

PERIODIC MAINTENANCE PROCEDURES

SERVICE TOOLS

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SERVICE PRODUCTS

| Description | Part Number | Page |
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Subsection XX (PERIODIC MAINTENANCE PROCEDURES)

GENERAL

This subsection provides general maintenance instructions. Where detailed instructions for disassembly or reassembly is required, refer to the applicable subsection.

PROCEDURES

ENGINE

Crankshaft PTO Seal Inspection

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | | | ✓ |

Check PTO seal for cracks, leaks or other damages.

Rewind Starter Cleaning and Lubrication

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | ✓ | | |

Refer to *REWIND STARTER ASSEMBLY* in *REWIND STARTER* subsection.

ENGINE (SUPPORTS)

Engine Rubber Mount Inspection

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | ✓ | | ✓ |

Check rubber mounts for cracks or other damages.

Engine Stopper Adjustment

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | ✓ | | |

Refer to *ENGINE REMOVAL AND INSTALLATION* subsection.

ENGINE (EXHAUST SYSTEM)

Exhaust System Inspection

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | ✓ | | ✓ |

Check the following components for leaks, cracks, or other damages:

- Springs and retainers
- Exhaust system mounts
- Muffler
- Tuned pipe
- Shields
- Manifold.

ENGINE (LUBRICATION SYSTEM)

Oil Injection Filter Replacement (600 and 800R Power TEK)

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | ✓ | | |

Refer to *OIL FILTER (600 AND 800R POWER TEK)* in *LUBRICATION SYSTEM* subsection.

Oil Injection Pump Adjustment (600 and 800R Power TEK)

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | | | ✓ |

Refer to *LUBRICATION SYSTEM* subsection.

Oil Injection Pump Strainer Inspection and Cleaning (E-TEC)

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | ✓ | | |

Refer to *OIL INJECTION PUMP (600 E-TEC)* in *LUBRICATION SYSTEM* subsection.

Engine Lubrication (600 and 800R Power TEK)

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | | ✓ | |

NOTICE Fuel stabilizer should be added prior to engine lubrication to ensure carburetor protection against varnish deposit.

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

Proceed as follows:

1. Place the vehicle in a well ventilated area and start the engine.

2. Start the engine and let it run at idle speed until it reached its operating temperature.
3. Stop the engine.
4. Remove the primary air intake silencer. Refer to *AIR INTAKE SYSTEM* for the removal procedure.
5. Restart engine and run at idle speed.
6. Inject storage oil into each carburetor/throttle body until the engine stalls, or until a sufficient quantity of oil has entered the engine (approximately half a can).
7. With the engine stopped, remove the spark plugs and spray recommended storage oil in each cylinder.

| RECOMMENDED SERVICE PRODUCT | |
|-----------------------------|---|
| Outside of the U.S. | XPS STORAGE OIL (EXCEPT U.S. COUNTRY) (P/N 413 711 600) |
| Within the U.S. | XPS STORAGE OIL (U.S. COUNTRY ONLY) (P/N 413 711 900) |

8. Slowly crank engine 2 or 3 revolutions to lubricate cylinders.
9. Reinstall the spark plugs and primary air intake silencer.

Engine Lubrication (E-TEC)

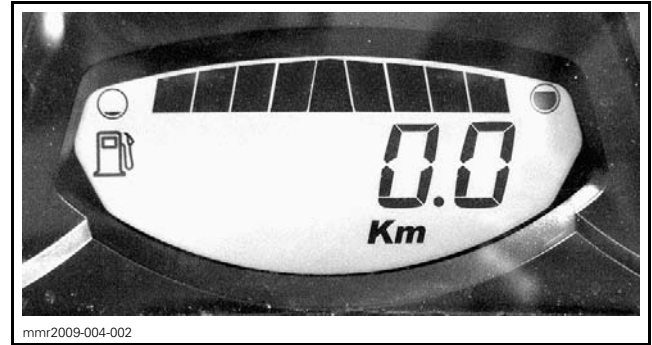
| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | | ✓ | |

Engine Storage Mode (E-TEC)

Like other engines, the E-TEC has to be properly lubricated at storage for internal parts protection. The E-TEC system offers a built-in engine storage lubrication function (summerization) that can be initiated by the operator.

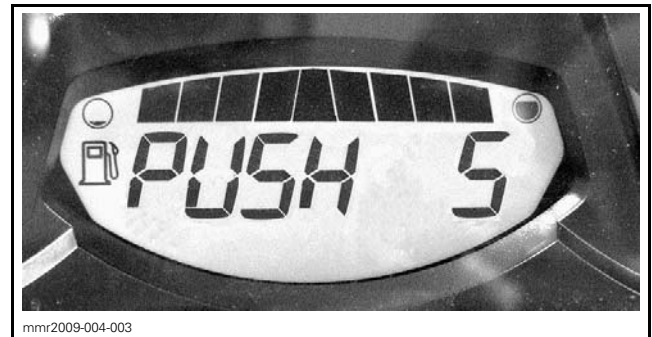
To engage procedure, do the following:

1. Place the vehicle in a well ventilated area.
2. Start the engine and let it run at idle speed until it reaches its operating temperature (watch the coolant temperature on the display or verify that the rear heat exchanger becomes warm).
3. Push the SET (S) button to select odometer mode.



NOTE: The storage mode does not function in other modes (trip A, trip B and hr trip).

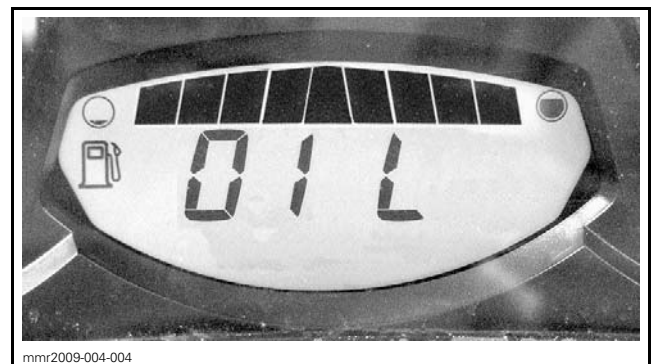
4. Repeatedly depress the HI/LOW beam switch rapidly, then, **while doing this**, press and hold the **SET button** until PUSH "S" appears on the display.



5. Release all buttons when gauge displays **PUSH "S"** appears.
6. Again, press and hold the SET (S) button for 2 - 3 seconds.

NOTE: The gauge will display OIL when the storage procedure is initiated.

7. When gauge displays **OIL**, release button and wait for the lubrication function to end.



Do not touch anything during engine lubrication cycle.

Subsection XX (PERIODIC MAINTENANCE PROCEDURES)


The engine lubrication function takes approximately 1 minute. During this time, engine RPM will increase slightly to approximately 1600 RPM and the oil pump will "oil flood" the engine.

At the end of engine lubrication function, the ECM will stop the engine.

8. Remove tether cord cap from engine cut-off switch.

NOTICE Do not start the engine during storage period.

ENGINE (COOLING SYSTEM)

 **WARNING**

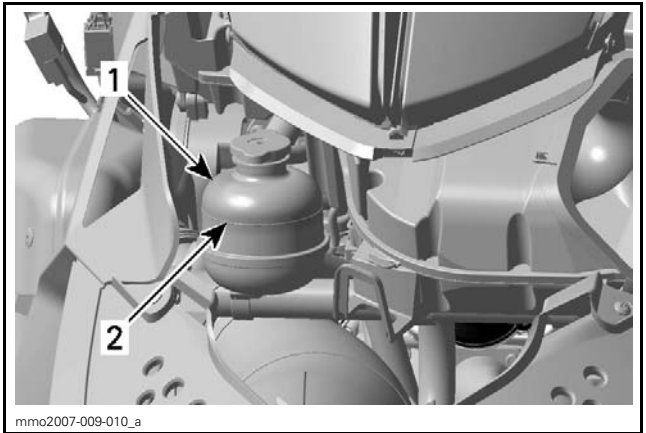
Never open coolant tank cap when engine is hot.

Engine Coolant Level Verification

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | | | |

Check coolant level at room temperature with the cap removed. Liquid should be at cold level line (engine cold) of coolant tank.

NOTE: When checking level at low temperature it may be slightly lower than the mark.



TYPICAL
1. Coolant tank
2. COLD LEVEL line

Engine Coolant Strength Verification

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | | | ✓ |

Remove pressure cap.

Use an antifreeze tester to test coolant strength.

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

Engine Coolant Replacement

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | ✓ | | |

Recommended Engine Coolant

| RECOMMENDED SERVICE PRODUCT | ACCEPTABLE |
|--|---|
| BRP PREMIXED COOLANT (P/N 219 700 362) | A blend of 50% distilled water with 50% antifreeze (especially formulated for aluminum engines) |

To prevent antifreeze deterioration, always use the same brand. Never mix different brands unless cooling system is completely flushed and refilled.

NOTICE To prevent rust formation or freezing condition, always replenish the system with the BRP premixed coolant or with 50% antifreeze and 50% distilled water. Do not use tap water, straight antifreeze or straight water in the system. Tap water contains minerals and impurities which build up in the system. During cold weather, straight water causes the system to freeze while straight antifreeze thickens (like slush ice) and does not have the same efficiency. Always use ethylene glycol antifreeze containing corrosion inhibitors specifically recommended for aluminum engines.

Cooling System Draining

 **WARNING**

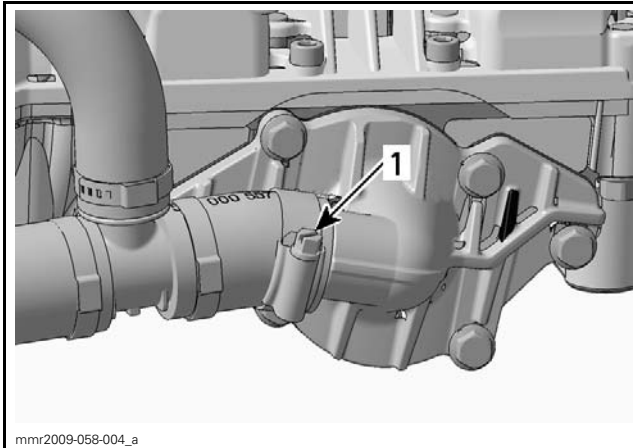
Never drain or refill the cooling system when engine is hot.

Remove RH side panel and hood. Refer to *BODY* subsection.

Remove muffler and tuned pipe. Refer to *EX-HAUST SYSTEM* subsection.

Place a large drain pan under the vehicle bottom pan.

Unplug coolant hose from water pump to drain coolant.



WATER PUMP

1. Unscrew clamp

When coolant level is low enough, lift the rear of vehicle to drain the heat exchangers.



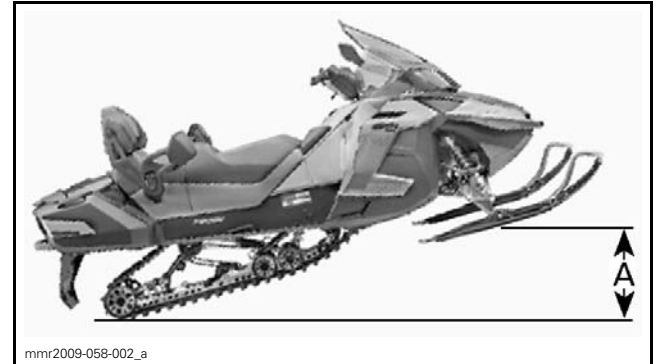
TYPICAL VIEW

Install and tighten coolant hose clamp on water pump.

| TIGHTENING TORQUE | |
|--------------------|---------------------|
| Coolant hose clamp | 5.5 N•m (49 lbf•in) |

Cooling System Refill and Bleeding

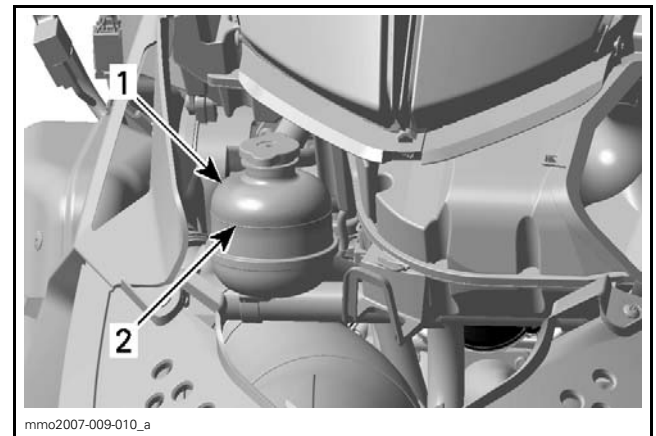
1. Apply parking brake.
2. Lift front of vehicle as shown and support it safely.



TYPICAL VIEW

- A. 25 cm ± 5 cm (10 in ± 2 in)

3. With engine cold, slowly fill coolant tank up to COLD LEVEL line allowing time for the air in the cooling system to seep out.



TYPICAL

1. Coolant tank
2. COLD LEVEL line

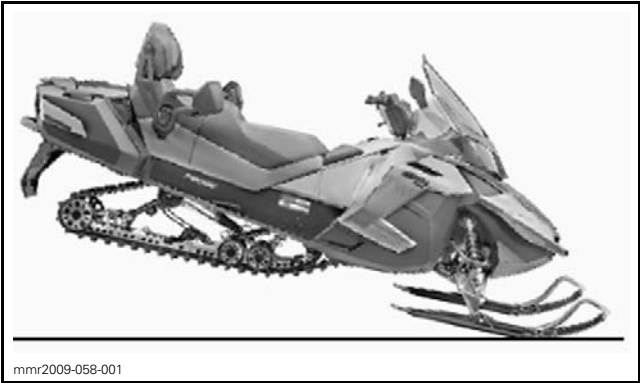
4. Start engine.
5. Refill coolant tank up to COLD LEVEL line while engine is idling until rear heat exchangers are warm to the touch (about 4 to 5 minutes).

NOTE: Always monitor coolant level while filling coolant tank to avoid emptying and thus allowing air to enter the system.

6. Install pressure cap.
7. Lower vehicle back to the ground.



8. Lift rear of vehicle and support it safely.



TYPICAL VIEW

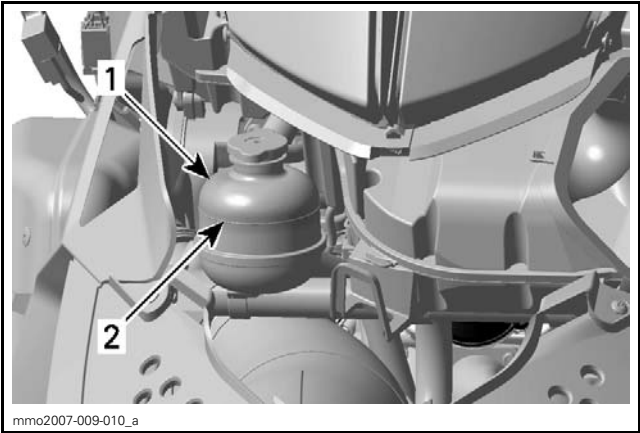
⚠ WARNING

Before revving engine, ensure that the track is free of particles which could be thrown out while track is rotating. Keep hands, tools, feet and clothing clear of track. Always lift the snowmobile on a wide-base stand with a rear deflector panel. Ensure no one is standing in close proximity to the snowmobile, especially at the rear of the track. Centrifugal force could cause debris, damaged or loose studs, pieces of torn track, or an entire track to be violently thrown backwards out of the frame with tremendous force, possibly resulting in the loss of a leg or other serious injury.

- 9. Remove parking brake.
- 10. Activate throttle lever 3 - 4 times to bring engine speed to 7000 RPM.
- 11. Apply the brake.
- 12. Lower vehicle back to ground.
- 13. Stop engine.



- 14. Add coolant up to 15 mm (1/2 in) above the COLD LEVEL line.



TYPICAL

- 1. Coolant tank
- 2. Coolant 15 mm (1/2 in) above COLD LEVEL line

- 15. When engine has completely cooled down, recheck coolant level in coolant tank and refill up to line if needed.
- 16. Perform *ENGINE COOLANT STRENGTH VERIFICATION*. See procedure in this subsection.
- 17. Adjust mixture as necessary.
- 18. Reinstall removed parts.

FUEL SYSTEM

Carburetor Inspection, Cleaning and Adjustment (600 and 800R Power TEK)

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | | | ✓ |

Refer to *TM CARBURETORS* subsection.

Fuel Lines and Connection Inspection

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | | | ✓ |

Visually inspect fuel lines and connections for cracks or leaks.

Fuel Pump Strainer Inspection (E-TEC)

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | ✓ | | |

Remove fuel pump, refer to *FUEL TANK AND FUEL PUMP* subsection.

Inspect strainer for trapped foreign particles, clogging or damages. Replace if necessary.

In-line Fuel Filter Replacement (E-TEC)

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | ✓ | | |

In-line Fuel Filter Removal

1. Remove primary air intake silencer. Refer to *AIR INTAKE SYSTEM* subsection.
2. Release fuel pressure in the system Refer to *FUEL TANK AND FUEL PUMP* subsection.
3. Disconnect magneto connector.

⚠ WARNING

The magneto connector must be disconnected to prevent any spark in the engine compartment and to remove power from the fuel pump. Otherwise, if the engine is cranked, fuel vapors may ignite in presence of a spark creating a fire hazard.

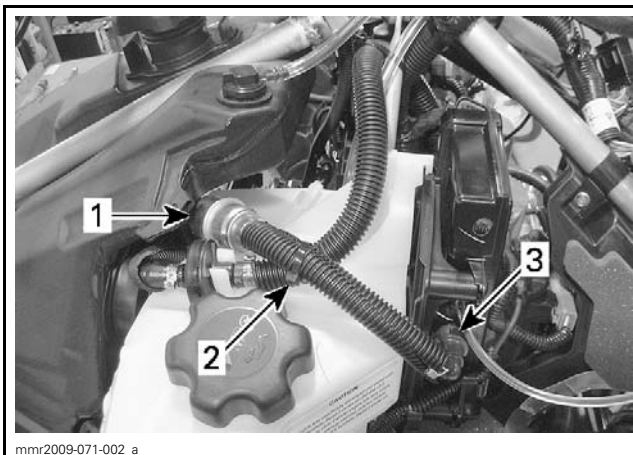
4. Cut the locking ties securing the fuel return hose to the fuel supply hose.

⚠ WARNING

Work in a well ventilated area. Wipe up all spilled fuel.

5. Press the release button on the fuel pressure hose quick disconnect fitting and slowly pull the fitting off the ECM.

NOTE: Place a container under the hose fitting to recover residual fuel remaining in the system.



TYPICAL - 600 HO E-TEC ILLUSTRATED

1. In line fuel filter
2. Locking tie to cut
3. Quick disconnect fitting

6. Move fuel tank back sufficiently to access the pressure hose fitting at the fuel pump. Refer to *FUEL TANK REMOVAL* subsection.

NOTE: Pressure hose fitting will be accessible from the LH side. It is not necessary to completely disconnect fuel pump or fuel level sensor.

7. Place a rag under the quick disconnect fitting at the fuel pump and disconnect it from the fuel pump.



TYPICAL - FUEL SUPPLY LINE TO DISCONNECT

8. Remove fuel filter from vehicle.

In-Line Fuel Filter Installation

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

⚠ WARNING

Ensure hose clamp is tight and that hose cannot turn on the fitting.

When reconnecting quick disconnect pressure fittings to fuel pump and ECM, be sure to pull on the each end of the hose to ensure they are properly locked and secure.

When installation is complete, carry out a fuel system leak test, refer to *FUEL SYSTEM PRESSURIZATION* in *FUEL TANK AND FUEL PUMP* subsection.

⚠ WARNING

After working on the fuel system, carry out a fuel system pressurization test to check for leaks. Failure to carry out a fuel system leak test could result in severe injury or a life threatening situation should a leak occur.

Throttle Body Inspection and Cleaning (E-TEC)

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | | | ✓ |

Subsection XX (PERIODIC MAINTENANCE PROCEDURES)

Clean throttle plates and throttle body bores using PULLEY FLANGE CLEANER (P/N 413 711 809).

Throttle Cable Inspection

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | ✓ | | ✓ |

Visually inspect cable sheath for kinks, wear or other damage.

Visually inspect cable at throttle body/carburetor and at throttle lever for fraying or other damage.

Make sure the throttle cable operates smoothly.

ELECTRICAL SYSTEM (CHARGING)

Battery Charging

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | | | ✓ |

To charge battery, refer to *CHARGING SYSTEM* subsection.

ELECTRICAL SYSTEM (IGNITION)

Spark Plug Inspection (600 and 800R Power TEK)

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | | | |

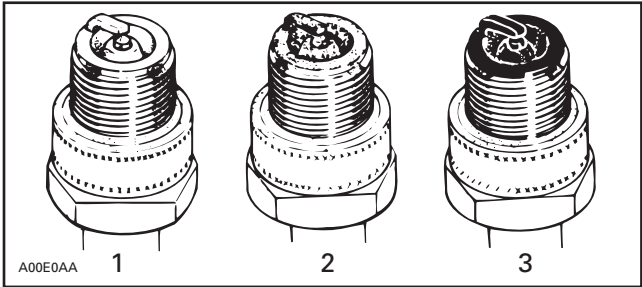
Troubleshooting a Fouled Spark Plug

Fouling of the spark plug is indicated by irregular running or misfiring of the engine, decreased engine speed due to misfiring, reduced performance, and increased fuel consumption.

Other possible causes are: a incorrect or bad fuel, defective ignition system, incorrect spark plug gap, loss of compression, or lubricating oil entering the combustion chamber.

The plug face of a fouled spark plug has either a wet or dry black carbon deposit. Such coatings form a conductive connection between the center electrode and the ground electrode.

Spark Plug Analysis



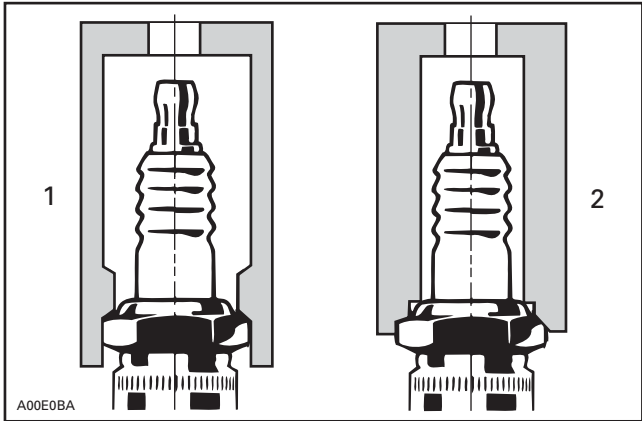
TYPICAL
1. Overheated (light gray, white)
2. Normal (light brown, brown)
3. Fouled (black, wet or dry, dark deposits, gray, melted coating)

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 prescribed intervals, examining the plug face (i.e. the part of the plug projecting into the combustion chamber).

Spark Plug Replacement (600 and 800R Power TEK)

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | | | ✓ |

NOTE: Use only an approved spark plug socket for removal and installation. Extra care should be taken to avoid side stresses which could result in a broken spark plug.



TYPICAL
1. Approved socket
2. Improper socket

Spark Plug Removal

1. First unscrew the spark plug 1 turn.
2. Clean the spark plug and cylinder head with pressurized air.
3. Remove spark plug from engine.

⚠ WARNING

Whenever using compressed air, always wear protective eye wear.

Spark Plug Installation

1. Using a feeler gauge, ensure electrode gap is set to specification.

NOTE: Spark plug gap is not adjustable. Replace spark plug if gap is incorrect.

| REQUIRED SETTING | |
|------------------|--|
| Spark plug gap | 0.7 mm to 0.8 mm (.028 in to .031 in) |

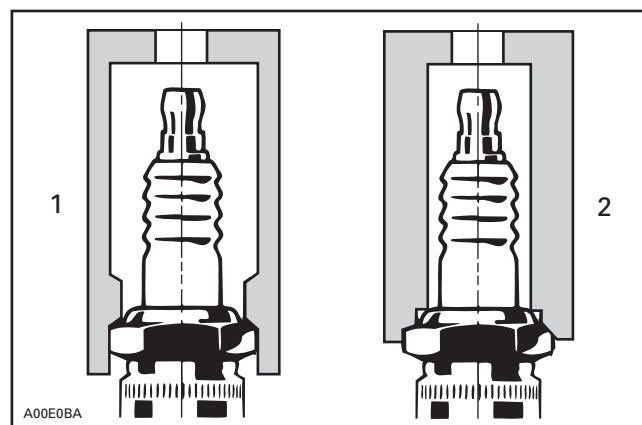
2. Install and tighten spark plug to specification.

| PART | PRODUCT | TORQUE |
|------------|---|--------------------|
| SPARK PLUG | LOCTITE 767 (ANTISEIZE LUBRICANT) (P/N 293 800 070) | 28 N•m (21 lbf•ft) |

Spark Plug Replacement (E-TEC)

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | ✓ | | |

NOTE: Use only an approved spark plug socket for removal and installation. Extra care should be taken to avoid side stresses which could result in a broken spark plug.



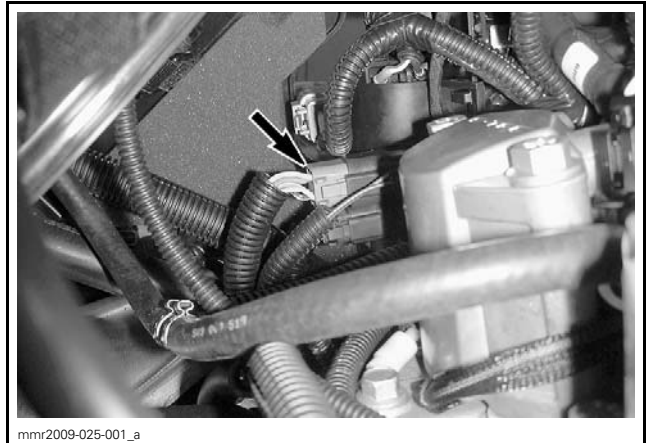
TYPICAL
1. Approved socket
2. Improper socket

Spark Plug Removal

1. Disconnect the magneto connector.

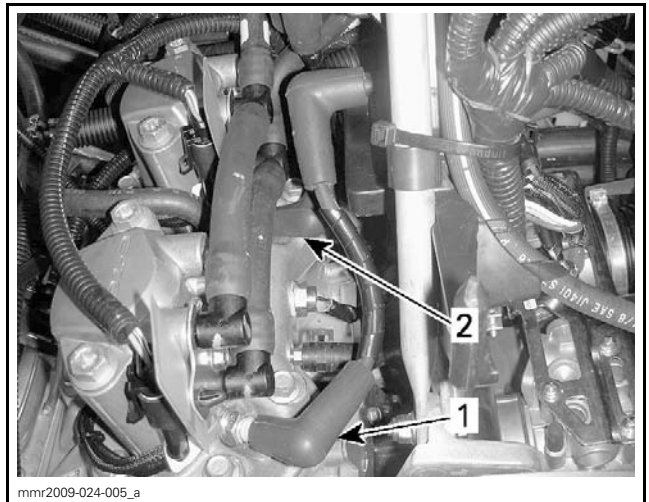
⚠ WARNING

Cranking engine with spark plug removed and without disconnecting the magneto connector may ignite fuel vapors creating a fire hazard.



TYPICAL — MAGNETO CONNECTOR

2. Remove the primary air intake silencer.
3. Remove spark plug cables by gently rotating the cap and pulling it off the plug.



TYPICAL
1. PTO spark plug
2. MAGspark plug

4. Clean the spark plug and cylinder head with pressurized air.

⚠ WARNING

Whenever using compressed air, always wear protective eye wear.

5. Unscrew the spark plug sufficiently to break the applied torque using the appropriate tools.

Subsection XX (PERIODIC MAINTENANCE PROCEDURES)

| CYLINDER IDENTIFICATION | REQUIRED TOOLS |
|-------------------------|---|
| MAG side | <ul style="list-style-type: none">– Spark plug socket (16 mm (5/8 in))– Crowfoot (19 mm (3/4 in))– Ratchet wrench– Extension |
| PTO side | <ul style="list-style-type: none">– Spark plug socket (16 mm (5/8 in))– Wrench (19 mm (3/4 in)) |

| REQUIRED SETTING | |
|------------------|--|
| Spark plug gap | 0.7 mm to 0.8 mm (.028 in to .031 in) |

3. Hand screw spark plug into cylinder head until it bottoms out.
4. Apply specific torque using a torque wrench, crow foot, and approved spark plug socket.

NOTE: Spark plug tightening torque is particularly important on this engine as it contributes to the proper positioning of the negative electrode.

| MODEL | TORQUE |
|--------------------------------|--------------------|
| 600 HO E-TEC and 800R E-TEC | 28 N•m (21 lbf•ft) |

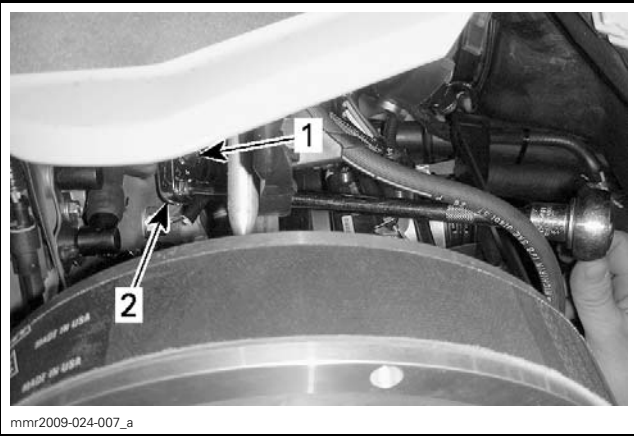
5. Apply DIELECTRIC GREASE (P/N 293 550 004) on contact in spark plug cap of the ignition cable prior to connecting it onto the spark plug.

Spark Plug Installation (Non-OEM)

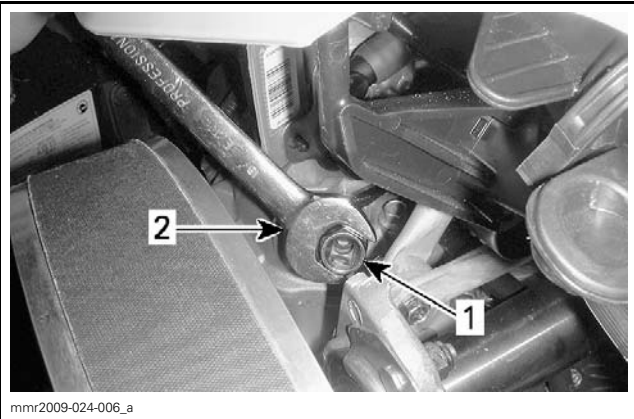
NOTE: When using a non-OEM spark plug, it must be correctly indexed or engine may experience rough idling and higher emissions.

1. Using a marker, mark the open end of the negative electrode on the plug shell (above threads).
2. Ensure the contact surfaces of the cylinder head and spark plug are free of grime.
3. Install and torque the spark plug, refer to previous table for specific torque.
4. Visually check to ensure the open end of the negative electrode is facing the injector nozzle within 90° each side of nozzle.

NOTE: The following illustration uses the point of attachment of the negative electrode to depict the angle. The injector is illustrated above the spark plug.



MAG SIDE
1. Spark plug socket (16 mm (5/8 in))
2. Crowfoot (19 mm (3/4 in))



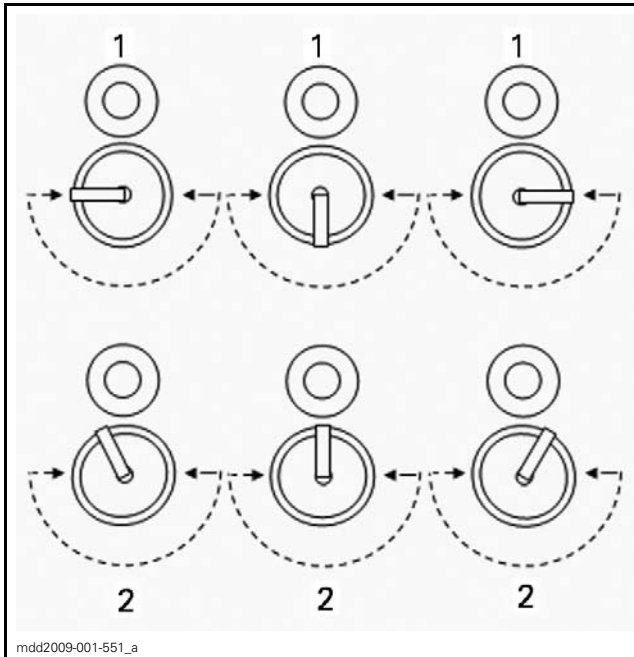
PTO SIDE
1. Spark plug socket (16 mm (5/8 in))
2. Wrench (19 mm (3/4 in))

6. Remove spark plugs by hand.

Spark Plug Installation (OEM)

1. Prior to installation, ensure the contact surfaces of the cylinder head and spark plug are free of grime.
2. Using a feeler gauge, confirm electrode gap is as specified.

NOTE: If spark plug gap is incorrect, use another spark plug.



SPARK PLUG INDEXING

1. Acceptable installation
2. Unacceptable installation

If the plug indexing angle is not within specification, repeat procedure with another spark plug until correct indexing is achieved.

ELECTRICAL SYSTEM (LIGHTS)

Headlights Beam Aiming Adjustment

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | | | ✓ |

Refer to *LIGHTS, GAUGE AND ACCESSORIES* subsection.

DRIVE SYSTEM (CLUTCHES)

Drive Belt Inspection

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | | | ✓ |

Refer to *DRIVE BELT* subsection.

Drive Pulley Inspection and Cleaning

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | ✓ | | ✓ |

Refer to *DRIVE PULLEY* subsection.

Drive Pulley Retaining Screw Tightening

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | ✓ | | |

DRIVE PULLEY TORQUE

| | |
|-------------|---------------------|
| All engines | 120 N•m (89 lbf•ft) |
|-------------|---------------------|

Drive Pulley Wear Parts Replacement

800R Power TEK and 800R E-TEC Engines

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | ✓ | | |

Replace drive pulley wear parts as per *PERIODIC MAINTENANCE SCHEDULE*. Refer to *DRIVE PULLEY* subsection.

Driven Pulley Inspection and Cleaning

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | ✓ | | ✓ |

Inspect pulley sheave for dirt, marks or scratches. Test sliding sheave operation.

Use the PULLEY FLANGE CLEANER (P/N 413 711 809) and a clean rag to clean pulley sheaves as necessary.

DRIVE SYSTEM (CHAINCASE)

Recommended Chaincase Oil

| RECOMMENDED SERVICE PRODUCT |
|---|
| XPS SYNTHETIC CHAINCASE OIL (P/N 413 803 300) |

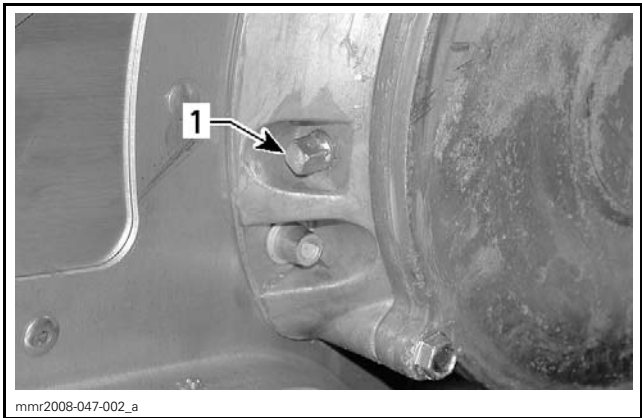
NOTICE Use only the recommended type oil when servicing. Do not mix synthetic oil with other types of oil.

Chaincase Oil Level Verification

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | ✓ | | |

1. Place vehicle on a level surface.
2. Remove magnetic check plug on the left side of chaincase. Oil level must be equal with the lower edge.

Subsection XX (PERIODIC MAINTENANCE PROCEDURES)

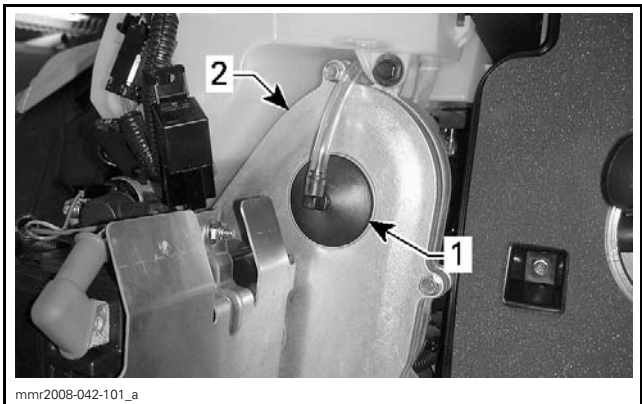


TYPICAL
1. Magnetic check plug

3. Remove metal particles from magnetic check plug.

NOTE: It is normal to find metallic particles stuck to magnetic check plug. If bigger pieces of metal are found, remove the chaincase cover and inspect the chaincase parts.

4. To add oil, remove the filler cap on top of chaincase cover.



TYPICAL
1. Filling plug
2. Chaincase cover

5. Pour recommended oil in chaincase by the filler hole until oil comes out by the magnetic check plug hole.

6. Reinstall magnetic check plug and torque to specification.

| TIGHTENING TORQUE | |
|---------------------|-------------------|
| Magnetic check plug | 6 N•m (53 lbf•in) |

Chaincase Oil Replacement

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | | | ✓ |

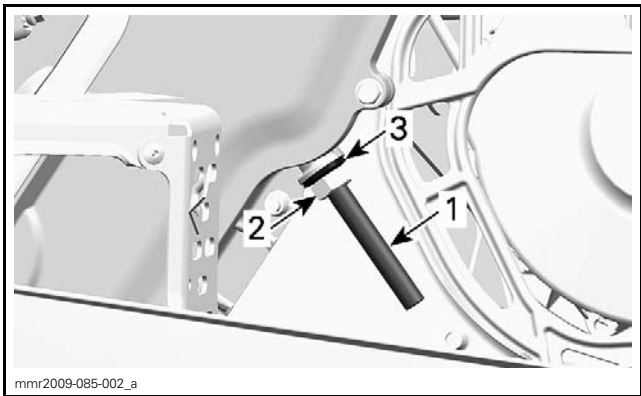
1. Place vehicle on a level surface.

2. Proceed with *CHAINCASE COVER REMOVAL* to allow oil to flow out of chaincase. See procedure in *CHAINCASE* subsection.
3. Proceed with *CHAINCASE COVER INSTALLATION*, see procedure in *CHAINCASE* subsection.
4. Pour approximately 350 ml (12 U.S. oz) of recommended oil in chaincase through the filler hole until oil comes out by the magnetic check plug hole.
5. Proceed with *CHAINCASE OIL LEVEL VERIFICATION*, see procedure in this subsection.

Drive Chain Adjustment

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | ✓ | | ✓ |

1. Remove muffler. Refer to *EXHAUST SYSTEM* subsection.
2. Unscrew the lock nut on tensioner adjustment screw.



1. Tensioner adjustment screw
2. Lock nut
3. Washer with rubber surface

3. Push back washer with rubber surface.
4. Tighten tensioner adjustment screw **BY HAND**.
NOTE: Turn adjustment screw until resistance is strong enough that it can not be turned by hand.
5. Hold tensioner adjustment screw and tighten lock nut to 36 N•m (27 lbf•ft).

DRIVE SYSTEM (TRACK)

Track Adjustment and Alignment

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | ✓ | | ✓ |

Track tension and alignment are interrelated. Do not adjust one without checking the other. Track tension procedure must be carried out prior to track alignment.

Track Tension Verification

1. Lift rear of vehicle and support it off the ground.
2. Allow rear suspension to fully extend.
3. Use the Tensiometer (P/N 414 348 200).



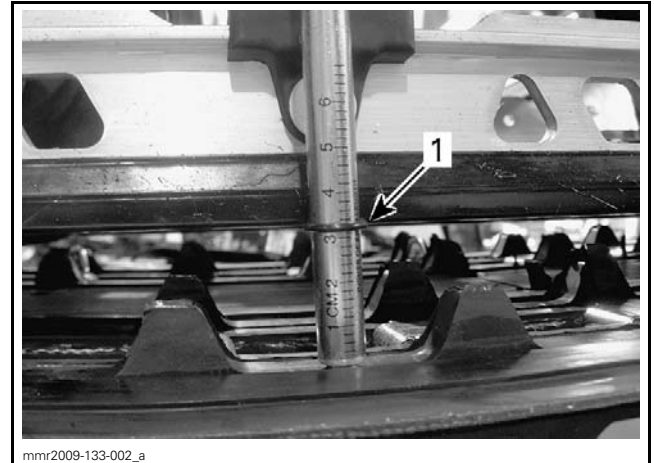
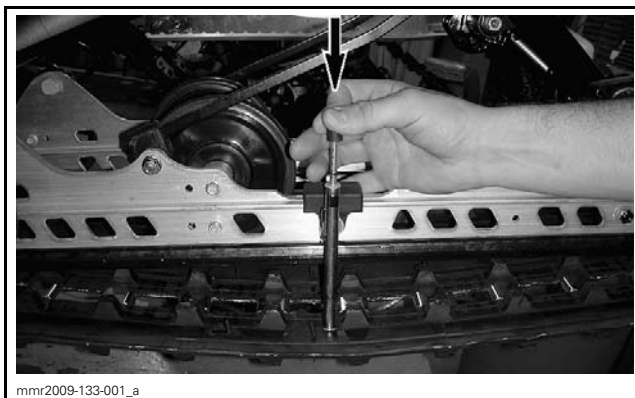
4. Set deflection to 3.2 cm (1.26 in) using bottom O-ring.



DEFLECTION SETTING

1. Bottom O-ring

5. Place upper O-ring to 0 kgf (0 lbf).
6. Position the tensiometer on track, halfway between front and rear idler wheels.
7. Push the tensiometer downwards until bottom O-ring (deflection) is aligned with the bottom of slider shoe.



1. Deflection O-ring aligned with slider shoe

8. Read load recorded by the upper O-ring on the tensiometer.



LOAD READING

1. Upper O-ring

Load reading must be as per the following table.

| TRACK ADJUSTMENT SPECIFICATION | |
|--------------------------------|--|
| Track deflection setting | 3.2 cm (1.26 in) |
| Track load reading | 6.0 kgf to 8.5 kgf (13 lbf to 19 lbf) |

9. If load reading is not in accordance with the specification, adjust track tension. Refer to *TRACK TENSION ADJUSTMENT*.

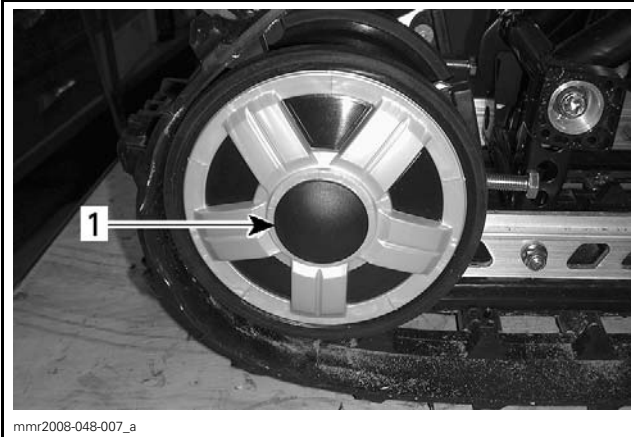
NOTICE Too much tension will result in power loss and excessive stresses on suspension components.

Track Tension Adjustment

NOTE: After track tension adjustment, ride the snowmobile in snow about 15 to 20 minutes and recheck track tension.

1. Lift rear of vehicle and support it off the ground.
2. Remove rear idler wheel caps.

Subsection XX (PERIODIC MAINTENANCE PROCEDURES)



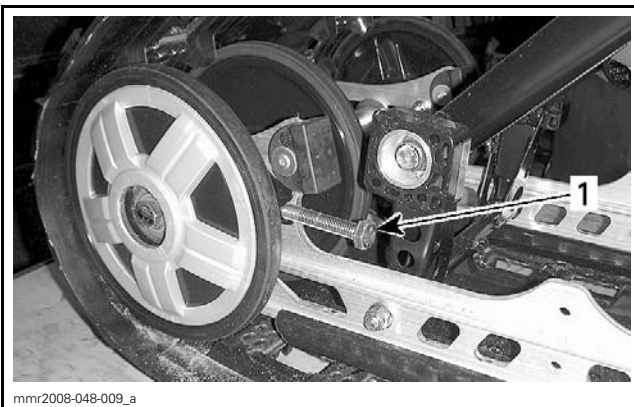
1. RH rear idler wheel cap

3. Loosen rear axle screws (one each side).



1. RH rear axle screw

4. Tighten or loosen both adjustment screws to increase or decrease track tension.



1. RH adjustment screw

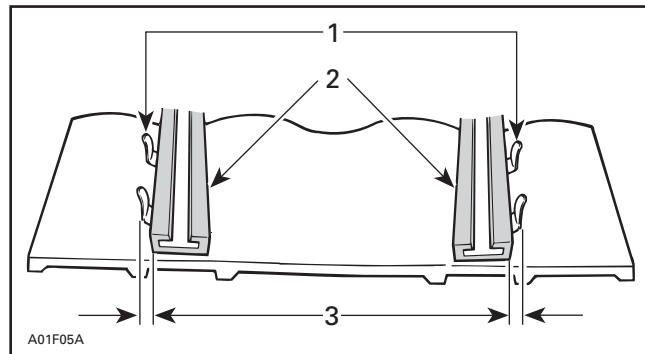
5. Verify track tension, refer to *TRACK TENSION VERIFICATION*.
6. Ensure track is properly aligned, refer to *TRACK ALIGNMENT*.

Track Alignment

⚠ WARNING

Before checking track alignment, ensure that the track is free of all particles which could be thrown out while track is rotating. Keep hands, tools, feet and clothing clear of track. Ensure no one is standing in close proximity to the vehicle. Never rotate at high speed.

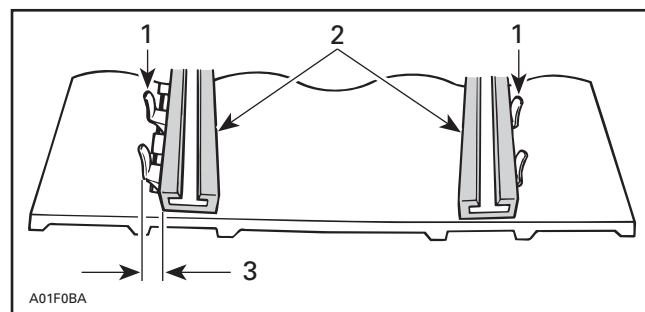
1. Lift rear of vehicle and support it off the ground.
2. Start engine and accelerate slightly so that track barely turns. This must be done in a short period of time (1 to 2 minutes).
3. Check that the track is well centered; equal distance on both sides between edges of track guides and slider shoes.



1. Guides
2. Slider shoes
3. Equal distance

4. To correct track alignment:

- 4.1 Stop engine.
- 4.2 Loosen rear wheel screws.
- 4.3 Tighten adjustment screw on side where the slider shoe is the farthest from the track insert guides.



1. Guides
2. Slider shoes
3. Tighten on this side

5. Restart engine.
6. Rotate track slowly and recheck alignment.

7. If satisfactory track alignment is achieved:

7.1 Torque idler wheel retaining screws to specification.

| TIGHTENING TORQUE | |
|------------------------------|--------------------|
| Idler wheel retaining screws | 48 N•m (35 lbf•ft) |

7.2 Reinstall wheel caps.

BRAKE

Recommended Brake Fluid

Always use brake fluid meeting the DOT 4 specification.

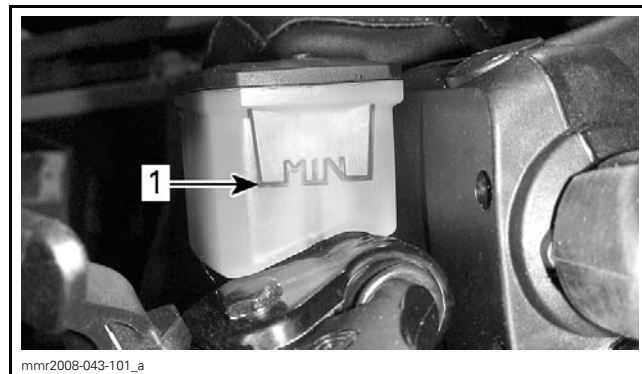
| RECOMMENDED SERVICE PRODUCT |
|--|
| BRAKE FLUID (P/N 293 600 131) meeting DOT 4 specification |

Brake Fluid Level Verification

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | | | ✓ |

With the vehicle on a level surface, position steering in the straight-ahead position to ensure reservoir is level.

Brake fluid must always be above the MIN. line when brake lever is squeezed.



1. MINIMUM line

Add fluid as required. Do not overfill.

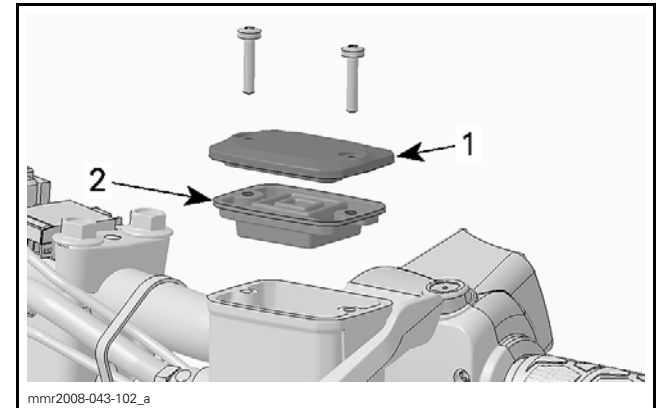
NOTE: A low level may indicate leaks or worn brake pads.

Brake Fluid Replacement

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | ✓ | | |

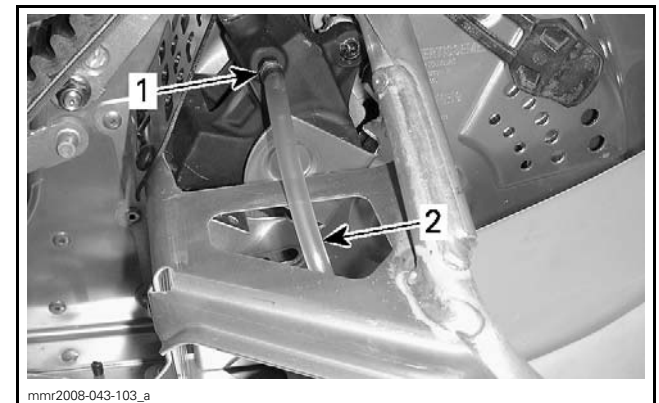
Brake Fluid Draining

1. Place vehicle on a level surface.
2. Remove reservoir cover with its diaphragm.



1. Reservoir cover
2. Diaphragm

3. Connect a clear hose to caliper bleeder.
4. Place the other end of hose in a container.
5. Loosen bleeder and pump brake lever until no more fluid flows out of bleeder.



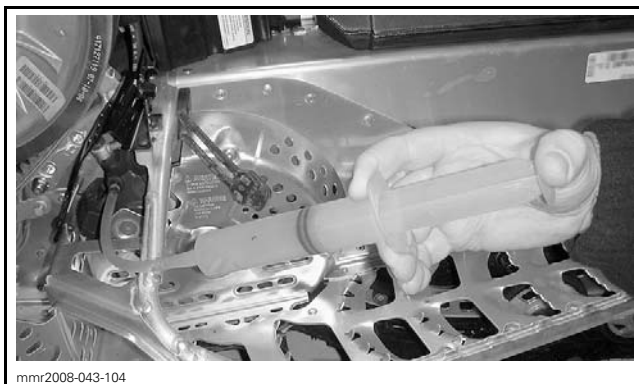
1. Bleeder
2. Clear hose to catch used brake fluid

Brake Fluid Filling

To fill brake circuit when it is empty do the following:

1. Ensure reservoir cover is removed.
2. Using a large syringe and a suitable tube, push brake fluid slowly into the caliper.

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3. Continue to push brake fluid until master cylinder reservoir is half full.
4. Close bleeder.
5. Fill up reservoir and install cover.
6. Squeeze brake lever.
 - 6.1 If brake lever is firm, the brake system does not require bleeding. Torque bleeder as specified.

| TIGHTENING TORQUE | |
|-----------------------|-------------------|
| Brake caliper bleeder | 9 N•m (80 lbf•in) |

- 6.2 If brake lever is spongy, bleed brake system as per following procedure.

Brake System Bleeding

1. Install a clear hose on bleeder.
2. Place the other end in a container partially filled with clean brake fluid.
3. Pump up circuit pressure with brake lever until lever resistance is felt.
4. Squeeze brake lever and open bleeder. When lever touches the handlebar, do not release lever and close bleeder.
5. Release brake lever slowly.
6. Repeat the procedure until no more air bubbles appear in hose.

NOTE: Check fluid level often to prevent air from being pumped into the circuit.

7. Install cover on reservoir.
8. Squeeze brake lever.
 - 8.1 If brake lever is firm, bleeding procedure is completed. Torque bleeder as specified.
 - 8.2 If brake lever is still spongy, go to step 9.
9. Push back brake pads with caliper in place and squeeze brake lever.
10. Repeat step 2 to step 5.
11. Torque bleeder as specified.

| TIGHTENING TORQUE | |
|-----------------------|-------------------|
| Brake caliper bleeder | 9 N•m (80 lbf•in) |

12. Refill reservoir.
13. Install diaphragm and cover on reservoir.

Brake Hose, Pads and Disc Inspection

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | ✓ | | ✓ |

Break-In Inspection

Visually inspect the brake hose for leaks or any damage.

Visually inspect pads and disc for abnormal wear or any damage.

Scheduled Maintenance and Preseason

Visually inspect the brake hose for leaks or any damage.

Refer to *BRAKE* subsection and carry out:

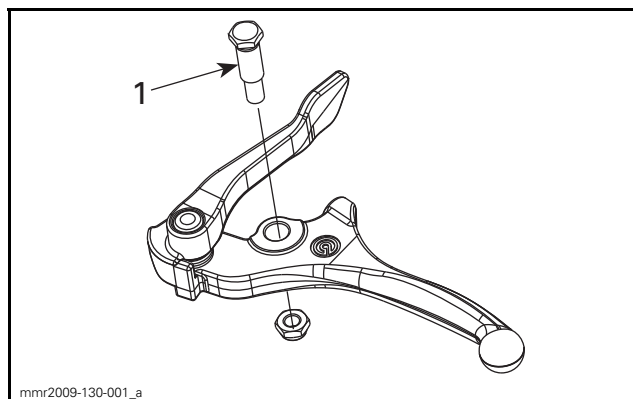
- *BRAKE PAD INSPECTION*
- *BRAKE DISC INSPECTION*.

Brake Lever Pivot Lubrication

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | | ✓ | |

1. Remove brake lever pivot.
2. Lubricate brake lever pivot using recommended product.

| SERVICE PRODUCT | |
|-------------------|--|
| Brake lever pivot | XPS SYNTHETIC GREASE (P/N 293 550 010) |



1. Lubricate this surface

3. Install brake lever pivot.
4. Torque pivot nut of brake lever as specified.

| TIGHTENING TORQUE | |
|-----------------------|-------------------|
| Brake lever pivot nut | 6 N•m (53 lbf•in) |

CHASSIS (SUSPENSION)

Front Suspension Inspection

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | ✓ | | ✓ |

Visually inspect front suspension for tightness of components:

- Arms
- Stabilizer bar
- Shock absorbers
- Ball joints.

Rear Suspension, Stopper Strap and Slider Shoes Inspection

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | ✓ | | ✓ |

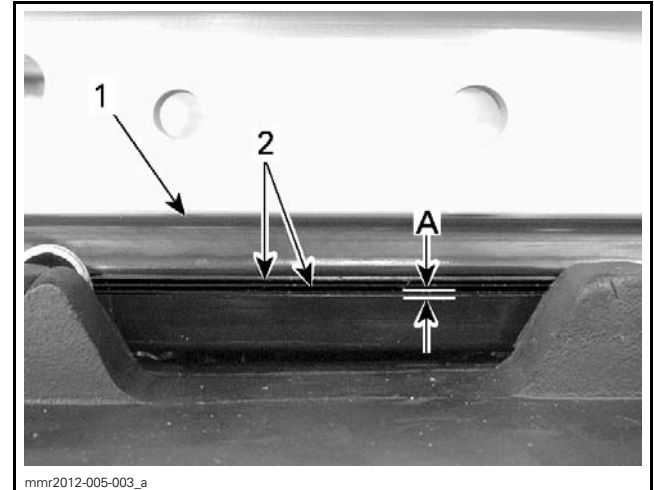
Rear Suspension Mechanism and Stopper Strap Inspection

1. Inspect rear suspension components for wear, deterioration or damage, replace defective parts if necessary.
2. Inspect stopper strap(s) for wear or cracks.
3. Check bolt and nut securing strap(s) for tightness. If loose, inspect strap holes for deformation. Replace strap if necessary.

Slider Shoe Inspection

Slider shoes are worn out and must be replaced when remaining material exceeding the 2 molding lines is as specified.

| MINIMUM SLIDER SHOE THICKNESS |
|--|
| 1 mm (.04 in) material remaining exceeding the 2 molding lines |



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1. Slider shoe
2. Molding lines

A. Minimum thickness: 1 mm (.04 in)

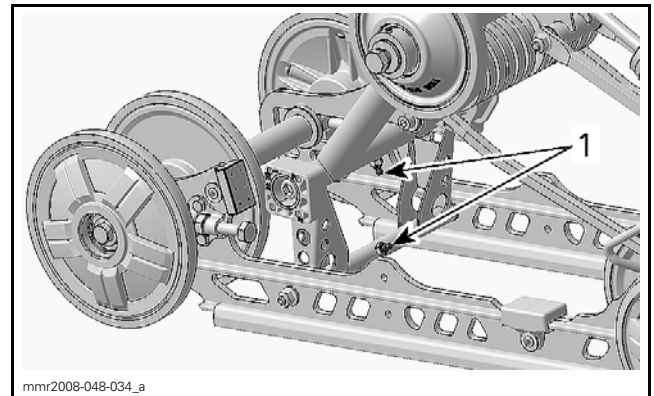
NOTICE Slider shoes must always be replaced in pairs.

Rear Suspension Lubrication

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| | | ✓ | |

Lubricate the following suspension pivots at grease fittings using SUSPENSION GREASE (P/N 293 550 033).

Lubrication (SC-5)



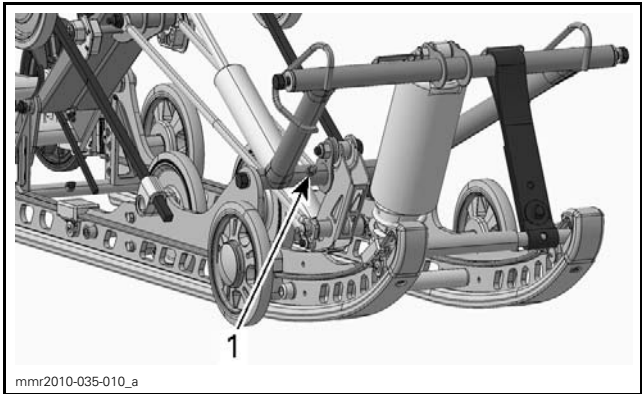
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REAR ARM PIVOT AND PIVOT ARM

1. Grease fittings

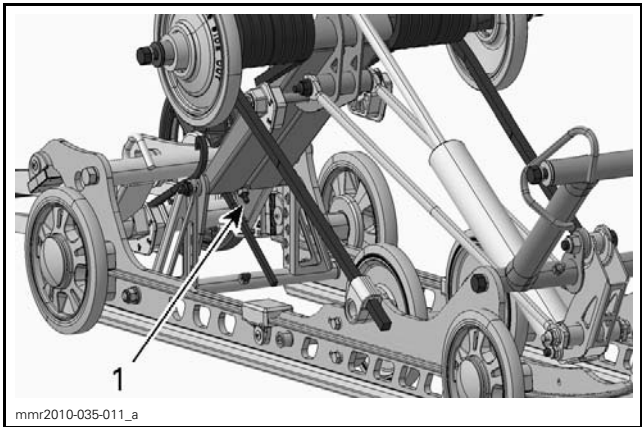
Subsection XX (PERIODIC MAINTENANCE PROCEDURES)

Lubrication (SC™-5M)



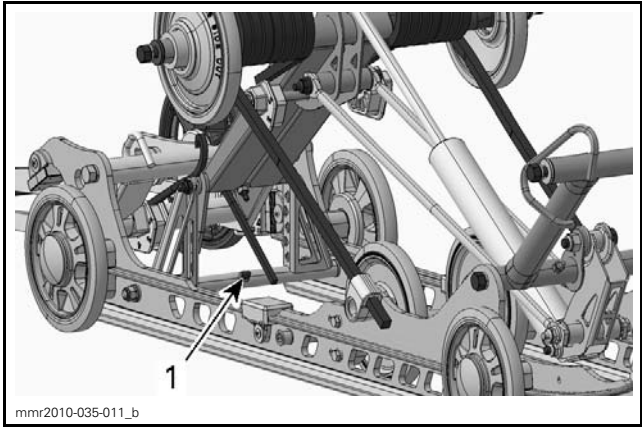
FRONT ARM PIVOT

1. Grease fitting



REAR ARM PIVOT

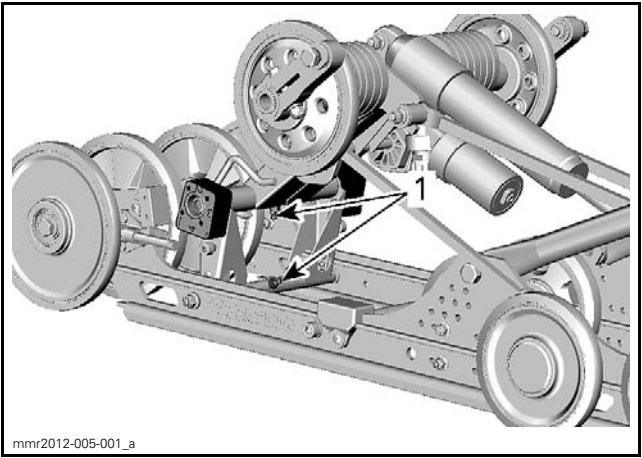
1. Grease fitting



PIVOT ARM

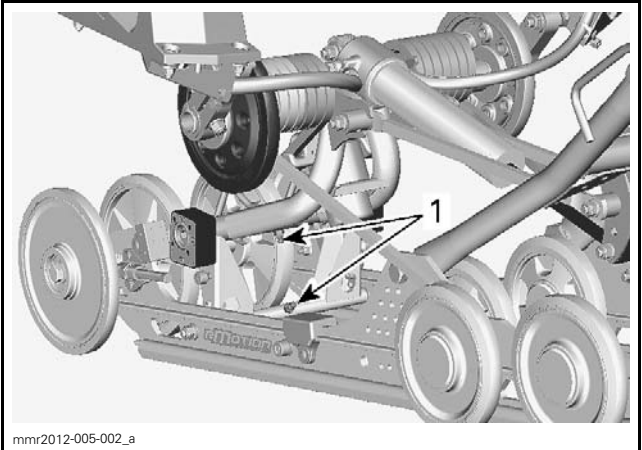
1. Grease fitting

Lubrication (rMotion)



REAR ARM PIVOT AND PIVOT ARM (WITHOUT QUICK ADJUST)

1. Grease fittings



REAR ARM PIVOT AND PIVOT ARM (WITH QUICK ADJUST)

1. Grease fittings

CHASSIS (STEERING)

Ski and Runner Inspection

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | | | ✓ |

Lift the front of vehicle and check ski runners for wear or damage (missing or broken carbide). Replace if necessary.

Inspect ski for excessive wear or other damage. Replace if necessary.

Steering Mechanism Inspection

| Break-In | Scheduled Maintenance | Storage | Preseason |
|----------|-----------------------|---------|-----------|
| ✓ | ✓ | | ✓ |

Subsection XX (PERIODIC MAINTENANCE PROCEDURES)

Visually inspect steering mechanism for tightness of components (steering arms, tie rods, ski bolts, ski legs, etc.).