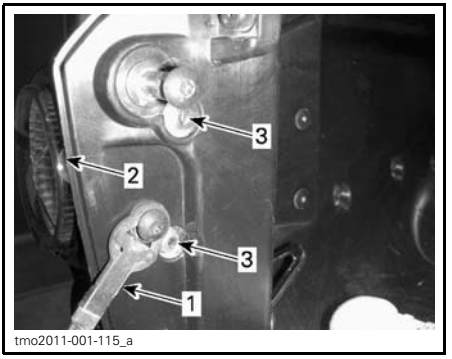


1. Adjustment screws

Taillight and Rear Turn Signal Bulbs Replacement

Open upper tailgate.

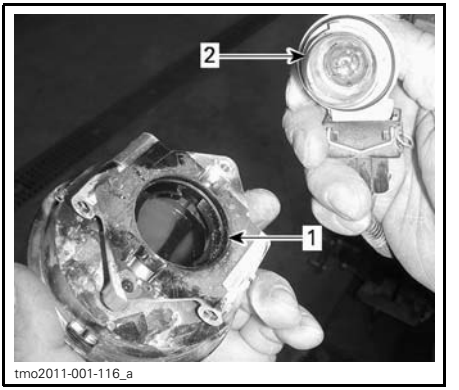
Remove both taillight retaining screws.



TYPICAL
1. Tailgate cable
2. Tail light
3. Retaining screws

Pull tail light out of its location.

Remove bulb socket from taillight.



1. Tail light
2. Light bulb and socket

Push the bulb in and hold while turning counterclockwise to release.

Installation is the reverse of the removal procedure.

Position Lights Bulbs Replacement

Pull bulb out.

Installation is the reverse of removal.

Drive Shaft Boot and Protector

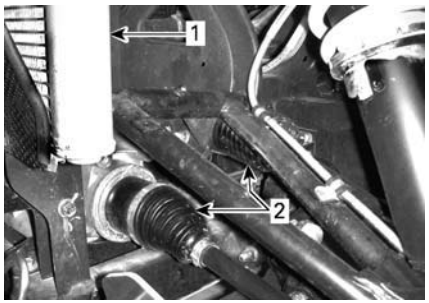
Drive Shaft Boot and Protector Inspection

Visually inspect drive shaft protectors and boots conditions.

Check protectors for damage or rubbing against shafts.

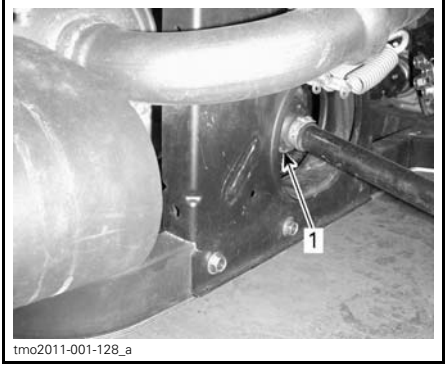
Check boots for cracks, tears, leaking grease, etc.

Repair or replace damaged parts as necessary.



FRONT OF VEHICLE
1. *Radiator*
2. *Inner drive shaft boots*

FRONT OF VEHICLE
1. *Outer drive shaft boot*



REAR OF VEHICLE
1. *Inner drive shaft boot*

REAR OF VEHICLE
1. *Outer drive shaft boot*

Wheel Bearing

Wheel Bearing Inspection

Lift and support vehicle. Refer to *LIFTING AND SUPPORTING THE VEHICLE* in *VEHICLE INFORMATION SECTION*.

Push and pull the wheels from the upper edge to feel the play.

See an authorized Can-Am dealer if there is any play.

TYPICAL

Wheels and Tires

Wheel Removal

Loosen nuts then lift and support vehicle. Refer to *LIFTING AND SUPPORTING VEHICLE* in *VEHICLE INFORMATION*.

Remove nuts then remove wheel.

Wheel Installation

At installation, it is recommended to apply anti-seize lubricant on threads.

The tires are unidirectional and their rotation must be kept in a specific direction for proper operation.

Torque wheel nuts in accordance with the following illustration.

TORQUE	
Wheel lug nuts	100 N•m ± 10 N•m (74 lbf•ft ± 7 lbf•ft)

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TIGHTENING SEQUENCE

NOTICE Always use the recommended wheel nuts for the type of wheel. Using a different nut could cause damages to the rim or studs.

Tire Pressure

⚠ WARNING

Tire pressure greatly affects vehicle handling and stability. Under pressure may cause tire to deflate and rotate on wheel. Overpressure may burst the tire. Always follow recommended pressure. NEVER set tire pressure below minimum. It could cause the tire to dislodge from the rim.

Check pressure when tires are **cold** before using the vehicle. Tire pressure changes with temperature and altitude. Recheck pressure if one of these conditions has changed.

For your convenience, a pressure gauge is supplied in tool kit.

TIRE PRESSURE		
	FRONT	REAR
MIN.	69 kPa (.7 bar)	83 kPa (.8 bar)
MAX. (Use when total load is greater than 180 kg (400 lb))	83 kPa (.8 bar)	152 kPa (1.5 bar)

NOTE: Although the tires are specifically designed for off-road use, a flat may still occur. Therefore, it is recommended to carry a tire pump and a repair kit.

Tire Inspection

Check tire for damage and wear. Replace if necessary.

⚠ WARNING

Do not rotate tires. The front and rear tires have a different size. The left and right tires have different unidirectional tread patterns.

Tire Replacement

Tires replacement should be performed by an authorized Can-Am dealer.

⚠ WARNING

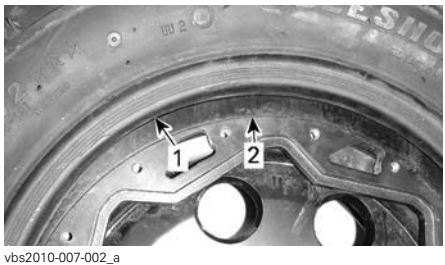
- Replace tires only with the same type and size as original tires.
- For unidirectional tread pattern, ensure that the tires are installed in the correct direction of rotation.
- Tires should be replaced, by an experienced person, in accordance with tire industry standards and tools.

Tire Mounting on Beadlock Wheels (XT-P Models Only)

1. Mount the tire on wheel.
   1.1 On the opposite side of beadlock, apply tire mounting lube on inner bead of tire and wheel to ensure proper seat when inflating. Mount the inner bead over the wheel like normal.

   NOTICE Mount tire from beadlock side only.

   1.2 Seat tire outer bead in the shoulder of the beadlock inner ring and center the tire.



TYPICAL
1. *Tire outer bead*
2. *Beadlock inner ring shoulder*

2. Place the beadlock clamp ring on the tire. Align the valve opening with valve.

TYPICAL
1. *Clamp ring valve opening*

3. Lubricate all beadlock screws with LOCTITE 767 (ANTISEIZE LUBRICANT) (P/N 293 800 070) or an equivalent product to prevent screws sticking.
4. Install all beadlock screws. To avoid cross threading, start all screws by hand.

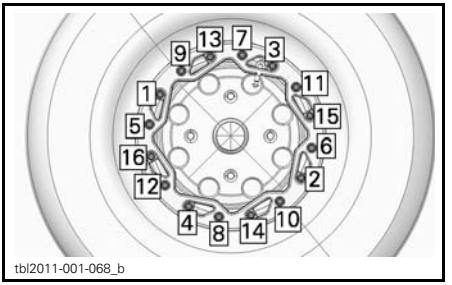
NOTICE Do not use an impact wrench for installing beadlock screws. The risk of screw breaking or screw stripping is high when using an impact wrench.

TYPICAL

5. Tighten beadlock screws as per following specification and sequence.

NOTE: To ensure even pressure on the beadlock clamp ring, tighten screws a few turns at a time.

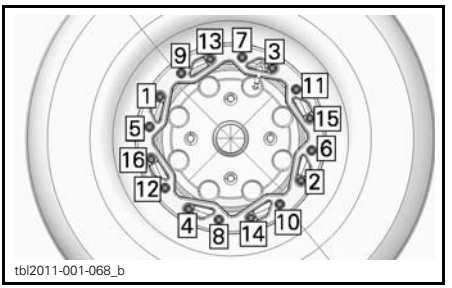
TIGHTENING TORQUE	
Beadlock screws (FIRST TORQUE)	3 N•m ± 1 N•m (27 lbf•**in** ± 9 lbf•**in**)



TIGHTENING SEQUENCE

6. At this time check if the tire is still centered on wheel. Reposition it if necessary.
7. Tighten beadlock screws as per the **second** torque using the same sequence.

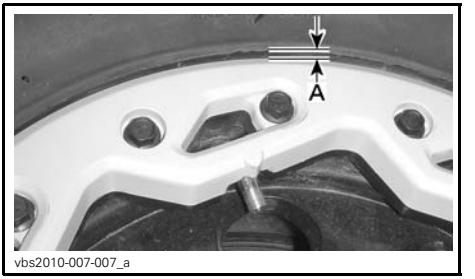
TIGHTENING TORQUE	
Beadlock screws (SECOND TORQUE)	8 N•m ± 1 N•m (71 lbf•**in** ± 9 lbf•**in**)



TIGHTENING SEQUENCE

NOTE: The beadlock clamp ring should be in contact with the beadlock inner ring. The beadlock clamp ring can flex slightly to match the tire bead. IT IS NORMAL.

8. Verify the gap between tire and beadlock clamp ring, it should be practically equal all around the ring.



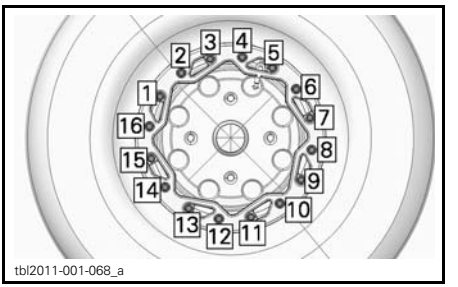
A. Gap equal all around beadlock clamp ring

If the gap is not acceptable,

– Loosen all screws.
– Check tire position on wheel and reposition it if necessary.
– Restart the torquing sequence as detailed.

9. Torque beadlock screws a **final** time following the indicated sequence.

TIGHTENING TORQUE	
Beadlock screws (FINAL TORQUE)	8 N•m ± 1 N•m (71 lbf•**in** ± 9 lbf•**in**)



FINAL TIGHTENING SEQUENCE

10. Inflate tire to seat the inner bead on wheel. Always use safe practices, such as a tire safety cage.

⚠ WARNING

Never exceed tire's recommended maximum pressure for seating beads.

Suspensions

Front Suspension Lubrication

Use SUSPENSION GREASE (P/N 293 550 033) or an equivalent.

Lubricate front A-arms.

There are three grease fittings on each A-arm oriented downwards.

TYPICAL - FRONT SUSPENSION
1. Grease fittings

Suspension Inspection

See an authorized Can-Am dealer if any problem is detected.

Shock Absorbers

Inspect shock absorber for leaks, bump stop wear out or other damages. Verify fasteners are still well tightened.

Front A-Arms

Check A-arms for cracks, bending or other damages.

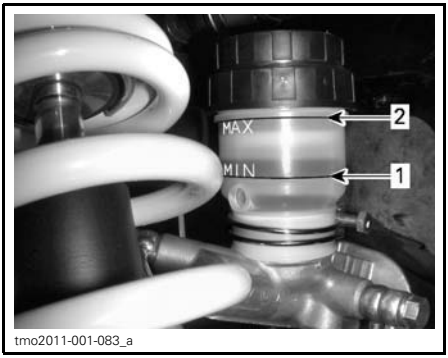
Rear Trailing Arms

Check trailing arms for distortion, cracks or bending.

Brakes

Brake Fluid Reservoir Level Verification

With vehicle on a level surface, check brake fluid in reservoir for proper level. Brake fluid level should be between MIN.and MAX. marks.



TYPICAL
1. MIN
2. MAX

NOTE: A low level may indicate leaks or worn brake pads.

Adding Brake Fluid

Clean filler cap before removing.

Add fluid as required. Do not overfill.

NOTE: Ensure filler cap diaphragm is pushed inside before to close the cap on brake fluid reservoir.

Recommended Brake Fluid

Always use brake fluid meeting the specification DOT 4 only.

⚠ WARNING

To avoid serious damage to the braking system, do not use fluids other than the recommended one, nor mix different fluids for topping up.

Brake Inspection

The brake inspection, maintenance and repair should be performed by an authorized Can-Am dealer.

However, verify the following between visits to your dealer:

- Brake fluid level
- Brake system for fluid leaks
- Brake cleanliness.

⚠ WARNING

The brake fluid replacement or brake system maintenance and repairs should be performed by an authorized Can-Am dealer.

Seat Belts

Seat Belt Cleaning

To clean dirt and debris from the seat belts, sponge the straps with mild soap and water. Do not use bleach, dye, or household detergents.

⚠ WARNING

Do not use pressure washer to clean seat belt components. Use of pressure washer can permanently damage seat belt components.

Post-Operation Care

When vehicle is used in salt-water environment rinsing the vehicle with fresh water is necessary to preserve vehicle and its components. Metallic parts lubrication is highly recommended. Use XPS LUBE (P/N 293 600 016) or an equivalent. This must be performed at the end of each operating day.

When vehicle is operated in muddy conditions, rinsing the vehicle is recommended to preserve vehicle and its components.

Vehicle Cleaning and Protection

Never use a high pressure washer to clean the vehicle. **USE LOW PRESSURE ONLY (like a garden hose).** High pressure can cause damage to electrical or mechanical components.

Pay attention to certain areas where mud or debris can accumulate and potentially cause wear, interferences or promote corrosion. The list includes but is not limited to:

- Around exhaust system and between muffler and muffler cover
- Under and around the fuel tank
- Radiator
- Shock absorbers
- Around front and rear differentials
- Around and underneath engine and gearbox
- Inside wheels
- On top of skid plates.

Painted parts which are damaged should be properly repainted to prevent rust.

When required, wash the body with warm water and soap (only use mild detergent). Apply non-abrasive wax.

NOTICE **Never clean plastic parts with strong detergent, degreasing agent, paint thinner, acetone, etc.**

STORAGE AND PRESEASON PREPARATION

When a vehicle is not in use for more than 4 months, proper storage is a necessity.

When using your vehicle after storage, a preparation is required.

See an authorized Can-Am dealer to have your vehicle prepared for either storage or the preseason.

TECHNICAL INFORMATION

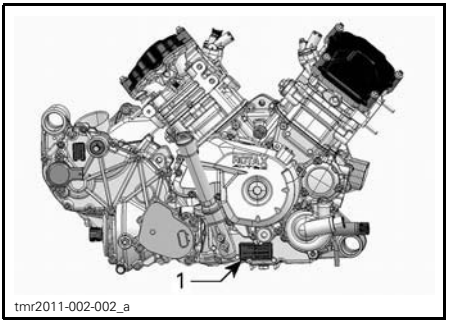
VEHICLE IDENTIFICATION

The main components of your vehicle (engine and frame) are identified by different serial numbers. It may sometimes become necessary to locate these numbers for warranty purposes or to trace your vehicle in the event of loss. These numbers are required by the authorized Can-Am dealer to complete warranty claims properly. No warranty will be allowed by BRP Inc. if the engine identification number (EIN) or vehicle identification number (VIN) is removed or mutilated in any way. We strongly recommend that you take note of all the serial numbers on your vehicle and supply them to your insurance company.

Vehicle Identification Number

TYPICAL — VEHICLE SERIAL NUMBER LABEL UNDER GLOVE BOX

Engine Identification Number



TYPICAL — ENGINE SERIAL NUMBER LABEL

1. EIN (Engine Identification Number)

SPECIFICATIONS

MODEL		800R	1000
ENGINE			
Engine type		ROTAX® 810	ROTAX® 1010
		4-stroke, Single Over Head Camshaft (SOHC), liquid cooled	
Number of cylinders		2	
Number of valves		8 valves (mechanical adjustment)	
Bore		91 mm (3.58 in)	91 mm (3.58 in)
Stroke		61.5 mm (2.42 in)	75 mm (2.95 in)
Displacement		799.9 cm^3 (48.81 in^3)	976 cm^3 (59.56 in^3)
Exhaust system		Spark arrestor approved by USDA Forest Service	
Engine air filter		Synthetic paper filter	
LUBRICATION SYSTEM			
Type		Wet sump. Replaceable oil filter	
Oil filter		BRP Rotax® paper type, replaceable	
Engine oil	Capacity (oil change with filter)	2 L (2.1 qt (U.S. liq.))	
	Recommended	For the summer season, use XPS 4-STROKE SYNTH. BLEND OIL (SUMMER) (P/N 293 600 121). For the winter season, use XPS 4-STROKE SYNTHETIC OIL (ALL CLIMATE) (P/N 293 600 112). If not not available, use a 5W 40 motor oil that meets the requirements for API service classification SM, SL or SJ	
COOLING SYSTEM			
Coolant	Type	Ethyl glycol/water mix (50% coolant, 50% water). Use premixed coolant sold by BRP (P/N 219 700 362) or coolant specifically designed for aluminum engines	
	Capacity	3.85 L (1.02 U.S. gal.)	4.25 L (1.12 U.S. gal.)
CVT TRANSMISSION			
Type		CVT (Continuously Variable Transmission)	
Engagement RPM		1800 RPM	
GEARBOX			
Type		Dual range (HI-LO) with PARK, neutral and reverse	
Gearbox oil	Capacity	450 ml (15 U.S. oz)	
	Recommended	XPS synthetic gear oil (P/N 293 600 140) or a 75W 140 API GL-5	

MODEL		800R	1000
ELECTRICAL SYSTEM			
Magneto generator output		625 W @ 6000 RPM	
Ignition system type		IDI (Inductive Discharge Ignition)	
Ignition timing		Not adjustable	
Spark plug	Quantity	2	
	Make and type	NGK DCPR8E	
	Gap	0.7 mm to 0.8 mm (.028 in to .031 in)	
Engine RPM limiter setting		8000 RPM	
Battery	Type	Dry battery type	
	Voltage	12 volts	
	Nominal rating	18 A•h	
	Power starter output	0.7 KW	
Headlights		4 x 60 W	
Taillight		2 x 5/21 W	
Turn signal light		2 x 10 W	
License plate light		2 x 5 W	
Position light		2 x 5 W	
Fuses	Main	40 A	
	Accessories (main)	50 A	
	DPS (if equipped)	50 A	
	Speedometer/tail lamp	10 A	
	Ignition/injection/ speed sensor	7.5 A	
	Engine control module (ECM)	5 A	
	4WD Actuator (winch if equipped)	5 A	
	Key switch	5 A	
	Fan (fuse breaker)	25 A	
	European component	5 A	
	Head lamp	30 A	
	DC outlet	15 A	
	Relay driver	5 A	
	Accessories	15 A	
	Fuel pump	5 A	

MODEL			800R	1000
FUEL SYSTEM				
Fuel delivery	Type		Electronic fuel injection (EFI) with iTC	
Throttle body			54 mm with ETA	
Fuel pump	Type		Electric (in fuel tank)	
Idle speed			1250 ± 100 RPM (not adjustable)	
Fuel	Type		Regular unleaded gasoline	
	Minimun octane		87 Pump Posted AKI (92 RON) - Refer to *FUEL REQUIREMENTS*	
Fuel tank capacity			37.8 L (10 U.S. gal.)	
Fuel remaining when low fuel light turns ON			± 12 L (3.2 U.S. gal.)	
DRIVE SYSTEM				
Drive system type			Selectable 2WD/4WD	
Front Differential oil/rear final drive oil	Capacity	Front	500 ml (17 U.S. oz)	
		Rear	280 ml (9.5 U.S. oz)	
	Type	Front	XPS Synthetic gear oil (75W 90 API GL-5) (P/N 293 600 043) or synthetic oil 75W 90 API GL5	
		Rear	XPS Synthetic gear oil (P/N 293 600 140) or a 75W 140 API GL-5 synthetic gear oil	
Front drive			Visco-lok† front differential	
Front drive ratio			3.6:1	
Rear drive			Spiral bevel gear/final drive	
Rear drive ratio			3.6:1	
CV joint grease			CV joint grease (P/N 293 550 019)	
Propeller shaft grease			Propeller shaft grease (P/N 293 550 063)	
STEERING				
Steering wheel			Adjustable tilt steering	
Turning radius			240 cm (94.5 in)	
Total toe (vehicle on ground)			0° ± 0.2° (±)	
Camber angle (vehicle on ground)			0.7° positive	

MODEL			800R	1000
FRONT SUSPENSION				
Suspension type		Base/XT	Double suspension-arm with dive-control geometry	
		XT-P	Double suspension-arm with dive-control geometry with external sway-bar	
Suspension travel			254 mm (10 in)	
Shock absorber	Qty		2	
	Type	Base	Oil / 5 spring preload settings	
		XT	Oil / 5 spring preload settings	
		XT-P	HPG shock with remote reservoir. Dual speed compression damping and rebound damping adjustments	
REAR SUSPENSION				
Suspension type			Torsional Trailing arm Independant (TTI) with external sway bar	
Suspension travel			254 mm (10 in)	
Shock absorber	Qty		2	
	Type	Base/XT	Oil / 5 spring preload settings	
		XT-P	HPG shock with remote reservoir. Dual speed compression damping and rebound damping adjustments	

MODEL			800R	1000
BRAKES				
Front brake	Type		Dual 214mm ventilated disc brakes with hydraulic twin-piston calipers	
Rear brake	Type		Single 214mm ventilated disc brake with hydraulic twin-piston caliper	
Brake fluid	Capacity		250 ml (8.5 U.S. oz)	
	Type		DOT 4	
Caliper			Floating	
Brake pad material	Front		Metallic	
	Rear		Metallic	
Minimum brake pad thickness			1 mm (.039 in)	
Minimum brake disc thickness	Front		4 mm (.157 in)	
	Rear		4 mm (.157 in)	
Maximum brake disc warpage			0.2 mm (.001 ft)	
TIRES				
Pressure	Front		Maximum: 83 kPa (12 PSI) Minimum: 69 kPa (10 PSI)	
	Rear		Maximum: 152 kPa (22 PSI) Minimum: 83 kPa (12 PSI)	
Minimum tire thread depth			3 mm (.118 in)	
Tire size	Front	Base/XT-P	27 x 9 x 12 (in)	
		XT	27 x 9 x 14 (in)	
	Rear	Base/XT-P	27 x 11 x 12 (in)	
		XT	27 x 11 x 14 (in)	

MODEL			800R	1000
WHEELS				
Type		Base	Steel	
		XT-P	Aluminum beadlock wheels	
		XT	Cast Aluminum	
Rim size	Front	Base	12 x 6 (in)	
		XT-P	12 x 6 (in)	
		XT	14 x 7 (in)	
	Rear	Base	12 x 8 (in)	
		XT-P	12 x 7.5 (in)	
		XT	14 x 8.5 (in)	
Wheel nuts torque			100 N•m ± 10 N•m (74 lbf•ft ± 7 lbf•ft)	
CHASSIS				
Cage type			50 mm (2 in) diameter, high strength steel, ROPS-approved cage	
DIMENSIONS				
Overall length			300.4 cm (118.3 in)	
Overall width			148.9 cm (58.6 in)	
Overall height			182.9 cm (72 in)	
Wheelbase			192.4 cm (75.7 in)	
Wheel track	Front		125.7 cm (49.5 in)	
	Rear		121.9 cm (48 in)	
Ground clearance			27.9 cm (11 in)	
LOADING CAPACITY AND WEIGHT				
Dry weight (models without accessories)			610 kg (1,344.8 lb)	635 kg (1,399.9 lb)
Weight distribution (front/rear)			44 / 56	
Cargo box capacity	Total		272 kg (600 lb)	
	Upper		181 kg (400 lb)	
	Lower		272 kg (600 lb)	
Total vehicle load allowed (including driver, passenger, all other loads and added accessories)			363 kg (800 lb)	
Gross vehicle weight rating			990 kg (2,183 lb)	
Towing capacity			270 kg (600 lb)	
Hitch support			50.8 mm (2 in) x 50.8 mm (2 in)	

TROUBLESHOOTING

TROUBLESHOOTING GUIDELINES

CVT BELT IS SLIPPING

1. Water has entered in the CVT.
   – *Refer to SPECIAL PROCEDURES subsection.*

E IS DISPLAYED ON TRANSMISSION POSITION DISPLAY

1. Shift lever is between 2 positions.
   – *Properly position the shift lever in the desired position.*
2. Shift lever is not properly adjusted.
   – *Contact an authorized Can-Am dealer.*
3. Electrical communication error.
   – *Contact an authorized Can-Am dealer.*

ENGINE DOES NOT TURN

1. Ignition switch is in the OFF position.
   – *Place switch to either ON position.*
2. Shift lever is not set on PARK or NEUTRAL.
   – *Set shift lever to either in PARK or in NEUTRAL or press the brake pedal.*
3. Burnt fuse.
   – *Check fuses.*
4. Weak battery or loose connections.
   – *Check charging system fuse.*
   – *Check fault message in cluster.*
   – *Check battery connections and terminals condition.*
   – *Have the battery checked by an authorized Can-Am dealer.*
5. Defective engine start button.
   – *Contact an authorized Can-Am dealer.*
6. Defective starter solenoid.
   – *Contact an authorized Can-Am dealer.*

ENGINE TURNS OVER BUT FAILS TO START

1. Flooded engine (spark plug wet when removed).
   – *(If the engine does not start and it is fuel-flooded, the drowned mode can be activated to prevent fuel injection and to cut ignition while cranking. Proceed as follows:*
   • Insert key in ignition switch and turn to either ON position.
   • Press completely and HOLD accelerator pedal.
   • Press the engine START button.
   The engine should be cranked for 10 seconds. Release engine START button.
   Release accelerator pedal and start/crank engine again to allow starting.
   If it does not work:
   • Remove the spark plugs (tools are supplied in tool kit). Refer to SPARK PLUGS in the MAINTENANCE PROCEDURES section.
   • Crank engine several times.
   • Install new spark plugs if possible or clean and dry spark plugs.
   • If engine does not start, see an authorized Can-Am dealer.

2. No fuel to the engine (spark plug dry when removed).
   – *Check fuel tank level.*
   – *Check fuel pump fuse.*
   – *Obstructed fuel pump pre-filter or fuel pump failure. See an authorized Can-Am dealer.*
3. Spark plug/ignition (no spark).
   – *Check ignition fuse.*
   – *Remove spark plug then reconnect to ignition coil.*
   – *Start engine with spark plug grounded to the engine away from spark plug hole. If no spark appears, replace spark plug.*
   – *If trouble persists, contact an authorized Can-Am dealer.*

ENGINE LACKS ACCELERATION OR POWER

1. Seat belt not buckled properly. Check cluster message.
   – *Buckle up seat belt.*
2. Fouled or damaged spark plug.
   – *Replace spark plugs.*
3. Engine air filter plugged or dirty.
   – *Check air filter and replace if necessary.*
   – *Check deposits in air filter housing.*
4. Water in CVT
   – *Drain water from CVT. Refer to SPECIAL PROCEDURES subsection.*
5. CVT dirty or worn-out.
   – *Contact an authorized Can-Am dealer.*
6. Lack of fuel.
   – *Dirty or clogged fuel pump pre-filter. See an authorized Can-Am dealer.*

ENGINE LACKS ACCELERATION OR POWER (cont'd)

7. Engine is in limp home mode.
   – *Check multifunction gauge display for messages.*
   – *Multifunction gauge CHECK ENGINE indicator lamp is on and display shows LIMP HOME, contact an authorized Can-Am dealer.*

ENGINE OVERHEATS

1. Low coolant level in cooling system.
   – *Check coolant level and refill. See MAINTENANCE PROCEDURES. See an authorized Can-Am dealer as soon as possible.*
2. Cooling fan is not working.
   – *Ensure cooling fan is not jammed and working properly.*
   – *Check fan fuse. See FUSES in the MAINTENANCE PROCEDURES subsection.*
3. Dirty radiators fins.
   – *Check and clean radiator fins. See MAINTENANCE PROCEDURES subsection.*

ENGINE MISFIRE

1. Fouled/damaged/worn spark plug.
   – *Replace spark plugs as required.*
2. Water in fuel.
   – *Drain fuel system and refill with fresh fuel.*

THE RPM INCREASES BUT THE VEHICLE DOES NOT MOVE

1. Water in the CVT.
   – *Drain water from CVT. See SPECIAL PROCEDURES subsection.*
2. CVT dirty or worn-out or belt failure.
   – *Contact an authorized Can-Am dealer.*

PARTIAL OR NO RESPONSE FROM THE ACCELERATOR PEDAL INPUTS (CHECK ENGINE IS ON AND PPS FAULT MESSAGE IS DISPLAYED).

1. Partial failure of the accelerator pedal sensors (PPS).
   – *Use the override switch to retrieve accelerator pedal normal operation. Contact an authorized Can-Am dealer.*
2. Total failure of the accelerator pedal sensors (PPS).
   – *Use the override switch to bypass the accelerator pedal in order to move vehicle. Contact an authorized Can-Am dealer.*

MESSAGES IN MULTIFUNCTION GAUGE

If an abnormal engine condition occurs, the following messages can be combined with a pilot lamp.

MESSAGE	DESCRIPTION
CHECK ENGINE	All active or previously activated faults that require attention. No engine limitation engaged.
LIMP HOME	Critical faults requiring diagnostic as soon as possible. An engine limitation is engaged and/or the engine behavior is modified.
ECM CRC ERROR	Error message from ECM.
TPS FAULT	Throttle body fault, generally followed by a Limp Home message.
BRAKE SWITCH FAULT	Brake signal fault.
ECM NOT RECOGNIZED	Message displayed when the gauge is unable to identify the ECM.
CHECK DPS (models with DPS)	Check engine pilot light on. Indicates that the DPS (Dynamic Power Steering) does not work properly. See an authorized Can-Am dealer.
DPS OVERHEAT (models with DPS)	Indicates that DPS module is lowering its assist level to protect itself against extreme temperature.
TRANSMISSION SIGNAL FAULT	Gearbox position sensor fault active. "E" is also displayed in the gear display.
PPS FAULT	When one or both sensor of the PPS is/are faulty, erratic or out of range or that the ratio between the two is incorrect, the message will be displayed and the check engine will be lit.
MANUAL LIMP HOME	When the PPS Limp Home is engaged, the message will be displayed.
FUEL SENDER RANGE PERFORMANCE	When the fuel sender resistor value is out of range the multifunction gauge (analog/digital) will detect it and display the message.
GEAR POSITION SENSOR FAULT	When the gear signal is erroneous the gauge will display the message.
USE LOW GEAR	When a slope is too steep for high gear, the message will be displayed. Change for low gear.

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WARRANTY

BRP INTERNATIONAL LIMITED WARRANTY: 2014 CAN-AM™ SSV

1) SCOPE OF THE LIMITED WARRANTY

Bombardier Recreational Products Inc. ("BRP")* warrants its 2014 Can-Am SSV sold by Can-Am SSV distributors or dealers authorized by BRP to distribute Can-Am SSVs ("Can-Am SSV Distributor/Dealer") outside of the fifty United States, Canada, member states of the European Economic Area (which is comprised of the states of the European Union plus Norway, Iceland and Liechtenstein) ("EEA"), member states of the Commonwealth of the Independent States (including Ukraine and Turkmenistan) ("CIS") and Turkey, from defects in material or workmanship for the period and under the conditions described below.

All genuine Can-Am SSV parts and accessories, installed by an authorized Can-Am SSV Distributor/Dealer at the time of delivery of the 2014 Can-Am SSV, carry the same warranty as that of the Can-Am SSV.

This limited warranty will become null and void if: (1) The SSV was used for racing or any other competitive activity, at any point, even by a previous owner; or (2) the SSV has been altered or modified in such a way so as to adversely affect its operation, performance or durability, or has been altered or modified to change its intended use.

2) LIMITATIONS OF LIABILITY

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY IS EXPRESSLY GIVEN AND ACCEPTED IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE EXPRESS WARRANTY. INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. SOME JURISDICTIONS DO NOT ALLOW FOR THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE, AS A RESULT, THEY MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH MAY VARY FROM COUNTRY TO COUNTRY. (FOR PRODUCTS PURCHASED IN AUSTRALIA SEE CLAUSE 4 BELOW).

Neither the Can-Am SSV Distributor/Dealer nor any other person has been authorized to make any affirmation, representation or warranty regarding the product, other than those contained in this limited warranty, and if made, shall not be enforceable against BRP.

BRP reserves the right to modify this warranty at any time, being understood that such modification will not alter the warranty conditions applicable to the products sold while this warranty is in effect.

3) EXCLUSIONS ARE NOT WARRANTED

The following are not warranted under this limited warranty under any circumstances:

- Normal wear and tear;
- Routine maintenance items, tune ups, adjustments (parts and labor);
- Damage caused by negligence or failure to provide proper maintenance and/or storage, as described in the Operator's Guide;

– Damage resulting from removal of parts, improper repairs, service, maintenance, modifications or use of parts not manufactured or approved by BRP or resulting from repairs done by a person that is not an authorized servicing Can-Am SSV Distributor/Dealer;
– Damage caused by abuse, abnormal use, neglect or operation of the product in a manner inconsistent with the recommended operation described in the Operator's Guide;
– Damage resulting from accident, submersion, fire, theft, vandalism or any act of God;
– Operation with fuels, oils or lubricants which are not suitable for use with the product (see the Operator's Guide);
– Damage resulting from rust, corrosion or exposure to the elements;
– Damage resulting from water or snow ingestion;
– Incidental or consequential damages, or damages of any kind including without limitation towing, transportation expenses, storage, telephone, rental, taxi, inconvenience, insurance coverage, loan payments, loss of time, loss of income or time missed for downtime experience due to service work.

4) WARRANTY COVERAGE PERIOD

This warranty will be in effect from (1) the date of delivery to the first retail consumer or (2) the date the product is first put into use, whichever occurs first and for a period of:

– SIX (6) CONSECUTIVE MONTHS for private use or commercial use.

The repair or replacement of parts or the performance of service under this warranty does not extend the life of this warranty beyond its original expiration date.

FOR PRODUCTS SOLD IN AUSTRALIA ONLY

Nothing in these Warranty terms and conditions should be taken to exclude, restrict or modify the application of any condition, warranty, guarantee, right or remedy conferred or implied under the Competition and Consumer Act 2010 (Cth), including the Australian Consumer Law or any other law, where to do so would contravene that law, or cause any part of these terms and conditions to be void. The benefits given to you under this limited warranty hereto are in addition to other rights and remedies that you have under Australian law.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

5) CONDITIONS TO HAVE WARRANTY COVERAGE

This warranty coverage is available **only** if **each** of the following conditions has been fulfilled:

– The 2014 Can-Am SSV must be purchased as new and unused by its first owner from a Can-Am SSV Distributor/Dealer authorized to distribute Can-Am SSVs in the country in which the sale occurred;
– The BRP specified pre-delivery inspection process must be completed and documented;

– The product must have undergone proper registration by an authorized Can-Am SSV Distributor/Dealer;
– The 2014 Can-Am SSV must be purchased in the country or union of countries in which the purchaser resides; and
– Routine maintenance outlined in the Operator's Guide must be timely performed in order to maintain warranty coverage. BRP reserves the right to make warranty coverage contingent upon proof of proper maintenance.

BRP will not honor this limited warranty to any private use owner or commercial use owner if one of the preceding conditions has not been met. Such limitations are necessary in order to allow BRP to preserve both the safety of its products, and also that of its consumers and the general public.

6) WHAT TO DO TO OBTAIN WARRANTY COVERAGE UNDER THIS WARRANTY

The customer must cease using the SSV upon the appearance of an anomaly. The customer must notify a servicing Can-Am SSV Distributor/Dealer within two (2) days of the appearance of a defect, and provide it with reasonable access to the product and reasonable opportunity to repair it. The customer must also present to the authorized Can-Am SSV Distributor/Dealer proof of purchase of the product and must sign the repair/work order prior to starting the repair in order to validate the warranty repair. All parts replaced under this limited warranty become the property of BRP.

Note that the notification period is subject to the applicable national or local legislation in customer's country.

7) WHAT BRP WILL DO

To the extent permitted by law, BRP's obligations under this warranty are limited to, at its sole discretion, repairing parts found defective under normal use, maintenance and service; or replacing such parts with new genuine Can-Am SSV parts without charge for parts and labour, at any authorized Can-Am SSV Distributor/Dealer during the warranty coverage period under the conditions described herein. BRP's responsibility is limited to making the required repairs or replacements of parts. No claim of breach of warranty shall be cause for cancellation or rescission of the sale of the Can-Am SSV to the owner. You may have other legal rights which may vary from country to country.

In the event that service is required outside of the country of original sale, the owner will bear responsibility for any additional charges due to local practices and conditions, such as, but not limited to, freight, insurance, taxes, license fees, import duties, and any and all other financial charges, including those levied by governments, states, territories and their respective agencies.

BRP reserves the right to improve or modify products from time to time without assuming any obligation to modify products previously manufactured.

8) TRANSFER

If the ownership of a product is transferred during the warranty coverage period, this limited warranty, subject to its terms and conditions, shall also be transferred and be valid for the remaining coverage period provided BRP or an authorized Can-Am SSV Distributor/Dealer receives a proof that the former owner agreed to the transfer of ownership, in addition to the coordinates of the new owner.

9) CONSUMER ASSISTANCE

1. In the event of a controversy or a dispute in connection with this limited warranty, BRP suggests that you try to resolve the issue at the Can-Am SSV Distributor/Dealer level. We recommend discussing the issue with the authorized Can-Am SSV Distributor/Dealer's service manager or owner.
2. If further assistance is required, the Can-Am SSV Distributor/Dealer service department should be contacted in order to resolve the matter.
3. If the matter still remains unresolved then contact BRP by writing to us at the address listed below.

For countries within Middle East, Africa, Turkey and Russia please contact our European office:

BRP EUROPE N.V.
Customer Assistance Center
Skaldenstraat 125
9042 Gent
Belgium
Tel.: + 32-9-218-26-00

For all other countries, please contact your local Can-Am SSV Distributor/Dealer (visit our website at www.brp.com for contact information), or contact our North America office at:

BOMBARDIER RECREATIONAL PRODUCTS INC.
Customer Assistance Center
75, J.-A. Bombardier Street
Sherbrooke, Québec J1L 1W3

Canada
Tel.: +1 819 566-3366

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BRP LIMITED WARRANTY FOR THE EUROPEAN ECONOMIC AREA, THE COMMONWEALTH OF THE INDEPENDANT STATES AND TURKEY: 2014 CAN-AM™ SSV

1) SCOPE OF THE LIMITED WARRANTY

Bombardier Recreational Products Inc. ("BRP")* warrants its 2014 Can-Am SSVs sold by Can-Am SSV distributors or dealers authorized by BRP to distribute Can-Am SSVs ("Can-Am SSV Distributor/Dealer").in member states of the European Economic Area (which is comprised of the member states of the European Union plus Norway, Iceland and Liechtenstein) ("EEA"), in member states of the Commonwealth of the Independent States (including Ukraine and Turkmenistan) ("CIS") and Turkey from defects in material or workmanship for the period and under the conditions described below.

All genuine Can-Am SSV parts and accessories, installed by an authorized Can-Am SSV Distributor/Dealer at the time of delivery of the 2014 Can-Am SSV, carry the same warranty as that of the SSV.

This limited warranty will become null and void if: (1) The SSV was used for racing or any other competitive activity, at any point, even by a previous owner; or (2) the SSV has been altered or modified in such a way so as to adversely affect its operation, performance or durability, or has been altered or modified to change its intended use.

2) LIMITATIONS OF LIABILITY

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY IS EXPRESSLY GIVEN AND ACCEPTED IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT THAT THEY CANNOT BE DISCLAIMED, THE IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE LIFE OF THE EXPRESS WARRANTY. INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM COVERAGE UNDER THIS WARRANTY. SOME JURISDICTIONS DO NOT ALLOW FOR THE DISCLAIMERS, LIMITATIONS AND EXCLUSIONS IDENTIFIED ABOVE, AS A RESULT, THEY MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH MAY VARY FROM COUNTRY TO COUNTRY.

Neither the Can-Am SSV Distributor/Dealer nor any other person has been authorized to make any affirmation, representation or warranty regarding the product, other than those contained in this limited warranty, and if made, shall not be enforceable against BRP.

BRP reserves the right to modify this warranty at any time, being understood that such modification will not alter the warranty conditions applicable to the products sold while this warranty is in effect.

3) EXCLUSIONS – ARE NOT WARRANTED

The following are not warranted under this limited warranty under any circumstances:

– Normal wear and tear;
– Routine maintenance items, tune ups, adjustments (parts and labor);

– Damage caused by negligence or failure to provide proper maintenance and/or storage, as described in the Operator's Guide;
– Damage resulting from removal of parts, improper repairs, service, maintenance, modifications or use of parts not manufactured or approved by BRP or resulting from repairs done by a person that is not an authorized servicing Can-Am SSV Distributor/Dealer;
– Damage caused by abuse, abnormal use, neglect or operation of the product in a manner inconsistent with the recommended operation described in the Operator's Guide;
– Damage resulting from accident, submersion, fire, snow or water ingestion, theft, vandalism or any act of God;
– Operation with fuels, oils or lubricants which are not suitable for use with the product (see the Operator's Guide);
– Damage resulting from rust, corrosion or exposure to the elements;
– Incidental or consequential damages, or damages of any kind including without limitation towing, transportation expenses, storage, telephone, rental, taxi, inconvenience, insurance coverage, loan payments, loss of time, loss of income or time missed for downtime experience due to service work.

4) WARRANTY COVERAGE PERIOD

This warranty will be in effect from (1) the date of delivery to the first retail consumer or (2) the date the product is first put into use, whichever occurs first and for a period of:

– TWENTY-FOUR (24) CONSECUTIVE MONTHS for private use.
– SIX (6) CONSECUTIVE MONTHS for commercial use or rental use.

The product is used commercially when it is used in connection with any work or employment that generates income during any part of the warranty period. The product is also used commercially when, at any point during the warranty period, it is licensed for commercial use.

The repair or replacement of parts or the performance of service under this warranty does not extend the life of this warranty beyond its original expiration date.

Note that the duration and any other modalities of the warranty coverage are subject to the applicable national or local legislation in your country.

5) CONDITIONS TO HAVE WARRANTY COVERAGE

This warranty coverage is available **only** if **each** of the following conditions has been fulfilled:

– The 2014 Can-Am SSV must be purchased as new and unused by its first owner from a Can-Am SSV Distributor/Dealer authorized to distribute Can-Am SSVs in the country in which the sale occurred;
– The BRP specified pre-delivery inspection process must be completed and documented;
– The product must have undergone proper registration by an authorized Can-Am SSV Distributor/Dealer;

– The 2014 Can-Am SSV must be purchased within the EEA by an EEA resident; and
– Routine maintenance outlined in the Operator's Guide must be timely performed in order to maintain warranty coverage. BRP reserves the right to make warranty coverage contingent upon proof of proper maintenance.

BRP will not honor this limited warranty to any private use owner or commercial use owner if one of the preceding conditions has not been met. Such limitations are necessary in order to allow BRP to preserve both the safety of its products, and also that of its consumers and the general public.

6) WHAT TO DO TO OBTAIN WARRANTY COVERAGE UNDER THIS WARRANTY

The customer must cease using the SSV upon the appearance of an anomaly. The customer must notify a servicing Can-Am SSV Distributor/Dealer within two (2) months of the appearance of a defect and provide it with reasonable access to the product and reasonable opportunity to repair it. The customer must also present to the authorized Can-Am SSV Distributor/Dealer, proof of purchase of the product and must sign the repair/work order prior to starting the repair in order to validate the warranty repair. All parts replaced under this limited warranty become the property of BRP.

Note that the notification period is subject to the applicable national or local legislation in your country.

7) WHAT BRP WILL DO

To the extent permitted by law, BRP's obligations under this warranty are limited to, at its sole discretion, repairing parts found defective under normal use, maintenance and service, or replacing such parts with new genuine Can-Am SSV parts without charge for parts and labor, at any authorized Can-Am SSV Distributor/Dealer during the warranty coverage period under the conditions described herein. BRP's responsibility is limited to making the required repairs or replacements of parts. No claim of breach of warranty shall be cause for cancellation or rescission of the sale of the Can-Am SSV to the owner. You may have other legal rights which may vary from country to country.

In the event that service is required outside of the EEA, the owner will bear responsibility for any additional charges due to local practices and conditions, such as, but not limited to, freight, insurance, taxes, license fees, import duties, and any and all other financial charges, including those levied by governments, states, territories and their respective agencies.

BRP reserves the right to improve or modify products from time to time without assuming any obligation to modify products previously manufactured.

8) TRANSFER

If the ownership of a product is transferred during the warranty coverage period, this warranty shall also be transferred and be valid for the remaining coverage period provided BRP or an authorized Can-Am SSV Distributor/Dealer receives a proof that the former owner agreed to the transfer of ownership, in addition to the co-ordinates of the new owner.

9) CONSUMER ASSISTANCE

1. In the event of a controversy or a dispute in connection with this limited warranty, BRP suggests that you try to resolve the issue at the Can-Am SSV Distributor/Dealer level. We recommend discussing the issue with the authorized Can-Am SSV Distributor/Dealer's service manager or owner.
2. If further assistance is required, the Can-Am SSV Distributor/Dealer service department should be contacted in order to resolve the matter.
3. If the matter still remains unresolved then contact BRP at the address listed below.

For countries within EEA, CIS or Turkey, except Scandinavian countries please contact our European office:

BRP EUROPE N.V.
Customer Assistance Center
Skaldenstraat 125
9042 Gent
Belgium
Tel.: + 32-9-218-26-00

For Scandinavian countries, please contact our Finland office:

BRP FINLAND OY
Service Department
Isoaavantie 7
FIN-96320 Rovaniemi
Finland
Tel.: + 358 16 3208 111

You can find your Can-Am Distributor/Dealer's coordinates on **www.brp.com**.

* In the EEA, products are distributed and serviced by BRP European Distribution S.A. and other affiliates or subsidiaries of BRP.

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ADDITIONAL TERMS AND CONDITIONS FOR FRANCE ONLY

The following terms and conditions are applicable to products sold in France only:

The seller shall deliver goods that are complying with the contract and shall be responsible for defects existing upon delivery. The seller shall also be responsible for defects resulting from packaging, assembling instructions or the installation when it is its responsibility per the contract or if accomplished under its responsibility. To be compliant with the contract, the good shall:

1. Be fit for normal use for goods similar thereto and, if applicable:
   - Correspond to the description provided by the seller and have the qualities presented to the buyer though sample or model;
   - Have the qualities that a buyer may legitimately expect considering the public declarations of the seller, the manufacturer of its representative, including in advertising or labeling; or
2. Have the characteristics mutually agreed upon as between the parties or be fit for the specific use intended by the buyer and brought to the attention of the seller and which accepted.

The action for failure to comply is prescribed after two years after delivery of the goods. The seller is responsible for the warranty for hidden defects of the goods sold if such hidden defects are rendering the good unfit for the intended use, or if they diminish its use in such a way that the buyer would not have acquired the good or would have given a lesser price, had he known. The action for such hidden defects shall be taken by the buyer within 2 years of the discovery of the defect.

CUSTOMER INFORMATION

PRIVACY INFORMATION

BRP wishes to inform you that your coordinates will be used for safety and warranty related purposes. Furthermore, BRP and its affiliates may use its customer list to distribute marketing and promotional information about BRP and related products.

To exercise your right to consult or correct your data, or to be removed from the addressee-list for direct marketing, please contact BRP.

BY E-MAIL: privacyofficer@brp.com

BY MAIL: BRP
Senior Legal Counsel-Privacy Officer
726 St-Joseph
Valcourt, Quebec
Canada,
J0E 2L0

CHANGE OF ADDRESS/OWNERSHIP

If your address has changed or if you are the new owner of the vehicle, be sure to notify BRP by either:

- Mailing one of the following card below;
- North America Only: calling at 715 848-4957 (USA) or 819 566-3366 (Canada);
- Notifying an authorized Can-Am dealer.

In case of change of ownership, please join a proof that the former owner agreed to the transfer.

Notifying BRP, even after the expiration of the limited warranty, is very important as it enables BRP to reach the vehicle owner if necessary, like when safety recalls are initiated. It is the owner's responsibility to notify BRP.

STOLEN UNITS: If your personal vehicle is stolen, you should notify BRP or an authorized Can-Am dealer. We will ask you to provide your name, address, phone number, the vehicle identification number and the date it was stolen.

In North America

BOMBARDIER RECREATIONAL
PRODUCTS INC.
Warranty Department
75 J.-A. Bombardier Street
Sherbrooke, QC J1L 1W3
Canada

In Other Countries in the World

BRP EUROPEAN DISTRIBUTION
Warranty Department
Chemin de Messidor 5-7
1006 Lausanne
Switzerland

In Scandinavian Countries

BRP FINLAND OY
Service Department
Isoaavantie 7
Fin-96320 Rovaniemi
Finland
Tel.: + 358 16 3208 111

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CHANGE OF ADDRESS ☐ CHANGE OF OWNERSHIP ☐

VEHICLE IDENTIFICATION NUMBER

Model Number | Vehicle Identification Number (V.I.N.)

OLD ADDRESS OR PREVIOUS OWNER:

NAME

NO. STREET APT

CITY STATE/PROVINCE ZIP/POSTAL CODE

COUNTRY TELEPHONE

NEW ADDRESS OR NEW OWNER:

NAME

NO. STREET APT

CITY STATE/PROVINCE ZIP/POSTAL CODE

COUNTRY TELEPHONE

E-MAIL ADDRESS

V00A2F

CHANGE OF ADDRESS ☐ CHANGE OF OWNERSHIP ☐

VEHICLE IDENTIFICATION NUMBER

Model Number | Vehicle Identification Number (V.I.N.)

OLD ADDRESS OR PREVIOUS OWNER:

NAME

NO. STREET APT

CITY STATE/PROVINCE ZIP/POSTAL CODE

COUNTRY TELEPHONE

NEW ADDRESS OR NEW OWNER:

NAME

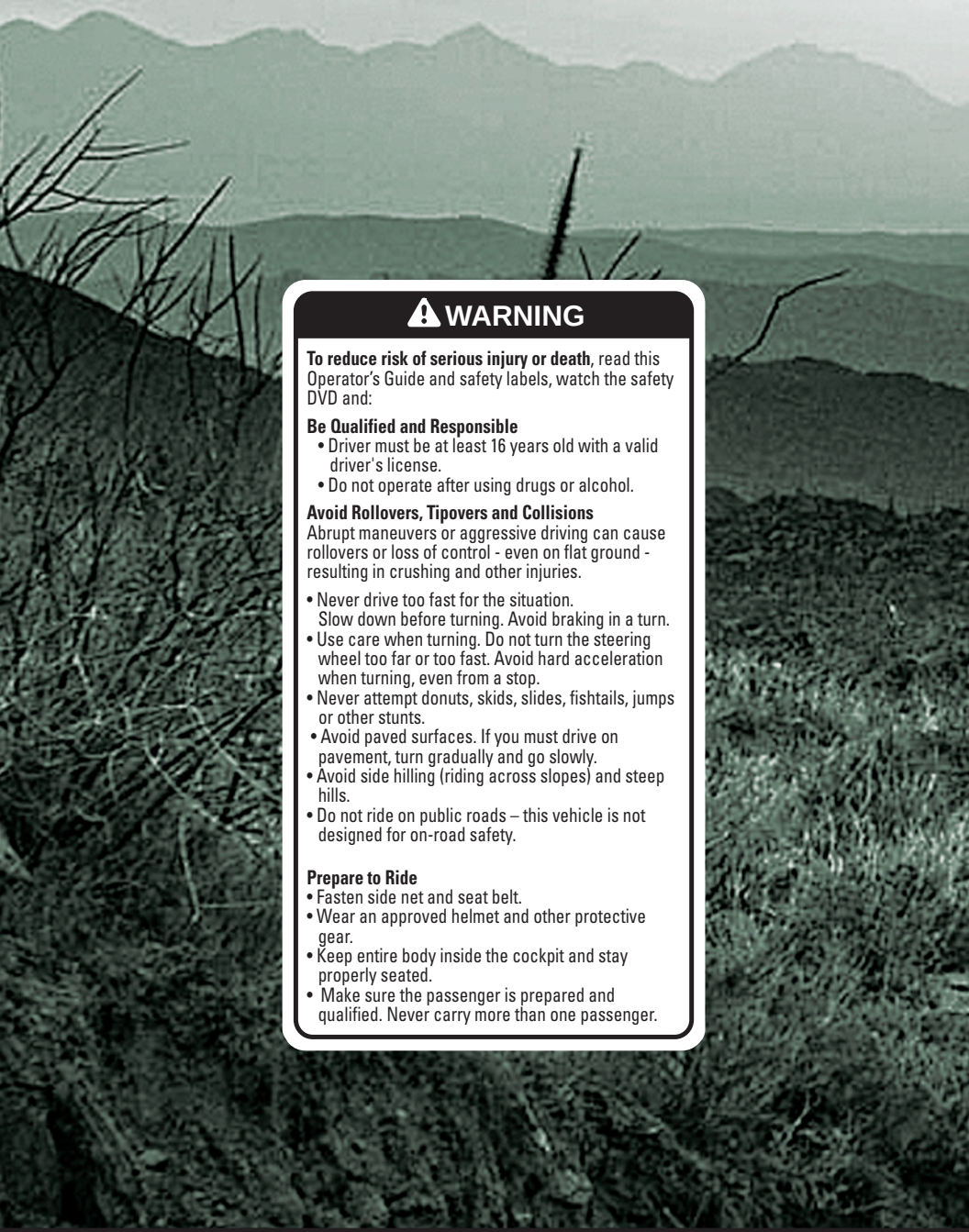
NO. STREET APT

CITY STATE/PROVINCE ZIP/POSTAL CODE

COUNTRY TELEPHONE

E-MAIL ADDRESS

V00A2F



⚠ WARNING

To reduce risk of serious injury or death, read this Operator's Guide and safety labels, watch the safety DVD and:

Be Qualified and Responsible

- Driver must be at least 16 years old with a valid driver's license.
- Do not operate after using drugs or alcohol.

Avoid Rollovers, Tipovers and Collisions

Abrupt maneuvers or aggressive driving can cause rollovers or loss of control - even on flat ground - resulting in crushing and other injuries.

- Never drive too fast for the situation. Slow down before turning. Avoid braking in a turn.
- Use care when turning. Do not turn the steering wheel too far or too fast. Avoid hard acceleration when turning, even from a stop.
- Never attempt donuts, skids, slides, fishtails, jumps or other stunts.
- Avoid paved surfaces. If you must drive on pavement, turn gradually and go slowly.
- Avoid side hilling (riding across slopes) and steep hills.
- Do not ride on public roads – this vehicle is not designed for on-road safety.

Prepare to Ride

- Fasten side net and seat belt.
- Wear an approved helmet and other protective gear.
- Keep entire body inside the cockpit and stay properly seated.
- Make sure the passenger is prepared and qualified. Never carry more than one passenger.

219 001 147 CA

OPERATOR'S GUIDE COMMANDER 800R, 1000 / ENGLISH
GUIDE DU CONDUCTEUR COMMANDER 800R, 1000 / ANGLAIS

FAIT AU / MADE IN CANADA U/M:P.C.

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CE

SEE THE NEW 2014 ACCESSORIES
INSIDE, FOR MAVERICK, MAVERICK MAX & MORE!

2014 RIDING GEAR, ACCESSORIES & GENUINE PARTS

can-am | BRP

WE PUT TOGETHER A CREW OF RIDERS LIKE YOU. T
TO PUT OUR 2014 RIDING GEAR AND ACCESSORIES

RYAN ORR
Is a pro racer living in Pinon Hills, California. He's most at home on powerful machines.

CAMILLE JOHNSON
Grew up on dirt bikes and is a fearless entrepreneur from Kanab, Utah.

SHELDON HONEY
Loved pushing his engine to the limit – and sometimes beyond. He manages a grocery store in Kanab, Utah.

JEREM
Is also fro
a busines
photograp

JARED BURTON
Law Marshall, Rodeo Professional, Horseshoer
Parowan, Utah, USA

BRAD RISING
Custom House Builder
Mesquite, Nevada, USA

BRITTANY BURG
Race Support Administrator
Fort Worth, Texas, USA

HAYZE H
Future Car
Kanab, Ut

DALTON PLATT
Event and Logistics Specialist, BRP Test Rider
Melbourne, Florida, USA

CODY HAWKINS
Event and Logistics Manager, Watercraft Pro Racer
Melbourne, Florida, USA

VÉRONIQUE CARON
Accessories Buyer and Planner
Valcourt, Quebec, Canada

FRANCIS
Project En
Valcourt, C

HEN WE TURNED THEM LOOSE
THROUGH THEIR PACES.

MY HOUSTON
om Kanab, Utah, where he owns
s. He's always camoed up, especially
phing wildlife, his passion.

THE CAN-AM CREW
tries the NEW and INNOVATIVE 2014 Maverick and Commander accessories.

HONEY & KYERON PIERSON
n-Am owners
ah, USA

WATCH

our crew experience the Can-Am Riding Gear and SSV accessories:
store.can-am.brp.com/video

"LET'S GO!"

S CLOUTIER
gineer, Can-Am off-road Accessories
Quebec, Canada

STORE.CAN-AM.BRP.COM

ONLINE STORE
for Parts, Accessories
and Riding Gear

Check out
the complete
CREW STORIES

XPS

Get your OILS
and LUBRICANTS
online

Sign up for Can-Am
off-road eNews and get
FREE SHIPPING the next
time you buy online

Valid with order of
$150 or more.

2014 Riding Gear, Accessories and Genuine Parts

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PERFORMANCE 4
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RECREATIONAL 14
WINTER 18
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102 SSV ACCESSORIES

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144 OILS & MAINTENANCE

Learn more at a glance

Look for these icons throughout the catalog to learn more about key products:

NEW
New item for 2014.

INNOVATION
An item BRP pioneered that takes your ride to the next level.

DID YOU KNOW
An interesting tidbit about an item beyond the product description.

WATCH
Check out the complete stories on store.can-am.brp.com/video

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RIDING GEAR

DESIGNED FOR RIDING + STYLE

PERFORMANCE P. 4

ADVENTURE P. 10

RECREATIONAL P. 14

WINTER P. 18

PERFORMANCE

HIGH PERFORMANCE DESIGN

Features and fit for high energy, race-style riding.

BREATHABLE JERSEYS

Sweat-wicking and evaporating fabrics, as well as mesh areas, keep you dry when working hard. Anti-bacterial properties prevent odors.

TOUGH PANTS

Rugged fabrics, along with special features like triple-stitched seams and leather patches, protect and last over the long haul.

MEN'S X-RACE JERSEY

- Ultralight, quick-dry, antibacterial, moisture-wicking fabric.
- Mesh fabric for maximum breathability.
- Extended back for coverage while riding.
- Non-fading sublimated graphics.

100% Polyester

286397
S, M, L, XL, 2XL, 3XL
White (01), Yellow (10), Purple (40)

$49.99

YELLOW (10) WHITE (01) PURPLE (40) BACK

MEN'S X-RACE PANTS

- Lightweight and extremely breathable pants for riders seeking peak performance, toughness and a competitive edge.
- Overall water-repelling Teflon† treatment.
- Debossed fullgrain leather inner knee for heat and abrasion resistance.
- Non-fading sublimated graphics.
- Stretch panel at crotch, knee, side waist, upper back and lower back leg for ease of movement.
- Rubberized elastic waist to hold jersey in place.
- Ratchet-style waist closure for better adjustment.
- Straight hem at leg opening for more comfort inside boots.
- 3/4 length mesh lining.

Polyester, Leather

286413 • 30, 32, 34, 36, 38, 40
White (01), Yellow (10)

$159.99

YELLOW (10) WHITE (01)

Professional racers wear a pit windbreaker jacket between races or while riding in colder conditions.

MEN'S PIT WINDBREAKER JACKET

- Lightweight, windproof half-zip jacket.
- Rear vent panel for breathability.
- Kangaroo front pocket.
- Packable hood into collar.
- Adjustable hem.
- Jacket can be folded into hood for easy traveling.
- Pre-shaped sleeves.
- Non-fading sublimated graphics.
- Reflective Can-Am logo.

100% Polyester

286411
XS, S, M, L, XL, 2XL, 3XL
Gray (09),
Hi-Vis Yellow (26)

$79.99

HI-VIS YELLOW (26) GRAY (09)

JACKET CAN BE FOLDED INTO HOOD FOR EASY TRAVELING

WHITE (01)

YELLOW (10)

BLACK (90)

N

SHORT SLEEVE TEAM JERSEY

- Quick-dry, antibacterial and moisture-wicking fabric.
- Large mesh panels on side seams and underarm for maximum breathability.
- Extended back for coverage while riding.
- Non-fading sublimated graphics.

100% Polyester

286406
S, M, L, XL, 2XL, 3XL
White (01), Yellow (10), Black (90)

$42.99

WHITE (01)

YELLOW (10)

WARM GRAY (15)

N

MEN'S TEAM JERSEY

- Evaporative, non-fading coconut fiber weaved into fabric for faster-drying, antibacterial and odor-resistant performance.
- Extended back for coverage while riding.
- Non-fading sublimated graphics.

75% Polyester,
25% Coconut Fiber

286392
S, M, L, XL, 2XL, 3XL
White (01), Yellow (10), Warm Gray (15)

$44.99

WHITE (01) YELLOW (10) BLACK (90)

N

MEN'S TEAM PANTS

- Lightweight, breathable and waterproof polyester shell.
- Overall water-repelling Teflon† treatment.
- Critical seams sealed.
- Zipper at bottom of legs to facilitate exit and entry.
- 2 cargo pockets at side legs.
- Elastic at side waist for adjustment, plus belt loops.
- Water-resistant stretch panel at crotch.
- Jacket-to-pants connector.
- Rubberized elastic waist.
- Non-fading sublimated graphics on length of the leg.
- Pre-shaped legs.
- 3/4 length mesh lining.

70% Polyester, 30% Nylon

286395 • 28, 30, 32, 34, 36, 38, 40, 42, 44
White (01), Yellow (10), Black (90)

$119.99

SAND (03)

BLUE (80)

BLACK (90)

LADIES' TEAM JERSEY

- Semi-fitted cut specifically designed for ladies.
- Stretch, quick-dry, antibacterial, moisture-wicking fabric.
- Sleeves with jacquard pattern fabric for extra ventilation.
- Small cuff.
- Non-fading sublimated graphics.

94% Polyester, 6% Spandex

286244 • XS, S, M, L, XL, 2XL
Sand (03), Blue (80), Black (90)

$44.99

LADIES' TEAM PANTS

- High-tech feminine design fit for female riders.
- Lightweight, durable and breathable waterproof nylon shell.
- Overall water-repelling Teflon† treatment.
- Critical seams sealed.
- Side leg zipper ventilation.
- Left zippered hip pocket.
- Shaped knees with expandable contrasting gussets.
- Velcro† side waist adjustment for custom fit.
- Double and triple stitched construction for added toughness.
- Reinforced binding hem with zipper to facilitate exit and entry.
- Water-resistant stretch panel at crotch and upper back.
- Jacket-to-pants connector.
- 3/4 length mesh lining.

Nylon

286234
3/4, 5/6, 7/8, 9/10, 11/12, 13/14
Black (90)

$119.99

can-am

TEEN RACE JERSEY

- Quick-dry, antibacterial, moisture-wicking fabric.
- Extended back for riding position.
- Sublimated print.

100% Polyester

286202 • 7/8, 10/12, 14/16 • Yellow (10)

$39.99

KIDS' TEE

- Cartoon print at front.

100% Cotton

286366 • 2, 3-4, 5-6 • Red (30)

$21.99

N

CAN-AM JUNIOR TRAIL GOGGLES

- Custom painted frame and strap graphics.
- No Fog™ anti-fog lens treatment.
- 100% UV protected clear Lexan† lens.
- Multi-layer face foam.
- Durable anti-slip strap.
- Can-Am branded.

447898 • One Size • Black With Graphics (94)

$49.99

JUNIOR VOLCANO CROSS HELMET

- High-tech, lightweight and tough.
- Fully-adjustable, aero-tuned peak.
- Ventilation system.
- Moisture-wicking and breathable chin strap, liner and cheek pads.
- Easily removable and washable liner and cheek pads.
- Provides maximum visibility.
- Fits all goggles.
- Strap grip to hold goggle strap in place.
- Weight: Medium = ± 1050 g.
- D.O.T. certified.

ABS

447512 • S, M, L • Black With Graphics (94)

$99.99

TEEN TEAM RIDING GLOVES

- Spandex† construction for flexibility.
- Chamude† palm.
- Pre-curved design.
- Direct-injection patches on back hand.
- Hook-and-loop wrist closure system.

Spandex, Chamude

286203 • 6/8, 10/12, 14/16 • Black (90)

$24.99

"I JUST LOVE TO LOAD UP THE FOUR-WHEELER, GEAR UP AND TAKE OFF FOR A COUPLE OF DAYS."

WATCH

Sheldon Honey and Camille Johnson on their adventure at: store.can-am.brp.com/video

DESIGNED FOR DESTINATION RIDERS

Each item keeps you warm, dry and protected even on the longest rides and in changing conditions.

PERFORMANCE JACKETS

Advanced technologies, such as RPM and Teflon, keep the elements out while letting perspiration escape.

WATERPROOF & BREATHABLE PANTS

By not letting water in and letting sweat escape, you stay comfortable no matter the weather.

YELLOW (10) URBAN CAMO (37) BLACK (90)

MEN'S RIDING JACKET

- Highly resistant, Teflon[1] treatment with RPM waterproof breathable technology.
- Double stitched construction throughout.
- Critical seams sealed.
- Large ventilation at chest, sleeves and back for maximum breathability and good airflow.
- Sleeves can be stored in lower large back pocket.
- Multiple pockets.
- Double front flap and adjustable wrists and hem.
- Small opening at left shoulder for water pack delivery tube (not included).
- Jacket-to-pants connector.
- Reflective details.
- Shaped sleeves.
- Mesh lining.

Nylon

286390 • XS, S, M, L, XL, 2XL, 3XL • Yellow (10), Urban Camo (37), Black (90)

$199.99

You can zip-off sleeves to wear this jacket as a vest in warmer conditions and sleeves can be stored in lower large back pocket.

YELLOW (10) URBAN CAMO (37) BLACK (90)

MEN'S ADVENTURE PANTS

- Lightweight durable pants with RPM waterproof breathable technology.
- Stretch waterproof panel at crotch and upper back for ease of movement.
- Triple stitched construction at crotch for reinforcement.
- Critical seams sealed.
- Side leg zipper to facilitate exit.
- 2 zippered cargo pockets with folded flaps on side thighs and 2 hip pockets.
- Jacket-to-pants connector.
- Perfectly positioned flaps to protect all openings from infiltration.
- Binding hem at cuff for reinforcement.
- Storm gaiters at bottom opening.
- Velcro side waist adjustment.
- Shaped knees with darts.
- Mesh lining.
- Belt loops.

Nylon

286391 • 28, 30, 32, 34, 36, 38, 40, 42, 44 • Yellow (10), Urban Camo (37), Black (90)

$169.99

LADIES' RIDING JACKET

- Highly resistant, Teflon†-treated nylon with RPM waterproof breathable technology.
- 500 denier nylon at hem and double stitched construction throughout.
- Critical seams sealed.
- Long ventilation at side and underarm, plus additional ventilation at back for maximum airflow.
- 2 waist pockets and 1 interior zippered pocket.
- Double front flap and adjustable wrist, hem and collar.
- Improved collar shape to add comfort while riding.
- Easy access collar adjustment on both sides.
- Gussets at back armhole for ease of movement.
- Jacket-to-pants connector.
- Reflective piping.
- Brushed polyester at inner collar, pocket and wrist for extra comfort.
- Shaped elbows with expandable contrasting gussets.
- Mesh lining.

Nylon

286294 • XS, S, M, L, XL, 2XL • Black (90)

$169.99

LADIES' CROSS PANTS

- Lightweight durable pants, Teflon HT-treated nylon with RPM waterproof breathable technology.
- 500 denier waterproof nylon at crotch and seat.
- Critical seams sealed.
- Side leg zipper ventilation.
- 2 zippered hip pockets with flaps.
- Jacket-to-pants connector.
- Binding hem at cuff for reinforcement with zipper to facilitate exit and entry.
- Pre-shaped legs.
- 3/4 length mesh lining.

Nylon

286462 • 5/6, 7/8, 9/10, 11/12, 13/14 • Black (90)

$149.99

It is ideal as a second layer when zipped inside the Camo Jacket.

MEN'S TECHNICAL FLEECE

- Waterproof, windproof and breathable full-zip soft shell.
- Fleece interior and chin flap for ultimate comfort.
- 2 zippered pockets.
- 3M† reflective print and piping.
- Pre-shaped sleeves.

100% Polyester

286330 • S, M, L, XL, 2XL, 3XL • Black (90)

$109.99

RECREATIONAL

RUGGED BASICS

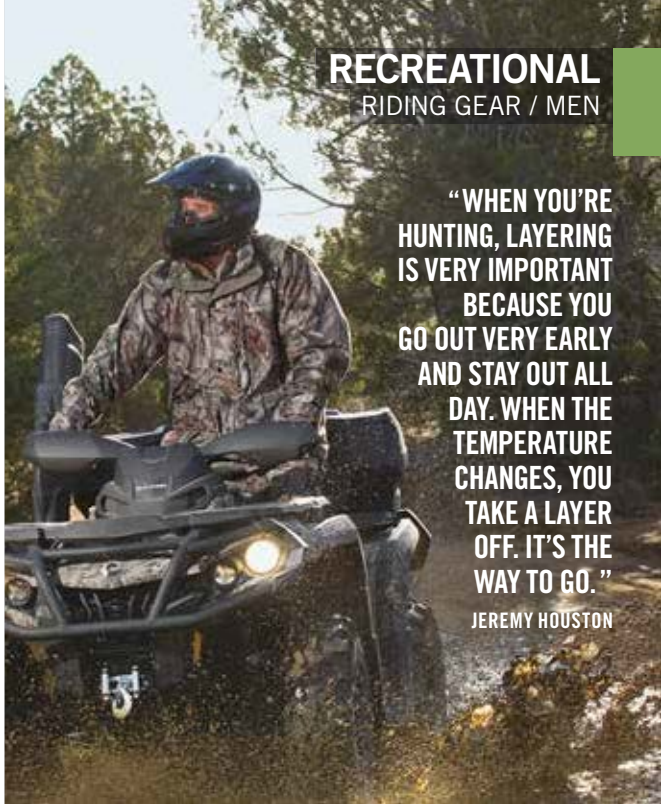
You never know when it can get nasty. Our packable basics have you covered.

ADAPTABLE JACKET

Conditions change when you're out from dawn to dusk. Our jackets change along with them.

DURABLE PANTS

It can get rough out there and our Recreational pants are designed to survive and protect.



"WHEN YOU'RE HUNTING, LAYERING IS VERY IMPORTANT BECAUSE YOU GO OUT VERY EARLY AND STAY OUT ALL DAY. WHEN THE TEMPERATURE CHANGES, YOU TAKE A LAYER OFF. IT'S THE WAY TO GO."
JEREMY HOUSTON

MEN'S CAMO JACKET

JEREMY'S PICK

- Quiet, waterproof Next G-1 Vista Camo fabric.
- All seams sealed.
- Underarm ventilation system for moisture evacuation.
- Detachable hood with molded visor and height adjustment drawcord.
- Collar with 3 different height levels for extra warmth and protection from wind.
- Watertight neoprene cuff with hook-and-loop tab.
- Multiple pockets.
- Internal waist drawcord for adjustment.
- Articulated elbow and longer back designed for riding position.
- Nonslip band at shoulders to keep gun strap in place.
- Relaxed fit allows layering.
- Inside zipper connecting with Can-Am Insulated Vest.
- Can-Am embroidered logo.

Polyester

286453 • M, L, XL, 2XL, 3XL
Next G-1 Vista Camo (37)
$149.99

The Can-Am Camo gear is the only one that matches perfectly Can-Am's ATV/SSV camo pattern.

MEN'S CAMO FLEECE

- Full-zip fleece with handwarmer pockets.
- Can-Am embroidery at front.
- Can be zipped inside Camo Jacket for extra insulation and warmth.

100% Polyester

286363 • M, L, XL, 2XL, 3XL
Next G-1 Vista Camo (37)
$79.99

MEN'S CAMO PANTS

- Quiet, waterproof Next G-1 Vista Camo fabric.
- All seams sealed.
- Double layer at knee for extra durability.
- Two cargo pockets easily accessible while seated.
- Full-length side zipper.
- Thin foam at knee and seat for extra comfort.
- Zippered fly with ratchet closure at waist.
- Articulated knee and higher back waist designed for riding position.
- Rubberized elastic waist.
- Brushed tricot lining.
- Belt loops.
- Relaxed fit to allow layering.
- Can-Am embroidered logo.

Polyester

286454 • M, L, XL, 2XL, 3XL
Next G-1 Vista Camo (37)
$119.99

MEN'S CAMO FLEECE

MEN'S INSULATED VEST
SEE PAGE 20

MEN'S TECHNICAL FLEECE
SEE PAGE 13

MEN'S BAYOU JACKET

- Waterproof DWR-treated nylon fabric.
- Critical seams sealed.
- Back ventilation for moisture evacuation.
- Bellows pocket at left chest.
- 2 Velcro® waist pockets with flap to prevent water intrusion and 1 interior pocket.
- Big reflective stripes on shoulder.
- Water-deflecting double layer storm flaps.
- Adjustable wrists and hem.
- Cozy collar.
- Pre-shaped sleeves.
- Can-Am print at front and back.

Nylon

286264 • S, M, L, XL, 2XL • Charcoal Gray (07)

$129.99

Jacket-in-pouch and pants-in-pouch fold into pockets for easy traveling.

MEN'S BAYOU PANTS

- Waterproof DWR-treated nylon fabric.
- Double layer and triple topstitch at seat for durability.
- Critical seams sealed.
- 2 practical cargo pockets with flap and gusset at front opening to prevent water intrusion.
- Adjustable suspenders.
- Storm gaiters at bottom opening.
- Adjustable waist.
- Elastic at bottom leg to prevent pants from riding up.
- Self fabric gussets at crotch and upper seam for better comfort.
- Pre-shaped legs.
- Can-Am print at left leg.

Nylon

286265 • S, M, L, XL, 2XL
Charcoal Gray (07)

$114.99

CLEAR (00) MATTE BLACK (93)

MEN'S MUD JACKET

- 100% waterproof PVC.
- Electronically-welded seams.
- Underarm and rear vent panels.
- Two hand pockets.
- Elastic cuffs.
- Drawstring hood and hem.
- On Matte Black version, Can-Am logo at front left chest and upper back vent.
- On Clear version, Can-Am X-Team logo at front and back and Can-Am logo on sleeves.

Waterproof PVC, Mesh Polyester

286127 • S, M, L, XL, 2XL • Clear (00), Matte Black (93)

$29.99

CLEAR (00) MATTE BLACK (93)

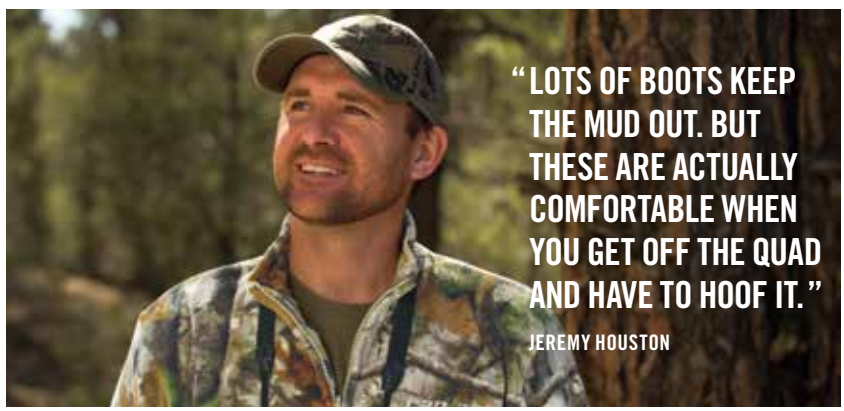
MEN'S MUD PANTS

- Oversized pants made of 100% waterproof PVC.
- Electronically welded seams.
- Strategically placed ventilation.
- Side openings at bottom of leg.
- On Matte Black version, Can-Am logo at bottom of legs.
- On Clear version, Can-Am logos on sides.

Waterproof PVC

286128 • S, M, L, XL, 2XL
Clear (00), Matte Black (93)

$14.99



CAN-AM NEOPRENE MUD BOOTS

- 100% waterproof polyurethane boots.
- Neoprene upper for maximum flexibility while walking or riding.
- Lightweight, comfortable soft liner.
- Aggressive tread design for style and maximum grip on any surface.
- Excellent resistance to oil, grease and gasoline.
- Can-Am branded.

Polyurethane, Neoprene

444196 • 8, 9, 10, 11, 12, 13
Black (90)

$119.99

444201 • 8, 9, 10, 11, 12, 13
Next G-1 Vista Camo (37)

$129.99

MEN'S CAMO JERSEY

- Ultralight, quick-dry, antibacterial, moisture-wicking fabric.
- Extended back for coverage while riding.
- Non-fading sublimated graphics.
- Matches ATV/SSV Camo pattern.

100% Polyester

286350 • M, L, XL, 2XL, 3XL
Next G-1 Vista Camo (37)

$44.99

MEN'S RECREATIONAL JERSEY

- Ultralight, quick-dry, antibacterial, moisture-wicking fabric.
- Extended back for coverage while riding.
- Non-fading sublimated graphics.

100% Polyester

286344 • S, M, L, XL, 2XL
White (01), Yellow (10), Black (90)

$39.99

WHITE (01) YELLOW (10) BLACK (90)

"I AM SO IMPRESSED BY HOW IT HANDLES WITH TRACKS IN THE SNOW, AND I'M A SKI-DOO RIDER. THE JACKET AND PANTS KEPT ME TOTALLY WARM AND DRY ALL RIDE LONG."

VÉRONIQUE CARON

PRIMALOFT† INSULATION

The warming power of down, but stays warm even when wet. Lightweight and flexible for freedom of movement.

RPM TECHNOLOGY

Developed specially for BRP, RPM technology delivers an exceptional balance of waterproofness, windproofness and breathability.

RIDER-FOCUSED DESIGN

Jackets and pants are pre-shaped into riding positions, and key areas use stretch panels.

FOR MEN

YELLOW (10) BLACK (90)

MEN'S WINTER RIDING JACKET

- Robust textured fabric featuring RPM MAX waterproof, windproof and breathable technology.
- All seams and logos sealed for added protection from water.
- Vents at underarm and back to enhance moisture evacuation during rigorous riding or mild weather.
- 2 waist pockets and 1 Napoleon pocket.
- MP3, cell phone, cap inner pockets.
- Front flap with insulated under flap uniquely designed for off-road riding windproofness.
- Powder skirt to keep wind, cold and snow from entering.
- Reflective details.
- Micro-polyester at collar and micro-fleece integrated inner wrists.
- Shaped elbows with expandable gussets for ease of movement.
- Inside front and back panels lined with micro-fleece to add warmth and comfort.
- Easy access collar adjustment on both sides.
- Can-Am and X-Team embroideries.

Nylon
Insulation: PrimaLoft† Cresta

286295 • M, MT, L, LT, XL, XLT, 2XL, 3XL • Yellow (10), Black (90)

$309.99

MEN'S WINTER RIDING HIGHPANTS

- RPM MAX waterproof, windproof and breathable technology.
- Intelligent combination of materials specifically adapted to warmth, weatherproofing and comfort standards required for winter riding.
- Lightweight and versatile.
- Composite insulation for extra warmth at seat and knees.
- 600 denier nylon seat, knees and inner legs.
- All seams and logos sealed for added protection from water.
- Pads at knees for durability.
- Full-length side zippers.
- Easy access thigh pocket.
- Reflective ankle details.
- Storm gaiters to shield snow entry.
- Accordion knees and pre-shaped legs for ease of movement.
- Bib-style pants with high back and front to keep wind and snow out.
- Reinforced topstitch at back rise.

Nylon, Polyester
Insulation: PrimaLoft Cresta

286463 • M, MT, L, LT, XL, XLT, 2XL, 3XL • Black (90)

$264.99

FOR LADIES

N

LADIES' WINTER RIDING JACKET

- RPM MAX waterproof, windproof and breathable technology.
- Overall water-repelling Teflon† treatment, plus light color Teflon† HT-treated for additional water and stain resistance.
- All seams and logos sealed for added protection from water.
- Underarm venting.
- Zippered hand pockets.
- MP3, cell phone and additional inner pockets.
- Contrasting water-resistant zipper at chest pocket.
- Micro-fleece at collar and integrated inner wrists.
- Powder skirt to keep wind, cold and snow from entering.
- Double front flap.
- Adjustable collar.
- Reflective details.
- Shaped sleeves.

Nylon
Insulation: PrimaLoft Cresta

286461 • XS, S, M, L, XL, 2XL, 3XL • Matte Black (93)

$259.99

LADIES' WINTER RIDING HIGHPANTS

- RPM MAX waterproof, windproof and breathable technology.
- All seams and logos sealed for added protection from water.
- 1000 denier nylon seat, knees and inner legs.
- Polar-fleece lined seat and knees.
- Stretch-fleece bib.
- Drop seat design.
- 2-way full-length side zippers.
- Adjustable waist.
- Hip pockets.
- Water-resistant zipper at right thigh pocket.
- Reflective details.
- Shaped knees.

Nylon, Polyester
Insulation: PrimaLoft Cresta

286460
XS, S, M, L, XL, 2XL, 3XL
Matte Black (93)

$219.99

This vest is suitable for everyday wear or under a jacket as an extra layer.

LADIES' INSULATED VEST

- Quilted lightweight vest.
- Delivers unparalleled warmth.
- 2 hand pockets.
- Soft micro-fleece inner collar.
- Adjustable bottom hem with drawstring and toggles.
- Reflective details.

Nylon
Insulation: PrimaLoft Cresta

286456 • XS, S, M, L, XL, 2XL, 3XL • Black (90)

$99.99

"GREAT WINTER GEAR LETS ME GET MORE FROM MY ATV, WHILE OTHERS STORE THEIRS."

FRANCIS CLOUTIER

YELLOW (10) BLACK (90)

MEN'S WINTER RECREATIONAL JACKET

- RPM waterproof, windproof and breathable technology.
- Critical seams and logos sealed.
- 2 waist pockets.
- Shaped sleeves.
- Soft micro-fleece inner cuffs.
- Adjustable Velcro wrists.
- Powder skirt to keep wind, cold and snow from entering.
- MP3 and cell phone pockets.
- Adjustable hem.
- Reflective details.

Nylon
Insulation: Thermal Loft

286326 • M, MT, L, LT, XL, XLT, 2XL, 3XL
Yellow (10), Black (90)

$169.99

MEN'S CLASSIC WINTER HIGHPANTS

- Combines classic look with recreational riding performance.
- RPM waterproof, windproof and breathable technology.
- Articulated knees.
- Storm gaiters to shield snow entry.
- 2-way full-length side zippers.
- Length adjustment at bottom.

Nylon
Insulation: Thermal Loft

286327 • M, L, XL, 2XL, 3XL
Black (90)

$129.99

This vest is suitable for everyday wear or under a jacket as an extra layer.

KHAKI (05) BLACK (90)

MEN'S INSULATED VEST

- Quilted lightweight vest.
- Delivers unparalleled warmth.
- 2 hand pockets.
- Soft micro-fleece inner collar.
- Adjustable bottom hem with drawstring and toggles.
- Reflective details.
- Can be zipped inside Camo Jacket for extra insulation.

Nylon
Insulation: PrimaLoft Cresta

286455
S, M, L, XL, 2XL, 3XL
Khaki (05), Black (90)

$99.99

mcFIT's unique membrane attachment system delivers more dexterity and tactility than other glove-lining technologies.

MEN'S WINTER RIDING GLOVES AND MITTS

- mcFIT† technology to improve grip at palm.
- Extra warm nylon gloves with leather palm.
- Adjustable insulation with removable antibacterial, stay-dry moisture management lining.
- Gauntlet with adjustable wrist.
- Gloves with visor-wiping cotton terry left thumb for clearing water, snow or fog.
- Reflective details.

Nylon, Leather
Insulation: PrimaLoft One

GLOVES

286385
S, M, L, XL, 2XL
Black (90)
$89.99

MITTS

286386
S, M, L, XL, 2XL
Black (90)
$79.99

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MEN'S HYBRID MITTS

- Porelle† waterproof, windproof and breathable glove insert.
- Added back hand insulation for maximum protection.
- Thinner insulated palm for increased sensitivity.
- Antibacterial, stay-dry moisture management lining.
- 3-finger design for maximum warmth without compromising agility.
- Extra grip rubberized palm and thumb.
- Adjustable gauntlet.
- Reflective details.

Nylon
Insulation: PrimaLoft

286414 • S, M, L, XL, 2XL, 3XL
Black (90)
$69.99

BROWN (04) BLACK (90)

MEN'S WINTER TRAIL GLOVES

- 4 oz insulation for cold weather.
- Leather reinforcements at fingers, palm and back hand for extra durability and grip at palm.
- Pre-curved design.
- Waterproof, breathable Hipora† insert.
- Clarino† at palm and thumb.
- Inverted seams at fingers for better comfort.

Nylon, Leather, Polyester, Spandex
Insulation: Polyester

286279 • S, M, L, XL, 2XL, 3XL
Brown (04), Black (90)
$44.99

MEN'S HOLESHOT GLOVES

- Hipora waterproof, windproof and breathable glove insert.
- Added back hand insulation for maximum protection.
- Thinner-insulated palm for increased sensitivity.
- Antibacterial, stay-dry moisture management lining.
- Articulated, shaped fingers.
- PVC padded knuckles.
- Extra grip rubberized palm and thumb.
- Adjustable gauntlet and wrist.
- Reflective details.

Nylon
Insulation: Thermal Loft

286343 • S, M, L, XL, 2XL
Black (90)
$59.99

YELLOW (10) BLACK (90)

CHARCOAL GRAY (07) YELLOW (10)

WINTER BEANIE

- Micro-fleece lining.
- Knitted Can-Am embroidery.

50% Acrylic, 50% Wool

286289 • One Size
Charcoal Gray (07), Yellow (10)
$15.99

MEN'S X-TEAM TURTLENECK

- Stretch fabric.
- Rib fabric collar and wrist.
- Printed Can-Am and X-Team logos.

95% Cotton, 5% Spandex

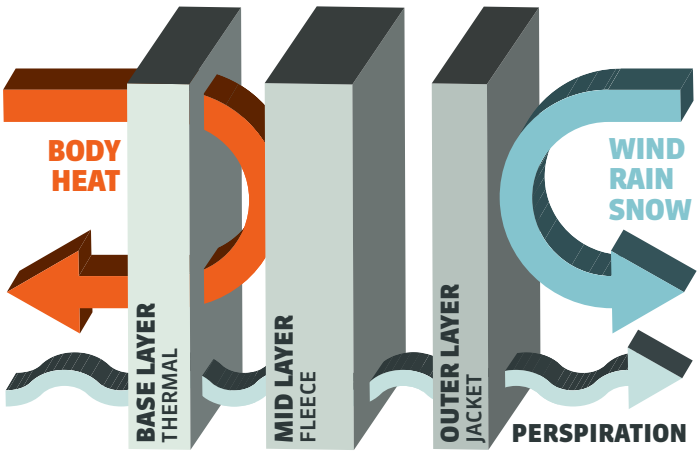
286328 • M, L, XL, 2XL • Yellow (10), Black (90)
$29.99

TECHNICAL WEAR

LAYERING SYSTEM SOLUTION

Layering with performance gear keeps you dry, warm and comfortable when riding an ATV or a SSV – whether blasting dunes, cruising trails or plowing snow.

HOW IT WORKS



BASE LAYER

Because it is closest to your skin, the base layer is the foundation of the system. Specially designed fabrics move moisture away from your skin and cool or warm you, depending on your riding style.

MID LAYER

Add more warmth by adding an insulating mid layer, such as a technical fleece.

OUTER LAYER

This layer protects you from the elements in all conditions and is generally waterproof, windproof and breathable. For colder conditions, the outer layer can include additional insulation, like our Winter gear.

OUTER LAYER TECHNICAL TERMINOLOGY

RPM TECHNOLOGY

BRP developed its own waterproof/windproof/breathable technology specifically for powersports gear: RPM.

It's a special coating that prevents wind and moisture from entering while allowing sweat to escape. The key is that it is specifically designed for powersports, not slower, less rugged use. Garments labeled RPM MAX also have 100% of their seams and logos sealed, so water can't enter through their potential openings.

RPM – RESPIRACTIVE PERFORMANCE MATRIX

Critical seams and logo sealed

RPM MAX – RESPIRACTIVE PERFORMANCE MATRIX

All seams and logo sealed

TEFLON

We use a Teflon coating on some garments. It's extremely slippery, so water, dirt and stains slide right off. Teflon HT maintains its performance up to 30 washes, compared to other coatings that last only one to five washings.

HIPORA

Windproof, breathable and waterproof membrane that features unique polyurethane coating technology and delivers excellent moisture management.

PRIMALOFT INSULATION

When it comes to insulation, we choose the best. We choose PrimaLoft.

WARMER

Ultrafine fibers form tiny air pockets that trap body heat, keeping you warm. As warm as goose down.

SOFT

Ultrafine fibers flex easily, so garments are flexible and move easily.

BREATHABLE

Moisture vapor is transported through the fine fibers and away from the skin.

WATER RESISTANT

PrimaLoft insulation dries faster than goose down because its fine fibers create a tight surface tension that resists moisture penetration.

PRIMALOFT one

PRIMALOFT ONE

Warmer – wet or dry – than any other synthetic insulation. This ultimate down-like microfiber insulation is quick drying, soft and breathable. It is also very lightweight, compressible and thermally efficient.

CRESTA THERMAL INSULATION

CRESTA BY PRIMALOFT

PrimaLoft Cresta offers warmth without weight and extra bulk. It is designed to keep you warm and comfortable throughout the day.

WE HAVE FOUR DIFFERENT TYPES OF CAN-AM OFF-ROAD RIDING GEAR BASED ON YOUR RIDING STYLE AND THE OUTSIDE TEMPERATURE. HERE'S HOW TO GET THE RIGHT GEAR TO MAXIMIZE YOUR EXPERIENCE:

STEP 1 IDENTIFY YOUR RIDING TYPE

PERFORMANCE

In active riding – sand, mud or rocky – you need highly breathable gear that wicks perspiration away from your skin.

ADVENTURE

Riding longer distances, you and your passenger need ergonomic, versatile gear that adjusts to changing conditions.

RECREATIONAL

You want great value and dependable performance for either work or play riding.

WINTER

ADVENTURE
RECREATIONAL

You don't put your vehicle away when the temperatures drop. Adventure and Recreational gear comes in warm Winter styles.

STEP 2 MATCH YOUR GEAR WITH A BASE LAYER THAT MATCHES YOUR RIDING TYPE

ACTIVE BASE LAYER

PERFORMANCE ADVENTURE

- Never feel too cold or too hot with X-Static†-treated fabric.
- Stay dry even on intense rides.
- Large mesh areas keep your thermal balance.
- Odor-free, anti-bacterial and anti-static.

ULTRALIGHT BASE LAYER

ADVENTURE RECREATIONAL

- Stay dry with coconut fiber fabric.
- Garment remains odor-free.
- Mesh areas keep your thermal balance.

THERMAL BASE LAYER

ADVENTURE RECREATIONAL

- Insulate your body for optimal warmth in cooler conditions.
- Slight brushing on the interior traps heat and provides softness and warmth.

SOCKS

PERFORMANCE ADVENTURE RECREATIONAL

- Ultralight socks keep your feet dry in all types of riding.
- Thermal socks add warmth in cooler conditions.

SELECT THE LAYER CORRESPONDING TO YOUR RIDING STYLE

ACTIVE BASE LAYER

You are an intense, active rider, which causes you to sweat.

MEN'S ACTIVE BASE LAYER

- X-Static silver technology on the fibers regulates your temperature by conducting body heat out in warm weather and reflecting body heat back to the skin in cold weather.
- Permanently treated for long-lasting antibacterial performance undiminished even after 250+ washes.
- Silver woven into fiber immediately binds with odor-causing agents such as ammonia and denatured proteins to instantly reduce odor.
- Mesh panels in specific areas for better ventilation and accelerated drying.
- Compressed for added comfort.

92% Polyester,
6% Spandex,
2% X-Static†

Cotton does not breathe effectively and traps moisture on your skin, cooling you further. Can-Am Synthetic base layers keep you dry and warm.

TOP	BOTTOM
286332 • M, L, XL, 2XL, 3XL	286333 • M, L, XL, 2XL, 3XL
Black (90)	Black (90)
$59.99	$54.99

ULTRALIGHT BASE LAYER

If you're currently wearing casual clothes that absorb sweat, leaving you damp and cold, you will benefit from a lightweight stay-dry layer like this.

Coconut fiber actively promotes evaporative cooling and odor absorption, and filters moisture out while trapping warmth in.

MEN'S ULTRALIGHT BASE LAYER

- Mesh panel in specific areas for better ventilation and accelerated drying.

68% Polyester,
32% Coconut Fiber

TOP	BOTTOM
286338 • M, L, XL, 2XL, 3XL	286339 • M, L, XL, 2XL, 3XL
Charcoal Gray (07)	Charcoal Gray (07)
$44.99	$34.99

THERMAL BASE LAYER

If you're always a little cold, this gear maximizes warmth.

THERMAL BASE LAYER

- Made of high-filament polyester enhanced by slight brushing to provide softness and warmth.
- Spandex for ease of movement.

95% Polyester, 5% Spandex (Brushed)

FOR MEN

MEN'S TOP	MEN'S BOTTOM
286334 • M, L, XL, 2XL, 3XL	286335 • M, L, XL, 2XL, 3XL
Charcoal Gray (07)	Charcoal Gray (07)
$64.99	$49.99

FOR LADIES

LADIES' TOP	LADIES' BOTTOM
286336 • XS, S, M, L, XL, 2XL	286337 • XS, S, M, L, XL, 2XL
White (01)	Charcoal Gray (07)
$64.99	$49.99

NECK AND BODY CORE PROTECTION

WINDPROOF LAYER

- Coverage for your crucial body core.
- Windproof, warm and breathable layer.
- Stretch fabric and unrestricted arm movement.
- Zipper on shoulder for easy slip on/off, even with a helmet.
- Flatlock seams to prevent skin irritation.

100% Polyester

286348 • S, M, L, XL, 2XL
Black (90)
$49.99

NECK GAITER

- Can-Am embroidery.
- Spandex† binding for a better fit.
- 14 oz anti-pilling fleece.

100% Polyester

286331 • One Size
Black (90)
$19.99

SOCKS

ULTRALIGHT SOCKS

- First layer socks for all purposes.
- Dual polyamide and polypropylene construction for resistance to cold and active management of perspiration moisture.
- Dri-Release† wool for ease of care.
- Stay-up comfort top keeps socks up.
- Elastic ankle and arch support for pro feel.
- Ventilated mesh panel maintains feet aerated for dry, warm comfort.
- Machine washable and dryable.

49% Polyester, 25% Polyamide Nylon, 17% Polypropylene, 7% Merino Wool, 2% Elasthane

286340 • S/M, L/XL
Black (90)
$9.99

THERMAL SOCKS

- Same thickness as competing thermal socks, but lighter, warmer and better moisture-wicking performance.
- Thermolite† hollow-core fibers deliver new generation of warmth-comfort fusion.
- Stay-up comfort top keeps socks up.
- Elastic ankle and arch support for pro feel.
- Fully cushioned shin segment.

50% Polyester Thermolite†, 21% Polyamide Nylon, 17% Merino Wool, 5% Acrylic, 2% Elasthane

286341 • S/M, L/XL
Black (90)
$19.99

BALACLAVAS

Perfect when used with a BV2S or Modular 2 helmet.

MASK SYSTEM BALACLAVA

- Keeps you warm while providing breathable and windproof performance.
- Waterproof, windproof and breathable fabric.
- Moisture-wicking fabric.
- Elastic adjustment at side.
- Contrasting flatlock stitching.

80% Nylon, 20% Spandex

447630 • S/M, L/XL
Black (90)
$29.99

Great fit with Cross type helmets.

MOUNTAIN BALACLAVA

- Stretch, quick-dry fabric with brushed inner surface.
- Neoprene face guard for effective moisture exchange to promote breathing in extreme cold, with removable rubber part in pocket.
- Flatlock seams prevent skin irritation.

80% Nylon, 20% Spandex

447631 • One Size
Black (90)
$24.99

MICRO-FLEECE BALACLAVA

- Stretch, antibacterial warming fleece fabric with brushed inner surface.
- Flatlock seams prevent skin irritation.

92% Polyester, 8% Spandex

447565 • One Size
Black (90)
$19.99

TECHNICAL BALACLAVA

- Strategically placed mesh for breathability.
- Micro-fleece for warmth.
- Windproof neck bib.
- Higher at back of neck for increased motion range.
- Flatlock seams prevent skin irritation.

92% Polyester, 8% Spandex

445950 • One Size
Black (90)
$24.99

BASIC BALACLAVA

- Designed for warmth, dryness and comfort.
- Flatlock seams prevent skin irritation.

80% Nylon, 20% Spandex

447449 • One Size
Black (90)
$12.99

SPORTSWEAR

VERSATILE LOOK

We design our sportswear to make you look good on the trails or on the street.

GENUINE CAN-AM DESIGN

Our designers create looks in the same high performance, high tech spirit as our vehicles.

FOR WORK OR LEISURE

Designs so versatile, they can go from casual weekends to camping to work.

JEREMY'S PICK

"I LOVE THIS SHIRT. IT'S GOT AN OUTDOORSY LOOK... THE FLEECE LINING AND SNAPS ARE NICE."

N

MEN'S OVERSHIRT

- Plaid flannel overshirt.
- Front opening with snaps.
- Two chest pockets.
- Can-Am embroidered logo on pocket.
- Removable hood.

100% Cotton

286451
S, M, L, XL, 2XL, 3XL
Mixed Color (18)

$69.99

N

MEN'S WILD X-TEAM HOODIE

- Full-zip hooded sweatshirt.
- Ribbed waistband and cuffs.
- Non-fading sublimated graphics.
- 2 hand pockets.

100% Polyester Interlock

286410
S, M, L, XL, 2XL, 3XL
Orange (12), Blue (80), Black (90)

$79.99

ORANGE (12)

BLUE (80)

BLACK (90)

HEATHER GRAY (27) BLACK (90)

MEN'S IMPULSE HOODIE

- Ribbed waistband and cuffs.
- Can-Am logo on front chest.
- Contrasting inner hood.
- Kangaroo front pocket.

80% Cotton, 20% Polyester

286409
S, M, L, XL, 2XL, 3XL
Heather Gray (27), Black (90)

$74.99

BLUE (80) BLACK (90)

MEN'S ZIPPED HOODIE

- Full-zip hooded sweatshirt.
- Ribbed waistband and cuffs.
- "X" print on front chest and on hood.

72% Cotton, 23% Polyester, 5% Spandex

286312 • S, M, L, XL, 2XL • Blue (80), Black (90)

$69.99

YELLOW (10) RED (30)

MEN'S X-TEAM FLEECE

- Pullover racing fleece with handwarmer pockets.
- X-Team embossed logo at front.
- Can-Am logo appliqué at sleeves.
- X-Team embroidery at upper back.

100% Polyester

286329 • S, M, L, XL, 2XL, 3XL • Yellow (10), Red (30)

$69.99

N

MEN'S LONG SLEEVE ADVENTURE TEE

• Print at front.

100% Cotton

286412
S, M, L, XL, 2XL, 3XL
White (01), Heather Gray (27), Black (90)

$34.99

BLACK (90)

HEATHER GRAY (27)

WHITE (01)

N

MEN'S LONG SLEEVE ORIGINAL TEE

• Can-Am vintage print.

100% Cotton

286415
S, M, L, XL, 2XL, 3XL
Heather Gray (27), Ice (38), Black (90)

$34.99

HEATHER GRAY (27)

ICE (38)

BLACK (90)

GRAY (09)

ORANGE (12)

BLACK (90)

N

MEN'S X-RACE POLO

- Quick-dry, antibacterial, moisture-wicking fabric.
- 3-button front placket.
- Non-fading sublimated graphics.
- Side slits.
- Rib collar.

100% Polyester

286400
S, M, L, XL, 2XL, 3XL
Gray (09), Orange (12), Black (90)

$49.99

SHELDON'S PICK

CHARCOAL GRAY (07)

BLACK (90)

MEN'S TECHNICIAN SHIRT

- Stretch-yarn-dyed twill shirt.
- Chest pocket with X-Team embroidery.
- Large X-Team embroidery at upper back.
- Hidden button placket.
- Pleat at back center for ease of movement.
- Embroidered sponsor logos on sleeves and at front.

65% Polyester, 35% Cotton

286308 • S, M, L, XL, 2XL, 3XL
Charcoal Gray (07), Black (90)

$64.99

HEATHER GRAY (27) RED (30) GREEN (70) BLACK (90)

N

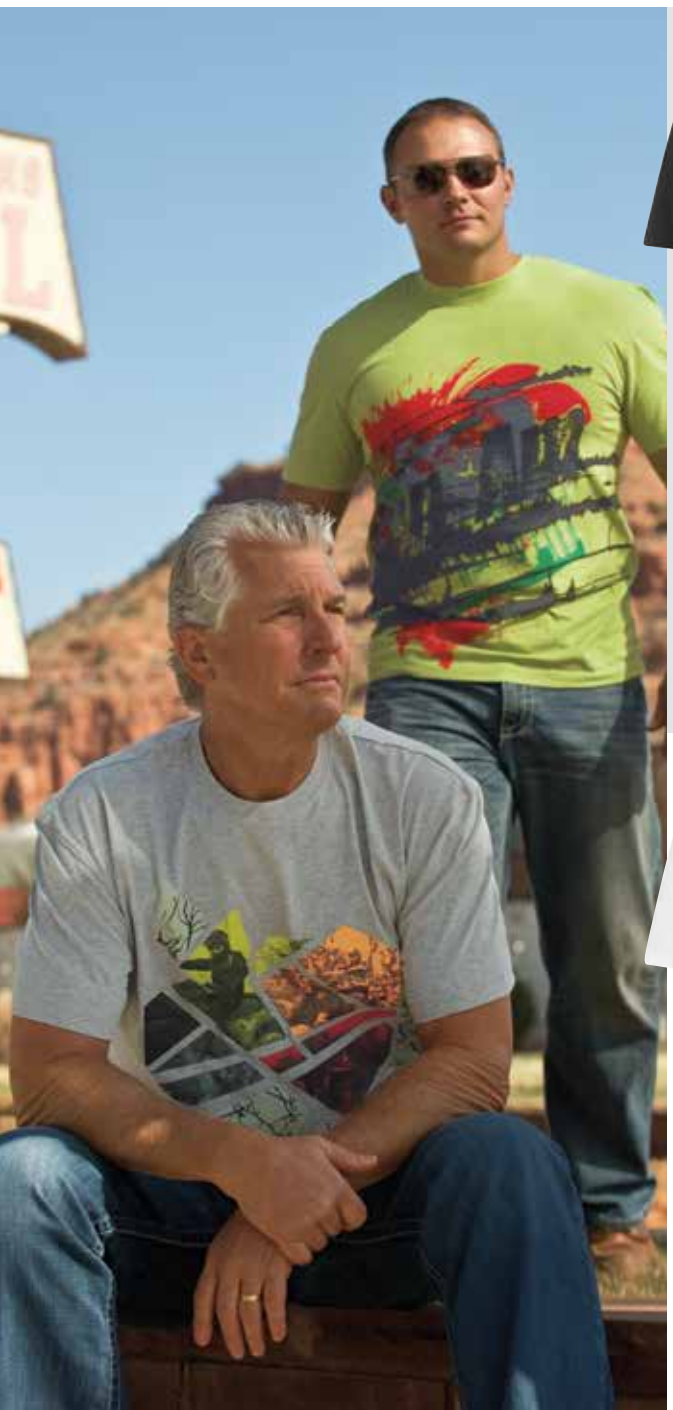
MEN'S WILD X-TEAM TEE

- Can-Am prints at front and on left sleeve.

100% Cotton

286408
S, M, L, XL, 2XL, 3XL
Heather Gray (27), Red (30), Green (70), Black (90)

$29.99



BLACK (90) HEATHER GRAY (27) KHAKI (05)

N

MEN'S ADVENTURE TEE

- Outlander print at front.

100% Cotton

286399 • M, L, XL, 2XL, 3XL • Khaki (05), Heather Gray (27), Black (90)

$25.99

WHITE (01) BLUE (80) BLACK (90)

N

MEN'S TRACK TEE

- Can-Am print at front.

100% Cotton

286405 • S, M, L, XL, 2XL, 3XL • White (01), Blue (80), Black (90)

$25.99

WHITE (01)

BLACK (90)

MEN'S RENEGADE TEE

- Printed logo at front.
- Contrasting stitches.

100% Cotton

286302 • M, L, XL, 2XL • White (01), Black (90)

$25.99

WHITE (01)

BLACK (90)

MEN'S COMMANDER TEE

- Commander print at front.

100% Cotton

286345 • S, M, L, XL, 2XL • White (01), Black (90)

$25.99

WHITE (01)

BLACK (90)

MEN'S MAVERICK TEE

- Maverick print at front.

100% Cotton

286416 • S, M, L, XL, 2XL, 3XL • White (01), Black (90)

$25.99

GREEN (70) BLUE (80) BLACK (90)

MEN'S X-TEAM TEE

• Can-Am print logo at front and X-Team print on sleeve.
100% Cotton
286303 • M, L, XL, 2XL • Green (70), Blue (80), Black (90)
$29.99

HEATHER GRAY (27) ICE (38) BLACK (90)

MEN'S ORIGINAL TEE

• Can-Am vintage print.
100% Cotton
286402 • S, M, L, XL, 2XL, 3XL • Heather Gray (27), Ice (38), Black (90)
$25.99

WHITE (01) KHAKI (05) BLACK (90)

MEN'S SIGNATURE TEE

• Can-Am print at front.
100% Cotton
286320 • S, M, L, XL, 2XL, 3XL • White (01), Khaki (05), Black (90)
$21.99

TUBE

- Multi-purpose, stretch and comfortable tubular headwear.
- 12 different configurations: bandana, headband, balaclava and more.
- Protects from sun, wind, dust or cold.
- Keeps hair out of face.
- Flatlock seams to avoid skin irritation.

94% Cotton, 6% Spandex

286349 • One Size
Yellow (10)
$14.99

WHITE (01) YELLOW (10) BLUE (80) BLACK (90)

TRACK CAP

- Fitted stretch twill cap.
- 3D Can-Am logo on side.
- Flat peak.

68% Polyester, 30% Rayon, 2% Spandex

286404 • S/M, L/XL
White (01), Yellow (10), Blue (80), Black (90)
$21.99

WHITE (01) YELLOW (10) BLACK (90)

X-RACE CAP

- Fitted stretch twill cap with prints.
- X-Team embroidered logo at front.
- Critter embroidered under peak.

98% Cotton, 2% Spandex

286396 • S/M, L/XL
White (01), Yellow (10), Black (90)
$24.99

WHITE (01) YELLOW (10) WARM GRAY (15)

TEAM CAP

- Lightweight fabric, perfect for hot weather.
- Can-Am embroidery at front.
- Metal adjuster with BRP logo.

85% Cotton, 15% Spandex

286394 • One Size
White (01), Yellow (10), Warm Gray (15)
$19.99

KHAKI (05) CHARCOAL GRAY (07) BLACK (90)

ADVENTURE CAP

- Can-Am embroidered logos at front and back strap.
- Metal adjuster with BRP logo.

100% Cotton

286398 • One Size
Khaki (05), Charcoal Gray (07), Black (90)
$21.99

ORIGINAL CAP

- Vintage stripes and logo embroidered at front.
- Metal adjuster with BRP logo.

100% Cotton

286401 • One Size
Beige (02), Orange (12), Black (90)

$21.99

COMMANDER CAP

- Fitted stretch cap.
- Commander rubber logo at front.
- Rubber details on sides and peak.

95% Cotton, 5% Spandex

286346 • S/M, L/XL, 2XL
Magnesium (24), Red (30), Black (90)

$19.99

CLASSIC CAP

- Ultra comfortable, stretch, lightweight fabric.
- 3D Can-Am embroidery at front.
- Metal adjuster with BRP logo.

72% Polyester, 23% Rayon, 5% Spandex

286210 • One Size
Charcoal Gray (07), Black (90)

$19.99

GENUINE CAP

- Adjustable cap.
- Mesh back panels.
- 3D Can-Am embroidery on contrasting peak.
- Wood print at front.

55% Cotton, 45% Nylon

286324 • One Size
Black (90)

$19.99

MAVERICK CAP

- Adjustable back strap.
- Maverick embroidered logo.
- Can-Am print at back strap.

100% Cotton

286417 • One Size
Yellow (10), Black (90)

$19.99

CAMO CAP

- Matches ATV/SSV Camo pattern.
- Can-Am embroidery at front.
- Metal adjuster with BRP logo.

100% Polyester

286290 • One Size
Next G-1 Vista Camo (37)

$19.99

SUMMER BEANIE

- Lightweight, plaid texturized knitted beanie with one contrast square and woven Can-Am label.

95% Cotton, 5% Spandex

286323 • One Size • Charcoal Gray (07), Black (90)

$15.99

BANDANA

- Light and comfortable.
- Multiple wear options.

80% Polyester, 20% Cotton

286347 • One Size • Mixed Color (18), Black With Graphics (94)

$9.99

"WHEN YOU'RE RACING AND YOU'RE A GIRL, YOU NEVER WANT YOUR PONYTAIL SHOWING. 'CAUSE IF THE BOYS SEE YOU IN FRONT OF THEM, THEY'RE GONNA TRY EVEN HARDER TO PASS YOU OR SHOW OFF"

BRITTANY BURG

HEATHER GRAY (27) ICE (38) BLACK (90)

LADIES' ORIGINAL TEE

- Feminine fitted t-shirt.
- Low crew neck with vintage print.

95% Cotton, 5% Spandex

286403 • XS, S, M, L, XL, 2XL • Heather Gray (27), Ice (38), Black (90)

$25.99

WHITE (01) BLUE (80) BLACK (90)

LADIES' X-TEAM TEE

- Stretch fabric.
- Lace print on front and Can-Am X-Team print on back left shoulder.

95% Cotton, 5% Spandex

286319 • XS, S, M, L, XL, 2XL • White (01), Blue (80), Black (90)

$29.99

BLACK (90) BLUE (80) PURPLE (40)

TUBE

- Multi-purpose, stretch and comfortable tubular headwear.
- 12 different configurations: bandana, headband, balaclava and more.
- Protects from sun, wind, dust or cold.
- Keeps hair out of face.
- Flatlock seams to avoid skin irritation.

94% Cotton, 6% Spandex

286349 • One Size • Purple (40), Blue (80), Black (90)

$14.99

"I'M KNOWN FOR MY INTENSITY. MY GRANDPA OFTEN SAYS 'THIS GIRL IS CRAZY – SHE'D JUMP OUT OF A PERFECTLY GOOD PLANE!' "

CAMILLE JOHNSON

LADIES' ZIPPED MICRO-FLEECE

- Full-zip feminine-fit micro-fleece.
- 2 zippered pockets.
- Contrast cord, pocket lip flaps (except Ice version).
- Can-Am embossed signature at front bottom and right back shoulder.
- Flatlock stitching.

100% Polyester

286304
XS, S, M, L, XL, 2XL
Ice (38), Purple (40), Black (90)

$64.99

ICE (38)

PURPLE (40)

BLACK (90)

WHITE (01)

PURPLE (40)

BANDANA

- Light and comfortable.
- Multiple wear options.
- Reversible (blue and red prints)

80% Polyester, 20% Cotton

286347 • One Size
Gray (09)

$9.99

LADIES' STAR TEE

- Fitted t-shirt.
- Feminine round neck with small gathering details at front.
- Print with sparkly details.

95% Cotton, 5% Spandex

286276 • XS, S, M, L, XL, 2XL • White (01), Purple (40)

$25.99

GLOVES

"YOU DON'T WANT YOUR GLOVES TO WRINKLE IN YOUR PALM AND CAUSE BLISTERS. THE X-RACE GLOVES DON'T – THEY FIT PERFECTLY ON MY HANDS."

DALTON PLATT

MEN'S X-RACE GLOVES

- Designed for protection and flexibility.
- Air mesh panels for ventilation and mobility.
- Perforated palm for ventilation.
- Double Clarino layer at palm and thumb for extra durability and comfort.
- Knuckle gussets for better mobility.
- Pre-curved design.
- Silicone at fingertip and at palm for better grip.
- Direct-injection details on back hand.
- Hook-and-loop wrist closure system to keep glove in place.

Air Mesh, Spandex, Clarino†

286452 • S, M, L, XL, 2XL
White (01), Yellow (10), Black (90)
$34.99

LADIES' X-RACE GLOVES

- Air mesh panel for maximum ventilation and mobility.
- Double Clarino layer at palm and thumb for extra durability and comfort.
- Pre-curved design.
- Silicone fingertips for added grip and control.
- Direct-injection details on back hand.
- Hook-and-loop wrist closure system.

Synthetic Leather, Polyester, Lycra, Nylon, Neoprene, Clarino

286322 • S, M, L, XL, 2XL
Blue (80), Black (90)
$34.99

MEN'S TEAM GLOVES

- Spandex† construction for flexibility.
- Chamude† palm.
- Pre-curved design.
- Non-fading sublimated graphics.
- Direct-injection logo and print on back hand.
- Hook-and-loop wrist closure system.

Spandex, Chamude
286393 • S, M, L, XL, 2XL, 3XL
Yellow (10), Warm Gray (15), Black (90)
$26.99

MEN'S RECREATIONAL GLOVES

- Spandex construction for flexibility.
- Clarino nash palm.
- Pre-curved design.
- Non-fading sublimated graphics matching Recreational Jersey.
- Hook-and-loop wrist closure system.

Clarino , Polyester, Lycra, Airprene
286342 • S, M, L, XL, 2XL
White (01), Yellow (10), Black (90)
$19.99

Hunter thumbs-ups: Quick and easy access to trigger at forefinger*. 4 oz insulation for cold weather.

MEN'S CAMO GLOVES

- 4 oz insulation for cold weather.
- Additional leather layer at palm for more durability and better grip.
- Waterproof, breathable Hipora insert.
- Velcro wrist adjustment.
- Pre-shaped fingers.
- Large gauntlet for wearing over jacket.

* Glove not completely waterproof at forefinger.

Polyester, Leather
Insulation: Polyester
286284 • M, L, XL, 2XL, 3XL
Next G-1 Vista Camo (37)
$49.99

MEN'S TRAIL GLOVES

- Leather reinforcements at fingers, palm and back hand for extra durability.
- Hipora insert at back hand to add water resistance without compromising grip at palm.
- Pre-curved design.
- Clarino at palm and thumb.
- Inverted seams at fingers for better comfort.

Nylon, Leather,
Polyester, Spandex
286268 • S, M, L, XL, 2XL, 3XL
Brown (04), Black (90)
$39.99

LEATHER PALM WITH EXTRA PADDING

MEN'S ADVENTURE GLOVES

- Flexible gloves mostly in leather for better protection from the elements.
- Leather palm for better grip and extra padding for increased comfort.
- Pre-curved design.
- Inverted seams at fingers for better comfort.
- Gauntlet with Velcro† adjustment and accordions for more flexibility.
- Water repellent.

Polyester, Cotton, Chloroprene Rubber, Nylon, Leather
286407 • S, M, L, XL, 2XL, 3XL
Yellow (10), Warm Gray (15), Black (90)
$79.99

"NOTHING FREES YOU LIKE BEING IN YOUR HELMET, IN TOTAL CONTROL OF A POWERFUL MACHINE."

RYAN ORR

XP-2

- High-tech, lightweight and tough matrix shell.
- Fully-adjustable, aero-tuned visor reduces lift at high speeds.
- Ventilation system.
- Moisture-wicking and breathable chin strap, liner and cheek pads.
- Removable and washable liner and cheek pads.
- Provides maximum visibility, fits all goggles.
- Strap grip keeps goggle strap in place.
- AMA competition rules compliant.
- Weight: Large = ± 1550 g.
- Snell M2010 and D.O.T. approved.

Fiberglass, Kevlar

N

XP-2 X-RACE HELMET

447831 • XS, S, M, L, XL, 2XL
White (01), Yellow (10)
$229.99

WHITE (01)

YELLOW (10)

XC-3

- Lightweight and tough.
- Equipped with air pump adjustable cheek pads activated by finger pressure for better fit.
- New chinbar, rubber nose roost shield for deflecting more debris without reducing goggle/eye port area.
- Fully-adjustable, aero-tuned visor reduces lift at high speeds.
- Ventilation system.
- Moisture-wicking chin strap, liner and cheek pads.
- Removable, washable liner and cheek pads.
- Provides maximum visibility and fits all goggles.
- Strap grip to hold goggle strap in place.
- Weight: Large = ± 1700 g.
- Snell M2010 and D.O.T. certified.

Polycarbonate Composite

XC-3 HOLESHOT HELMET

447514
XS, S, M, L, XL, 2XL
Yellow (10), Red (30)
$169.99

YELLOW (10)

RED (30)

XC-3 HELMET

447604
XS, S, M, L, XL, 2XL
Black (90)
$149.99

XC-3 CAMO HELMET

447692
XS, S, M, L, XL, 2XL
Urban Camo (37)
$164.99

We improved our best-of-the-best lightweight helmet with new features such as:
- Tool-less adjustable wide angle visor with glare-reducing decal on the underside;
- Flexible face trim with a large nose area for better protection;
- Anti-slip goggle strap design.

XP-R2

- Our best-of-the-best Multi Directional Carbon Fiber lightweight helmet with carbon and aramid fiber reinforced shell.
- EPS foam upper insert between inner fabric and outer shell.
- Integrated rear fin for added stability and aerodynamic performance.
- Double D racing buckle and pocket for sweat absorbent front pad.
- Removable and washable cheek and head pads.
- Morpho System Plus ergonomic 3D cheek pads available in your size.
- Liner features sanitized treatment with Coolmax† moisture-wicking action.
- F.A.S. (Full Air System) with 10 ventilation points and double rear extractor.
- Aluminum screws, protective coated parts.
- Ergonomic helmet bag.
- AMA competition rules compliant.
- Weight: Large = ± 1275 g.
- D.O.T. approved.

Carbon Fiber Composite

N

XP-R2 CARBON LIGHT ORIGINAL HELMET

447830 • XS, S, M, L, XL • White (01)

$499.99

XP-R2 is our lightest helmet with a carbon and aramid fiber reinforced shell! Weight: Large = ± 1275 g.

XP-R2 CARBON LIGHT HELMET

447656 • XS, S, M, L, XL • Black (90)

$479.99

ORANGE (12)

BRONZE (92)

XP-R2 CARBON LIGHT BLAZE HELMET

447660 • XS, S, M, L, XL • Orange (12), Bronze (92)

$499.99

XP-R / XP-R2 HELMET SWEAT ABSORBENT PAD

• Pack of 10.

447435 • One Size • White (01)

$7.99

XP-R2 MORPHO KIT

• Extra cheek pads, for a better fit inside the helmet.
• Left and right pads included.

447754 • M, L, XL, 2XL, 3XL • Clear (00)

$14.99

X-1

- High-tech, lightweight and tough.
- Fully-adjustable, aero-tuned peak.
- Ventilation system.
- Moisture-wicking and breathable chin strap, liner and cheek pads.
- Easily removable and washable liner and cheek pads.
- Provides maximum visibility.
- Fits all goggles.
- Strap grip keeps goggle strap in place.
- Weight: Large = ± 1400 g.
- D.O.T. certified.

ABS

WHITE (01)

YELLOW (10)

X-1 TEAM CROSS HELMET

447688 • XS, S, M, L, XL, 2XL • White (01), Yellow (10)

$99.99

Dust Mask

- Protects your breathing while riding.
- Easily replaceable filters remove 99.9% of airborne dust, particles, pollen and odors.
- The mask is made of soft yet durable neoprene material that fits snugly under helmets and goggles.
- Convenient MP3 player pocket on the side.
- XS/S fits most kids 12 and under, M/L fits most riders, and XL/2XL fits larger frames (235+ lbs).
- Includes 2 replacement filters and a small storing pouch.

N

ORIGIN DUST MASK

447833 • XS/S, M/L, XL/2XL
Black (90)

$29.99

N

X-RACE DUST MASK

447834 • XS/S, M/L, XL/2XL
Yellow (10)

$29.99

LADIES' DUST MASK

447721 • XS/S, M/L, XL/2XL
Purple (40)

$29.99

CAMO DUST MASK

447722 • XS/S, M/L, XL/2XL
Urban Camo (37)

$29.99

DUST MASK REPLACEMENT FILTERS

447719 • XS/S, M/L, XL/2XL
White (01)

$6.99

Bluetooth Communication System

- Bluetooth v3.0 Stereo Headset with long-range Bluetooth Intercom designed specifically for motorcycles.
- Call handsfree on your Bluetooth mobile phone, listen to stereo music or voice instructions of GPS navigations by Bluetooth wirelessly, and have intercom conversations in full duplex with a passenger or other motorcycle riders.
- 4-way conference intercom.
- Conference phone call with intercom participant.
- Multipoint for Mobile Phone+GPS.
- Voice prompts.
- Bluetooth stereo headset for Bluetooth audio devices such as MP3 players.
- Bluetooth music playback control by AVRCP: play, pause, track forward and track back.
- Easy operation via versatile Jog Dial (patent pending).
- Sufficient sound level with integrated audio booster.
- Bluetooth handsfree for Bluetooth mobile phones.
- Bluetooth headset or stereo headset for Bluetooth GPS navigation.
- Stereo music through 3.5mm audio cable.
- Water-resistant for use in inclement weather.
- Crystal clear and natural sound quality.
- Up to 12 hours talk time, 10 days stand-by time.
- Can be used while charging on road trips.
- Individual volume control for each audio source.
- Bluetooth specification v3.0.
- Firmware upgradable.

BLUETOOTH COMMUNICATION SYSTEM

Single Pack

447714 • One Size
Black (90)
$209.99

Dual Pack

447715 • One Size
Black (90)
$379.99

BLUETOOTH COMMUNICATION SYSTEM UNIVERSAL DC CHARGER AND USB CABLE

447796 • One Size
Black (90)
$17.99

“ IT’S FUN TO BE THE PERSON ON THE TRAIL WITH THE COOLEST GEAR. ”
CAMILLE JOHNSON
can-am

ST-2

- Lightweight fiberglass shell design.
- Sport visor peak with sunshield.
- Soft and comfortable head liner and cheek pad fabric.
- Retro, modern open face styling.
- Padded chin strap with D-ring closure.
- Can-Am branded.
- D.O.T. approved.

ST-2 OPEN FACE HELMET

447884
XS, S, M, L, XL, 2XL, 3XL
White (01), Black (90)
$114.99

WHITE (01)

BLACK (90)

ST-2 OPEN FACE RETRO HELMET

447882
XS, S, M, L, XL, 2XL, 3XL
White (01), Matte Black (93)
$124.99

WHITE (01)

MATTE BLACK (93)

ST-5

- All purpose helmet.
- Injection molded shell.
- 3-snap visor included.
- Comfortable head liner and cheek pad fabric.
- Rubber edge molding for best finish.
- Padded chin strap with D-ring closure.
- Can-Am branded.
- D.O.T. approved.

ST-5 OPEN FACE VINTAGE HELMET

- Can-Am branded.

447862
XS, S, M, L, XL, 2XL
White (01), Black (90)
$69.99

ST-5 OPEN FACE HELMET

447880
XS, S, M, L, XL, 2XL
Black (90)
$59.99

ST-1

- Multiple functionalities when fitted with optional jaws.
- Ventilation tabs that can be easily opened and closed while riding.
- Anti-scratch visor.
- Integrated retractable sun visor.
- Anti-fog spray kit.
- Moisture-wicking and breathable removable liner and cheek pads.
- D.O.T. approved.

Polycarbonate Composite

WHITE (01) MAGNESIUM (24) BLACK (90)

ST-1 HYBRID HELMET

447734 • XS, S, S/M, M/L, L, XL
White (01), Magnesium (24), Black (90)
$299.99

ST-1 HYBRID FULL FACE JAW

- Transforms the ST-1 Hybrid Helmet into a standard full face helmet for extra wind protection.

447755 • One size
White (01), Magnesium (24), Black (90)
$69.99

ST-1 HYBRID VENTED JAW

- Transforms the ST-1 Hybrid Helmet into a jet ventilated full face helmet for enhanced protection with ventilation comfort.

447756 • One size
White (01), Magnesium (24), Black (90)
$69.99

SHORT LONG

ST-1 HYBRID SINGLE PANE VISOR

- Optically-correct polycarbonate shield with hardcoated anti-scratch technology.

Short
447758 • One size • Clear (00)
$49.99
Long
447757 • One size • Clear (00)
$49.99

ST-3

- Vent system on top.
- Double density inner shell.
- Non-allergenic and breathable lining.
- Clear visor with anti-scratch treatment.
- D.O.T. approved.

Polycarbonate Composite

SILVER (08) BLACK (90)

ST-3 OPEN FACE HELMET

447464 • XS, S, M, L, XL, 2XL
Silver (08), Black (90)
$89.99

SMOKE 60% (21)

ST-3 OPEN FACE TINTED VISOR

- Tinted visor with anti-scratch treatment.

447598 • One size
Smoke 60% (21)
$19.99

ST-3 OPEN FACE CLEAR VISOR

- Clear visor with anti-scratch treatment.

447823 • One size
Clear (00)
$19.99

BV2S is simply the most hightech helmet available, delivering picture window-like visibility with its fog-resistant mask system and crystal clear visor.

BV2S

- Unique BV2S fog-resistant mask system adapts to all faces.
- Integrated backlight.
- Dual lens visor featuring enhanced 180° peripheral vision.
- Adjustable sunshield.
- Removable washable interior.
- D.O.T. approved.
- Backlight batteries included.

Polycarbonate Composite

BV2S HELMET
447404 • S, M, L, XL, 2XL, 3XL • White (01), Yellow (10), Black (90), Matte Black (93)
$449.99

BV2S ELECTRIC SE HELMET
(Not illustrated)
447468 • S, M, L, XL, 2XL, 3XL • Black (90)
$529.99

ABSORBENT MASK
• Pack of 5.
447282 • One Size
White (01)
$7.99

HELMET LIGHTING SYSTEM KIT
• Batteries not included.
447465 • One Size
Black (90)
$39.99

SUNSHIELD VISOR
445720 • One Size
Orange (12)
$59.99

ELECTRIC VISOR
447517 • One Size
Clear (00)
$169.99

HELMET REPLACEMENT VISOR
447508 • One size
Clear (00)
$109.99

Modular 2

- Built-in Clear Vision Technology with optically-correct dual lens visor.
- Adjustable sunshield lowers or raises at the touch of a button.
- Front push-button release integrated into jaw section facilitates manipulation when wearing gloves.
- BREATH EVAC fog-resistant mask system and increased vent diameter control breathing airflow.
- Spacious design allows room for eyeglasses.
- D.O.T. approved.

Polycarbonate Composite

MODULAR 2 HELMET
447521 • S, M, L, XL, 2XL, 3XL • White (01), Gray (09), Yellow (10), Black (90)
$329.99

MODULAR 2 ELECTRIC SE HELMET
447652 • S, M, L, XL, 2XL, 3XL • Black (90)
$399.99

ABSORBENT MASK
• Pack of 10.
445953 • One Size • White (01)
$7.99

SMOKE (57)

MODULAR 2 ANTI-SCRATCH SUN VISOR
447744 • One Size • Yellow (10), Smoke (57)
$59.99

MODULAR 2 REPLACEMENT VISOR
• Sun visor not included.
445967 • One Size • Clear (00)
$99.99

MODULAR 2 ELECTRIC VISOR
• Sun visor not included.
447516 • One Size • Clear (00)
$149.99

CAN-AM RACE GOGGLES BY SCOTT

- Custom painted frame and strap graphics.
- No Fog™ anti-fog lens treatment.
- 100% UV protected clear Lexan lens.
- Multi-layer face foam.
- Durable anti-slip strap.
- Tear-off and roll-off compatible (sold separately).
- Storing pouch included.
- Can-Am branded.

447902 • One Size • Yellow (10), Green (70)

$64.99

CAN-AM ADVENTURE SPEED STRAP GOGGLES BY SCOTT

- Custom painted frame and strap graphics.
- No Fog™ anti-fog lens treatment.
- 100% UV protected clear Lexan lens.
- Multi-layer face foam.
- Durable rubber-threaded strap.
- Tear-off and roll-off compatible (sold separately).
- Can-Am branded.

447934 • One Size • White (01), Yellow (10), Black (90)

$79.99

CAN-AM RACE SAND GOGGLES BY SCOTT

(Not illustrated)

447903 • One Size • Yellow (10), Green (70)

$64.99

Vent foam protects from dust and sand.

SPEED STRAP HELMET ATTACHMENT SYSTEM

- Quick fastening system features enhancements not found in other similar systems.
- Proven pivot design provides secure and easy-to-use durable attachment to any helmet.
- On-the-fly strap tension adjustment for riders on the go.

447912 • One Size • Black (90)

$20.99

SPEED STRAP REMOUNT KIT

447943

$10.99

CAN-AM WORKS FILM ROLLS

- Ready to be used clear film refills.
- Pack of 6.

447909 • One Size • Clear (00)

$14.99

CAN-AM WORKS FILM SYSTEM

- Anti-stick replacement lens.
- 2 rolls of film.
- 1 mud flap.
- 6 Hole Shot tear-offs.

447908 • One Size • Clear (00)

$43.99

CAN-AM WORKS SINGLE LENS TEAR-OFF KIT

- Anti-stick replacement lens.
- 6 Hole Shot tear-offs.
- Posts included.

447910 • One Size • Clear (00)

$19.99

CAN-AM WORKS TEAR-OFF REFILLS

- Ready to be used clear tear-off tabs.
- Pack of 10.
- Posts included.

447911 • One Size • Clear (00)

$10.99

CAN-AM ADVENTURE GOGGLES BY SCOTT

- Custom painted frame and strap graphics.
- No Fog™ anti-fog lens treatment.
- 100% UV protected clear Lexan lens.
- Multi-layer face foam.
- Durable anti-slip strap.
- Tear-off and roll-off compatible.
- Can-Am branded.

447900 • One Size • White (01), Yellow (10), Black (90)

$54.99

CAN-AM ADVENTURE OVER THE GLASSES GOGGLES BY SCOTT

447901 • One Size • Black (90)

$54.99

Engineered to fit comfortably over prescription eyewear.

CAN-AM TRAIL GOGGLES BY SCOTT

- 100% UV protected clear Lexan lens.
- Hypoallergenic super-soft face foam.
- Durable anti-slip strap.
- Tear-off and roll-off compatible (sold separately).
- Can-Am branded.

447899 • One Size • White (01), Yellow (10), Black (90)

$34.99

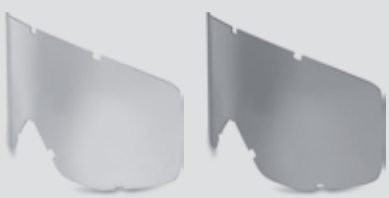
CAN-AM JUNIOR TRAIL GOGGLES REPLACEMENT SINGLE LENS

- Replacement single lens.
- Impact-resistant polycarbonate.
- No Fog™ anti-fog lens treatment.
- 100% UV protection.

100% Polycarbonate

447904 • One Size • Clear (00)

$10.99



REPLACEMENT SINGLE LENS

- Fits Trail, Adventure, OTG and Race Goggles.
- Impact-resistant polycarbonate.
- No Fog™ anti-fog lens treatment.
- 100% UV protection.

100% Polycarbonate

447905 • One Size • Clear (00), Gray (09)

$10.99

GOGGLES REPLACEMENT DUAL LENS

- Fits Trail, Adventure, OTG and Race Goggles.
- Impact-resistant polycarbonate.
- No Fog™ anti-fog lens treatment.
- 100% UV protection.

100% Polycarbonate

447906 • One Size • Clear (00)

$20.99

N

CAN-AM CARRIER 8800 GEAR BAG BY OGIO

- Heavy-duty chassis with oversized treaded wheels.
- Wide mouth U-shaped opening for easy access to all gear.
- Large main ventilated compartment and multi-use dual end pockets.
- Secondary end pocket with accessory organization sleeves for smaller gear.
- iFom† integrated foam panel construction throughout for added gear protection.
- Telescoping pull handle and padded adjustable shoulder strap.
- Easy grab end handles for transport.
- Dimensions: 15" H x 18" W x 32" D.
- Weight: 9 lbs.
- Capacity: 8800 Cubic Inches.

600D PVC / Tarpaulin

447854 • One size • Black (90)
$164.99

N

CAN-AM CARRIER 9800 GEAR BAG BY OGIO

- Structural Load Equalization Deck (SLED) wheeled chassis system.
- Wide mouth Lid opening for easy access to all compartments and specialty pockets.
- iFOM integrated foam panel construction throughout entire bag for added protection.
- Adjustable main compartment dividers for custom organization.
- Multiple zippered mesh organization pockets for garment, shoes and accessories.
- Front accessory pocket and secure hold compression straps.
- Oversized heavy-duty treaded wheels.
- Telescoping pull handle.
- Dimensions: 16" H x 17" W x 36" D.
- Weight: 14.2 lbs.
- Capacity: 9800 Cubic Inches.

600D Polyester, 420D Dobby Polyester

447853 • One size • Black (90)
$259.99

N

CAN-AM CARRIER BACKPACK BY OGIO

- Padded interior laptop compartment fits most 17" laptops.
- iFom integrated panels keep your electronics and other valuables protected.
- Padded iPad† / tablet / e-reader sleeve.
- Large main compartment fits books, binders and extra files.
- Comfortable padded back panel.
- Adjustable ergonomic shoulder straps.
- Zippered fleece lined top pocket for valuables.
- Easy-access front stash pocket.
- Dual side beverage / accessory holders.
- Laptop sleeve: 19" H x 13"W x 1.5"D.
- Dimensions: 19" H x 13" W x 7.5" D.
- Weight: 1.6 lbs.
- Capacity: 1700 Cubic Inches.

600D Polyester, 420D Dobby Polyester

447858 • One size
Black (90)
$74.99

This is more than an helmet bag. You can fit all helmet brands and sizes, goggles, gloves and much more.

N

CAN-AM CARRIER DUFFLE BAG BY OGIO

- High-tensile strength, durable, lightweight construction.
- Ventilated shoe compartment (holds two pairs).
- Zippered front accessory pocket.
- Large main compartment with additional end storage pocket.
- Padded, ventilated and adjustable shoulder strap.
- Sweat-resistant, soft touch, molded carry handle.
- Durable abrasion resistant base.
- High visibility liner.
- Dimensions: 11" H x 9.75" W x 25" D.
- Weight: 1.6 lbs.
- Capacity: 3000 Cubic Inches.

Polyester

447856 • One size
Black (90)
$64.99

N

CAN-AM CARRIER HEAD CASE BY OGIO

- Oversized helmet bag fits all helmet brands and sizes with fins and without.
- iFOM integrated foam panels and additional fleece interior provides the ultimate in protection.
- Protective zipper teeth closure prevents scratches from zippers.
- Easy-access oversized external sleeve pocket for goggles, lenses and tear offs.
- Exterior zippered accessory pocket for valuables.
- Durable reinforced bottom.
- Dimensions: 11" H x 13" W x 19" D.
- Weight: 1.6 lbs.

600D Polyester, 420D Dobby Polyester

447857 • One size
Black (90)
$49.99

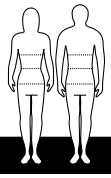
CAN-AM HELMET CASE

- Easy-to-carry ergonomic handle.
- Outer pocket for helmet accessory.
- Can-Am branded.

100% polyester

447678 • One Size
Black (90)
$29.99

SIZING CHART
RIDING GEAR



HOW TO MEASURE

For best results, have someone else take measurements. Measure body in underwear.
Tape must be snug but not tight. If measurements fall between two sizes, order the larger size.

Chest/Bust
Measure under your arms, around the fullest part of your chest.

Waist
Measure around your natural waistline, keeping one finger between the tape and body.

Gloves
Measure palm width.

Inseam
Without shoes, from crotch to the floor.

Arm length
Hand on hip, from center back neck bone, along shoulder point around elbow to bottom of wrist bone.

Head
Around your head, from the center of the forehead, above the ears and over the natural bump at the back of the head.

MEN - REGULAR 5'8" - 6'0" (1.77 M - 1.83 M)

JACKET AND PANTS		S	M	L	XL	2XL	3XL
PANTS	**28**	**30**	**32-34**	**36-38**	**40-42**	**44**	
CHEST	33 - 35	36 - 38	39 - 41	42 - 44	46 - 48	50 - 52	54 - 56
WAIST	28 - 30	30 - 32	33 - 35	36 -39	41 - 43	45 - 48	50 - 52
HIPS	32 - 34	35 - 37	38 - 40	41 - 43	45 - 47	49 - 51	53 - 55
ARM LENGTH	31	33	33	34	34	35	35
INSEAM	31	32	32	32	33	33	33

MEN - BIG AND TALL 6'1" - 6'4" (1.86 M - 1.95 M)

JACKET AND PANTS	MT	LT	XLT
PANTS			
CHEST	39 - 41	42 - 44	46 - 48
WAIST	33 - 35	36 - 39	41 - 43
HIPS	38 - 40	41 - 43	45 - 47
ARM LENGTH	34 1/2	35 1/2	35 1/2
INSEAM	34	34	35

LADIES' - REGULAR 5'4" - 5'8" (1.64 M - 1.77 M)

JACKET AND PANTS	XS	S	M	L	XL	2XL	3XL
PANTS	**3/4**	**5/6**	**7/8**	**9/10-11/12**	**13/14**		
CHEST	32 1/2 - 33 1/2	34 1/2 - 35 1/2	36 1/2 - 38	39 1/2 - 41	43 - 45 1/2	47 - 49 1/2	51 - 53
WAIST	24 1/2 - 25 1/2	26 1/2 - 27 1/2	28 1/2 - 30	31 1/2 - 33	35 - 37	39 - 41	43 - 45
HIPS	34 1/2 - 35 1/2	36 1/2 - 37 1/2	38 1/2 - 40	41 1/2 - 43	45 - 47	49 - 51	53 - 55
ARM LENGTH	29	30	31	32	32	32	32
INSEAM	29	29	30	30	30	30	30

MEN'S GLOVES (measure palm width)

	S	M	L	XL	2XL	3XL
INCHES	3	3 3/8	3 3/4	4 1/8	4 1/2	5 1/2

LADIES' GLOVES (measure palm width)

	S	M	L	XL	2XL
INCHES	2 5/8	3	3 1/4	3 1/2	4 1/2

TEEN GLOVES

	6-8	10-12	14-16
INCHES	3 1/8	3 3/8	3 5/8

SOCKS

S/M	L/XL
6 - 9	10 - 13

JUNIOR HELMETS

	S	M	L
HAT SIZE	6 1/8 - 6 1/4	6 3/8 - 6 1/2	6 5/8 - 6 3/4
HEAD (INCHES)	19 3/8 - 19 3/4	20 1/8 - 20 1/2	20 7/8 - 21 1/4

HELMETS

	XS	S	S/M	M	M/L	L	XL	2XL	3XL
HAT SIZE	6 5/8 - 6 3/4	6 7/8 - 7	7 1/8	7 1/8 - 7 1/4	7 1/4	7 3/8 - 7 1/2	7 5/8 - 7 3/4	7 7/8 - 8	8 1/8 - 8 1/4
HEAD (INCHES)	20 7/8 - 21 1/4	21 5/8 - 22	22 3/8	22 3/8 - 22 3/4	22 3/4	23 1/8 - 23 5/8	24 - 24 3/8	24 3/4 - 25 1/8	25 1/2 - 25 7/8

KIDS/TEEN

	2	3/4	5/6	7/8	10/12	14/16
CHEST	21	22 - 23	24 - 25	26 - 27	28 1/2 - 30	31 1/2 - 33
WAIST	20	20 1/2 - 21	21 1/2 - 22	22 1/2 - 23	24 - 25	26 - 27
HIP (SEAT)	21	22 - 23	24 - 25	26 - 27	28 1/2 - 30	31 1/2 - 33
ARM LENGTH	15 1/2	17 - 18 1/2	20 - 21 1/2	23 - 24 1/2	28 1/2 - 30	31 1/2 - 33
INSEAM	13 1/2	15 1/2 - 17 1/2	19 1/2 - 21	22 3/4 - 24 1/2	26 1/4 - 28	29 1/2 - 31

WHAT CODE REPRESENTS YOUR SIZE?

1. Find your size.

2. **The corresponding code is THE CODE you use to complete the part number on your order.**
   Example: 440227__90 Size: M = code "06", therefore 4402270690

SIZE	One Size	XS	XS/S	S	M	MT	L	LT	XL	XLT	2XL	3XL	4XL	5XL
CODE	**00**	**02**	**90**	**04**	**06**	**07**	**09**	**10**	**12**	**13**	**14**	**16**	**18**	**88**

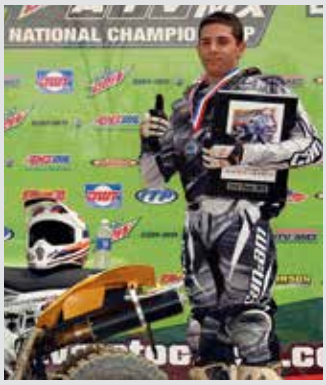
SIZE	S/M	M/L	L/XL	2	3/4	5/6	6/8	7/8	9/10	10/12	11/12	13/14	14/16
CODE	**72**	**91**	**73**	**21**	**79**	**52**	**48**	**54**	**55**	**49**	**56**	**80**	**50**

SIZE	8	9	10	11	12	13	28	30	32	34	36	38	40	42	44
CODE	**28**	**29**	**30**	**31**	**32**	**33**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**

MEET SOME OF OUR CAN-AM RACERS

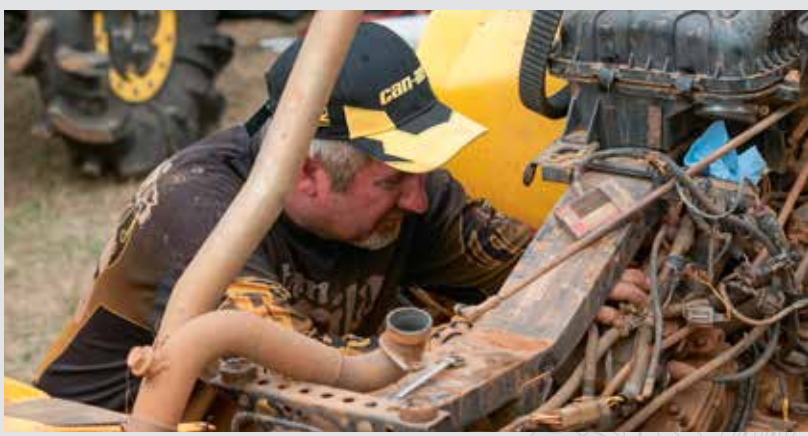
Looking to build upon its racing success, BRP fields teams of Can-Am racers on both ATVs and side-by-sides in off-road racing in the U.S.A. and Canada.

Meet some of the racers that are prepared to do battle aboard their Can-Am machines proudly showing our bold team look.



NICHOLAS GENNUSA (ATV MX)
Is an AMA ATV Rider of the Year award winner who enjoys building race tracks, but he loves winning on his Can-Am even more. A six-time champion who lives in Wall, NJ, Nick races a DS450 with the BCS Performance Can-Am Team.

JARROD MCCLURE (GNNC)
Started racing off road at a young age 10 years ago, this 2012 Baja 1000 race winner really gets the job done while racing in the tight woods aboard his JB Racing Can-Am DS450. When not training, the young "Jrod" works as a mechanic in Kaska, PA.



TEAM GORILLA AXLE
Mud-Racing with the Can-Am Outlander 800R X mr, Renegade 800R ATVs, Commander 1000 and Maverick 1000 X rs SSVs.

For more information on Can-Am racing, the entire race schedule, the contingency program and all amateur racer support programs:

VISIT
WWW.CAN-AMXTEAM.COM

FOLLOW
BLOG.CANAMOFFROAD.COM

Ryan Orr, Brittany Burg, Cody Hawkins and Dalton Platt in action wearing the 2014 PERFORMANCE collection.

Sheldon Honey and Camille Johnson on their ADVENTURE.

WATCH

our crew experience the NEW
Can-Am Riding Gear and SSV accessories:
store.can-am.brp.com/video

Jeremy Houston and Brad Rising wear and explore the features of the RECREATIONAL collection.

Ryan Orr, Brittany Burg, Kyeron Pierson, Haze Pierson, Dalton Platt and Cody Hawkins experience new and innovative Can-Am SSV ACCESSORIES.

JOIN THE CAN-AM COMMUNITY
SHARE. LEARN. CONNECT.

MAIN WEBSITE
can-am.brp.com

CAN-AM OFF-ROAD ON FACEBOOK
facebook.com/CanAmOffRoad

CAN-AM OFF-ROAD BLOG
blog.canamoffroad.com

NEWSLETTER
store.can-am.brp.com

ATV ACCESSORIES

WINCHES P. 99

LINQ TRUNK BOXES P. 64

RENEGADE ACCESSORIES P. 78

DS ACCESSORIES P. 88

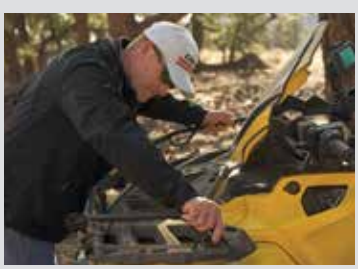
OUTLANDER

58-77 Parts & accessories
92 Winter accessories
138 Tires & Rims

"THE PASSENGER SEAT AND SUPPORT GIVE YOU A SENSE OF SECURITY CLIMBING HILLS. IT'S COMFORTABLE, TOO."
CAMILLE JOHNSON

CAN-AM OUTLANDER ACCESSORIES ADD VERSATILITY

The **Deluxe Fairing** adds protection and many options, such as lighting.



LinQ Rack Extensions simply plug in to add more tie-down possibilities.

Carry smaller items, like tools, in the **LinQ Storage Box**.

Customize the **LinQ Trunk Box** with color-matched panels.

MAKE IT YOURS WITH TOTAL INTEGRATION

LINQ 32 GAL (124L) TRUNK BOX FOR MAX

Specifically designed for the Outlander MAX. Extra large, innovative LinQ System mount, with passenger comfort pads and rear tail light. Weather-resistant lid gaskets seal out dust and moisture.
Key locking latch. Color panels available to match your vehicle.

FRONT & REAR LINQ RACK EXTENSIONS

These strong, durable rack extensions install easily on the Outlander and Outlander MAX thanks to the LinQ System, requiring no tools. It helps keep your cargo more securely in place.

FRONT & REAR BUMPERS

Provide additional protection against the elements. Tough and durable, they can be added on the base vehicle to give your Outlander the look of an XT model.

PASSENGER HEATED HAND GRIPS AND WIND DEFLECTORS

Passenger handles with dual temperature and visor outlet, plus wind deflectors for greater comfort while riding.

UNDERBELLY PROTECTION

Aluminum plates made with high strength 5052 H32 aluminum and suspension components to protect your frame from the unexpected. A must-have for rugged terrains.

EXTRA HIGH WINDSHIELD

For wind protection and winter applications.

DELUXE FAIRING

The Deluxe Fairing provides not only wind protection, but a series of innovative features:
- Quick tool-less removal once the base brackets are mounted on the handlebar
- 2 cup holders
- Optional GPS mounting kit
- Optional windshield can be added on
- Optional mirrors
- Optional auxiliary windshield lighting

Aluminum plates made with high strength 5052 H32 aluminum and suspension components protect your frame from the unexpected, making them a must-have for rugged terrain.

FIND YOUR MODEL AND YEAR

OUTLANDER 2013-2014 (EXCEPT WITH 400 ENGINE) OUTLANDER 2012 WITH 800R OR 1000 ENGINE	OUTLANDER 2006-2012 (EXCEPT WITH 400 ENGINE & 2012 WITH 800R OR 1000 ENGINE)	OUTLANDER MAX 2013-2014 (EXCEPT WITH 400 ENGINE)	OUTLANDER MAX 2012 AND PRIOR (EXCEPT WITH 400 ENGINE)

SKID PLATE **BUNDLES**

INCLUDE:
- A-Arm Protectors
- Footwell Protector Plates
- Rear Skid Plate
- Front Skid Plate
- Trailing Arm Protectors
- Central Skid Plate
- Rear Differential Protector

715002137 $624.99	715002134 $784.99	715002138 $744.99	715002135 $799.99

SKID PLATE **INDIVIDUAL KITS**

A-ARM PROTECTORS

- Add more protection to the CV joints and rubber boots.
- Drain hole to release water, mud and debris.
- Replace stock plastic protectors.
- Embossed Can-Am logo.
- 1/8" (3 mm) thick lightweight and durable design.
- Easy to install.
- Sold in pairs.
- Except X mr.

715001667 $114.99	703500524 $129.99	715001667 $114.99	703500524 $129.99

FRONT SKID PLATE

- 3/16" (4.5 mm) thick and die-formed for strength and durability.
- Protection for the front portion of the frame.
- Use in conjunction with the central chassis skid plate for full frame protection.

715000926 $64.99	715000548 $104.99	715000926 $64.99	715000548 $104.99

CENTRAL CHASSIS SKID PLATE

- 715000923 - 3/16'' (4.5 mm) thick die-formed
- Must be installed with front skid plate
- 715000636 - 1/8'' (3 mm) thick die-formed
- Engraved Can-Am logo

Standard on Outlander X xc 715000923 $89.99	715000636 $89.99	Standard on Outlander X xc 715000923 $89.99	715000636 $89.99

FOOTWELL PROTECTOR PLATES

- Bump up the impact protection to the footwells.
- Use in conjunction with the central chassis skid plate.
- 1/8" (3 mm) thick lightweight and durable design.
- Sold in pairs.

715000922 $119.99	715000547 $154.99	715000922 $119.99	715000547 $154.99

TRAILING ARM PROTECTORS

- 1/8" (3 mm) thick lightweight and durable design.
- Sold in pairs.
- Replaces stock plastic protectors.
- Engraved Can-Am logo.

715001129 $104.99	715000311 $129.99	715001129 $104.99	715000311 $129.99

REAR DIFFERENTIAL PROTECTORS

- 1/8" (3 mm) thick lightweight and durable design.
- Replace stock plastic protectors.

715000920 $59.99	715000285 $119.99	715000920 $59.99	715000285 $119.99

REAR SKID PLATE

- 3/16" (4.5 mm) thick and die-formed for strength and durability.
- Must be installed with the central and front skid plates.

715000918 $69.99		715000919 $94.99	

- 1/8" (3 mm) thick and die-formed for strength and durability.
- Must be installed with the central and front skid plates.

(With 400 engine only) 703500382 $59.99	(Except with 400 engine) 715000609 $54.99	(With 400 engine only) 703500381 $74.99	715000610 $69.99

CENTRAL AND FRONT SKID PLATE

- Two-piece 3/16" (4.5 mm) aluminum full-body skid plate designed to protect frame and engine case from rough terrain conditions.

Outlander 400 only
703500570
$104.99

FRONT BUMPER LIGHTS

- Two 10W LED Cree 900 lumens lights.
- Long-range illumination up to 107 meters (350 feet).
- Each light draws less than 1 amp.
- Multi-position clamps included for mounting on various tube sizes.

Outlander (all models) with XT bumper

715001741

$249.99

XT FRONT BUMPER KIT

- Provides additional protection against the elements.
- Tough and durable, can be added on base Outlander model to convert vehicle into XT model.
- Large tube construction with textured black finish.
- Standard on XT model.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715000947

$159.99

Outlander 2009 800R, 2010-2012 (except 2012 with 800R or 1000 engine), Outlander MAX 2010-2012

715000670

$189.99

Outlander 2006-2009 (except with 800R engine)

703500551

$159.99

Outlander 2004-2005

703500348

$174.99

EXTREME FRONT BUMPER

- Ultra sturdy for extra vehicle front protection.
- Fits with Apache 360 Track System when removing the side panels.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715001286

$229.99

LOWER BUMPER EXTENSION

(Not illustrated)

- Adds protection to lower front plastic fascia.
- Easy to install.
- No drilling required.
- Removable for track system installation.
- Must be installed with XT Front Bumper Kit (715000670).

Outlander 2009 800R, 2010-2012 (except 2012 with 800R or 1000 engine), Outlander MAX 2010-2012

715000635

$79.99

XT REAR BUMPER KIT

- Provides additional protection against the elements.
- Tough and durable, can be added on base Outlander model to convert vehicle into XT model.
- Large tube construction with textured black finish.
- Standard on XT model.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715000948

$149.99

Outlander 2009 800R, 2010-2012 (except 2012 with 800R or 1000 engine), Outlander MAX 2010-2012

715000671

$144.99

Outlander 2006-2009 (except with 800R engine)

703500550

$154.99

Outlander 2004-2005

703500349

$159.99

LinQ SYSTEM™

ACCESSORIZING ACCELERATED

- Install and remove accessories in seconds and transform your vehicle to suit the need of the moment.
- Tool-less system allows you to literally plug in and out of situations as they arise.
- True secure mounting and anti-theft protection locks in peace of mind.
- Trunk boxes, rack extensions, modular bags and gear grips attach quickly on expeditions.
- Detach instantly for freeriding.

The LinQ System full-lock mounting system for Can-Am ATV accessories will transform the way you use your ATV, AND IT'S EXCLUSIVE TO BRP.

FRONT OR REAR LinQ 4" (10 CM) RACK EXTENSION

- Strong and durable.
- Easy and tool-less installation thanks to the LinQ System.
- Helps keep cargo securely in place.
- Mounts in seconds.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715000944 • Silver

$169.99

715001665 • Black

$169.99

FRONT OR REAR LinQ 6" (15 CM) RACK EXTENSION

- Strong and durable.
- Easy and tool-less installation thanks to the LinQ System.
- Helps keep cargo securely in place.
- Mounts in seconds.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715001187 • Silver

$179.99

715001671 • Black

$179.99

LinQ (REPLACEMENT PART)

- Unique mounting fastener usable on any LinQ System accessory.
- Tool-less installation and removal.
- Sold in pairs.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715001707

$19.99

32 GAL (124L) TRUNK BOXES
FOR OUTLANDER & OUTLANDER MAX

OUTLANDER & OUTLANDER MAX

- **Seamless vehicle integration**
  Built from the design stage to specifically match your Can-Am Outlander or Outlander MAX. Totally cohesive design eliminates the need to modify your vehicle in any way.*
- **Easy quick-attach installation**
  Equipped with the LinQ System, the rear trunk box plugs in and out in seconds. Instantly transforms your vehicle to suit the need of the moment.
- **Unparalleled storage**
  32 Gal (124L) load capacity with contiguous unobstructed space to maximize storage room and access to the trunk's interior.
- **Built tough**
  Made of injection-molded polyethylene. Double walled in critical areas.
- **Dust & weather proof**
  The fully sealed lid protects your belongings from dust, moisture and the elements.

OUTLANDER MAX

- **Ergonomic design**
  Passenger comfort is ensured on active rides as well as longer recreational rides thanks to the ergonomically designed passenger padding, comfort-fitted with a portion made of closed cell foam that won't absorb water.
- **Easy access**
  Very easy to embark even when the driver is seated.
- **Passenger handgrips**
  Three holding positions enable passengers to adjust to the type of ride and type of comfort they desire. Heated handgrips available as an option, featuring 3 heated zones and dual temperature for ultimate comfort.

BUILD YOUR
32 GAL (124L) Trunk Box

1 CHOOSE YOUR TRUNK BOX

OUTLANDER

LinQ 32 GAL (124L) TRUNK BOX FOR OUTLANDER

Outlander 2012 with 800R or 1000 engine, Outlander 2013-2014 (except with 400 engine), For other Outlander models, the LinQ Retrofit Adaptor Plate is required (715001334).

715000931 • Rear tail light included

$339.99

OUTLANDER MAX

ERGONOMIC DESIGN

LinQ 32 GAL (124L) TRUNK BOX FOR OUTLANDER MAX

Outlander MAX 2013-2014 (except with 400 engine)

715001682 • Rear tail light included

$419.99

*WARNING: YOU SHOULD NEVER ACCESSORIZE YOUR CAN-AM OFF-ROAD VEHICLE WITH ACCESSORIES NOT APPROVED BY BRP BECAUSE YOUR VEHICLE MAY NO LONGER MEET CERTAIN SAFETY AND CONSTRUCTION STANDARDS. THIS SITUATION COULD INCREASE THE RISK OF SEVERE INJURY OR DEATH AND RENDER YOUR VEHICLE NOT LEGAL FOR USE.

2 CHOOSE COLOR PANELS TO MATCH YOUR VEHICLE

TRUNK BOX PANEL KIT

- Color panels to match your LinQ Trunk Box to your vehicle.

Fits LinQ 32 GAL (124L) Trunk Boxes for Outlander & Outlander MAX

715001391 • Black
715001392 • Yellow
715001395 • Red

$29.99

+

ADD THE NEXT G-1 VISTA CAMO DECALS ON BLACK PANELS TO MATCH YOUR CAMO VEHICLE

CAMO DECALS FOR BLACK TRUNK BOX PANEL KIT

- Complement your camo vehicle.
- Next G-1 Vista Camo pattern perfectly matches your camo vehicle.
- Easy and quick installation.

Fits Black Premium Trunk Box Panel Kit

715001683

$44.99

3 ORDER A PLATE (IF REQUIRED)

LINQ RETROFIT ADAPTOR PLATE

- Kit especially designed to allow the use of the LinQ 32 GAL (124L) Trunk Box (715000931) on older Outlander models.
- Comes with specific harness for the Trunk Box Light.

Outlander 2006-2012 (except 2012 with 800R or 1000 engine), Outlander 2013-2014 with 400 engine

715001334

$74.99

LinQ SYSTEM™

LinQ DELUXE MODULAR BAG

- Tool-less installation and removal.
- Versatile, rugged, spacious and attractive.
- Ideal for carrying anything you need in any conditions.
- Weatherproof, scratch-resistant, with molded rubber bottom.
- Central compartment can be used alone on the rack.
- Removable bin.
- The front bag will not obstruct light beam on Outlander Deluxe Fairing.

Outlander 2013-2014 (except with 400 engine), Outlander 2012 with 800R or 1000 engine

Front 44L Bag
715001695
$244.99

Rear 73L Bag
715001694
$274.99

REAR COMPARTMENT STORAGE 10L BAG

- Rolltop dry bag for protecting your cargo fully from the elements.
- Fits in innovative rear compartment of your Outlander.

Outlander & Outlander MAX 2013-2014 (except with 400 engine), Outlander 2012 with 800R or 1000 engine

708300460
$29.99

RACK EXTENSIONS

- Offers 4" (10 cm) or 7" (18 cm) of clearance with existing racks.
- Sturdy tube construction for securing bulky loads.
- Textured black finish.

Outlander 2006-2012 (except 2012 with 800R or 1000 engine), Outlander MAX 2012 and prior

Front		Rear	
Medium Profile 4" (10 cm)	High Profile 7" (18 cm)	Medium Profile 4" (10 cm)	High Profile 7" (18 cm)
703500536	703500535	703500538	703500537
$99.99	$114.99	$99.99	$114.99

NONSKID LUGGAGE RACK STRIPS

- Rubber strips you can apply to your front and rear luggage racks to maintain your cargo in position.
- Help keep your luggage rack scratch free.
- Easy to install.
- Sold in pack of 4.

Outlander 2006-2012 (except 800R or 1000 engine), Outlander MAX 2012 and prior

703500569
$8.99

This case has the most interior room of all Kolpin Gun Boot cases.

GUN BOOT† 6.0 IMPACT† BY KOLPIN†

- Features largest interior room of all Kolpin Gun Boot cases.
- Extra room for pistol-grip-type weapons and small bipods.
- Easily fits firearms up to 51" in total length.
- Provides ample room for 60mm scopes.
- Hatchback design allows easy access.
- Snap-close cover with locking capability.
- Ergonomically designed handle and molded attachment points for sling.
- Designed to accommodate left and right hand bolt-action rifles and shotguns.
- Includes removable, shock absorbing foam and nylon Impact liner for superior interior protection.
- Requires appropriate mounting kit for installation.

715001419

$74.99

LinQ SYSTEM™

LinQ GUN BOOT RACK

- This lightweight Gun Boot Rack can be mounted on either side of your Outlander using the tool-less LinQ System.
- For use with Gun Boot 6.0 Impact by Kolpin (715001419).

Outlander MAX 2013-2014 (except with 400 engine)

715001680

$159.99

Outlander 2013-2014 (except with 400 engine), Outlander 2012 with 800R or 1000 engine

715001226

$149.99

GUN BOOT SUPPORT

- Used in conjunction with Kolpin Gun Boot 6.0 (715001419).
- Attaches to the rear rack.

Rally & Outlander 2012 and prior (except MAX and Outlander 2012 with 800R or 1000 engine)

715000029

$89.99

LinQ SYSTEM™

LinQ MOUNTED GEAR GRIPS BY KOLPIN†

- Make transporting your tools a snap by combining the Gear Grips with the LinQ System.
- Durable, flexible grips cushion and protect while providing a custom fit for a variety of items from 1 to 4 inches in diameter.
- Heavy-duty design for carrying bows, fishing poles, rakes, farm tools and more.
- Quick-release button opens grip quickly for easy access to gear.
- Heavy-duty base system built for the toughest adventures.
- 360° orientation.
- Sold in pairs.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715001351

$99.99

STORAGE BOX

- Features easy quick-attach LinQ installation on front and rear racks.
- Also installable behind the driver seat on Outlander MAX.
- Fully sealed box provides additional storage for essential and valuable items.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

708200255

$65.99

REAR TRUNK BOX

- Perfect fit with vehicle.
- Made of impact resistant polyethylene.
- Fully sealed lid.
- Tray quick-hooks to box.
- Equipped with lid key lock.
- The molded handle makes lifting and moving the box easy.
- Robust double wall lid.
- Improved trunk latch and attachment system on rack.
- Easy-install quick attach/detach system (715000273) available as an option.
- Cannot be used with Rear Rack Extensions (703500537 & 703500538).

Outlander 2014 and prior, Outlander MAX 2012 and prior

715001842 • Black

$279.99

QUICK ATTACH/DETACH SYSTEM FOR REAR TRUNK BOX

(Not illustrated)

- Fits with Rear Trunk Box (715001842).

Outlander 2006-2012 (except 2012 with 800R or 1000 engine), Outlander MAX 2012 and prior

715000273

$89.99

REAR CARGO BOX

- Convert your Outlander MAX into a versatile vehicle.
- Designed exclusively for the Outlander MAX, this rear cargo box is built tough and made of high-resistance polyethylene plastic.

Outlander MAX 2006-2012

715000734 • Black

$539.99

GARMIN MONTANA 650T GPS

- Bright 4" sunlight readable, 65K Color TFT, touchscreen color display (272 X 480 pixels).
- High sensitivity, WAAS-enabled GPS receiver with Hotfix†.
- Wirelessly shares routes, tracks, way points and geocaches with friends between vehicles.
- Built-in WorldWide basemap with shaded relief, preloaded US topo maps.
- 3-axis compass and barometric altimeter.
- MicroSD† card slot for optional mapping.
- 5 megapixel autofocus digital camera with automatic geo-tagging.
- 3.5mm audio jack.
- High speed USB and serial interface.
- Rugged and waterproof (IEC 60529 IPX7).
- Multiple battery options: user replaceable 3AA (up to 22 hours) or rechargeable lithium (up to 16 hours).
- Includes mount for use with GPS Handlebar Mounting Kit (715001985).

Outlander (all models)
715002081
$649.99

GPS MOUNT

- For mounting a Garmin† Nuvi GPS.
- Kit includes wiring harness and protective cover.

Fits Deluxe Fairing
715000962
$89.99

GPS PROTECTOR

(Not illustrated)

- Provides extra protection from mud and dust.
- Covers GPS support when GPS is removed.
- For GPS Garmin Nuvi.

Outlander Limited 2010-2012
710002425 • Black
$19.99

GPS ADAPTOR FOR OUTLANDER LTD WINDSHIELD

- Needed to install your GPS from the Limited model when using a Can-Am windshield kit (715001015, 715001020 or 703500444).

Outlander Limited 2010-2012
715000961
$26.99

Outlander 2009 and prior
715000309
$26.99

GPS MOUNT FOR HANDLEBAR

- Convenient bracket for installing the Garmin Montana 650T GPS (not included) onto your unit's handlebar.

Outlander (all models)
715001985 • Black
$59.99

This bag keeps your stuff dry with 100% water-repellent construction.

FRONT BAG

- 100% water-repellent polyester construction.
- Designed to fit with or without a rack extension.
- Integrated map holder.
- Waterproof zippers.

Outlander 2006-2012 (except 2012 with 800R or 1000 engine), Outlander MAX 2006-2012
715000235 • Black
$119.99

Outlander 2004-2005
295100276 • Black
$114.99

REAR BAG

- 100% water-repellent polyester construction.
- Designed to fit with or without a rack extension.
- Waterproof zippers.

Outlander 2006-2012 (except 2012 with 800R or 1000 engine), Outlander MAX 2006-2012
715000234 • Black
$119.99

Outlander 2004-2005
295100277 • Black
$114.99

You can carry your stuff with ease by converting it to a duffel bag.

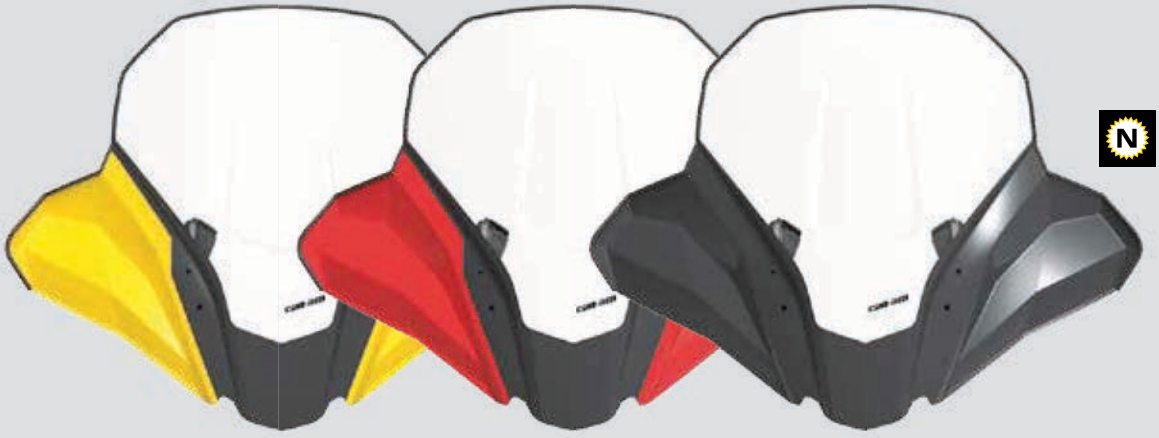
PREMIUM MODULAR BAG

- Multi-configuration 4-section bag.
- Made of 600-denier, solution-dyed, water-repellent polyester.
- Semi-rigid thermoformed structure.
- Heavy-duty water-resistant zipper.

Outlander 2006-2012 (except 2012 with 800R or 1000 engine), Outlander MAX 2006-2012
715001400
$179.99

"BEING IN UTAH IN MARCH, IT WAS NICE HAVING THE WINDSHIELD TO TAKE THE EDGE OFF THE CHILL."

CODY HAWKINS



HIGH WINDSHIELD KIT

- Provides excellent wind protection.
- Fits straight and tapered handlebars.
- Easy mounting system allows you to install it effortlessly.

Outlander (all models)

715001937 • Yellow
715001938 • Black
715002061 • Red

$179.99

ULTRA HIGH WINDSHIELD KIT

- Provides superior wind protection.
- Added substructure to control vibration.
- Can-Am branded and color matched.
- Can be used on standard, XT and Limited models.
- Easy to install and remove.

Outlander 2006-2012 (except with 400 engine & 2012 with 800R or 1000 engine), Outlander MAX 2012 and prior (except with 400 engine)

715001018 • Yellow
715001019 • Red
715001020 • Tinted Black

$219.99

HIGH WINDSHIELD KIT

- Provides excellent wind protection.
- Can be used on standard, XT and Limited models.
- Easy to install and remove.
- Can-Am branded.

Outlander 2006-2012 (except with 400 engine & 2012 with 800R or 1000 engine), Outlander MAX 2012 and prior (except with 400 engine)

715001015 • Yellow
715001016 • Red
715001017 • Tinted Black

$189.99

WINDSHIELD KIT

- Can be used with or without handlebar protectors.
- Includes steering cover.
- Easy to install and remove.

Outlander with 400 engine 2013 and prior

703500444

$159.99

CUSTOMIZING YOUR Deluxe Fairing in 3 easy steps

This is more than a fairing – it is ready from the factory for lights, mirrors or a GPS mount.

1 CHOOSE A DELUXE FAIRING COLOR

DELUXE FAIRING

- Innovative, richly-featured wind protection.
- Quick tool-less removal once base brackets are mounted on handlebar.
- 2 cup holders.
- GPS-mounting-kit-ready.
- Optional mirrors & auxiliary lighting.

Outlander 2006-2014 (except with 400 engine & models with 1 1/8" steel handlebars)

715000935 • Yellow
715001231 • Red
715001232 • Black

$174.99

CAMO DECALS FOR BLACK DELUXE FAIRING

- Next G-1 Vista Camo pattern perfectly matches your camo vehicle.
- Easy and quick installation.

Fits Black Deluxe Fairing (715001232)

715001684

$44.99

2 CHOOSE A DELUXE WINDSHIELD

LOW WINDSHIELD

- 6" (15 cm) windshield allows you to keep your unit looking sporty while giving you some protection from the elements and the possibility of enjoying directional lighting.
- Tool-less installation and replacement.

Fits Deluxe Fairing

715001227

$54.99

HIGH WINDSHIELD

- 11" (28 cm) high, for wind protection and winter applications.
- Tool-less installation and replacement.

Fits Deluxe Fairing

715001211

$64.99

EXTRA HIGH WINDSHIELD

- 16" (41 cm) windshield is the ultimate for protection against the elements while touring.
- For wind protection and winter applications.
- Tool-less installation and replacement.

Fits Deluxe Fairing

715000936

$89.99

3 YOU MIGHT ALSO LIKE...

AUXILIARY WINDSHIELD LIGHTING

- Two premium LED spots for Deluxe Fairing for both increased output and directional lighting.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715001214

$299.99

DELUXE MIRROR KIT

- Wide rear view.
- Perfect fit with your Deluxe Fairing & Deluxe Windshield.

Fits Deluxe Fairing

715001384

$59.99

FLASHER & HORN KIT

- Complete flasher and horn kit.
- Integrates vehicle.
- Easy to install.
- Not for road use.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715001358

$349.99

Outlander 2009-2012 (except 2012 with 800R or 1000 engine), Outlander MAX 2009-2012

715000695

$264.99

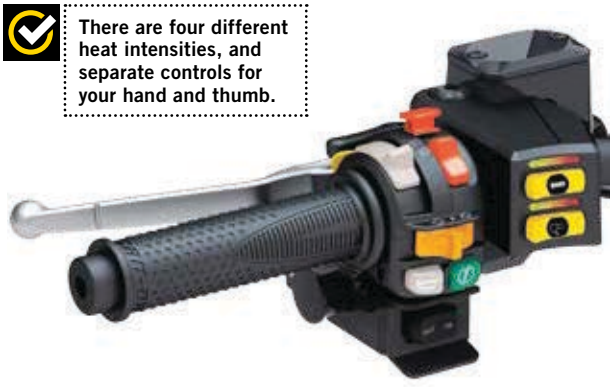
REPLACEMENT PASSENGER SEAT

Outlander MAX 2013-2014 (except with 400 engine)

715002032

$579.99

There are four different heat intensities, and separate controls for your hand and thumb.



HEATED HAND GRIPS & THROTTLE COMBO

- New ergonomically-designed control module.
- Four different temperature settings with individual controls for your thumb and your grips.
- LED dimmer facilitates reading temperature settings.
- Returns to previous heat setting.
- One touch shutdown.
- Can-Am logo.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715001849

$169.99

PASSENGER HEATED GRIPS & VISOR OUTLET

- Replace your stock passenger handles with dual temperature 3-zone heated handles and grips.
- A heated visor outlet is integrated onto the control switch housing for added passenger comfort.

Outlander MAX 2013-2014 (except with 400 engine)

715000943

$199.99

HEATED VISOR OUTLET

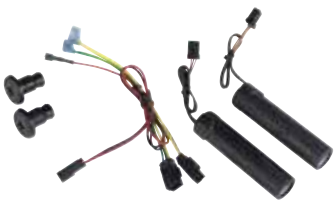
- Strategically positioned on vehicle to help you maintain your agility.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715001246

$44.99

By keeping your hands warm, you'll want to ride longer in cool conditions.



HEATED HAND GRIP KIT

- Keep your hands warm while riding with this easy-to-install hand grip kit.
- Includes a 3-position switch, switch cover, wiring harness, hand grip and handlebar end cap.
- Grips are 4 7/8" (12 cm) long with an interior diameter of 7/8" (22 mm).
- Grip heat control can be set to High (20 watts) or Low (10 watts).

Outlander 2012 and prior (except 2012 with 800R or 1000 engine)

715000322

$79.99

HEATED THROTTLE LEVER ASSEMBLY

- Improved heating element provides faster warm-up time and increased maximum temperature.
- For a perfect fit and finish, designed especially for your Can-Am ATV.
- Kit includes a 3-position switch, switch cover, wiring harness and throttle lever assembly.

Outlander 2012 and prior (except 2012 with 800R or 1 000 engine)

715000584

$59.99

PASSENGER WIND DEFLECTORS

- These wind deflectors fit on the passenger handles and provide greater comfort while riding.
- Easy to install and remove.

Outlander MAX 2013-2014 (except with 400 engine)

715001669

$74.99

ALUMINUM TAPERED HANDLEBAR

- 7/8"- 1 1/8" (22 mm - 28 mm) tapered handlebar made of 6061-T6 aluminum.
- Includes all hardware, center steering foam and cover.

Outlander & Outlander Max 2014 and prior (except with 400 engine)

715000550

$99.99

MIRROR KIT FOR HANDLEBAR WIND DEFLECTORS

- Handlebar wind deflector mount design.
- Sold in pairs.

Fits on handlebar wind deflectors

860200080

$24.99

HANDLEBAR WIND DEFLECTORS

- Rugged injected-plastic construction with Can-Am logo.
- Include removable cap for air flow adjustment.
- Mounting kit sold separately.

Outlander & Outlander Max 2014 and prior (except with 400 engine)

715000525 • Black / Yellow
715000537 • White / Black
715000733 • Yellow / Black
715001706 • Black / Black

$25.99

FULL WRAP ALUMINUM MOUNTING KIT

- Lightweight black die-cast aluminum construction.
- Includes complete hardware.
- Handlebar wind deflectors sold separately.

Outlander & Outlander Max 2014 and prior (except with 400 engine)

715001378

$82.99

SHORT ALUMINUM MOUNTING KIT

- Lightweight black die-cast aluminum construction.
- Includes complete hardware.
- Handlebar wind deflectors sold separately.

Outlander & Outlander Max 2014 and prior (except with 400 engine)

715001379

$49.99

FOOTPEG EXTENSIONS

- Made of aluminum.
- Provide grip in during hard cornering.
- Use in conjunction with footpeg kit (715000916).
- Sold in pairs.

Outlander 2012 and prior (except 2012 with 800R or 1000 engine), Outlander MAX 2012 and prior

715000996

$74.99

FOOTPEG KIT

- Provides maximum integrated grip and more stability during vigorous riding.
- Kick-up end generates added grip during hard cornering.
- Made of aluminum.
- Sold in pairs.

Outlander 2012 and prior (except 2012 with 800R or 1000 engine), Outlander MAX 2012 and prior

715001131

$44.99

Outlander 2009-2012 (except 2012 with 800R or 1000 engine), Outlander MAX 2009-2012

715000916

$39.99

PASSENGER WIND DEFLECTORS

- These wind deflectors fit snugly around the passenger handles and provide total comfort while riding.
- Easy to install and remove.

Outlander MAX 2006-2012

715000233

$59.99

Outlander MAX 2004-2005

715000231

$59.99

XT HANDLEBAR PROTECTOR KIT

Outlander & Outlander MAX 2006-2014 (except with 400 engine)

703100251 • Black

$69.99

Outlander & Outlander MAX 2005-2014 with 400 engine

715000271 • Black

Outlander & Outlander Max 2004 with 400 engine

715000272 • Gray

$104.99

SHIFTER LOCK

- Locking device locks transmission shifter in "Park" position.
- Minimum 5,000 key combinations.
- Fully integrated.

Outlander 2012 and prior (except 2012 with 800R or 1000 engine), Outlander MAX 2012 and prior (except with 400 engine)

715000689

$49.99

Outlander with 400 engine

715000690

$49.99

PASSENGER HEATED GRIPS

- Heat control can be set to High or Low.
- Ideal for replacing stock passenger handles.
- Added passenger comfort.
- Easily removable when summer comes.
- Easy to install.

Outlander MAX 2006-2012

715000634

$169.99

DPS MODULE

(Not illustrated)

Outlander & Outlander MAX 2010-2014

715001202

$169.99

FOX SHOCKS

- This FOX shock kit has been engineered for more agressive riders.
- Offers increased bump absorption and better roll control.
- Offers a slightly firmer ride than standard kits but still fit for all around use.
- Kit includes 4 shocks and springs.
- Rebuildable.
- Threaded preload adjusters.

Outlander & Renegade 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715001471

$569.99

FRONT HPG SHOCK KIT

- High pressure gas (HPG) shocks.
- Provide enhanced Outlander ride, handling and control.
- Razor sharp calibration for even the most demanding riders.
- Fade-free performance.
- Sold in pairs.

Outlander 2012 and prior (except 2012 with 800R or 1000 engine)

715000303

$219.99

Outlander 2012 and prior. Standard on XT models (except 2012 with 800R or 1000 engine)

715000304

$264.99

REAR HPG SHOCK KIT WITH SPRINGS

- High pressure gas (HPG) shocks.
- Provide enhanced Outlander ride, handling and control.
- Razor sharp calibration for even the most demanding riders.
- Fade-free performance.
- Sold in pairs.

Outlander 2012 and prior. Standard on XT models (except 2012 with 800R or 1000 engine)

715000305

$269.99

FRONT SPRING KIT

- Front heavy-duty springs.
- Stiffer than factory installed front springs for more precise front suspension behavior.
- Ideal for snow plowing or heavy load transportation applications.
- Sold in pairs.

Outlander 2012 and prior. Standard on XT models (except 2012 with 800R or 1000 engine)

715000306

$74.99

MUDGUARD KIT

- Kit designed to deliver extra protection from dirt and debris, therefore a must if you enjoy riding in the mud.
- Made of thermoformed plastic parts (except 715001764 - made of injected plastic) that hug your Outlander fenders perfectly.
- Gives vehicle added flair for that rugged cool look.
- Includes front and rear extensions and all mounting hardware.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715001764

$99.99

Outlander 2006-2012 (except with 400 engine and 2012 with 800R or 1000 engine), Outlander MAX 2012 and prior

715000533

$139.99

Outlander & Outlander MAX 2006-2014 with 400 engine

715000297

$139.99

Outlander & Outlander MAX 2004-2005 with 400 engine

715000296

$139.99

SHOCK PROTECTOR

- Provides X Package shock rods with additional protection against pitting.

Fits X Package KYB shocks

715001209

$33.99

FRONT SHOCK COVERS

- Feature ventilation holes.
- Sold in pairs.

Outlander

715500301

$33.99

FENDER PROTECTORS

- Provide extra fender protection when you're in tight situations.
- 1" (25 mm) diameter steel construction with textured black finish.

Outlander 2006-2012 (except 2012 with 800R or 1000 engine)

703500544

$124.99

Outlander MAX 2006-2012

703500546

$114.99

Raising the intake and exhaust is key to transforming your ATV into a mudder.

SNORKEL KIT

- This comprehensive kit comes complete with extended air intake and new extended CVT inlet and outlet exhaust conveniently integrated into the upper gauge pod cover.
- A must for tackling mud conditions.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715001730

$359.99

Outlander 2010-2011 with 650 or 800R engine, Outlander 2012 with 650 engine, Outlander MAX 2010-2012

715001136

$259.99

RADIATOR RELOCATOR KIT

- Relocates radiator to a top mount position to prevent cooling performance loss in mud conditions.
- Reuses radiator and includes support, hardware and hoses.
- Engineered for easy cooling system bleeding and maintenance.
- Radiator not included.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

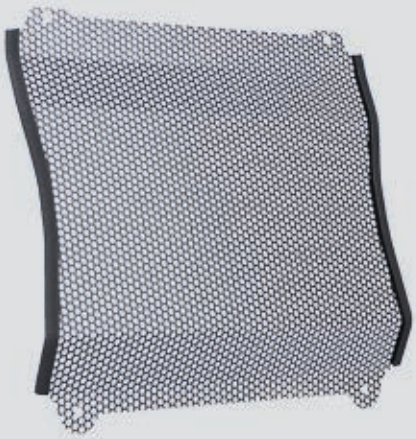
715001666

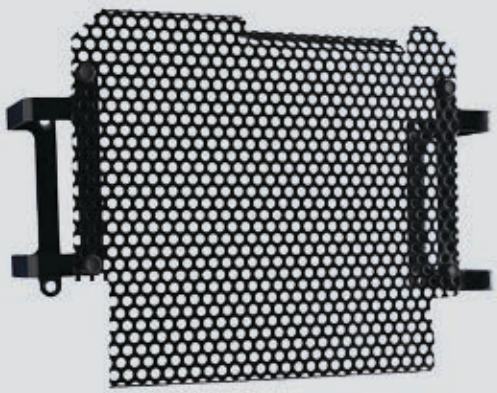
$359.99

Outlander 2010-2011 with 650 or 800R engine, Outlander 2012 with 650 engine, Outlander MAX 2010-2012

715001178

$249.99





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RADIATOR PROTECTOR

- Metal shield that mounts over radiator face providing protection from stones and branches.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715001744

Outlander 2006-2012 (except with 800R or 1000 engine)

703500543

Outlander & Rally 2004-2005

703500427

$59.99

N

X mr TRACTION PLATES

- Provide extra foot grip for driver when riding in extreme mud conditions.
- Help driver maintain ideal riding position to maximize vehicle traction.
- Not meant for passenger.

Outlander MAX 2013-2014 (except with 400 engine)

715001752

$99.99

Outlander MAX 2012 and prior

715001137

$154.99

OUTLANDER X xc FRONT PRE-RUNNER BUMPER

- Lightweight yet sturdy aluminum bumper provides maximum frontal protection.
- Incorporated front skid plate, reinforced tubing, and it still works with a winch.
- Fairlead bracket (715000696) needed when equipped with a winch.

Outlander 2009, 2010-2011, 2012 with 800R engine, Outlander MAX with 500, 650 engine

715001123

$269.99

715001130

715001333

FOAM AIR FILTER BY TWINAIR†

- Maximizes performance by increasing air flow throughout RPM range.
- Maintenance-friendly, i.e. just wash, re-oil and re-use after riding in severely dusty/ muddy environments.

Outlander & Outlander MAX 2013-2014 (except with 400 engine), Outlander 2012 with 800R or 1000 engine

715001333

$69.99

Outlander 2009-2011 with 800R engine, Outlander 2010-2012 with 650 engine Outlander MAX with 650 engine and 2012 with 800R engine

715001130

$69.99

UNI† FOAM FILTER

- Ease of maintenance.
- Can be easily washed, re-oiled and re-used when subject to severe dusty/ muddy environments.
- Contains a rigid adaptor with an added flair providing adequate retention of the air filter.

Outlander with 500, 650, 800R engine

715000310

$31.99

AIR PREFILTER

- Filters out even the tiniest of contaminants in dusty conditions.
- Extends the service period.
- Use in conjunction with the stock filter.
- Air filter not included.

Outlander with 400 engine

707800293

$19.99

FRONT HITCH

- Front hitch for Outlander with or without a winch.
- This hitch offers 750 lbs (340 kg) of towing capacity.
- Allows you to maneuver your trailer easily in tight, confined areas.
- Hitch drawbar sold separately.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715000921

$79.99

Outlander 2006-2012 (except 2012 with 800R or 1000 engine), Outlander MAX 2012 and prior

703500421

$79.99

FRONT & REAR HITCH DRAWBAR

- Fits 2" receiver hitch that comes standard on Outlanders.
- Hitch ball not included.

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715000972

$79.99

REAR RECEIVER HITCH

- Powder-coated finish.
- Does not affect ground clearance.
- Trailer ball not included.
- Rear hitch plate (715000286) is required for Renegade & Outlander X xc 2011.
- Includes Hitch Drawbar.

Outlander 2012 and prior (except 2012 with 800R or 1000 engine)

715000325

$99.99

REWIND STARTER KIT

- Complete manual rewind assembly.

Outlander 400 EFI 2010-2014

715001034

$159.99

LOCKABLE GAS TANK CAP

- Protects your fuel.
- Meets EPA requirements.

Outlander 2014 and prior

860200387 • Black

$39.99

N

TRAILERING COVER

- X-attachment system.
- 300-denier solution-dyed, water-repellent polyester construction.
- Fits with or without mirrors and windshield.
- Key areas are reinforced.

Outlander 2012 with 800R or 1000 engine, Outlander 2013-2014 (except with 400 engine)

Fits with trunk box and passenger seat, has opening for access to the fuel tank • 715001737

$199.99

Outlander with trunk box 2012 and prior (except 2012 with 800R and 1000 engine), Outlander with trunk box 2013-2014 with 400 engine

Has opening for access to the fuel tank • 715000675

$179.99

Outlander MAX 2013-2014 (except with 400 engine)

Fits with trunk box and passenger seat • 715001736

$219.99

Outlander MAX 2012 and prior

715000681

$159.99

Outlander 2012 and prior (except 2012 with 800R and 1000 engine), Outlander 2013-2014 with 400 engine

715000682

$154.99

STORAGE COVER

- For storage use only.
- Heavy-duty elastic cord around bottom for secure fit.
- 100-denier polyester construction.
- Fits with or without windshield and mirrors.

Outlander 2013-2014 (except with 400 engine), Outlander 2012 with 800R or 1000 engine

Fits with trunk box • 715001720

$139.99

Outlander 2012 and prior (except 2012 with 800R or 1000 engine)

715000677

$129.99

Outlander MAX 2013-2014 (except with 400 engine)

Fits with trunk box • 715001668

$149.99

Outlander MAX 2012 and prior

715000676

$139.99

RENEGADE

"NOT EVERYONE RIDES THE SAME OR IN THE SAME CONDITIONS. THE ACCESSORIES MAKE THE ATV FIT YOU PERFECTLY."

RYAN ORR

81 Windshields
82 Shocks
85 Handlebars & Mirrors

PERSONALIZE YOUR CAN-AM RENEGADE WITH ACCESSORIES

The **Sport Windshield** protects but keeps a sleek look.

Upgrade capability with high performance shock kits and protectors.

Handlebar Wind Deflectors add even more race-quad style.

Bring your critical stuff on the **Rear Aluminum Rack**.

MAKE IT YOURS WITH TOTAL INTEGRATION

REAR ALUMINUM RACK
30 lbs capacity. Compact, lightweight aluminum construction.

HEATED HAND GRIPS & THROTTLE COMBO
Ergonomically-designed control module with 4 different temperature settings.

MUDGUARD KIT
Integrated extended fender flairs for sporty look and full body protection from dirt and water.

UNDERBELLY PROTECTION
Aluminum plates made with high strength 5052 H32 aluminum and plastic deflectors to protect your frame from the unexpected. A must-have for rugged terrains.

HANDLEBAR WIND DEFLECTORS
Add comfort while riding with these rugged injected-plastic handlebar wind deflectors.

SPORT WINDSHIELD
Offers your Renegade wind protection without compromising its sporty look. Easy mounting system.

FRONT SHOCK COVERS
Feature ventilation holes.

Aluminum plates made with high strength 5052 H32 aluminum and plastic deflectors protect your frame from the unexpected, making them a must-have for rugged terrain.

FIND YOUR MODEL AND YEAR

RENEGADE 2013-2014
RENEGADE 2012
WITH 800R OR
1000 ENGINE,

RENEGADE 2012
AND PRIOR
(EXCEPT 2012 WITH 800R
OR 1000 ENGINE)

SKID PLATE **BUNDLES**

INCLUDE:
- **A-Arm Protectors**
- **Central Skid Plate**
- **Rear Differential Protector**
- **Trailering Arm Protectors**
- **Front Skid Plate**
- **Footwell Protectors**
- **Rear Skid Plate**

715002139	**715002136**
$644.99	**$784.99**

SKID PLATE **INDIVIDUAL KITS**

A-ARM PROTECTORS
- Add more protection to the CV joints and rubber boots.
- 1/8" (3 mm) thick lightweight and durable design.
- Drain hole to release water, mud and debris.
- Easy to install.
- Replace stock plastic protectors.
- Sold in pairs.
- Embossed Can-Am logo.

715001667	**715000287**
$114.99	**$129.99**

FRONT SKID PLATE
- 3/16" (4.5 mm) thick and die-formed for strength and durability.
- Engraved Can-Am logo.
- Recessed bolt holes.
- Cannot be installed with Plow Mounting Kit.

715000925	**715000548**
$64.99	**$104.99**

CENTRAL CHASSIS SKID PLATE
- 3/16" (4.5 mm) thick and die-formed.
- Engraved Can-Am logo.

(Standard on Renegade X xc model)	
715000923	**715000636**
$89.99	**$89.99**

FOOTWELL PROTECTOR PLATES
- Bump up the impact protection to the footwells and structure.
- 1/8" (3 mm) thick lightweight and durable design.
- Use in conjunction with central chassis skid plate.
- Sold in pairs.

715001359	**715000686**
$139.99	**$154.99**

REAR DIFFERENTIAL PROTECTOR
- 1/8" (3 mm) thick lightweight and durable design.
- Replaces stock plastic protector.

715000920	**715000285**
$59.99	**$119.99**

TRAILING ARM PROTECTORS
- 1/8" (3 mm) thick lightweight and durable design.
- Replace stock plastic protectors.
- Sold in pairs.
- Engraved Can-Am logo.

715001129	**715000311**
$104.99	**$129.99**

REAR SKID PLATE
- 3/16" (4.5 mm) thick and die-formed for strength and durability.
- Must be installed with the central and front skid plates.

715000918	**715000609**
$69.99	**$54.99**

HIGH WINDSHIELD KIT
- Provides excellent wind protection.
- Fits straight and tapered handlebars.
- Easy mounting system allows you to install it effortlessly.

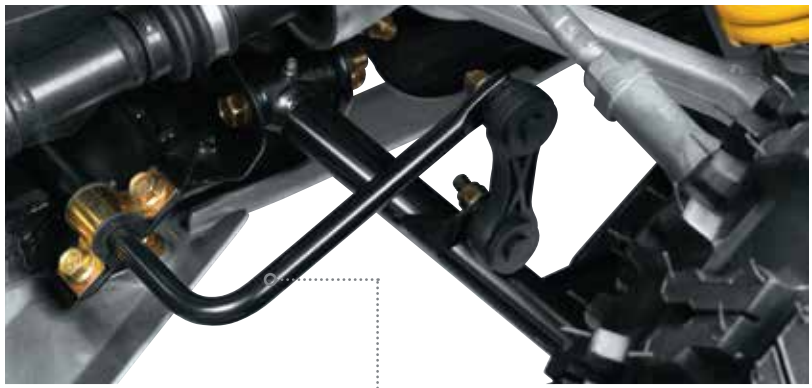
Renegade (all models)

715001937 • Yellow
715001938 • Black
715002061 • Red
$179.99

SPORT WINDSHIELD
- Offers your Renegade wind protection without compromising its sporty look.
- Fits straight and tapered handlebars.
- Easy mounting system allows you to install it effortlessly.

Renegade 2014 and prior

715001212 • Yellow **715001429 • White** **715001468 • Black**
$169.99



FRONT SWAY BAR KIT

- Enhances vehicle stability and control during hard cornering.

Renegade 2010-2011

715000967

$154.99

FOX SHOCKS

- This FOX shock kit has been engineered for more agressive riders.
- Offers increased bump absorption and better roll control.
- Offers a slightly firmer ride than standard kits but still fits for all around use.
- Kit includes 4 shocks and springs.
- Rebuildable.
- Threaded preload adjusters.

Renegade 2013-2014, Renegade 2012 with 800R or 1000 engine

715001471

$569.99

MUDGUARD KIT

- Integrated extended fender flairs for sporty look and full body protection from dirt and water.
- Kit of 4 includes front and rear extensions and all mounting hardware.

Renegade 2013-2014, Renegade 2012 with 800R or 1000 engine

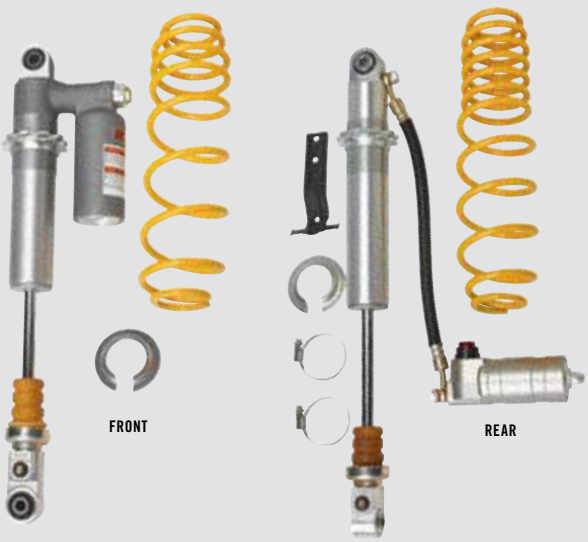
715001681 • Black

$169.99

Renegade 2007-2012 (except 2012 with 800R or 1000 engine)

715001115 • Black

$199.99



X PACKAGE SHOCK & SPRING KIT

- Rebound and dual speed compression adjustable gas shocks.
- Kit includes matching springs and hardware.
- Sold in pairs.

Renegade 2008-2012 (except 2012 with 800R or 1000 engine)

Front - 715000536

$619.99

Rear - 715000538

$979.99

SHOCK PROTECTOR

- Provides X Package shock rods with additional protection against pitting.

Fit X Package KYB shocks

715001209 • Black

$33.99

FRONT SHOCK COVERS

- Feature ventilation holes.
- Sold in pairs.

Renegade (all models)

715500301

$33.99

CENTER CONSOLE DAY LIGHT

- Mountable on top end of center console.
- Enhances look of vehicle.

Renegade (all models)

715000691

$69.99

"ATV RIDING ALLOWS YOU TO BE CREATIVE AND PUT YOUR OWN TWIST ON RIDING AND THE TERRAIN."

RYAN ORR

Easily converts to a backpack for carrying off the ATV.

REAR BAG

- Made of 600-denier, solution-dyed, water-repellent polyester.
- Semi-rigid thermoformed structure.
- Heavy-duty water-resistant zipper.
- Easy to install and remove.

Renegade (all models)
715001399 • Black
$89.99

REAR ALUMINUM RACK

- 30 lbs (14 kg) capacity.
- Compact, lightweight aluminum construction.
- Engraved Can-Am logo.
- Stamped 5052 aluminum center plate.
- Easy to install.

Renegade 2012 with 800R or 1000 engine, Renegade 2013-2014
715001360
$189.99

Renegade 2007-2012 (except 2012 with 800R or 1000 engine)
715000242
$164.99

RENEGADE TRAILERING COVER

- 300-denier solution-dyed, water-repellent polyester construction.
- Fits with or without mirrors and windshield attachment brackets (windshield must be removed).
- Key wear areas are reinforced.

Renegade (all models)
715000683
$154.99

STORAGE COVER

(Not illustrated)

- Fits with or without windshield and mirrors.
- Heavy-duty elastic cord around bottom for secure fit.
- Vinyl construction.

Renegade (all models)
715000678
$104.99

GARMIN MONTANA 650T GPS

- Bright 4" sunlight readable, 65K Color TFT, touchscreen color display (272 X 480 pixels).
- High sensitivity, WAAS-enabled GPS receiver with Hotfix†.
- Wirelessly shares routes, tracks, way points and geocaches with friends between vehicles.
- Built-in WorldWide basemap with shaded relief, preloaded US topo maps.
- 3-axis compass and barometric altimeter.
- MicroSD† card slot for optional mapping.
- 5 megapixel autofocus digital camera with automatic geo-tagging.
- 3.5 mm audio jack.
- High speed USB and serial interface.
- Rugged and waterproof (IEC 60529 IPX7).
- Multiple battery options: user replaceable 3AA (up to 22 hours) or rechargeable lithium (up to 16 hours).
- Includes mount for use with GPS Handlebar Mounting Kit (715001985).

Renegade (all models)
715002081
$649.99

GPS MOUNT FOR HANDLEBAR

- Convenient bracket for installing the Garmin Montana 650T GPS (not included) onto your unit's handlebar.

Renegade (all models)
715001985 • Black
$59.99

REAR HITCH PLATE

- Bolt-on hitch plate and hardware.

Renegade 2007-2012 (except 2012 with 800R or 1000 engine)
715000286
$39.99

REAR RECEIVER HITCH

- Powder-coated finish.
- Does not affect ground clearance.
- Trailer ball not included.

Renegade 2012 with 800R or 1000 engine, Renegade 2013-2014
715001329
$79.99

- Rear Hitch Plate (715000286) is required for Renegade.
- Includes Hitch Drawbar.

Renegade 2012 and prior (except 2012 with 800R or 1000 engine)
715000325
$99.99

LICENSE PLATE BRACKET

- For supporting your license plate.

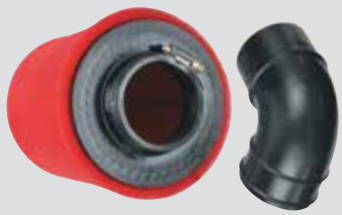
Renegade 2012 with 800R or 1000 engine, Renegade 2013-2014
715001401
$19.99

FOAM AIR FILTER BY TWINAIR†

- Maximizes performance by increasing air flow throughout RPM range.
- Maintenance-friendly, i.e. just wash, re-oil and re-use after riding in severely dusty/muddy environments.

Renegade 2012 with 800R or 1000 engine, Renegade 2013-2014
715001333
$69.99

Renegade 2009-2011 with 800R engine, Renegade 2010-2012 with 650 engine
715001130
$69.99



UNI† FOAM FILTER

- Ease of maintenance.
- Can be easily washed, re-oiled and re-used when subject to severe dusty/muddy environments.
- Contains a rigid adaptor with an added flair providing adequate retention of the air filter.

Renegade 2011 and prior (except 2010-2011 800R or 650)
715000310
$31.99

LOCKABLE GAS TANK CAP

- Protects your fuel.
- Meets EPA requirements.

Renegade 2014 and prior
860200387 • Black
$39.99

There are four different heat intensities, and separate controls for your hand and thumb.

HEATED HAND GRIPS & THROTTLE COMBO

- New ergonomically-designed control module.
- LED dimmer facilitates reading temperature settings.
- Returns to previous heat setting.
- One touch shutdown.
- Can-Am logo.

Renegade 2012 with 800R or 1000 engine, Renegade 2013-2014

715001849

$169.99

By keeping your hands warm, you'll want to ride longer in cool conditions.

HEATED HAND GRIP KIT

- Keep your hands warm while riding with this easy-to-install hand grip kit.
- Includes a 3-position switch, switch cover, wiring harness, hand grip and handlebar end cap.
- Grips are 4 7/8" (12 cm) long with an interior diameter of 7/8" (22 mm).
- Grip heat control can be set to High (20 watts) or Low (10 watts).

Renegade 2012 and prior (except 2012 with 800R or 1000 engine)

715000322

$79.99

HEATED THROTTLE LEVER ASSEMBLY

- Improved heating element provides faster warm-up time and increased maximum temperature.
- Kit includes a 3-position switch, switch cover, wiring harness and throttle lever assembly.

Renegade 2012 and prior (except 2012 with 800R or 1000 engine)

715000584

$59.99

SHIFTER LOCK

- Locking device locks transmission shifter in "Park" position.
- Minimum 5,000 key combinations.
- Fully integrated.

Renagade 2009-2011 with 500, 650, 800R engine, Renegade 2012 with 500 & 650 engine

715000689

$49.99

MIRROR KIT FOR HANDLEBAR WIND DEFLECTORS

- Handlebar wind deflector mount design.
- To be used with handlebar wind deflectors.
- Sold in pairs.

Fit on handlebar wind deflectors

860200080

$24.99

FULL WRAP ALUMINUM MOUNTING KIT

- Lightweight black die-cast aluminum construction.
- Includes complete hardware.
- Handlebar wind deflectors sold separately.

Renegade (all models)

715001378

$82.99

SHORT ALUMINUM MOUNTING KIT

- Lightweight black die-cast aluminum construction.
- Includes complete hardware.
- Handlebar wind deflectors sold separately.

Renegade (all models)

715001379

$49.99

ALUMINUM TAPERED HANDLEBAR

- 7/8"- 1 1/8" (22 mm - 28 mm) tapered handlebar made of 6061-T6 aluminum.
- Includes all hardware, center steering foam and cover.

Renegade (all models)

715000550

$99.99

HANDLEBAR WIND DEFLECTORS

- Rugged injected-plastic construction with Can-Am logo.
- Includes removable cap for air flow adjustment.
- Mounting kit sold separately.

Renegade (all models)

715000525 • Black / Yellow
715000537 • White / Black
715000733 • Yellow / Black
715001706 • Black / Black

$25.99

DS 450

89 Underbelly Protection
89 Shocks & Bumpers
90 Speedometer, Sprockets & Covers
138 Tires & Rims

"THE CAN-AM DS 450 COMES RACE-READY, BUT THE ACCESSORIES TAKE IT TO A WHOLE NEW LEVEL."

DALTON PLATT

ADD COMFORT AND PERFORMANCE TO MAKE THE MOST OF YOUR CAN-AM DS 450

"There's so much freedom blasting dunes..."

"...yet the DS 450 is so precise and responsive no matter what you do."

"It becomes an extension of your body."

"And the accessories make it fit you and your style even more."

MAKE IT YOURS WITH TOTAL INTEGRATION

HANDLEBAR WIND DEFLECTORS
Add comfort and protection while riding.

FRONT SHOCKS
Ultra-high performance KYB† fully adjustable shocks. Include rebound and high/low speed compression adjustments.

NERF BARS
Provide extra protection for assertive riding.

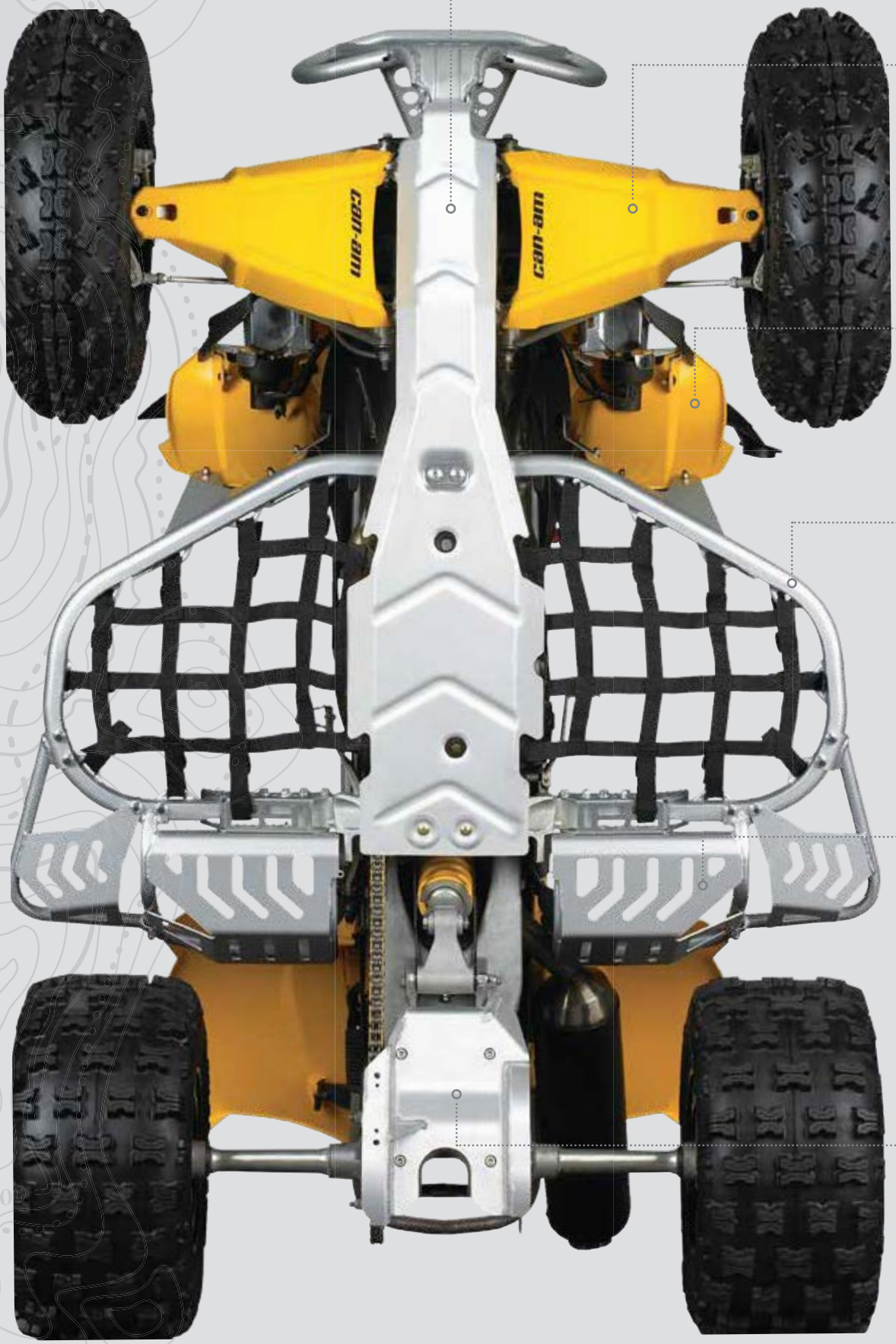
UNDERBELLY PROTECTION
Save your frame from the unexpected with these rough and durable underbelly protectors.

DIGITAL SPEEDOMETER

NUMBER PLATE

FRONT ALUMINUM BUMPER
Extra-large and lightweight front bumper offers the best protection for all forms of racing.

Save your frame from the unexpected with these rough and durable underbelly protectors.



X PACKAGE CHASSIS SKID PLATE

- Lightweight and strong full chassis skid plate.
- 5052 1/8" (3 mm) stamped aluminum construction.
- Recessed bolt holes.
- Includes all necessary hardware.

DS 450 (all models)

715000506

$114.99

A-ARM PROTECTORS

- Lightweight injected-plastic A-arm protectors provide strong protection for lower aluminum A-arm.
- Can-Am branding visible from top and underneath vehicle.
- Easy installation, no holes to drill.
- Sold in pairs.

DS 450 except X mx model

715000517 • Black
715000589 • Yellow

$64.99

FRONT FENDER EXTENSIONS

- Lightweight aluminum extensions connect the front fender to the nerf bar.
- Sold in pairs.

DS 450 (all models)

715000514

$74.99

X PACKAGE NERF BARS

- Strong lightweight rectangular aluminum tubing provides extra protection for aggressive riding.
- Complete with mounting hardware and black webbing.
- Must be installed with Rear Aluminum Baskets (715000673).
- Sold in pairs.

DS 450 2009-2014

715000672

$199.99

DS 450 2008 and prior

715000505

$209.99

REAR ALUMINUM BASKETS

- For direct replacement of stock plastic version.
- 1/8" (3 mm) 5052 aircraft aluminum construction and 7/8" (22 mm) tubing.
- Stronger construction than stock model.

DS 450 - Must be installed with X Package Nerf Bars (715000672)

715000673

$244.99

DS 450 2008 and prior - Can be installed with or without X Package Nerf Bars (715000505)

715000526

$239.99

X PACKAGE SWING ARM SKID PLATE

- Lightweight protection for your swing arm, rear disc, sprocket and chain.
- 5052 3/16" (4.5 mm) aluminum construction.
- Replaces stock plastic protector.

DS 450 (all models)

715000507

$114.99

X PACKAGE FRONT ALUMINUM BUMPER

- Extra-large and lightweight front bumper offers the best protection for all forms of racing.
- 6063 aluminum construction.
- Provides superior coverage to the front of your DS 450.
- Required to install the number plate.

DS 450 (all models)

715000508

$114.99

FRONT PLASTIC GRILLE

- Add color to your vehicle.

DS 450 2009 and prior

715000516

$16.99

FRONT SHOCK COVERS

- Offer added protection against tough terrain and weather conditions.
- Sold in pairs.

DS 450 (all models)

715500302

$37.99

X PACKAGE ADJUSTABLE FRONT SHOCKS

- Ultra-high performance KYB† fully adjustable shocks.
- Include rebound and high/low speed compression adjustments.
- More performance oriented valving than stock vehicle.
- Use original stock spring.
- Sold in pairs.

DS 450 (all models)

715000511

$574.99

NUMBER PLATE

- Injection molded high gloss finish.
- To be used with X Package front aluminum bumper (715000508).

DS 450 (all models)

715000521 • Black
715000522 • Yellow

$24.99

SPEEDOMETER

- Digital speedometer.
- Complete kit with mounting pod.
- Includes reliable speed sensor built into transmission and extra race functions, e.g. maximum speed, average speed, lap counter, comparative average vs. actual speed, and RPM.
- Easy to install.

DS 450 (all models)

715000512

$264.99

STORAGE COVER

(Not illustrated)

- For storage use only.
- Fits with or without windshield and mirrors.
- Heavy-duty elastic cord around bottom for secure fit.
- Vinyl construction.

DS 450 (all models)

280000347

$99.99

DS 450 TRAILERING COVER

- X-attachment system.
- 300-denier solution-dyed, water-repellent nylon.
- Key areas are reinforced.
- Includes sponsor graphics.

DS 450 (all models)

280000346

$154.99

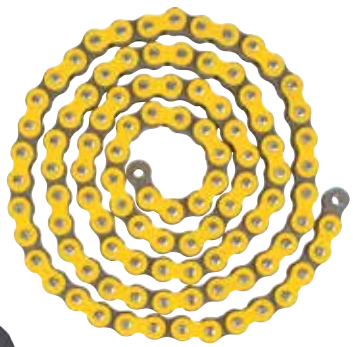
AIR PREFILTER

- Filters out even the tiniest of contaminants in dusty conditions.
- Extends the service period.
- Use in conjunction with the stock filter.
- Air filter not included.

DS 450 (all models)

707800293

$19.99



REGINA Z-RING CHAIN

- This chain is the best choice for the most severe and demanding applications.
- Among other characteristics, RZ chains feature high alloy steel plates and pins, solid bushings and rollers, shot peening of plates, pins and rollers, performance-enhancing pre-stretching and "Can-Am yellow" outer plates.
- Stronger than stock chain (32000N).
- 102 link to match with different sprocket sizes.
- Includes connecting link.

DS 450 (all models)

715000523

$114.99

FRONT SPROCKETS

- Hardened steel construction.
- Changing sprocket ratio will vary vehicle top speed and behaviour.
- Includes snap ring.
- For racing applications only.

DS 450

13-tooth (-1)	15-tooth (+1)
715000519	715000518
$26.99	$26.99

14-tooth (stock)

715000591

$26.99

REAR SPROCKETS

- Lightweight 7075 T-6 aluminum construction.
- Changing sprocket ratio will vary vehicle top speed and behaviour.
- For racing applications only.

DS 450 (all models)

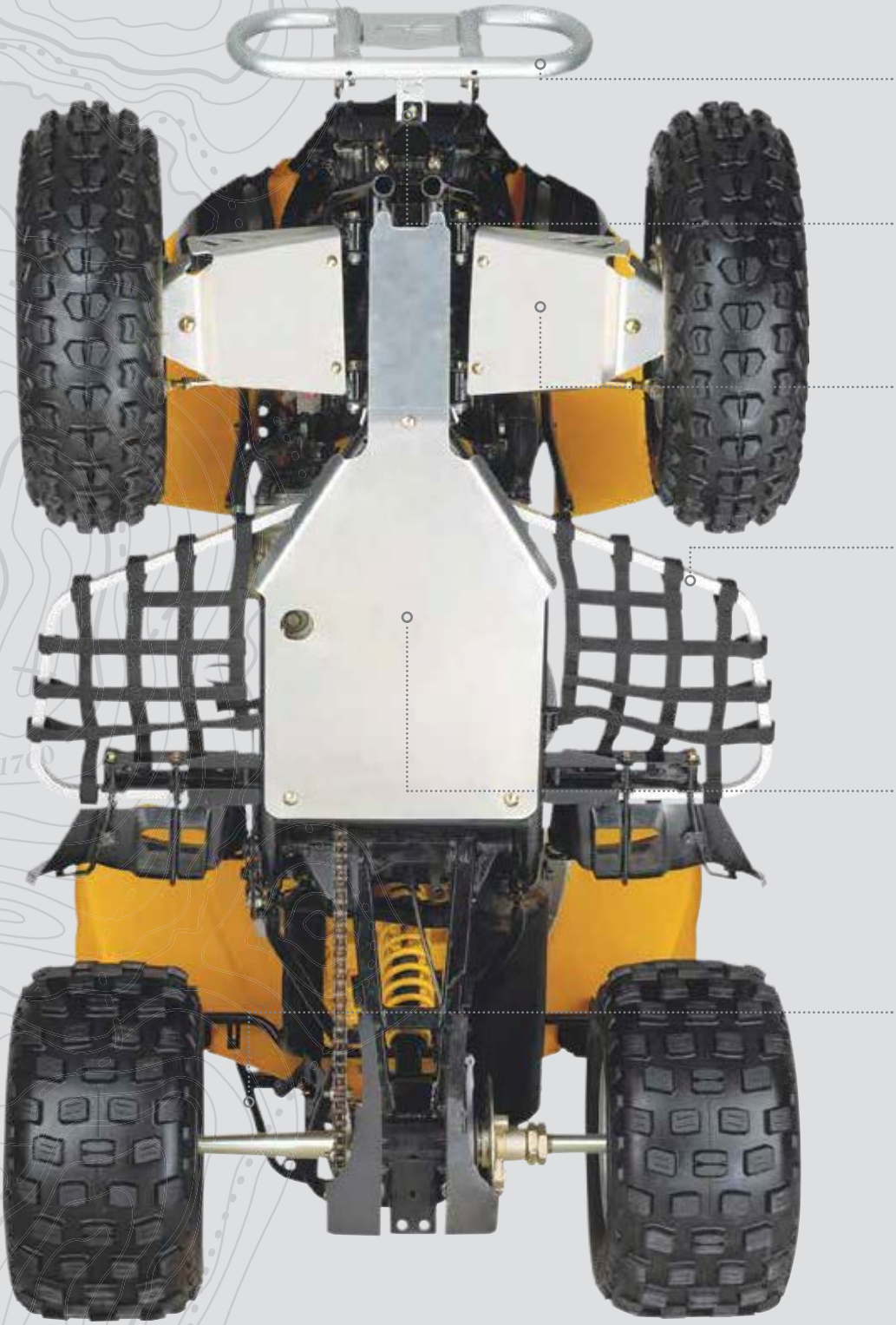
39-tooth (-3)	44-tooth (+2)
715000527	715000515
$79.99	$89.99

42-tooth (stock)

715000592

$74.99

DS 250



FRONT BUMPER
- Adds protection to the front of your vehicle.

DS 250

705000387

$177.99

FRONT BUMPER BRACKET
- For installing the Front Bumper (715000172) to your DS 250.

DS 250

715000241

$64.99

A-ARM PROTECTORS
- These aluminum guards provide maximum A-arm protection.

DS 250

703500618

$114.99

NERF BARS
- Strong lightweight rectangular aluminum tubing provides you with extra protection for aggressive riding.
- Complete with mounting hardware and black webbing.
- Sold in pairs.

DS 250

703500617

$269.99

FULL-BODY SKID PLATE
- Aluminum full chassis skid plate designed to protect your frame and engine case from rocks and undercarriage damage.
- Maximum underbody protection when driving your DS 250 on the most rugged terrain.

DS 250

703500616

$144.99

REAR RACK
- Sturdy steel construction, powder paint finish.
- Can be used with Rear Rack Bag (715000264).

DS 250

715000243 • Black

$239.99

STORAGE COVER
(Not illustrated)
- For storage use only.
- Fits with or without windshield and mirrors.
- Heavy-duty elastic cord around bottom for secure fit.
- Vinyl construction.

DS 250

715000680

$103.99

100% water-repellent polyester construction

REAR RACK BAG
- 100% water-repellent polyester bag.
- Specially designed to fit on the rear rack (715000243).

DS 250

715000264 • Black

$89.99

MIRROR
- Stem includes 5/16" (8 mm) thread.

DS 250

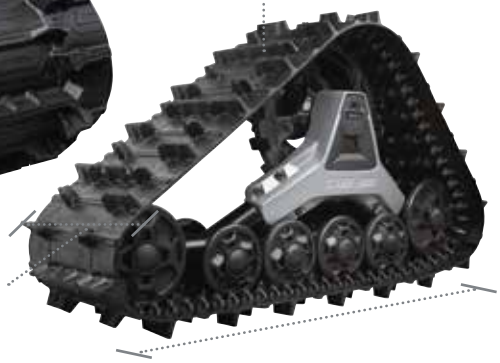
Left	Right
S88120RA1000	S88110RA1000
$20.99	$20.99

BRP OFFERS THE BEST YEAR ROUND TRACK SYSTEM ON THE MARKET – THE APACHE 360

CONVERSION FROM TIRES TO TRACKS CAN BE DONE IN ONLY 20 MINUTES

LIGHTEST TRACKS ON THE MARKET

CURVED FRONT TRACKS FOR EASIER STEERING



BIGGEST CONTACT PATCH TO PROVIDE EXTRA FLOTATION AS WELL AS TRACTION

APACHE 360 TRACK SYSTEM

Outlander & Outlander MAX

715001981

$3,699.99

APACHE 360 LT TRACK SYSTEM

- Larger contact patch than the standard Apache 360 by 15 in² at the front and 41 in² at the back.

Outlander & Outlander MAX

715000959

$4,649.99

APACHE 360 MOUNTING KIT

(Not illustrated)

Outlander 2012 and prior (except with 400 engine and 2012 with 800R or 1000 engine and except Outlander 800R X xc 2011), Outlander MAX 2012 and prior

715001701

Outlander 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine)

715001328

$299.99

CVT PRE-FILTER

- Designed to prevent snow intrusion in the CVT and belt slippage when Apache Track System is used in deep snow.
- Easy to install and remove.
- Standard on Renegade and Outlander 800R 2009.

Renegade & Outlander 2008 and prior with 800R engine, Renegade & Outlander 2012 and prior with 500 engine, Renegade & Outlander 2009 and prior with 600 engine

715000552

$6.99

CVT AIR INTAKE

- Designed to relocate and maximize height of CVT air intake to prevent belt slippage in deep snow or muddy conditions.
- Equipped with integrated CVT pre-filter to also reduce dust and extend CVT and belt life.

Outlander 500, 650, 800R 2008-2009

715000970

$66.99

Renegade 500, 800R 2007-2009

715000984

$66.99

AIR INTAKE PRE-FILTER

- Adds extra protection to your engine in harsh riding conditions.
- Filter blocks particles larger than 0.005".
- Note: A pre-filter is necessary to maintain the vehicle warranty when an Apache system is installed.

Renegade & Outlander 800 2008 and prior, Renegade & Outlander 650 2009 and prior, Outlander 500 2012 and prior, Renegade 500 2014 and prior, Renegade & Outlander 2012-2014 with 800R or 1000 engine

715000291

$26.99

AIR INTAKE PRE-FILTER

(Not illustrated)

- Adds extra protection to your engine in harsh riding conditions.
- Filter blocks particles larger than 0.005".
- Note: A pre-filter is necessary to maintain the vehicle warranty when an Apache system is installed.

Renegade & Outlander 800R 2009-2011, Renegade & Outlander 650 2010-2012, Outlander MAX 650 & 800R 2012 MAX

715000908

$36.99

BUILD YOUR
Alpine Flex Plastic Plow System

1 FIND YOUR MODEL

2 FIND YOUR MODEL YEAR

3 CHOOSE YOUR TYPE OF PUSH FRAME

4 MATCH THE MOUNT

5 CHOOSE THE WIDTH AND STYLE OF PLOW

6 ADD IF USING APACHE 360 TRACK SYSTEM

MODEL	YEAR	ATTACHMENT SYSTEM	PUSH FRAME	MOUNTING KIT	PLOW	PUSH FRAME EXTENSION
Outlander & MAX 500	07-12		715001708	715001412		
Outlander & MAX 500	13-14		715001708	715001411		
Outlander & MAX 650	06-12		715001708	715001412		
Outlander & MAX 650	13-14		715001708	715001411		
Outlander & MAX 800R	06-11		715001708	715001412		
Outlander MAX/X mr 800R	11-12		715001708	715001412		
Outlander MAX 800R	13-14		715001708	715001411		
Outlander 800R	12-13		715001708	715001411		
Outlander & MAX/X mr 1000	12-14		715001708	715001411		
Renegade 500	07-09		715001709	715001412		
Renegade 500	13-14		715001709	715001411		
Renegade 800R	07-09		715001709	715001412		
Renegade & X xc 800R	12-14		715001709	715001411		
Renegade & X xc 1000	12-14		715001709	715001411		

Alpine Flex Push Frame With Quick Attach System

Alpine Flex Plow 60” (152 cm)
715001181

Alpine Flex Plow 54” (137 cm)
715001677

Alpine Flex Push Frame Extension
715001389

Needed when using Alpine Flex Plastic Plow with Apache 360 Track System

PLOWS

The UHMW material used for this plow has the highest impact strength of any current thermoplastic.

ALPINE FLEX PLOW 54" (137 CM) & 60" (152 CM)

- Plow made of flexible UHMW, featuring the highest impact strength of any thermoplastic presently made.
- Enormous flex action protects the driver, unit and object accidentally impacted.
- Impact absorption properties return plow to its original shape.
- Rearward release action practically eliminates jolts from being transferred to the driver or unit.
- Attaches and detaches effortlessly thanks to a fast and easy mounting system.
- Groundbreaking reinvented blade-turning mechanism mounted as high as possible to eliminate having to bend down to change or adjust blade's angle.
- High pivot point keeps plow on pavement.
- Compatible with all Alpine Flex Plow accessories to further enhance plow versatility.

54" (137 cm) - 715001677 • Black
$329.99

60" (152 cm) - 715001181 • Black
$359.99

PUSH FRAMES

ALPINE FLEX PUSH FRAME WITH QUICK ATTACH SYSTEM

- Rearward release action practically eliminates jolts from being transferred to the driver or unit.
- Attaches and detaches effortlessly thanks to a fast and easy mounting system.
- Groundbreaking reinvented blade-turning mechanism mounted as high as possible to eliminate having to bend down to change or adjust blade's angle.
- High pivot point keeps plow on pavement.
- Compatible with all Alpine Flex Plow accessories to further enhance plow versatility.
- Includes plow roller fairlead and cable saver limit switch.

715001708 • Outlander (see table p. 94)
715001709 • Renegade (see table p. 94)
$499.99

ALPINE FLEX PUSH FRAME EXTENSION

- Bolt-on push frame extension for use with Apache 360 Track System.
- Does not alter plow functionality.
- Fits Alpine Flex Push Frame (715001708 & 715001709).

715001389
$99.99

MOUNTING KITS

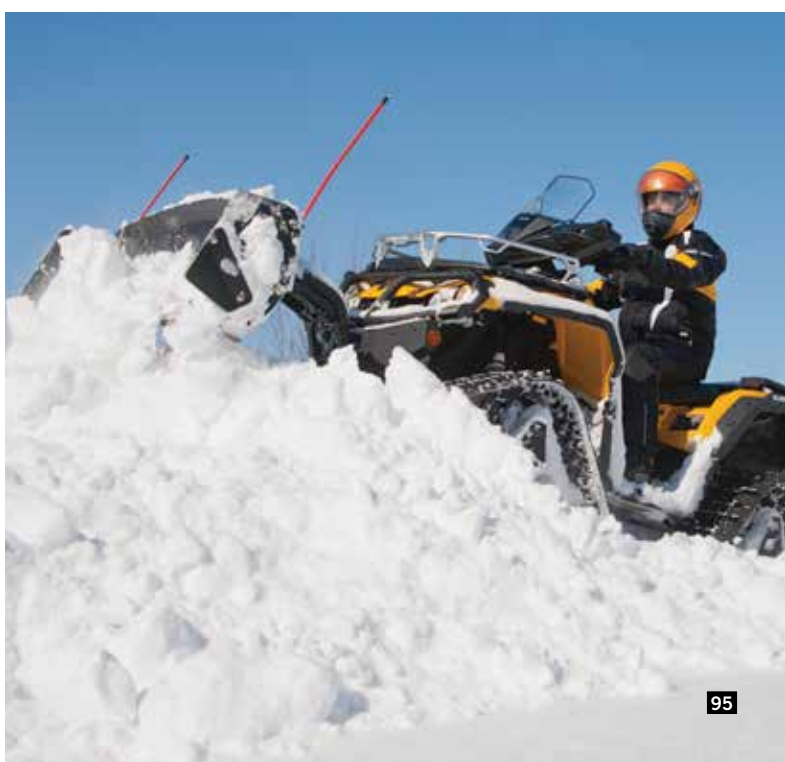
PLOW MOUNTING KIT

- Mounting plate precision-designed to stay on year round without compromising ground clearance.
- Fits with Alpine Super Duty & Alpine Flex Push Frames (715001182, 715001474, 715001708 & 715001709).

715001412
$102.99

- Required to install Alpine Super Duty Push Frames (715001182, 715001474) and Alpine Flex Plow Push Frames (715001708 & 715001709).
- Fits with or without Can-Am Skid Plates.

715001411
$99.99



BUILD YOUR
Alpine Super Duty Steel Plow System

1 FIND YOUR MODEL

2 FIND YOUR MODEL YEAR

3 CHOOSE YOUR TYPE OF PUSH FRAME

4 MATCH THE MOUNT

5 CHOOSE THE WIDTH AND STYLE OF PLOW

6 ADD IF USING APACHE 360 TRACK SYSTEM

MODEL	YEAR	ATTACHMENT SYSTEM	PUSH FRAME	MOUNTING KIT	PLOW	PUSH FRAME EXTENSION
Outlander & MAX 400	04-05	Std Alpine Super Duty	715001064	715000586		
		Quick Attach Alpine Super Duty	715001063			
Outlander & MAX 400	06-14	Std Alpine Super Duty	715001064	715001205		
		Quick Attach Alpine Super Duty	715001063			
Outlander & MAX 500	07-12	Std Alpine Super Duty	715001064	715001205		
		Quick Attach Alpine Super Duty	715001182	715001412		
Outlander & MAX 500	13-14	Std Alpine Super Duty	715001064	715001688		
		Quick Attach Alpine Super Duty	715001182	715001411		
Outlander& MAX 650	06-12	Std Alpine Super Duty	715001064	715001205		
		Quick Attach Alpine Super Duty	715001182	715001412		
Outlander & MAX 650	13-14	Std Alpine Super Duty	715001064	715001688		
		Quick Attach Alpine Super Duty	715001182	715001411		
Outlander X xc	2011	Std Alpine Super Duty	715001064	715001206		
		Quick Attach Alpine Super Duty	715001063			
Outlander & MAX 800R	06-11	Std Alpine Super Duty	715001064	715001205		
		Quick Attach Alpine Super Duty	715001182	715001412		
Outlander MAX/X mr 800R	11-12	Std Alpine Super Duty	715001064	715001205		
		Quick Attach Alpine Super Duty	715001182	715001412		
Outlander MAX 800R	13-14	Std Alpine Super Duty	715001064	715001688		
		Quick Attach Alpine Super Duty	715001182	715001411		
Outlander 800R	12-14	Std Alpine Super Duty	715001064	715001688		
		Quick Attach Alpine Super Duty	715001182	715001411		
Outlander & MAX/X mr 1000	12-14	Std Alpine Super Duty	715001064	715001688		
		Quick Attach Alpine Super Duty	715001182	715001411		
Renegade 500	07-09	Std Alpine Super Duty	715001064	715001205		
		Quick Attach Alpine Super Duty	715001474	715001412		
Renegade 500	10-12	Std Alpine Super Duty	715001064	715001206		
		Quick Attach Alpine Super Duty	715001063			
Renegade 500	13-14	Std Alpine Super Duty	715001064	715001688		
		Quick Attach Alpine Super Duty	715001474	715001411		
Renegade 800R	07-09	Std Alpine Super Duty	715001064	715001205		
		Quick Attach Alpine Super Duty	715001474	715001412		
Renegade & X xc 800R	10-11	Std Alpine Super Duty	715001064	715001206		
		Quick Attach Alpine Super Duty	715001063			
Renegade & X xc 800R	12-14	Std Alpine Super Duty	715001064	715001688		
		Quick Attach Alpine Super Duty	715001474	715001411		
Renegade & X xc 1000	12-14	Std Alpine Super Duty	715001064	715001688		
		Quick Attach Alpine Super Duty	715001474	715001411		
Traxters & Quest	All	Std Alpine Super Duty	715001064	715000258		
		Quick Attach Alpine Super Duty	715001063			

Alpine Super Duty One-Way State Plow 66” (168 cm)
715000650 • Yellow

Alpine Super Duty One-Way State Plow 60” (152 cm)
715000649 • Yellow
715000207 • Black

Alpine Super Duty Straight Plow 60” (152 cm)
715000648 • Yellow
715000209 • Black

Alpine Super Duty Straight Plow 54” (137 cm)
715000647 • Yellow
715000208 • Black

Alpine Super Duty Push Frame Extension
(703500603)

Needed when using Alpine Super Duty Steel Plow with Apache 360 Track System

ALPINE SUPER DUTY STRAIGHT PLOW

- Super-duty plow blades made from 12-gauge steel.
- Replaceable wear blades.
- When angled, 60" (152 cm) blade clears 53 1/2" (136 cm) path, 54" (137 cm) blade clears 48" (123 cm) path.
- Blades swivel left or right, 5 positions.
- Large pin designed for easy blade rotation to eliminate dirt and snow buildup at pivot point.
- Blade design provides best snow/dirt roll-off at any angle.
- Yellow-colored version Can-Am branded.

54" (137 cm)

715000647 • Yellow
715000208 • Black

$199.99

60" (152 cm)

715000648 • Yellow
715000209 • Black

$209.99

ALPINE SUPER DUTY ONE-WAY STATE PLOW

- One-way "winged" state plow designed to throw snow higher.
- Wing end of plow measures 25" (63 cm) high and tapers down to 16" (41 cm).
- Rubber flap designed to keep snow away from driver.
- Yellow-colored version Can-Am branded.

60" (152 cm)

715000649 • Yellow
715000207 • Black

$299.99

66" (168 cm)

715000650 • Yellow

$339.99

PUSH FRAMES

ALPINE SUPER DUTY PUSH FRAME WITH QUICK ATTACH SYSTEM

- Tubes withstand roughest use.
- Mid-mount carriage provides up to 11 1/2" (29 cm) lift.
- Fits all steel blade styles.
- Improved auto aligning quick-attach system, easy foot lever release pedal, larger plow roller fairlead, cable saver limit switch preventing cable breakage by automatically stopping the winch.
- Fits on Plow Mounting Kit (715001411 & 715001412) depending on your vehicle platform.

715001182, 715001474 (Refer to page 96)

$374.99

ALPINE SUPER DUTY PUSH FRAME WITH QUICK ATTACH SYSTEM

- Super-duty push tubes withstand the roughest use.
- Mid-mount carriage provides up to 11 1/2" (29 cm) lift.
- Fits all steel blade styles.
- Fully assembled quick-attach system.
- Pin-ready for reduced installation time.
- Fits on Plow Mounting Kit (715000586, 715000258 & 715001206).

715001063 • Black

$374.99

ALPINE SUPER DUTY PUSH FRAME

- Super-duty push tubes withstand the roughest use.
- Mid-mount carriage provides up to 11 1/2" (29 cm) lift.
- Fits all steel blade styles.
- Quick-attach not included.

715001064 • Black

$239.99

ALPINE SUPER DUTY QUICK-ATTACH SYSTEM

- Available as an option to upgrade Alpine Super Duty Push Frame (715001064).
- The plow will be easy to install with this quick-attach system.
- Durable with a powder-coated rust-resistant finish.

715000731

$169.99

ALPINE SUPER DUTY PUSH FRAME EXTENSION

- 12 1/4" (31 cm) chassis extension for use with Apache 360 Track System.
- Increases angle and enables extra blade rotation.
- Fits on Alpine Super Duty Push Frame (715001063, 715001064, 715001182 & 715001474).

703500603

$129.99

PLOW MOUNTING KIT

- Quick-release pins attach and detach plow blade and base assembly in minutes.
- Can be used with or without Alpine Super Duty Quick Attach System (715000731).
- Simplified installation.
- No frame drilling required.

715001688 • Black

$99.99

MOUNTING KITS

PLOW MOUNTING KIT

- Mounting plate precision-designed to stay on year round without compromising ground clearance.
- Fits with Alpine Super Duty & Alpine Flex Push Frames (715001182, 715001474, 715001708 & 715001709).

715001412

$102.99

- Required to install Alpine Super Duty Push Frames (715001182, 715001474) and Alpine Flex Plow Push Frames (715001708 & 715001709).
- Fits with or without Can-Am Skid Plates.

715001411

$99.99

PLOW MOUNTING KIT

- Quick-release pins attach and detach plow blade and base assembly in minutes.
- Can be used with or without Alpine Super Duty Quick Attach System (715000731).
- Simplified installation.
- No frame drilling required.

715000586
$79.99

715001206
$134.99

715001205
$119.99

715000258
$79.99

Alpine Flex Plows accessories

ALPINE FLEX 8" (20 CM) PLOW EXTENSIONS

- These conveniently extend your Alpine Flex Plow.
- Fit Alpine Flex Plows (715001181, 715001677).

Fit Alpine Flex Plow
715001385
$129.99

ALPINE FLEX PLOW EDGE MARKERS

- For a more accurate view of the width of your plow so you avoid damaging your curb, your car or your house.
- Fit Alpine Flex Plows (715001181, 715001677).

Fit Alpine Flex Plow
715001388
$34.99

ALPINE FLEX DRIFT CUTTER

- Keeps snow securely in the plow.
- Fits on either left or right side.
- Sold individually.
- Fits Alpine Flex Plows (715001181, 715001677).
- Requires Plow Extensions.

Fits Alpine Flex Plow
715001386
$89.99

ALPINE FLEX WEAR BLADE (PLASTIC)

- Flexible UHMW plastic construction won't scratch your driveway.
- For use with Alpine Flex Plows (715001181, 715001677).
- Replaces stock wear blade.

Fits Alpine Flex Plow 54" (137 cm)	Fits Alpine Flex Plow 60"
715001703	715001475
$129.99	$129.99

ALPINE FLEX WEAR BLADE (STEEL)

- Long-lasting wear blade that provides a sharper cut.
- For use with Alpine Flex Plows (715001181, 715001677).
- Replaces stock wear blade.

Fits Alpine Flex Plow 54" (137 cm)	Fits Alpine Flex Plow 60" (152 cm)
715001704	715001476
$79.99	$79.99

- Stock replacement blade that is versatile for general plowing.
- Stock wear blade.

Fits Alpine Flex Plow 54" (137 cm)	Fits Alpine Flex Plow 60" (152 cm)
705203199	705202835
$79.99	$79.99

ALPINE FLEX PLOW RUBBER FLAP

(Not illustrated)

- Keeps snow away from the driver.
- Minimizes snow flowing over plow.
- Increases snow rolling effect.

Fits 54" (137 cm) Alpine Flex Plow
715001767
$54.99

Fits 60" (152 cm) Alpine Flex Plow
715001387
$59.99

PLOW LIGHTS

- Featuring 35W H3 halogen bulbs and a lens design that achieves 110-degree beam spread to provide excellent lighting for plowing.

Outlander 2012 and prior (except 2012 with 800R or 1000 engine)

715000063

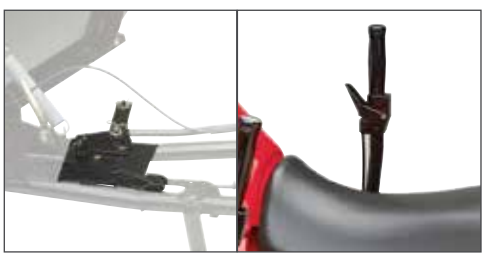
$69.99

ALPINE SUPER DUTY DRIFT CUTTER

- Helps keep snow in the plow.
- Designed with a rear pivot point.
- Works with both Straight and One-Way State blades.

Fits Alpine Super Duty Plow

Right	Left
715000218	715000217
$79.99	$79.99



ALPINE SUPER DUTY REMOTE ANGLING SYSTEM

- Increases operator convenience.
- Swivel system allows the driver to manually pivot the plow blade from the driver's seat.
- Cannot be used with the Push Frame Extension (703500603) and Push Frames with Quick Attach System (715001182 & 715001474).
- Does not fit Alpine Flex Plows.

715000260

$224.99

ALPINE SYNTHETIC WINCH CABLE FOR PLOW

- Especially designed for plowing applications.
- 8' (2.4 m) section of durable, extra-strong synthetic rope.
- Stands up to repeated, sharp angle pulls used to lift heavy plow blades.
- Temporarily replace your winch rope for plow season to save wear and tear on wire rope.

Fits Alpine Super Duty Plow & Alpine Flex Plow

715000540

$39.99

ALPINE SUPER DUTY PULLEY KIT

- Pulley kit to be used in conjunction with the winch when using a snow plow.
- Recommended to increase winch efficiency.
- To be used with the XT Front Bumper.

Fits Alpine Super Duty Plow

715000279

$44.99

XT15 WARN† WINCH KIT

- Lightweight Warn 1,500 lbs (680 kg) winch kit complete with synthetic rope, roller fairlead, mounting plates and hardware.
- Specifically designed for the Renegade.

Renegade 2012 and prior (except 2012 with 800R or 1000 engine)

715000254

$499.99

RT25 WARN WINCH KIT

- Fully-sealed winch with a pulling strength capability of 2,500 lbs (1,134 kg).
- Includes a 0.9 HP motor, 50' (15 m) of 3/16" (5 mm) wire rope, an ergonomically designed clutch knob, a mechanical brake, hand-held remote, potted-and-sealed mini-rocker handlebar switch, waterproof contactor and roller fairlead.
- Winch mounting plate (715000927) required for Renegade.
- CE certified.

Outlander & Renegade 2012 with 800R or 1000 engine, Outlander & Outlander MAX 2013-2014 (except with 400 engine), Renegade 2013-2014

715001347

$449.99

Outlander 2012 and prior (except 2012 with 800R or 1000 engine), Outlander MAX 2012 and prior

715000553

$424.99

RT30 WARN WINCH KIT

- Fully-sealed winch with a pulling strength capability of 3,000 lbs (1,361 kg).
- Includes a 0.9 HP motor, 50' (15 m) of 3/16" (5 mm) wire rope, an ergonomically designed clutch knob, a mechanical brake, hand-held remote, potted-and-sealed mini-rocker handlebar switch, waterproof contactor and roller fairlead.
- Winch mounting plate (715000927) required for Renegade.
- CE certified.

Outlander & Renegade 2012 with 800R or 1000 engine, Outlander, Outlander MAX & Renegade 2013-2014 (except with 400 engine)

715001348

$524.99

Outlander 2012 and prior (except 2012 with 800R or 1000 engine), Outlander MAX 2012 and prior

715000528

$524.99

WINCHES
PARTS & ACCESSORIES

WINCH ACCESSORIES KIT
- Get the most out of your winch.
- Double your pulling power, change your pulling direction and keep your winch in proper working order.
- Includes tree straps, snatch block and shackle.

715000005

$134.99

You increase your recovery options with this remote's 50 ft./15 m range.

WIRELESS REMOTE CONTROL
- The system is quick and easy to install, thanks to a wiring harness with an integrated antenna and all necessary mounting hardware.
- The system allows you to operate your winch from anywhere within a 50' (15 m) radius, increasing your recovery options.
- All components are weatherproof.
- Works with all Outlander XT, Traxter/Quest XT 2004 and up, and BRP accessory winches with a handlebar mounted mini-rocker switch.

715000544

$164.99

OUTLANDER X XC WINCH MOUNTING KIT
- Required for winch installation on models equipped with the X xc bumper.
- Must be used in conjunction with winch mounting kit (703500547) and roller fairlead (715000011) (Winch not included).

Outlander with X xc bumper

715001121 • Black

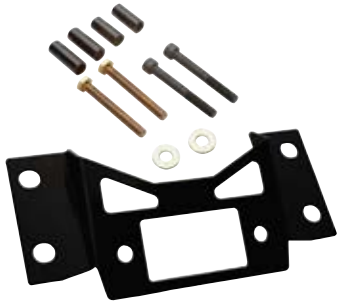
$39.99

WINCH MOUNTING PLATE
- Adds functionality to your Renegade.
- Fits RT25 and RT30 winches.

Renegade 2012 with 800R or 1000 engine, Renegade 2013-2014

715000927

$99.99



WINCH FAIRLEAD BRACKET
- Allows for more winch cable clearance when using XT-style bumpers.

Outlander XT 2012 and prior (except 2012 with 800R or 1000 engine), Outlander MAX XT 2012 and prior

715000696

$44.99

WIRED REMOTE CONTROL
- This kit allows the winch owners to add the hand-held remote to their winch.
- Works in conjunction with the mini-rocker switch.

715000197

$74.99

HOOK WITH SAFETY LATCH & STRAP KIT
- Heavy-duty winch-rope hook with stainless steel snap.
- Includes a nylon safety strap.

715000069

$16.99

ROLLER FAIRLEAD
- Features top, bottom and side rollers for less cable wear and smoother operation from any direction for easier winching.

715000011 • Black

$49.99

SYNTHETIC WINCH CABLE
- Easier to manipulate than steel cable.
- Replaces the original cable on any factory installed Warn winch or sold as an accessory by BRP.
- Kit includes synthetic rope and rock guard sleeve.
- Always use with roller fairlead (715000011) to prevent premature wear.

50" (15 m) long. 3,000 lbs (1,361 kg) pulling strength

715000539

$109.99

For XT15 winch only. 40' (12 m) long. 1,500 lbs (680 kg) pulling strength

715000593

$99.99

WINCH MOUNTING KIT
(Not illustrated)

Outlander 2012 and prior (except 2012 with 800R or 1000 engine)

715001416

$34.99

WINCH BRAKE KIT
(Not illustrated)
- Upgrades standard winch with brake kit.
- Convenient for use with plow.

Fits all 2011 and prior production Outlander with XL3000 winch

715001135

$79.99

REPLACEMENT WIRE ROPE
- Play it safe.
- Always carry a replacement wire rope.
- 50' (15 m) aircraft grade steel wire.
- 3/16" (5 mm) diameter.
- 3,000 lbs (1,1361 kg) pulling strength.

All Warn winches

715000047

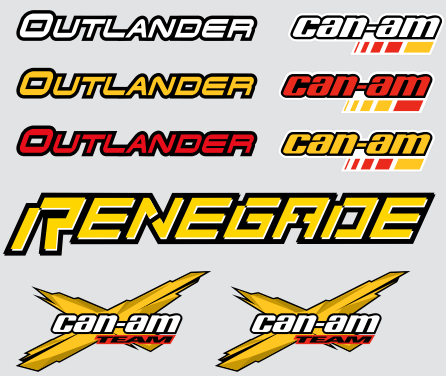
$49.99

Decals

• 6" x 12 3/4" (15 cm x 32 cm).
704901483
$13.99

• 12" x 4" (30 cm x 10 cm).
704901482
$13.99

• 6" x 12 3/4" (15 cm x 32 cm).
704901484
$13.99



• 9 per sheet.
• 24" x 8" (60 cm x 20 cm).
704901481
$11.99

• Set of 2.
• 2" x 6" (5 cm x 15 cm).
704901480
$9.99

HOOK HOLDER

• An easy way to carry your tools, firearm or bow over any terrain with confidence.
• Swivels to allow various mounting positions for multiple applications.
• Allen wrench is included for easy installation to your tubular rack.

Single	Double
715000042 • Black	**715000043 • Black**
$49.99	**$69.99**

CUP HOLDER

• Mounts easily to handlebars or racks.
715000121
$74.99

FLAG

• Make sure everyone knows what you're riding.
• Perfect for the dunes and new riders.
• 8-foot (2.4 m) length.
• Includes flag mount (715000127).
715000277 • Yellow
$19.99

FLAG MOUNT

715000127
$19.99

HAND HELD LIGHT

• High-intensity rubber spotlight comes standard with a one-inch diameter double ball and socket system.
• Designed to withstand more than 50 g of shock.
• Can be easily moved from your handlebar, rack or any other location you choose.
• Plugs into 12V DC outlet.
715000007 • Black
$79.99

MIRROR

• True vision surface 5" x 3" (13 cm x 8 cm).
• Matte finish.
• Stem includes 3/8" (10 mm) thread.
• Bracket (715000190) is required for installation on an Outlander without windshield.

Right - 5/16" (8 mm) Outlander	Left - 3/8" (10 mm) Outlander	Right - 3/8" (10 mm) DS 450
709400407	**709400406**	**709400523**
$29.99	**$29.99**	**$29.99**

TIE-DOWN

• Our 100% polyester ratchet-style tie-down measures 10' (3 m) in length and ensures a safe load with its unique soft loop strap design.
715000276 • Black
$14.99

BRP CAN-AM VANITY PLATE

484800455
$13.99

SSV ACCESSORIES

SPORT ALUMINUM ROOF P. 117

SPORT ALUMINUM DOORS P. 118

WATCH

Ryan, Brittany, Kyeron, Haze, Dalton and Cody experience NEW and INNOVATIVE Can-Am SSV accessories: store.can-am.brp.com/video

17" LED LIGHT BAR P. 121

BAJA STYLE SPARE TIRE HOLDER P. 131

MAVERICK & MAVERICK MAX

"SURE THE ACCESSORIES ADD FUNCTION. BUT, MAN, DO THEY GIVE THE MAVERICK ONE AGGRESSIVE LOOK."

SHELDON HONEY

110 Bumpers & Racks
114 Windshields
116 Roofs
118 Doors
120 Lighting Systems

MAVERICK IS ALREADY THE SSV TO BEAT. CAN-AM ACCESSORIES MAKE IT EVEN MORE CAPABLE.

Shield yourself from the elements and the environment.

Tackle tougher terrain with suspension, wheel and tire upgrades.

Strap in for the ride of your life with interior accessories.

Lighting upgrades let the fun continue after the sun goes down.

MAKE IT YOURS WITH TOTAL INTEGRATION

BAJA STYLE SPARE TIRE HOLDER
Combined with the wheel jack, it is the perfect dune accessory.

SPORT ALUMINUM ROOF
Bare aluminum for a durable sporty look.

39" LED LIGHT
Provides intense lighting for extra visibility and a one-of-a-kind look.

HALF WINDSHIELD
Provides extra protection against the elements.

DUNE FRONT BUMPER
Delivers additional heavy-duty protection in extreme conditions.

ROCK SLIDER BAR
Delivers additional protection.

REAR WINDOW NET
Looks sharp and installs in a snap.

BIMINI ROOF
Allows stowage of the soft top on the hard visor.

SPORT ALUMINUM DOORS
Rear hinge opening for easy in and out access.

10" LED LIGHT
Provides intense lighting for extra visibility and a one-of-a-kind look.

UNDERBELLY PROTECTION
Aluminum plates that provide essential protection.

COMMANDER

110 Bumpers & Racks
114 Windshields
116 Roofs
118 Doors
120 Lighting Systems

"I'VE BEEN IN OTHER SIDE-BY-SIDES. THE RIDE IN THE CAN-AM IS DEFINITELY MORE COMFORTABLE, NO MATTER HOW HARD YOU RIP IT."

JEREMY HOUSTON

TAKE YOUR COMMANDER TO A NEW LEVEL, WHETHER YOU USE IT FOR PLAY, WORK OR BOTH.

Added confidence and functionality make the ride more enjoyable.

LinQ System Gear Grips by Kolpin make bringing gear along easy.

Open the ride to the sky with the **Sport Visor**.

Keep winter out with a **Full Windshield**.

MAKE IT YOURS WITH TOTAL INTEGRATION

GEAR RAIL
Stationary rail system specially designed for your side-by-side vehicle. Multiple mounting options for the Can-Am accessories by Kolpin, like the Gear Grips, Fuel Packs, Gun Boot 6.0 Impact and more.

REAR WINDOW NET
Sharp look, easy installation.

SPORT ROOF
Ultimate protection, style and integration.

LIGHT RACK
Made of rugged aluminum. Essential protection for your accessory lighting systems. Fully integrated. Can be mounted directly on the ROPS- approved cage and fits the Sport Roof and sport visor.

HALF WINDSHIELD
Designed for protection from wind and debris as well as optical clarity while riding. Quick-attach brackets for easy and tool-less removal.

BUMPERS
Deliver additional protection and aggressive look.

RT4O WINCH KIT
Capable of 4,000 lbs pulling strength.

UNDERBELLY PROTECTION
Aluminum plates that provide essential protection.

LIGHTS
A wide range of lights can be integrated on your Commander on the bumper and on the roof, to provide you with incomparable long range illumination: HID, halogen and LED lights or a combination of them.

FRONT ACCESSORY BAR
Allows installation of front rack and front bumper lights (sold separately) when vehicle is not equipped with Front XT Bumper.

MAVERICK & MAVERICK MAX

FIND YOUR MODEL

MAVERICK	MAVERICK MAX	MAVERICK X XC

N SKID PLATE BUNDLES

INCLUDE:
- A-Arm Protectors
- Lateral Skid Plates
- Rear Skid Plate
- Front Skid Plate
- Rear Lateral Skid plates
- Rear A-Arm Protectors

715002131 $1,069.99	715002132 $1,449.99	715002294 $1,069.99

N SKID PLATE INDIVIDUAL KITS

FRONT A-ARM PROTECTORS
- Engraved Can-Am logo.
- Sold in pairs.

715001639 $139.99	715001639 $139.99	715002021 $139.99

FRONT SKID PLATE
- Engraved Can-Am logo.

715001641 $179.99	715001641 $179.99	715001641 $179.99

CENTRAL SKID PLATE
- Engraved Can-Am logo.
- Maverick MAX only. (included in bundle).

	715001969 $199.99	

LATERAL CENTRAL SKID PLATE
- Engraved Can-Am logo.
- Sold in pairs.
- Maverick MAX only. (included in bundle).

	715001970 $179.99	

FRONT LATERAL SKID PLATES
- Engraved Can-Am logo.
- Sold in pairs.

715001642 $229.99	715001642 $229.99	715001642 $229.99

REAR LATERAL SKID PLATES
- Engraved Can-Am logo.
- Sold in pairs.

715001640 $149.99	715001640 $149.99	715001640 $149.99

REAR SKID PLATE
- Engraved Can-Am logo.

715001643 $209.99	715001643 $209.99	715001643 $209.99

REAR A-ARM PROTECTORS
- Engraved Can-Am logo.
- Sold in pairs.

715001644 $159.99	715001644 $159.99	715002022 $159.99

For ultimate durability, all Can-Am SSV skid plates are made of beefy 3/16 in. thick aluminum.

YOUR MODEL

COMMANDER

SKID PLATE **BUNDLE**

INCLUDE:
- Front Skid Plate
- Lateral Skid Plates
- Rear Skid Plate
- A-Arm Protectors
- Central Skid Plate
- Trailing Arm Protectors

715002130
$974.99

SKID PLATE **INDIVIDUAL KITS**

FRONT SKID PLATE
- Draw-formed 5052-H32 aluminum front skid plate provides essential protection.
- 3/16" (4.5 mm) thick for durability and strength.
- Engraved Can-Am logo.

715000692
$179.99

A-ARM PROTECTORS
- 5052-H32 aluminum A-arm plates and plastic deflectors provide essential protection and aggressive look.
- 3/16" (4.5 mm) thick for durability and strength.
- Engraved Can-Am logo.
- Sold in pairs.

715000660
$119.99

LATERAL SKID PLATES
- Draw-formed 5052-H32 aluminum lateral skid plates provide essential protection.
- 3/16" (4.5mm) thick for durability and strength.
- Engraved Can-Am logo.
- Sold in pairs.

715000950
$199.99

CENTRAL SKID PLATE
- 5052-H32 aluminum, 3/16" (4.5 mm) thick.
- Pre-cut holes for fluid and mud drainage, and servicing access.
- Engraved Can-Am logo.
- Direct replacement of factory installed plastic skid.

715000693
$299.99

REAR SKID PLATE
- 5052-H32 aluminum, 3/16" (4.5 mm) thick.
- Provides additional protection to rear end of vehicle.
- Engraved Can-Am logo.
- Direct replacement of factory installed plastic skid.

715000694
$99.99

TRAILING ARM PROTECTORS
- 5052-H32 aluminum trailing arm plates and plastic deflectors provide essential protection.
- 3/16" (4.5 mm) thick for durability and strength.
- Sold in pairs.

715000661
$74.99

FRONT LIGHT PROTECTION

- Works in conjuction with XT bumper, offering protection to front headlights and sporting aggressive look.
- Textured black electrocoated for durable finish and rugged style.
- Integrated Can-Am fastening system provides efficient mounting vs traditional P-clamps.

Commander

715000656

$159.99

FRONT XT BUMPER

- Made of heavy gauge steel for additional protection.
- XT styled for matching appearance.
- Textured black electrocoated for durability and rugged style.
- Effortless mounting.
- Standard on X, XT, XTP and Limited models.

Commander

715000958

$219.99

The design of this rack still gives you access to the air filter and coolant.

FRONT RACK

- Durable finish.
- Equipped with genuine Can-Am clamps for easy mounting on required XT Bumper or Front Accessory Bar (sold separately).
- Allows access to air filter, washer fluid or coolant.
- 75 lbs load capacity.

Commander

715000985

$299.99

XTREME FRONT BUMPER

- Delivers additional heavy-duty protection that works with or without the front XT bumper.
- Textured black electrocoated for durability and rugged style.
- Can-Am logo tag.
- Does not fit with Signaling Kit (715001308).

Commander

715000951

$299.99

REAR BUMPER

- Integrated tubular system provides sporty look while protecting vehicle's bodywork.
- Flips with cargo box and lower tailgate.

Commander

715000657

$249.99

LOWER TAILGATE PROTECTOR

- Aluminum body plating covering lower tailgate provides additional protection and aggressive look.

Commander

715001097

$89.99

ALLOWS YOU TO OPEN LOWER TAILGATE

All Can-Am Maverick bumpers are made of 1.5" steel tubing with a 1/8" Aluminum plate for extra durability.

DUNE FRONT BUMPER

- This racy looking bumper delivers additional heavy-duty protection in extreme conditions.
- This bumper features a more pronounced attack angle, and mounting points for lights.
- This bumper is not winch compatible.

Maverick & Maverick MAX
715001954
$299.99

FRONT PRE-RUNNER BUMPER

- Delivers additional heavy-duty protection in extreme conditions.
- Winch compatible.

Maverick & Maverick MAX
715001645
$329.99

REAR BUMPER

- Provides a sporty look while protecting the vehicle's bodywork.
- Rear receiver hitch compatible.

Maverick & Maverick MAX
715001646
$299.99

FRONT ACCESSORY BAR

- Textured black electrocoated for durability and rugged style.
- Can-Am casted clamps for easy mounting.
- Allows installation of front rack and HID or halogen lights and LED bars (sold separately).
- Not compatible with XT Front Bumper.

Commander (base model only)
715001377
$99.99

XT BOX RAILS

- Add integrated tie down area to your cargo box while enhancing the look.
- Textured black finish.
- Standard on XT and Limited models.

Commander
715000957
$99.99

LICENSE PLATE HOLDER

- Supports your license plate.

Commander
715001326
$30.99

FOX PERFORMANCE FRONT SHOCKS

- Fox Piggyback racing shocks.
- Include rebound and high/low speed compression adjustments.
- Sold in pairs.
- Standard on X & XTP models.

Commander

715001022

$999.99

FOX PERFORMANCE REAR SHOCKS

- Fox 2.0 Position Sensitive racing shocks.
- Include rebound and high/low speed compression adjustments.
- Sold in pairs.
- Standard on X & XTP models.

Commander

715001023

$1,109.99

FRONT SHOCK COVERS

- Offer added protection in rough terrain and weather conditions.
- Sold in pairs.

Commander

715001324

$39.99

ROCK SLIDER

- Protects vehicle's sides and undercarriage against large obstacles.
- Textured black electrocoated for durability.
- Standard on Commander X and XTP models.

Commander & Maverick

715001722

$259.99

XT MUDGUARDS

- Deliver aggressive look while providing added protection from dirt and debris.
- Include front and rear extensions and all mounting hardware.
- Standard on XT, XTP and Limited models.

Commander

715001013

$199.99

SPORT ROCK SLIDER

- Made of heavy duty 1.5" steel tube.
- Lightweight.

Commander & Maverick

715001649

$259.99

RADIO / GPS CONSOLE ADAPTOR

- Update center console for GPS and/or audio system integration.
- Includes a cover for unused GPS or audio system slot.
- Standard on Limited model.

Commander, Maverick & Maverick MAX

715001404 • Black

$69.99

COMPLETE AUDIO SYSTEM

- This integrated Jensen† wired remote, amplifier/receiver and speaker combination provides durability, convenience and ease of installation.
- The waterproof design and UV resistant materials mean no matter how extreme your riding, this unit will follow you through.
- LED illumination makes this unit easy to use and easy to see.
- You can select between AM/FM tuner, 7-channel weather band, and it's IPod, USB 2.0, MP3, WMA ready to kick out all your favorites from its front and rear speakers.
- Top it off with plug and play installation and there is no easier choice to make when it comes to riding entertainment.
- 50Wx4, -10°C to 60°C operating range.
- Requires Radio/GPS Console Adaptor (715001404).
- Standard on Limited model.

Commander, Maverick

715001197

$839.99

FRONT & REAR SPEAKERS

- Complete your system with this pair of great sounding outdoor speakers.
- Kit includes black speaker boxes and plug and play wiring to match up with Radio with amplifier (715001313).
- Set of 2.
- Standard on Limited model.

Commander, Maverick & Maverick MAX (only front speaker)

Front 5.25" (13 cm) • 715001309

$134.99

Rear 6.5" (16.5 cm) • 715001315

$269.99

RADIO WITH AMPLIFIER

- Designed for outdoor use, this wired remote and amplifier combo is ready to install.
- Plug and play wiring will have you listening to AM/FM tuner, 7-channel weather band or IPod, USB 2.0, MP3, WMA media in no time.
- Rugged construction ensures longevity.
- 50Wx4, -10°C to 60°C operating range.
- Requires Radio/GPS Console Adaptor (715001404).
- Standard on Limited model.

Commander, Maverick & Maverick MAX

715001313

$449.99

GARMIN† MONTANA† 650T GPS

- Bright 4" sunlight readable, 65K Color TFT, touchscreen color display (272 X 480 pixels).
- High sensitivity, WAAS-enabled GPS receiver and Hotfix†.
- Wireless shares routes, tracks and way points with your friends, and geocaches between units.
- Worldwide built-in basemap with shaded relief, preloaded US topo.
- 3-axis compass and barometric altimeter.
- MicroSD† card slot for optional mapping.
- 5 megapixel autofocus digital camera with automatic geotagging.
- 3.5mm audio jack.
- High speed USB and serial interface.
- Rugged, waterproof (IEC 60529 IPX7).
- Multiple battery options: user replaceable 3AA (up to 22 hours) or rechargeable lithium (up to 16 hours).
- Includes mount for use with Radio/GPS Console Adaptor (715001404).
- Standard on Limited model.

Commander, Maverick & Maverick MAX

715001361

$649.99

HEATED VISOR OUTLET

- Optional visor outlet that delivers fog-free riding.
- Quick and easy installation.
- Sold individually.
- Heated Visor not included.

Commander, Maverick & Maverick MAX

715001246

$44.99

Double wiper system for a larger coverage area and a better efficiency.

GLASS WINDSHIELD AND WIPER PACKAGE

- Glass windshield with wipers and washer fluid dispenser.
- Metal frame with DOT approved laminated glass.
- Wide coverage (2 wipers).
- 2-speed wiper control.
- Windshield washer tank integrated in the vehicle service center.

Commander
715001678
$1,149.99

FULL WINDSHIELD

- Designed for optical clarity and better impact resistance than acrylic windshields, thanks to durable polycarbonate construction.
- Non yellowing, non crazing, non cracking and UV resistant properties.
- Quick-attach brackets procure fast, easy and tool-less installation and removal.

Maverick, Maverick MAX	Commander
715001786	715001697
$379.99	$349.99

Mud and dirt come right off without scratching because of the specially formulated hardcoated Makrolon polycarbonate (only available for Maverick).

FULL WINDSHIELD (HARDCOATED)

- Combines the utmost in protection from the elements with optical clarity while riding.
- Hardcoated (both sides) polycarbonate material offers better impact and abrasion resistance, as well as prolonged protection against wear-and-tear for longer "like-new" look than acrylic windshields.
- Non yellowing, non crazing, non cracking and UV resistant properties.
- Quick-attach brackets procure fast, easy and tool-less installation and removal.

Maverick, Maverick MAX	Commander
715001787	715001698
$549.99	$524.99

PANORAMIC CENTER MIRROR

- Convex mirror for wide angle visibility.
- Can be used with or without roof and windshields.
- Light switches not included.
- Sport Visor sold separately.

Commander, Maverick & Maverick MAX
715000956
$74.99

REARVIEW MIRROR

- Car-type mirror.
- Can be used with or without roof and windshields.
- Not compatible with light rack for cage or sport roof.

Commander, Maverick & Maverick MAX
715001191 • Black
$89.99

SIDE MIRROR

- Includes clamp for installation on cage.

Commander, Maverick & Maverick MAX
LH • 715001192 • Black
$89.99
RH • 715001418 • Black
$89.99

HALF WINDSHIELD

- Designed for protection from wind and debris as well as optical clarity.
- This rugged, durable polycarbonate construction offers better impact resistance than acrylic windshields.
- Features reverse angle lip to deflect air flow.
- Non yellowing, non crazing, non cracking and UV resistant properties.
- Quick-attach brackets procure fast, easy and tool-less installation and removal.
- Standard on Limited model.

Maverick, Maverick MAX
715001653
$229.99

Commander
715001696
$209.99

One person can easily and quickly "pop the top" because of its thoughtful design.

Combined with the Deluxe Convertible Roof, the Sport Visor offers complete protection from the elements.

DELUXE CONVERTIBLE ROOF

- Ultimate in protection, style and integration.
- Twinsheet HDPE manufacturing delivers premium look, and complete coverage when combined with Sport Visor.
- Quick-attach bracket procures fast, easy and tool-less installation and removal.

Commander 2014 & Maverick 2014

715001949 • Black
715001950 • Yellow
715001951 • Red

$499.99

Commander 2011-2013, Maverick 2013

- Standard on Limited model.

715001478 • Black
715001479 • Yellow
715001306 • Red

$499.99

SPORT VISOR

- Aggressive designed, twinsheet HDPE sport visor complete with integrated driver and passenger inner storage pockets.
- Required for installation of Light Rack (715001718 or 715001687).
- Complete with integrated light switch knock outs.
- Creates full roof for maximum element protection when combined with the Deluxe Convertible Roof.
- Easy installation and removal.
- Can be used in conjunction with any windshield.

Commander 2014, Maverick 2014, Maverick MAX

715001952 • Black

$299.99

Commander 2011-2013, Maverick 2013

- Standard on Limited model.

715000762 • Black

$299.99

You can easily customize your SSV by painting the Sport Roof.

"WITH THE BARE ALUMINUM, YOU CAN SEE FROM A LONG WAY OFF THIS IS A SERIOUS OFF-ROADER."

RYAN ORR

SPORT ROOF

- Economy roof for protection against the elements.
- Thermoformed TPO construction.
- Can be assembled with Light Rack for Sport Roof (715001686 or 715001094).

Commander, Maverick

715001679 • Black

$499.99

715001444 • Camo

$799.99

The Camo version of the Sport Roof is applied with a water transfer process, which makes it durable and UV resistant.

Its aluminum construction makes it the most durable Can-Am roof.

SPORT ALUMINUM ROOF

- Formed aluminum roof 2.25 mm thick.
- Durable and lightweight.
- Sporty look.

Commander, Maverick
715001659
$574.99

You can let the sun shine in by rolling up the roof and clipping it to the visor.

BIMINI ROOF WITH SUN VISOR

- Soft top with hard visor.
- Allows user to stow the soft top on the hard visor.
- Hard visor allows the possibility of installing the light rack.
- Can-Am branded
- Polyester 600 denier solution-dyed
- Water repellent
- UV resistant

Commander, Maverick
715001198
$249.99
Maverick MAX
715001965
$319.99

"WHEN YOU HEAR THE CLICK OF THE DOOR LATCH, YOU KNOW YOU'RE READY TO RIP."

RYAN ORR

Getting in and out of the vehicle is easy thanks to the wide door opening.

SPORT ALUMINUM DOORS

- Made of lightweight aluminum.
- Rotary latch and rear hinge opening for ease of ingress/egress in the cockpit.
- Powder coated black.

Commander 2011 to 2013, Maverick 2013
715001658
$699.99

Maverick MAX (Kit includes 4 doors)
715001958
$1,299.99

Commander 2014 & Maverick 2014
715002115
$699.99

Our exclusive system offers the safety buckle switch feature and is ROHVA compliant.

4-POINT HARNESSES

- These 4-point harnesses use 2" shoulder and hips straps and an automotive style buckle.
- Sewn-on shoulder pads and a leather pad on hips keep you comfortable.
- A removable upper mounting point maintains the removable seat feature.
- Require 715001980 4-point harness bar.

Commander & Maverick 2014

Driver

715000736

$174.99

Passenger

715002010

$149.99

4-POINT HARNESS BAR

- Tested as per ROHVA requirements.
- 1.5" inch thick walled steel tubing.

Commander 2014, Maverick 2014

715001980

$159.99

BUILD YOUR Lighting System

FOR A HASSLE-FREE ORDER, FOLLOW THE 4 STEPS BELOW

ORDER EXAMPLES

Maverick owner wants **2 HID** and **2 Halogen Lights** in a **Black Rack on a Sport Roof**
ORDER > 715001382 (HID) & 715001383 (Halogen)
715001687 (Rack) & 715001689 (Power Cable)

Commander owner wants a **17" LED light bar** on their **XT BUMPER**
ORDER > 715001979 (LED) & 715002175 (Wiring)

1 CHOOSE YOUR VEHICLE — **2 CHOOSE YOUR MOUNT POINT** — **3 CHOOSE YOUR LIGHT**

VEHICLE	MOUNT POINT	10" LED BAR	17" LED BAR	39" LED BAR (2014 MODELS ONLY)	HID (SOLD IN PAIRS)	HALOGEN (SOLD IN PAIRS)
Commander	XT bumper / Accessory bar	715001955 (LED) & 715002175 (Light mount kit)	701001979 (LED) & 715002175 (Light mount kit)	NA	715001382 (HID) & 715001366 (Light mount kit)	715001383 (Halogen) & 715001366 (Light mount kit)
	Sport Visor	715001955 (LED) & 715001718 (Silver Rack) or 715001687 (Black Rack)	701001979 (LED) & 715001718 (Silver Rack) or 715001687 (Black Rack)	715001943 (LED)	715001382 (HID) & 715001718 (Silver Rack) or 715001687 (Black Rack) *SEE NOTE FOR 4 LIGHT INSTALL	715001383 (Halogen) & 715001718 (Silver Rack) or 715001687 (Black Rack) *SEE NOTE FOR 4 LIGHT INSTALL
	Sport Roof, Bimini Roof or Roll Cage	715001955(LED) & 715001094 (Silver Rack) or 715001686 (Black Rack)	701001979 (LED) & 715001094 (Silver Rack) or 715001686 (Black Rack)	715001943 (LED)	715001382 (HID) & 715001094 (Silver Rack) or 715001686 (Black Rack) *SEE NOTE FOR 4 LIGHT INSTALL	715001383 (Halogen) & 715001094 (Silver Rack) or 715001686 (Black Rack) *SEE NOTE FOR 4 LIGHT INSTALL
	Aluminum Roof	N/A	NA	715001943 (LED)	NA	NA
Maverick	Original Bumper	715001955 (LED) & 715002175 (Light mount kit) & 715001689 (Power Cable)	701001979 (LED) & 715002175 (Light mount kit) & 715001689 (Power Cable)	NA	715001382 (HID) & 715001713 (Light mount kit) & 715001689 (Power Cable)	715001383 (Halogen) & 715001713 (Light mount kit) & 715001689 (Power Cable)
	Pre-Runner Bumper	NA	715001955 (LED) & 715002175 (Light mount kit) & 715001689 (Power Cable)	NA	715001382 (HID) & 715001713 (Light mount kit) & 715001689 (Power Cable)	715001383 (Halogen) & 715001713 (Light mount kit) & 715001689 (Power Cable)
	Dune front Bumper	715001955 (LED) & 715002175 (Light mount kit) & 715001689 (Power Cable)	701001979 (LED) & 715002175 (Light mount kit) & 715001689 (Power Cable)	NA	715001382 (HID) & 715001713 (Light mount kit) & 715001689 (Power Cable)	715001383 (Halogen) & 715001713 (Light mount kit) & 715001689 (Power Cable)
	Sport Visor	715001955 (LED) & 715001689 (Power Cable) & 715001718 (Silver Rack) or 715001687 (Black Rack)	701001979 (LED) & 715001689 (Power Cable) & 715001718 (Silver Rack) or 715001687 (Black Rack)	715001943 (LED) & 715001689 (Power Cable)	715001382 (HID) & 715001689 (Power Cable) & 715001718 (Silver Rack) or 715001687 (Black Rack) *SEE NOTE FOR 4 LIGHT INSTALL	715001383 (Halogen) & 715001689 (Power Cable) & 715001718 (Silver Rack) or 715001687 (Black Rack) *SEE NOTE FOR 4 LIGHT INSTALL
	Sport Roof, Bimini Roof or Roll Cage	715001955 (LED) & 715001689 (Power Cable) & 715001094 (Silver Rack) or 715001686 (Black Rack)	701001979 (LED) & 715001689 (Power Cable) & 715001094 (Silver Rack) or 715001686 (Black Rack)	715001943 (LED) & 715001689 (Power Cable)	715001382 (HID) & 715001689 (Power Cable) & 715001094 (Silver Rack) or 715001686 (Black Rack) *SEE NOTE FOR 4 LIGHT INSTALL	715001383 (Halogen) & 715001689 (Power Cable) & 715001094 (Silver Rack) or 715001686 (Black Rack) *SEE NOTE FOR 4 LIGHT INSTALL
	Aluminum Roof	NA	NA	715001943 (LED) & 715001689 (Power Cable)	NA	NA
Maverick MAX	Original Bumper	715001955 (LED) & 715002175 (Light mount kit) & 715002036 (Power Cable)	701001979 (LED) & 715002175 (Light mount kit) & 715002036 (Power Cable)	NA	715001382 (HID) & 715001713 (Light mount kit) & 715002036 (Power Cable)	715001383 (Halogen) & 715001713 (Light mount kit) & 715002036 (Power Cable)
	Pre-Runner Bumper	NA	715001955 (LED) & 715002175 (Light mount kit) & 715002036 (Power Cable)	NA	715001382 (HID) & 715001713 (Light mount kit) & 715002036 (Power Cable)	715001383 (Halogen) & 715001713 (Light mount kit) & 715002036 (Power Cable)
	Dune front Bumper	715001955 (LED) & 715002175 (Light mount kit) & 715002036 (Power Cable)	701001979 (LED) & 715002175 (Light mount kit) & 715002036 (Power Cable)	NA	715001382 (HID) & 715001713 (Light mount kit) & 715002036 (Power Cable)	715001383 (Halogen) & 715001713 (Light mount kit) & 715002036 (Power Cable)
	Sport Visor	715001955 (LED) & 715002036 (Power Cable) & 715001718 (Silver Rack) or 715001687 (Black Rack)	701001979 (LED) & 715002036 (Power Cable) & 715001718 (Silver Rack) or 715001687 (Black Rack)	715001943 (LED) & 715002036 (Power Cable)	715001382 (HID) & 715002036 (Power Cable) & 715001718 (Silver Rack) or 715001687 (Black Rack) *SEE NOTE FOR 4 LIGHT INSTALL	715001383 (Halogen) & 715002036 (Power Cable) & 715001718 (Silver Rack) or 715001687 (Black Rack) *SEE NOTE FOR 4 LIGHT INSTALL
	Sport Roof, Bimini Roof or Roll Cage	715001955 (LED) & 715002036 (Power Cable) & 715001094 (Silver Rack) or 715001686 (Black Rack)	701001979 (LED) & 715002036 (Power Cable) & 715001094 (Silver Rack) or 715001686 (Black Rack)	715001943 (LED) & 715002036 (Power Cable)	715001382 (HID) & 715002036 (Power Cable) & 715001094 (Silver Rack) or 715001686 (Black Rack) *SEE NOTE FOR 4 LIGHT INSTALL	715001383 (Halogen) & 715002036 (Power Cable) & 715001094 (Silver Rack) or 715001686 (Black Rack) *SEE NOTE FOR 4 LIGHT INSTALL
	Aluminum Roof	NA	NA	715001943 (LED) & 715002036 (Power Cable)	NA	NA

4 ORDER ALL PART NUMBERS IN THE INTERSECTING BOX

*WARNING: When installing more than one HID or Halogen light kit on light rack, you only need to order one rack and one power cable (if required).

10" LED LIGHT BAR (60 WATTS)

- This complete 10W Cree LED light bar packs a big punch for its size with 5400 lumens.

Commander, Maverick & Maverick MAX

715001955 • Black

$479.99

17" LED LIGHT BAR (100 WATTS)

- Complete 10W Cree LED light bar kit.
- A great compliment to our light rack and most bumpers, this light has a 9000 lumens output.

Commander, Maverick & Maverick MAX

715001979 • Black

$749.99

39" LED LIGHT BAR (240 WATTS)

- Complete 10W Cree LED light bar kit with 21 600 lumens.
- Sitting protected inside the cage area, this light offers a mix of flood and spot lenses.
- This kit comes with brackets for installation.
- Not compatible with full windshields.

Commander 2014, Maverick 2014 & Maverick MAX

715001943 • Black

$1,599.99

LIGHT POWER CABLE

(Not illustrated)

- Brings power from rear battery to dash location.
- Includes fuse for safety.

Maverick	Maverick MAX
715001689	715002036
$34.99	$34.99

LIGHT RACK FOR SPORT VISOR

- Provides Can-Am side-by-side vehicles with a custom look.
- Made of rugged aluminum.
- Essential protection for your accessory lighting systems.
- Fully integrated.
- Can be mounted directly on the Sport Visor (715000762 or 715001952).
- Wiring included.
- Lights sold separately.

Commander, Maverick & Maverick MAX

715001718 • Silver
715001687 • Black
$219.99

LIGHT RACK FOR CAGE OR SPORT ROOF

- Provides Can-Am side-by-side vehicle with a custom look.
- Made of rugged aluminum.
- Essential protection for your accessory lighting systems.
- Fully integrated.
- Can be fixed directly to the roll cage or mounted on the Sport Roof (715001679 or 715001444).
- Wiring included.
- Lights sold separately.

Commander, Maverick & Maverick MAX

715001094 • Silver
715001686 • Black
$289.99

LIGHT MOUNT KIT

- Effortless installation and integrated dash switch convenience thanks to Can-Am casted clamps that facilitate light mounting and all the necessary wiring.
- Required for HID lights or Halogen lights.
- Delivers numerous light installation options.

Maverick & Maverick MAX
715001713
$144.99

Commander
715001366
$139.99

LIGHT MOUNT KIT FOR LED LIGHT BAR

- Effortless installation and integrated dash switch convenience thanks to Can-Am casted clamps that facilitate light mounting and all the necessary wiring.
- Required for 10" and 17" LED Light Bar.
- Delivers numerous light installation options.

Commander, Maverick & Maverick MAX
715002175
$144.99

SIGNALING KIT

- Complete flasher, horn and illuminated license plate holder.
- Integrates onto vehicle.
- Not for road use.
- Does not fit with the Xtreme Front Bumper (71500951) and Lower Tailgate Protector (715001097).

Commander
715001308
$429.99

HID LIGHTS BY HELLA†

- Incomparable and powerful HID long range illumination plug-and-play system converts night usage into virtually daytime riding.
- Integrated ballast unit with 3.25" clear glass lens and swivel mounting heavy-duty bracket provides compact design.
- Water and dust proof IP67 and IP6K9K.
- Highest electromagnetic compatibility rating.
- EMC Class 5 according to CISPR 25, for total disturbance-free electronic operation.
- Peak light performance with just 35W.
- Luminous flux is 2.5 times higher than conventional halogen bulb with 35% less energy consumption.
- High vibration resistance with longer lifetime than halogen bulb.
- Constant light intensity even under unsteady power supply voltage.
- Includes basic wiring and switch.
- Sold in pack of 2.
- See p. 120 for perfect fit.

Commander, Maverick
715001382
$899.99

HALOGEN LIGHTS BY HELLA†

- Delivers long range illumination.
- 3.25" clear glass lens and swivel mounting heavy-duty bracket provides compact design.
- Includes basic wiring and switch.
- Sold in pack of 2.
- See p. 120 for perfect fit.

Commander, Maverick
715001383
$169.99

RAM† SPOTLIGHT

- High-intensity (37.5 watts), heavy-duty spotlight standard-equipped with 1" diameter rubber-coated double ball and socket system.
- Can be easily moved from your XT box rails to any other location.
- Cargo Box 12 V Power Outlet (715001321) required for cargo box mounting.

Commander 2012 & up
715000007
$79.99

can-am ACCESSORY BY KOLPIN

CAN-AM EXCLUSIVE

GEAR RAIL

- Stationary rail system specially designed for your side-by-side vehicle.
- Mounts on roll bar behind driver and passenger.
- Universal mounting options for many Kolpin accessories like Gear Grips, Fuel Packs, Gun Boot 6.0, Impact Gun Boot Mount and Universal Saw Press.
- Rail is made with heavy-duty 7-gauge extruded anodized black aluminum.
- Includes one versatile Gear Rail Mount by Kolpin (715001422).

Commander, Maverick & Maverick MAX

715001320

$209.99

GEAR RAIL MOUNT BY KOLPIN

- Accessory bracket for mounting additional accessories to the Gear Rail (715001320).
- Includes C clamp and metal mounting brackets.

Commander, Maverick & Maverick MAX

715001422

$39.99

GEAR GRIPS BY KOLPIN

- Durable, flexible grips cushion and protect while providing a custom fit for a variety of items 1" to 4" (2.5 cm to 10 cm) in diameter.
- Heavy-duty design for carrying bows, fishing poles, rakes, farm tools and more.
- Quick-release button opens grip quickly for easy access to gear.
- Heavy-duty base system built for the toughest adventures.
- Compatible with Gear Rail (715001320).
- Sold in pairs.

Commander, Maverick & Maverick MAX

715001421

$64.99

(LinQ mounted) Maverick & Maverick MAX

715001351

$99.99

UNIVERSAL SAW PRESS BY KOLPIN

- Specially crafted for transporting your chainsaw securely and safely aboard your side-by-side vehicle.
- Heavy-duty, black powder-coated metal bracket designed to attach any chainsaw model with up to a 20" (51 cm) bar.
- Rubber pads provide cushion and tight fit.
- Hinged design for quick removal.
- Holds saw in vertical position or 45˚ angle in either direction.
- Requires Gear Rail (715001320).
- Protective sheath included.

Commander, Maverick & Maverick MAX

715001423 • Black

$99.99

This case has the most interior room of all Kolpin Gun Boot cases.

GUN BOOT† 6.0 IMPACT† BY KOLPIN†

- Extra room for pistol-grip-type weapons and small bipods.
- Easily fits firearms up to 51" in total length.
- Provides ample room for 60mm scopes.
- Hatchback design allows easy access.
- Snap-close cover with locking capability.
- Ergonomically designed handle and molded attachment points for sling.
- Designed to accomodate left and right hand bolt-action rifles and shotguns.
- Includes removable, shock absorbing foam and nylon Impact liner for superior interior protection.
- Requires Gear Rail (715001320) and Gun Boot Mount by Kolpin (715001420) for installation.
- Compatible for dual mount with Additional Gun Boot Mount (715001586).

Commander, Maverick & Maverick MAX

715001419 • Black

$74.99

GUN BOOT MOUNT BY KOLPIN

- Fits one Kolpin Gun Boot 6.0 Impact (715001419).
- Lightweight and extremely durable.
- Easily adjustable without the use of any tools.
- Offers precision gun angle adjustability.
- Requires Gear Rail (715001320).

Commander, Maverick & Maverick MAX

715001420 • Black

$74.99

ADDITIONAL GUN BOOT MOUNT

(Not illustrated)

- Requires Gear Rail Mount by Kolpin.

Commander, Maverick & Maverick MAX

715001586

$109.99

FUEL PACK BRACKET BY KOLPIN

- Easy, quick and secure bracket for your fuel pack that leaves plenty of room for your other gear.
- 1/4-turn-action knob allows quick and easy removal of fuel pack from bracket.
- Perfect match with the 1.5 Gallon Fuel Pack Jr. (715001425).
- Mount the 4 Gallon Fuel Pack (715001424) with the use of 2 Fuel Pack Brackets.

Commander, Maverick & Maverick MAX

715001427 • Black

$39.99

4 GALLON FUEL PACK AND 1.5 GALLON FUEL PACK JR. BY KOLPIN†

- Fuel container built tough to facilitate longer rides.
- Mounts on SSV, garage wall, camper, etc.
- Made of puncture-resistant, crush-proof, high-density polyethylene.
- Self-venting and self-closing spout is CARB and CPSC compliant for spill-proof operation.
- Molded handle for easy carriage and filling.
- Requires Gear Rail (715001320) and Fuel Pack Bracket (715001427) for easy and convenient attachment to your SSV.
- Legal in all 50 States.
- CARB compliant and EPA certified.
- Dimensions: 34 1/2" x 3" x 13 1/4".
- Not available in Canada.

Commander, Maverick & Maverick MAX

4 Gallon • 715001424

$94.99

- Requires Gear Rail (715001320) and Fuel Pack Bracket (715001427).
- Dimensions: 11 1/2" x 4 1/2" x 12".
- Not available in Canada.
- 1.5 Gallon

Commander, Maverick & Maverick MAX

1.5 Gallon • 715001425

$39.99

LinQ 32 GAL (124L) TRUNK BOX

- Equipped with the LinQ System, the rear trunk box installs in seconds.
- 32 gal (124L) load capacity with unobstructed space to maximize storage room and access the trunk's interior.
- Made of injection-molded polyethylene, double walled in critical areas.
- The fully sealed lid protects your belongings from dust, moisture and the elements.
- Cannot be installed with the Baja Style Spare Tire Holder (715000826) & (715002011).

Maverick, Maverick MAX

715000931 • Black

$339.99

LinQ 32 GAL (124L) TRUNK BOX PANEL KIT

- Fits LinQ 32 gal (124L) Trunk Box.

Maverick, Maverick MAX

715001391 • Black
715001392 • Yellow

$29.99

WIRING CABLE FOR LinQ TRUNK BOX

- Required for the tail light to function.

Maverick, Maverick MAX

710003419 • Black

$20.99

The LinQ System is exlusive to BRP

LinQ DELUXE MODULAR BAGS

- Tool-less installation and removal.
- Versatile, rugged, spacious and attractive.
- Ideal for carrying anything you need in any conditions.
- Weatherproof, scratch-resistant, with molded rubber bottom.
- Central compartment can be used alone on the rack.
- Removable bin.

Maverick, Maverick MAX

44L	73L
715001695	715001694
$244.99	$274.99

RACK EXTENSIONS

- Strong and durable.
- Easy and tool-less installation thanks to the LinQ System.
- Helps keep cargo securely in place.
- Mounts in seconds.

Maverick, Maverick MAX

4" (10 cm)	6" (15 cm)
715000944 • Silver	715001187 • Silver
715001665 • Black	715001671 • Black
$169.99	$179.99

TONNEAU COVER

- Fitted to cover all of the items in your cargo box thoroughly.
- Prevents splash from entering the cargo box.
- Easily removable for quick access.
- Fits with or without XT box rails.

Commander

715001194

$249.99

CARGO BAG

- Rugged all-purpose cargo bag with rain cover for additional protection against the elements.

Commander, Maverick, Maverick MAX

280000539

$149.99

CARGO BED LINER

- Covers the rear end of your vehicle for endless possibilities.
- Includes solid mounting location to attach your stuff.
- Tool-less removal.
- Made of durable polyethylene plastic.

Maverick, Maverick MAX

715001904

$249.99

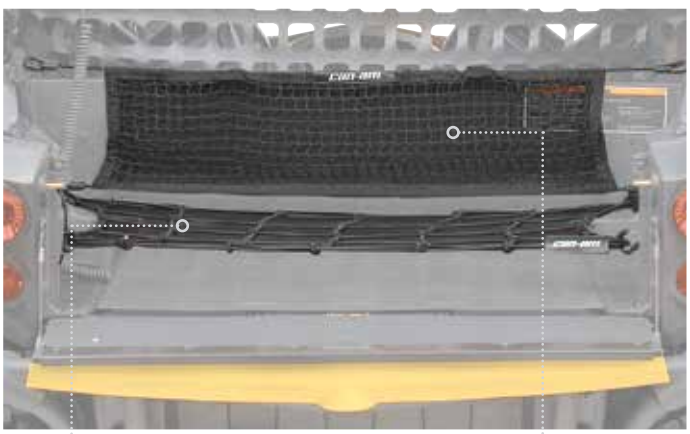
N

REAR WINDOW NET

- Net designed to look sharp.
- Installs in a snap.
- 2" Velcro straps.
- Mounts to roll bar.

Commander 2014 & Maverick 2014
715002004
$89.99

Commander 2011-2013, Maverick 2013
715000832 • Black
$99.99



CARGO BOX ELASTIC NET

- Elastic net designed to hook to the bottom of the cargo box.
- Ideal for retaining lighter, irregular-shaped items.

Commander
715001372 • Black
$39.99

CARGO BOX STORAGE NET

- Mesh net.
- Stores items vertically.
- Quick installation.

Commander
715001370 • Black
$59.99

CARGO BOX NET

- Solid net designed to hook to the bottom of the cargo box for secure and compact confinement of your cargo.

Commander
715001371 • Black
$59.99

REAR WIND SCREEN

- Full rear mesh coverage reduces backdraft when windshield is installed.
- Mounts to roll bar.
- White Cam-Am logo on black mesh.
- Standard on Limited model.

Commander 2014 & Maverick 2014
715002003
$84.99
Commander 2011-2013, Maverick 2013
715001193
$69.99

SOFT REAR WINDOW

- Clear soft window made from see-through vinyl with cold cracking resistance to temperatures down to -4°F (-20°C).
- Prevents dust and rain from drafting back into the vehicle in harsh riding environments.
- Quick installation with 2" Velcro straps.

Commander 2014 & Maverick 2014
715002005
$99.99
Commander 2011-2013, Maverick 2013
715001373
$99.99

BAJA STYLE SPARE TIRE HOLDER

- Holds your spare tire in place.
- Fast installation and removal of the tire with specifically designed tie-down strap.
- Compatible with the Wheel Jack.
- Rear bumper required for installation.
- Made from durable steel tubing.

Maverick MAX
715002011
$319.99

Maverick
715000826
$359.99

SPORT STEERING WHEEL

- Polyurethane soft-touch black grip highlighted with silver spokes.
- Standard on X, XT, XTP, XRS and Limited models.

Commander, Maverick & Maverick MAX
715001134
$149.99

WHEEL JACK

- ProArmor† Quickshot Wheel Jack.
- Helps you change a flat out on the trail.
- Includes a large base for more stability, even in soft soil.
- Includes 17mm key for ease of wheel removal.
- Can sit in Commander bed.

Commander, Maverick & Maverick MAX
715001719
$179.99

715001025

TRAILERING AND STORAGE COVER

- Can-Am branded 300-denier solution-dyed, water repellent polyester construction.
- Has trap for fuel, access to cargo box and passenger area.
- Heavy-duty cord around bottom for secure fit.
- Features soft material in the windshield area to prevent scratches while trailering.

Commander

- Fits with or without roof, light rack, front rack, light protector, rear bumper, extreme bumper, side mirrors.

715001025

$279.99

Maverick

- Fits with or without roof, light rack, rear bumper, front bumper, side mirrors and Baja style spare tire holder.

715001655

$319.99

715001655

STORAGE COVER

- 100-denier solution-dyed, water-repellent polyester construction.
- Heavy-duty elastic cord around bottom and polypropylene webbing across bottom for secure fit.
- Fits with or without most accessories.

Commander

715001368

$219.99

ANTI-POOLING POLES

- 8 mm fiberglass poles to prevent snow or rain from accumulating on your trailer cover.
- Sold in pairs.
- Comes with nylon bag.
- Not for use while trailering.

Commander & Maverick

715001374

$19.99

RADIATOR PROTECTOR

- Black epoxy electrocoated metal shield that mounts over radiator face to provide protection from stones and branches.

Commander

715001126 · Black

$64.99

LOCK FOR TAILGATE

- Device locks lower tailgate.
- Includes key.

Commander

715001127

$29.99

WORK KEY

- Key limits vehicle speed to 25 mph for use on construction sites.

Commander, Maverick & Maverick MAX

715001201

$45.99

LOCKABLE GAS CAP

- Protects your fuel.
- Meets EPA requirements.

Commander, Maverick & Maverick MAX

715001124

$44.99

CARGO BOX 12-V POWER OUTLET

- 12-Volt accessories outlet.
- Easy plug-in harness.
- Wiring harness included.

Commander 2012 and up	Maverick & Maverick MAX
715001321	715001650
$34.99	$34.99

N

FOAM AIR FILTER

- The best choice for the harshest conditions.
- Multiple staged oiled filtering foam for superior dust retaining capacity with high air flow.
- Washable and reusable.

Commander, Maverick & Maverick MAX

715001956

$99.99

FOAM REPLACEMENT

(Not illustrated)

Commander, Maverick & Maverick MAX

707800582

$24.99

DPS MODULE

(Not illustrated)

Commander

715001202

$169.99

AIR INTAKE PRE-FILTER

- Add extra protection to your engine in harsh riding conditions.
- Filter blocks particles larger than 0.005" (0.1 mm).

Commander, Maverick & Maverick MAX

715000953

$39.99

RT40 WARN† WINCH KIT

- Fully-sealed, capable of 4,000 lbs pulling strength.
- Includes 1.5 HP motor, 55 feet of 7/32" wire rope, ergonomically designed clutch knob, mechanical brake, hand-held remote and integrated dash switch, waterproof contactor and roller fairlead.
- CE certified.
- Standard on Limited and XT, XTP & LTD models.

Commander
715001899
(requires Winch & Hitch Support Plate 715000704)
$669.99

Maverick & Maverick Max
715002071
$699.99

ROLLER FAIRLEAD

- Suggested when changing the wire rope.
- Heavy-duty replacement fairlead for RT40 Warn winch.

Commander, Maverick & Maverick MAX
715001119
$51.99

MOUNTING PLATE FOR WINCH

- Mounting plate for 4,000 lbs winch kit.

Maverick & Maverick MAX
715001699
$109.99

WIRELESS REMOTE CONTROL

- The system is quick and easy to install, thanks to a wiring harness with an integrated antenna, and all necessary mounting hardware.
- The system allows you to operate your winch from anywhere within a 50' (15 m) radius, increasing your recovery options.
- All components are weatherproof.

Commander, Maverick & Maverick MAX
715001592
$179.99

MULTIMOUNT WINCH KIT

- For use with RT40 Warn Winch Kit (715001899).
- Versatile system that can be easily mounted at the front or rear of the Can-Am Commander.
- Complete with Can-Am plug and play front and rear wire harness.
- Ergonomically formed handle makes it easy to carry from front to rear.
- Front 2" Receiver Hitch (715000663) is required for installation.
- Integrated receiver allows for use with Multimount Tow (715001142), not included.

Commander
715000659
$299.99

FRONT SWAY BAR

- Enhances vehicle performance and control during hard cornering.
- Standard on X & XTP models.

Commander
715001125
$124.99

WINCH & HITCH SUPPORT PLATE

- Mounting plate for RT40 Warn Winch Kit (715001899) and front 2" Receiver Hitch (715000663).
- Standard on XT and Limited models.

Commander
715000704
$89.99

RECEIVER HITCH

- Heavy duty 2" receiver hitch.
- Can pull up to 1,300 lbs.

Maverick & Maverick MAX

715001648

$179.99

FRONT 2" RECEIVER HITCH

- Can be used with a standard 2" draw bar.
- Complete with integrated quick-locking/ release pin for easy installation and removal of draw bar.
- Allows for front-mount pulling/pushing or additional accessory attachments, such as a plow.
- Winch & Hitch Support Plate (715000704) is required for installation.

Commander

715000663

$89.99

MULTIMOUNT TOW

- 1.5" bar system, no ball.
- Requires Multimount Winch Kit (715000659).

Commander

715001142

$44.99

SYNTHETIC CABLE EXTENSION

- Lightweight 1/4" diameter, easy to handle and won't rattle in cargo box.
- Easily attaches to winch cable to provide additional 50' of distance.
- 4,000 lbs single line capacity.

Commander, Maverick & Maverick MAX

715001120

$132.99

REPLACEMENT WIRE ROPE

- 55 feet of 7/32" wire rope for RT40 Warn winch kit.

Commander, Maverick & Maverick MAX

715001117

$64.99

SYNTHETIC WINCH CABLE

- 50 feet of 7/32" synthetic cable for RT40 Warn winch.

NOTE: Replacing a wire rope with synthetic cable also requires changing the fairlead to avoid damage and wear to the synthetic cable from the rough surface of the old fairlead.

Commander, Maverick & Maverick MAX

715001118

$129.99

SSV WINTER ACCESSORIES

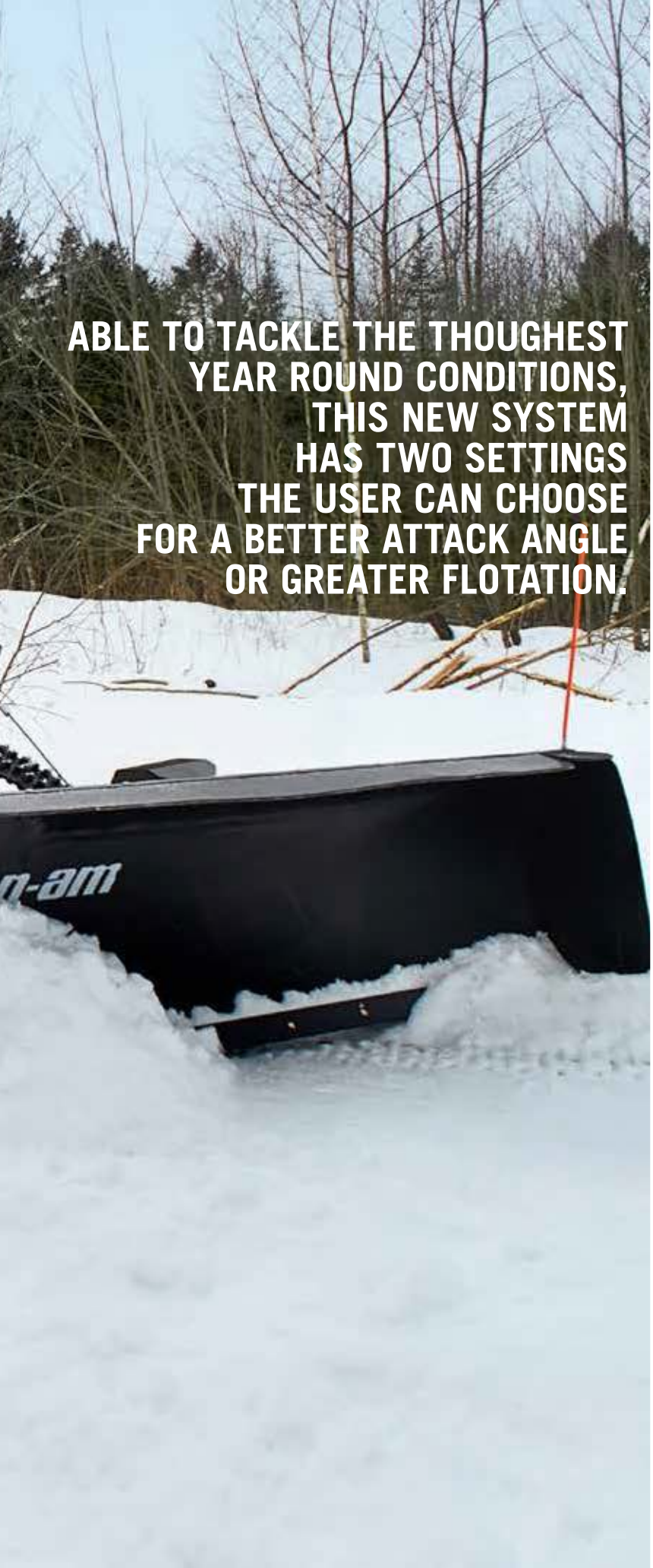
COMMANDER'S LEGENDARY CAPABILITY ISN'T RESERVED FOR DIRT. IT'S UNBEATABLE IN THE SNOW – WITH THE RIGHT ADD-ONS.

Incredible traction in all 4 seasons with the Apache 360 Track system.

It's almost like the Commander was designed for clearing snow.

Take your essentials along with ease with innovative cargo systems.

Be protected from the elements with a windshield and a roof.



APACHE 360 LT TRACK SYSTEM

- Highest ground clearance on the market: 1 extra inch.
- Larger contact patch than the ATV track system by 336 in².
- Developed from the same technology that makes our Apache 360 ATV system the best year round track system.
- Able to tackle the toughest year round conditions, this new system has two settings the user can choose for a better attack angle or greater flotation.
- Heavy-duty components ensure reliablilty and the design offers excellent acceleration, turning, braking and side-hilling performance.
- Conversion from tires to track in only 20 minutes.

Commander
715000959
$4,649.99

CURVED FRONT TRACK FOR EASIER STEERING

LIGHTEST TRACK ON THE MARKET

BIGGEST CONTACT PATCH IN DEEP SNOW CONFIGURATION TO PROVIDE EXTRA FLOTATION AND TRACTION

AIR INTAKE PRE-FILTER

- Add extra protection to your engine in harsh riding conditions.
- Filter blocks particles larger than 0.005" (0.1 mm).
- Necessary to maintain the vehicle warranty when tracks are installed.

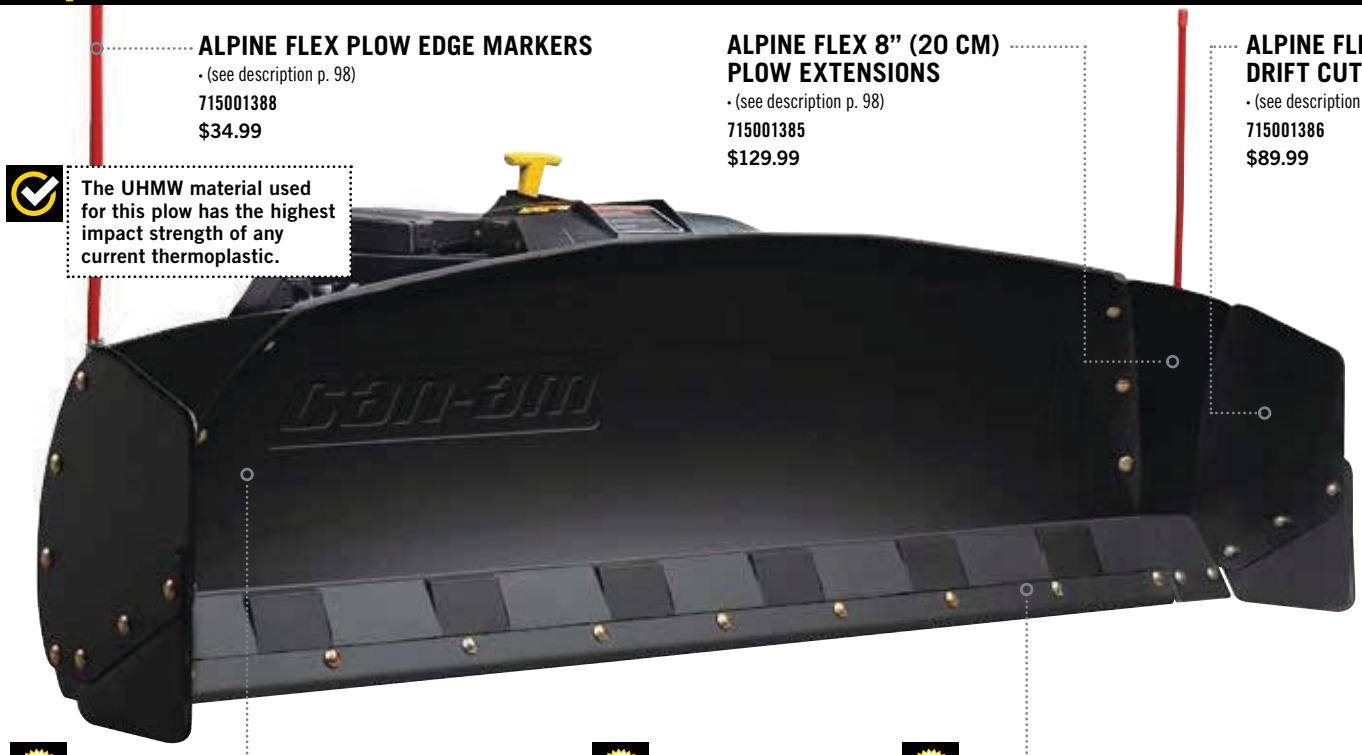
Commander, Maverick & Maverick MAX
715000953
$39.99

APACHE 360 MOUNTING KIT

(Not illustrated)

Commander
715002031
$349.99

Alpine Flex Plow



ALPINE FLEX PLOW EDGE MARKERS
• (see description p. 98)
715001388
$34.99

ALPINE FLEX 8" (20 CM) PLOW EXTENSIONS
• (see description p. 98)
715001385
$129.99

ALPINE FLEX DRIFT CUTTER
• (see description p. 98)
715001386
$89.99

The UHMW material used for this plow has the highest impact strength of any current thermoplastic.

ALPINE FLEX PLOW 72"
- Plow made of flexible UHMV, featuring the highest impact strenght of any thermoplastic presently made.
- Enormous flex action protects the driver, unit and object accidentally impacted.
- Impact absorption properties return plow to its original shape.
- Rearward release action practically eliminates jolts from being transferred to the driver or unit.
- Attaches and detaches effortlessly thanks to a fast and easy mounting system.
- Groundbreaking reinvented blade-turning mechanism mounted as high as possible to eliminate having to bend down to change or adjust blade's angle.
- High pivot point keeps plow on pavement.

Commander & Maverick, Maverick MAX
715001972
$599.99

ALPINE FLEX PLOW RUBBER FLAP
(Not illustrated)
- Keeps snow away from the driver.
- Minimizes snow flowing over plow.
- Increases snow rolling effect.

Fits 72" Alpine Flex Plow
715002117
$79.99

ALPINE FLEX WEAR BLADE (PLASTIC)
- Flexible UHMW plastic construction won't scratch your driveway.
- For use with Alpine Flex Plows (715001181, 715001677).
- Replaces stock wear blade.

Fits Alpine Flex Plow 72"
715002120
$159.99

ALPINE FLEX WEAR BLADE (STEEL)
(Not illustrated)
• (see description p. 98)
715002121
$109.99

ALPINE FLEX PLOW MOUNTING KIT
(Not illustrated)
- Mounting plate for Alpine Flex Plow.

Commander & Maverick, Maverick MAX
715001957
$129.99

ALPINE FLEX PLOW PUSH FRAME EXTENSION
(Not illustrated)
- Extension for Flex Push Frame for use with the Apache 360 LT Track System.

Commander
715001973
$139.99

PLOW MAGNETIC SWITCH
(Not illustrated)
- Magnetic switch that stops the winch to prevent cable, winch and frame damage.

Commander
715001995
$99.99

ALPINE FLEX PLOW PUSH FRAME
- Rearward release action practically eliminates jolts from being transferred to the driver or unit.
- Attaches and detaches effortlessly thanks to a fast and easy mounting system.
- Groundbreaking reinvented blade-turning mechanism mounted as high as possible to eliminate having to bend down to change or adjust blade's angle.
- High pivot point keeps plow on pavement.
- Compatible with all Alpine Flex Plow accessories to further enhance plow versatility.
- Includes Plow Roller Fairlead and cable saver limit switch.

Commander & Maverick, Maverick MAX
715001992
$649.99

Super Duty Plow

PLOW EDGE MARKERS
- For a more accurate view of the width of your plow.
- Allows you to work closely around objects.

Commander
715001216
$34.99

PLOW RUBBER FLAP
- Keeps snow away from the driver and helps snow roll in front of the plow.

Commander
715001219
$89.99

PLOW DRIFT CUTTER
- Keeps snow securely in the plow.
- Allows you to cut a cleaner pass.
- Sold individually.

Commander
715001218 - Black
$89.99

SUPER DUTY PLOW PUSH FRAME EXTENSION
(Not illustrated)
- Extension to use the Super Duty Plow with the Apache 360 LT Track System.

Commander
715001221 - Black
$279.99

PLOW PULLEY
(Not illustrated)
- For use with the Super Duty Plow.
- Helps winching efficiency.
- Requires front XT bumper.

Commander
715002042
$49.99

SUPER DUTY PLOW
- Heavy-duty 12 gauge steel blade with integrated reinforcement for maximum durability.
- Complete plow system with manual angling.
- Heavy-duty push tubes withstand the roughest uses.
- Requires a winch for raising and lowering.
- Easy to install.
- Quick disconnect system for fast installation and removal.
- Front mount system provides minimum 11" lift.
- Front mount included.

Commander
715001140
$1,199.97

WARN PLOW ROLLER FAIRLEAD
- Larger diameter lower roller reduces wear on wire rope for plow application.

Commander, Maverick & Maverick MAX
715001223
$64.99

PLOW BLADE EXTENSIONS
- Side extensions for widening your plow blade by 6" (15 cm) on each side.
- Include rubber flaps for extension parts.
- Sold in pairs.

Commander
715001217 - Black
$269.99

SUPER DUTY PLOW HYDRAULIC ANGLING KIT
- Allows you to have full up/down and left/right plow control at your fingertips.
- Pre-assembled, it comes with everything you need to turn your Commander Super Duty Plow into a quick, easy-to-control unit from the driver's seat.
- Using one hand to control all plow motions with the supplied joystick will allow you to easily concentrate and manage your plowing task.
- With this commercial grade kit, you will send snow exactly where you want reliably all winter long.
- Winch and plow sold separately.

Fits Super Duty Plow, Commander
715001220
$1,199.99

TIRES & RIMS

"IF YOU DON'T HAVE THE RIGHT TIRES, YOU'D BETTER FIND ANOTHER WAY."

TIRES COMPLETELY CHANGE THE CAPABILITY AND CHARACTER OF THE RIDE. THE RIGHT ONES ARE ESSENTIAL.

Tires

Accessory Tires

ZILLA TIRE BY MAXXIS*

- For 14" (36 cm) rim.
- Sold individually.

Front - 27" x 10" (69 cm x 25 cm)
705401302
$174.99

Rear - 27" x 12" (69 cm x 30 cm)
705501703
$189.99

MUD LITE XTR TIRE BY ITP*

- For 14" (36 cm) rim.
- Sold individually.

Front - 27" x 9" (69 cm x 23 cm)
705401296
$234.99

Rear - 27" x 11" (69 cm x 28 cm)
705501698
$257.99

DOONZ TIRE BY DWT*

Front - 25.5" x 11" x 12" (65 cm x 28 cm x 30 cm)
705501689
$97.99

Rear - 25.5" x 13" x 12" (65 cm x 33 cm x 30 cm)
705501688
$119.99

OEM Tires

TIRE (FRONT AND REAR)*

- AT30X9-14 Gorilla silverback mud tire.
- Sold individually.

OUTLANDER X mr 30" (76 cm) x 14" (35 cm)
705400962
$224.99

MAXXIS MUDZILLA

OUTLANDER X mr 650 Front - 28 x 8 x 12
705401391
$176.99

Rear - 28 x 10 x 12
705501836
$209.99

MAVERICK

Front - 27 x 9 x 12
705401385
$164.99

Rear - 27 x 11 x 12
705501817
$164.99

MAXXIS BIGHORN 2.0

COMMANDER X

Front - 27 x 9 x 12
705400846
$179.99

Rear - 27 x 11 x 12
705501186
$179.99

COMMANDER XT

Front - 27 x 9 x 14
705400631
$199.99

Rear - 27 x 11 x 14
705500964
$209.99

CARLISLE ACT

OUTLANDER 500-1000 XT

Front - 26 x 8 x 12
705401333
$124.99

Rear - 26 x 10 x 12
705501769
$129.99

OUTLANDER 400 XT

Front - 25 x 8 x 12
705400606
$109.99

Rear - 25 x 11 x 12
705500933
$144.99

CARLISLE BLACK ROCK

COMMANDER BASE

Front - 27 x 9 x 12
705400781
$89.99

Rear - 27 x 11 x 12
705501129
$94.99

CARLISLE BADLANDS A/R

OUTLANDER 500-1000 BASE

Front - 26 x 8 x 12
705401331
$101.99

Rear - 26 x 10 x 12
705501767
$109.99

* Consult your operator's guide/owner's manual for proper tire type and rim sizing. Improper tire and rim selection may affect vehicle handling. Check with your local authorities for proper regulation.

OEM Tires

CARLISLE TRAIL WOLF

OUTLANDER 400 BASE
Front - 25 x 8 x 12
705400009
$107.99
Rear - 25 x 11 x 12
705500385
$114.99

TRAXTER
Rear - 26 x 10 x 12
705500230
$72.99

ITP HOLESHOT ATR

RENEGADE
Front - 205/80R12 (25 x 8 x 12)
705400600
$102.99
Rear - 270/60R12 (25 x 10 x 12)
705500926
$149.99

DURO BLACK HAWK

RALLY
Front - 22 x 10 x 10
A42711179000
$84.99
Rear - 22 x 10 x 7
705500294
$57.99

ITP HOLESHOT SR

DS450
Front - 21 x 7 x 10
705400432
$59.99
Rear - 20 x 10 x 9
705500787
$72.99

ITP QUADCROSS MX PRO

DS450 X MX
Front - 20 x 6 x 10
705400765
$101.99
Rear - 18 x 10 x 8
705501106
$90.99

ITP HOLESHOT GNCC

DS450 X XC
Front - 21 x 7 x 10
705400650
$86.99
Rear - 20 x 10 x 9
705500989
$135.99

KENDA KNARLY

DS250
Front - 22 x 7 x 10
S44710RCA000
$86.99
Rear - 20 x 11 x 9
S42710RCA000
$97.99

DURO THRASHER

DS 90/70
Front - 19 x 7 x 8
V42711DGF000LL
$68.99
Rear - 18 x 9.5 x 8
V42712DGF010LL
$62.99

KENDA KLAW MXR

DS90X
Front - 20 x 6 x 10
V42711DGF01HLL
$93.99
Rear - 18 x 10.5 x 8
V42712DGF01HLL
$68.99

Rims

OEM Rims

COMMANDER, MAVERICK & MAVERICK MAX

LIMITED 14" (36 CM) RIM

- Premium cast aluminum rim.
- Black with machined face.
- Sold individually.
- Standard on Limited model.

Commander, Maverick & Maverick MAX

Front - 14" x 7" (36 cm x 18 cm) offset = 41 mm
705401098 • Silver/Black
$124.99

Rear - 14" x 8.5" (36 cm x 22 cm) offset = 51 mm
705501471 • Silver/Black
$139.99

XT 14" (36 CM) RIM

- Premium cast aluminum rim.
- Sold individually.
- Standard on XT models.

Commander, Maverick & Maverick MAX

Front - 14" x 7" (36 cm x 18 cm) offset = 41 mm
705400632
Silver With Clear Coat
$124.99

Rear - 14" x 8.5" (36 cm x 22 cm) offset = 51 mm
705500965
Silver With Clear Coat
$139.99

- Premium cast aluminum rim with durable black finish.
- Sold individually.
- Standard on XT Camo models.

Commander, Maverick & Maverick MAX

Front - 14" x 7" (36 cm x 18 cm) offset = 41 mm
705400919 • Black
$124.99

Rear - 14" x 8.5" (36 cm x 22 cm) offset = 51 mm
705501261 • Black
$139.99

MAVERICK BEADLOCK

705401329 • Yellow
$65.99

Bolt for Beadlock (16 bolts per wheel)

Front Wheel	Rear Wheel
705401155	705501522
$189.99	$189.99

Accessory Rims

ATV, COMMANDER & MAVERICK

RED LABEL BLACK RIM BY DWT*

- Sold individually.

Front
12" x 8" (30 cm x 20 cm)
Bolt circle pattern: 4/136 mm
Wheel offset: 4+4
705401261
$125.99

Rear
12" x 10" (30 cm x 25 cm)
Bolt circle pattern: 4/136 mm
Wheel offset: 5+5
705501717
$125.99

Accessory Rims

LOCKOUT 393 14" RIM BY VISION*

- Sold individually.
- Matching cap (705401362), matching nuts (250100100).

Front
14" x 7" (36 cm x 18 cm)
Bolt circle pattern: 4/136 mm
Wheel offset: 4+3
705401363
$94.99

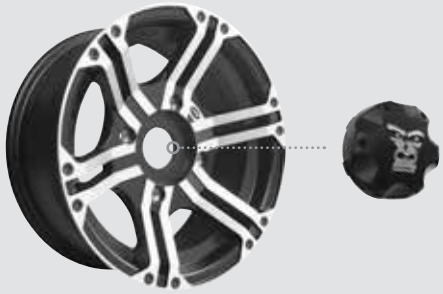
Rear
14" x 8" (36 cm x 20 cm)
Bolt circle pattern: 4/136 mm
Wheel offset: 4+4
705501787
$94.99

SS312 RIM BY ITP*

- Black with clear coat.
- Sold individually.
- Matching cap (705401318), matching nuts (250100100).

Front -
14" x 6" (36 cm x 15 cm)
Bolt circle pattern: 4/136 mm
Wheel offset: 4+2
705401297
$104.99

Rear
14" x 8" (36 cm x 20 cm)
Bolt circle pattern: 4/136 mm
Wheel offset: 5+3
705501696
$114.99



OUTLANDER X MR RIM (FRONT AND REAR) (ITP-SS212)*

- Black with machining and clear coat rim.
- Matching cap (705400963), matching nuts (250100100).
- Sold individually.

Front & Rear Rim 14" x 6" (36 cm x 15 cm) Outlander X mr
705400877 • Black and Machined
$124.99

* Consult your operator's guide/owner's manual for proper tire type and rim sizing. Improper tire and rim selection may affect vehicle handling. Check with your local authorities for proper regulation.

OEM Rims

OUTLANDER & RENEGADE 2012 WITH 800R OR 1000 ENGINE, OUTLANDER, OUTLANDER MAX & RENEGADE 2013-2014

MAVERICK Xrs & RENEGADE X xc RIM

- Black with clear coat aluminum rim.
- Must be installed with Yellow Beadlock (705401156).

Front	Rear
12" x 6" (30 cm x 15 cm)	12" x 7.5" (30 cm x 19 cm)
705401155	705501522
Black and Yellow Beadlock	Black and Yellow Beadlock
$189.99	$189.99

BEADLOCK RENEGADE X xc ONLY

- Cast aluminum Beadlock.
- Must be installed on Front Rim (705401155) and Rear Rim (705501522).

705401156 • Yellow

$65.99

OUTLANDER XT RIM

- Black with machining and clear coat aluminum rim.

Front	Rear
12" x 6" (30 cm x 15 cm)	12" x 7.5" (30 cm x 19 cm)
705401078	705501458
Black with Machining and Clear Coat	Black with Machining and Clear Coat
$139.99	$149.99

OUTLANDER RIM

- Silver with clear coat aluminum rim.

Front	Rear
12" x 6" (30 cm x 15 cm)	12" x 7.5" (30 cm x 19 cm)
705401088	705501460
Silver and Clear Coat	Silver and Clear Coat
$139.99	$149.99

MAVERICK & RENEGADE RIM

- Black with clear coat aluminum rim.

Front	Rear
12" x 6" (30 cm x 15 cm)	12" x 7.5" (30 cm x 19 cm)
705401091	705501465
Black and Clear Coat	Black and Clear Coat
$139.99	$149.99

OUTLANDER RIM (CAMO MODEL)

- Black with clear coat aluminum rim.

Front	Rear
12" x 6" (30 cm x 15 cm)	12" x 7.5" (30 cm x 19 cm)
705401127	705501493
Black and Clear Coat	Black and Clear Coat
$139.99	$149.97

NOTE: MATCHING NUTS - 250100100 (EXCEPT 250100082 FOR OUTLANDER RIMS (705401088 & 705501460) — MATCHING CAP - 705400928

DS450

X mx RIM KIT

- ITP T-9 Trac-Lock rims.
- Sold in pairs.

Front	Rear
10" x 5" (25 cm x 13 cm)	8" x 8" (20 cm x 20 cm)
715000903	715000906
$219.99	$399.99

X xc RIM KIT

- ITP T-9 Trac-Lock rims.
- Sold in pairs.

Front	Rear
10" x 5" (25 cm x 13 cm)	9" x 8" (23 cm x 20 cm)
715000902	715000905
$464.99	$479.99

X PACKAGE REINFORCED RIM KIT

- Black painted aluminum rims with exterior reinforcement ring.
- Sold in set of 4.
- Beadlock with inside reinforcement.

715000510

$374.99

OEM Rims

RENEGADE, OUTLANDER & COMMANDER

RENEGADE X RIM

- Center cast aluminum rims.
- Welded exterior and interior reinforcement rings.
- Needs to be installed with Beadlock (705400841).

Renegade & Outlander 2012 and prior with 650 or 800R engine (except 2006 800R & 2012 with 800R or 1000 engine), Commander

Front	Rear
12" x 6" (30 cm x 15 cm)	12" x 7.5" (30 cm x 19 cm)
705400945	705501137
$124.99	$139.99

X BEADLOCK

- Cast aluminum.
- Must be installed on rims 705400945 and 705501137.
- Needs 16 bolts (250000435) for installing the Beadlock Disk.

Renegade & Outlander 2012 and prior with 650 or 800R engine (except 2006 800R & 2012 with 800R or 1000 engine), Commander

705400841 • Yellow
$79.99

RENEGADE RIM

- Center cast aluminum rims.

Renegade & Outlander 2012 and prior with 650 or 800R engine (except 2006 with 800R engine & 2012 with 800R or 1000 engine)

Front	Rear
12" x 6" (30 cm x 15 cm)	12" x 7.5" (30 cm x 19 cm)
705400506	705500837
$119.99	$129.99

XTR CUSTOM RIM KIT

- Custom Can-Am XTR branded 12" (30cm) painted aluminum rims.
- Includes matching chrome nuts and center covers.
- Set of 4.
- Front rim: 12" x 6" (30 cm x 15 cm).
- Rear rim: 12" x 8" (30 cm x 20 cm).

Renegade & Outlander 2012 and prior with 650 or 800R engine (except Outlander 2006 with 800R engine)

715000611 • Black
$504.99

COLORED FINS FOR RIMS

- Plastic fins that enhance the appearance of your vehicle.
- Pack of 8.

Fit on following rims:
XT, XT-P and Limited 2010 & 2011 (705500986, 705501015, 705501019, 705400687, 705400648, 705400683)

705400950 • Steel Gray
705400681 • Yellow
$2.99

RENEGADE & OUTLANDER 2012 AND PRIOR WITH 650 OR 800R ENGINE (EXCEPT 2006 WITH 800R ENGINE & 2012 WITH 800R OR 1000 ENGINE)

XT-P RIM

- Made of aluminum.
- Upgrade for non XT models.

Front	Rear
12" x 6" (30 cm x 15 cm)	12" x 7.5" (30 cm x 19 cm)
705400687	705501019
$124.99	$139.99

LIMITED RIM

- Made of aluminum.
- Upgrade for non XT models.

Front	Rear
12" x 6" (30 cm x 15 cm)	12" x 7.5" (30 cm x 19 cm)
705400683	705501015
$124.99	$139.99

XT RIM

- Made of aluminum.
- Upgrade for non XT models.

Front	Rear
12" x 6" (30 cm x 15 cm)	12" x 7.5" (30 cm x 19 cm)
705400648	705500986
$119.99	$129.99

NOTE: MATCHING NUTS - 250100100 BLACK AND 250100082 CHROME — MATCHING CAP - 705400680 BLACK

OILS & MAINTENANCE

IT'S NOT WORTH TAKING A CHANCE WITH PARTS. IT'S YOUR FREE TIME WE'RE TALKING ABOUT.

5 ESSENTIAL BRP PRODUCTS

TO ENSURE A PROPER TUNE-UP

AIR PREFILTER
PAGE 76

OIL FILTER
PAGE 148

BRAKE PAD KIT
PAGE 148

PERFORMANCE DRIVE BELT
PAGE 148

XPS SYNTHETIC GEAR OIL
PAGE 151

MAKE THE RIGHT CHOICE

BRP's commitment to quality means that every vehicle is engineered to the highest standards of reliability. Nevertheless, a lack of proper maintenance can cause even the best components to fail eventually. **By using original BRP maintenance parts, you are taking care of your investment.**

Recommended periodic maintenance **schedule**

Going to your BRP dealership for regular maintenance servicing can prevent bigger and more expensive repairs in the long run. Just follow the recommended maintenance schedule. It was designed by experts who understand your ATV / SSV and know exactly how to keep it in top form.

To do:	475 mi or 25 h	625 mi or 50 h	1875 mi or 100 h	3725 mi or 200 h
Clean the CVT air inlet/outlet	✓			
Inspect and clean the CVT air filter	✓			
Inspect the brake system and pads	✓		✓	
Tighten the wheel lug nuts	✓			
Inspect the drive shaft boots and protectors	✓			
Inspect passenger grab handles condition	✓			
Inspect hitch condition	✓			
Inspect driver & passenger seat latch operation	✓			
Inspect tailgates latch operation	✓			
Replace air filter		✓		
Verify battery condition		✓		
Inspect front differential/rear final drive oil level		✓		
Inspect drive shaft joints condition		✓		
Inspect front/rear propeller shaft joint condition		✓		
Inspect tie rod ends		✓		
Inspect shock absorbers for leaks		✓		
Lubricate shock absorber spherical bearings (X model)		✓		
Inspect and lubricate front suspensions arms		✓		
Inspect seat belts			✓	
Inspect side nets			✓	
Replace the engine oil and filter			✓	
Inspect and adjust the valve clearance			✓	
Inspect and clean the muffler spark arrester			✓	
Check engine coolant strength			✓	
Inspect throttle body			✓	
Clean the fuel pump pre-filter			✓	
Inspect the fuel pump pressure			✓	
Replace fuel vent breather filter			✓	
Inspect the drive belt			✓	
Inspect, clean and lubricate the drive and driven pulleys (including the one-way bearing)			✓	
Inspect the gearbox oil level and condition			✓	
Inspect wheel bearings			✓	
Inspect the steering system (column, bearing, etc.)			✓	
Inspect and clean the brake system			✓	
Inspect frame for any damage			✓	
Replace rear final drive oil			✓	
Replace engine coolant				✓
Verify cooling system				✓
Verify fuel system				✓
Replace Spark plugs				✓
Replace front differential oil				✓
Replace gearbox oil				✓
Clean the vehicle speed sensor				✓
Replace the brake fluid				✓

Take care of your vehicle by maintaining it using strictly **BRP and Rotax OEM** or **100% Can-Am-approved parts and products.**

You bought the best vehicle available on the market. It deserves the best maintenance products in the world.

PERFORMANCE DRIVE BELT

- High-performance drive belts calibrated to maximize your off-road performance.
- Ask your authorized Can-Am dealer which one fits your vehicle.

715000302
$129.99
715900024
$56.99
715900023
$134.99

PERFORMANCE DRIVE BELT

(Not illustrated)

- For the X mr and Maverick intense riders, a 100% PBO material which is the most advanced compound to date for high-performance drive belts.
- Extremely durable under high temperatures.
- See your dealer for details.

715900212
$164.99

OIL FILTER

- Use on all Can-Am off-road vehicles.
- Ask your authorized Can-Am dealer which one fits your vehicle.

420256188
$14.99

NGK† SPARK PLUGS

- BRP dealers carry the full line of premium NGK spark plugs for Can-Am ATVs.

(DCPR8E - 0.8 mm gap) • 707000246
$3.80

BRAKE PAD KIT

- One-stop replacement brake pad kit designed to replace the parts while keeping your vehicle's performance intact.
- Ask your authorized Can-Am dealer which one fits your vehicle.

Outlander
Front Left • 705601014
Front Right • 705601015
$39.99

YUASA BATTERIES

- Top of the line models from the leading preferred original equipment battery supplier in North America.

18 Amps. Wet (YTX20L-BS) • 410301203
$112.99
19 Amps. Dry (YB16CL-B) • 278001756
$74.99
13 Amps. Wet (YTX15L-BS) • 710000283
$116.99
DRY (YB30CBL) • 278001882
$129.99
3 Amps. Wet (YT4L-BS) • 410301204
$49.99

YUASA† SMART SHOT AUTOMATIC BATTERY CHARGER

- The Yuasa Smart Shot automatic battery chargers are available in 900 milliamp and 1.5 amp charge capacities and ensure that optimum power is available from your battery when you need it.
- Both chargers are supplied with a fused-ring connector, in addition to the alligator clips that can be attached permanently to your battery, making charging and maintaining your battery a snap.

900 Automatic 12V 900MA • 529035773
$41.99
Automatic 6/12V 1.5 amps. 5 Stage • 529035772
$62.99

DEMAND XPS FOR YOUR BRP ROTAX® ENGINE

TOP REASONS WHY YOUR BRP ROTAX ENGINE DESERVES XPS

- Superior lubricants for both engine and transmission.
- Much higher quality base stock than standard automotive oil.
- Maximum corrosion protection for snow, dirt and mud environments.
- Tested and optimized to perform in every 4-stroke Rotax engine.
- XPS Oils: The only oil recommended by BRP's engineering team.

XPS Engine Oils

XPS 4-STROKE SYNTHETIC OIL - ALL CLIMATE GRADE

- Unlike other ordinary 4-stroke motor oils, XPS all climate grade synthetic 4-stroke oil is specifically engineered to meet the particular lubrication requirements of the Can-Am off-road vehicles equipped with Rotax 4-stroke engines.
- Provides easier starting in very cold temperatures.

1 US gallon / 3.785 L • 293600115

1 quart / 946 ml • 293600112

XPS 4-STROKE SYNTHETIC BLEND OIL - SUMMER GRADE

- BRP 4-stroke engines are high output, used in the most demanding conditions, and used aggressively they need a specialized oil to handle these demands!

1 US gallon / 3.785 L • 293600122

1 quart / 946 ml • 293600121

XPS 4-STROKE OIL CHANGE KIT

- Kit includes: 3 quarts of XPS synthetic blend oil, oil filter, o-ring and instruction sheet.
- For Renegade, Outlander & Commander.

Summer use • 703500736

All climate • 703500735

FLEXIBLE SPOUT

- To use your 1 quart / 946 ml, 1 U.S. gallon / 3.785 L oil bottles for spill-free pouring.
- Easy installation.

414837300

$6.99

Note: Please contact your nearest dealer for suggested retail prices of oil based products.

XPS Cleaners

XPS BRAKES & PARTS CLEANER

- A concentrated blend of solvents with a powerful blasting spray that effectively removes grease, grime, brake fluid and other contaminants from brake components and metal parts without the need for disassembly.
- Evaporates instantly and completely, leaving no residue to hinder performance.
- Contains no ozone depleters.
- 14 oz. / 397 g.

219701705

$7.99

XPS OFF-ROAD VEHICLE WASH

- A biodegradable and non-toxic cleaner that removes mud and dried-on dirt from your off-road vehicle.
- Whether grimy from the track, the woods or the fields, this cleaner will leave your off-road vehicle sparkling.
- When used as directed, XPS Wash is safe for all off-road vehicles finishes.
- 32 oz. / 946 ml.

219701702

$9.99

XPS MICROFIBER TOWELS

- The latest in high-quality detailing towels. Made up of extremely fine fibers, their soft surfaces have been perfected for drying and polishing motorcycles, boats, cars or any shiny finish.
- They are so absorbent they hold up to seven times their weight in water.
- Machine washable means they can be used over and over again.
- Pack of 2.

219701759

$8.99

XPS Maintenance Products

XPS OFF-ROAD VEHICLE HPG-T/A GAS SHOCK OIL

- Recommended for all top quality gas shocks for off-road vehicles including our own Can-Am HPG-T/A nitrogen gas charged shocks.
- High viscosity index for extreme temperatures encountered in off-road vehicle conditions.

293600136

$73.99

XPS SYNTHETIC GEAR OIL

- Brings forward the latest innovations of lubricant technology.
- Provides optimal protection under severe conditions while allowing durability that far exceeds other synthetic and conventional API GL-5 gear oils.
- Offers added assurance during extended drain intervals.
- Allows higher load capacity when compared to petroleum lubricants.
- Its tremendous thermal stability and relatively constant viscosity give exceptional wear protection and superior performance at extreme temperatures.
- Strongly recommended for use in all Can-Am off-road vehicles requiring API GL-5 gear oil.

For SSV 75W-140 • 293600140

$32.17

For ATV 75W-90 • 293600043

$22.99

XPS STORAGE OIL

- This specialty oil is a must when putting your Can-Am off-road vehicle away for extended periods.
- Specially formulated to protect the engine's internal parts from the hazards of rust and corrosion due to condensation during storage or prolonged periods of non-use.
- 350 g.

413711900

$9.99

PRE-MIXED ANTIFREEZE/ COOLANT

- Pre-mixed, ready to top up your coolant level.
- Blended to perform best in our Rotax engines with anti-corrosive additive.
- 1 quart / 946 ml.

219700362

$8.99

XPS LUBE

- A multipurpose lubricant that prevents rust, corrosion and moisture intrusion.
- Contains active extreme-pressure additives which provide excellent lubrication and antiwear properties.
- Comes in a spray can that works upside down.
- 14 oz.

293600016

$11.99

XPS DOT 4 BRAKE FLUID

- Exceeds DOT 3 and 4 requirements.
- Unique low-moisture formulation providing maximum protection against vapor lock.
- Recommended in Ski-Doo snowmobiles and Can-Am off-road vehicles.

293600131

$9.99

XPS SYNTHETIC SUSPENSION GREASE

- Specially designed for Can-Am off-road vehicle suspensions.
- Offers optimal lubrication at low and high temperature while protecting critical suspension components from dirt and other contaminants.
- 400 g.

293550033

$9.99 (for 1 tube)

XPS FUEL STABILIZER

- Fuel additive to protect against fuel contamination and residue build-up in carburetors and gas lines.
- Should always be used before storing your Can-Am off-road vehicle.
- Suitable for all gasoline engines.

413408601

$9.99

RIDE IT HARD. TREAT IT RIGHT.

XPS. THE ONLY OIL ENGINEERED BY BRP FOR THE LEVEL OF PERFORMANCE YOU EXPECT.

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VISIT XPSPROMOTION.COM AND ENTER THIS CODE: XV6P7A8
OFFER ENDS ON DECEMBER 31, 2013.

USA - 716001118

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Nothing is more valuable than your playtime. That is why BRP is dedicated to continually finding new and better ways to help you enjoy your favorite powersports. From snow to water to both on- and off-road fun, our passion for adventure fuels the innovations that result in the ultimate powersports experience for our customers. We value the land and water we play on and are committed to protecting it. Our desire to thrill is paired with an emphasis on rider responsibility, placing personal safety above all else. So that each outing can be the most enjoyable, memorable and thrilling experience possible. Because your free time should always be your best time.

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