

LIGHTS, GAUGE AND ACCESSORIES

SERVICE TOOLS

Description	Part Number	Page
FLUKE 115 MULTIMETER	529 035 868	9

SERVICE PRODUCTS

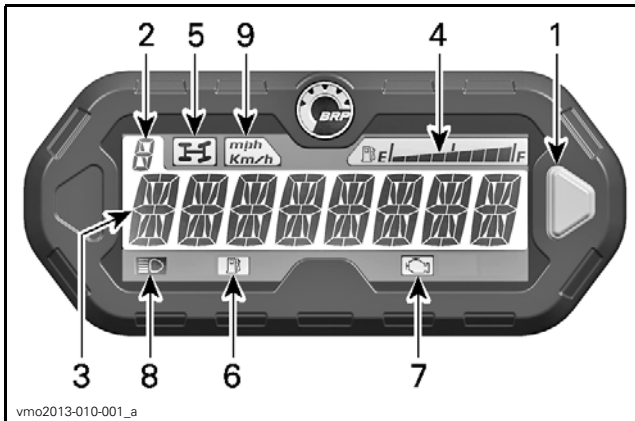
Description	Part Number	Page
DIELECTRIC GREASE	293 550 004	4

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.

MULTIFUNCTION GAUGE

Multifunction Gauge Description



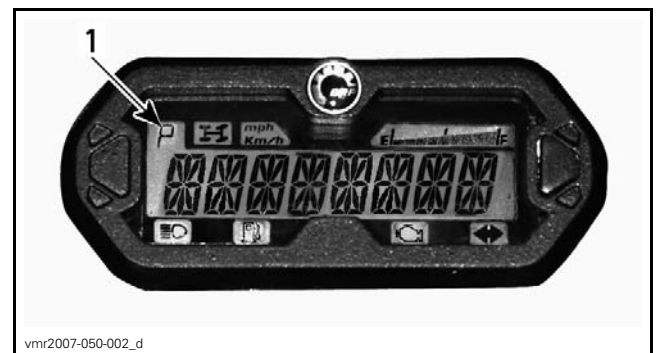
1. Selector button
2. Transmission position display
3. Main screen
4. Fuel level display
5. 4WD indicator lamp
6. Low fuel level indicator lamp
7. Check engine indicator lamp
8. High beam indicator lamp
9. MPH, Km/h indicator lamp
10. Signal lights/hazard lights indicator lamp (CE models)

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

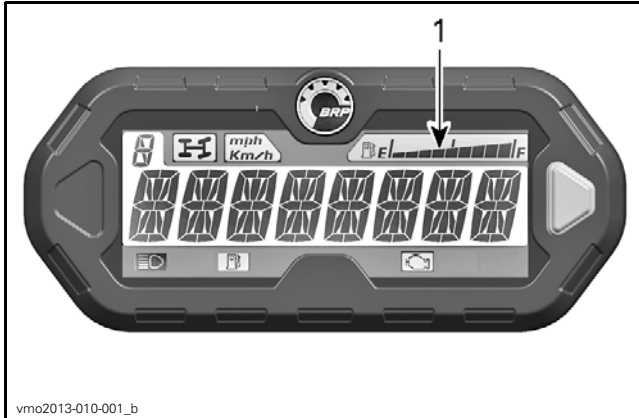
3) Main Screen

The main screen is used to display numerous functions of the multifunction gauge.

Refer to *MULTIFUNCTION GAUGE MODES* for the available display 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 5 L (1.3 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 in the main screen display.

When this indicator blinks, it indicates that **LIMP HOME** mode is activated.

8) High Beam Indicator Lamp



When this indicator is ON, it indicates that **high beam** is selected on the headlights switch and that the ignition key is in the "ON with lights" position.

9) KM/H or MPH Indicator Lamp

mph
Km/h

The applicable lamp turns on to indicate the active speedometer unit of display.

10) Turn signal/Hazard lights Indicator Lamp



When this indicator is ON, it indicates:

- A turn signal is activated, or
- The hazard lights are activated.

Multifunction Display Modes

Speed Mode

In this mode, the display shows the speed of the vehicle either in km/h or in MPH.



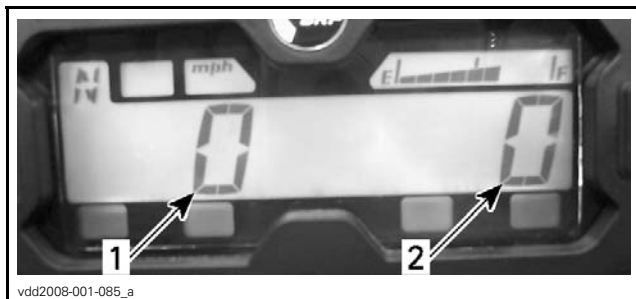
RPM Mode

In this mode, the display shows the engine RPM.



Combined Mode

In this mode, the display shows the speed of the vehicle and the engine RPM.



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

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 places.



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

If an abnormal engine condition occurs, a message may scroll across the main screen in conjunction with a pilot lamp.

Refer to *DIAGNOSTIC AND FAULT CODES* subsection.

Navigating the LCD Gauge

⚠ WARNING

Never adjust or set functions on the multi-function gauge while riding the vehicle.

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.
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.



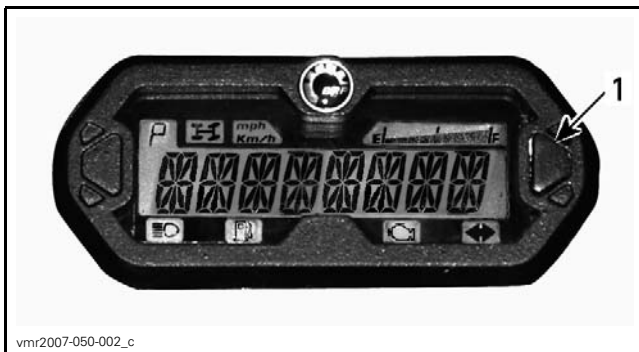
5. To select another mode, repeat steps 3 and 4 until the desired mode is displayed.

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.



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.

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.

Testing the Circuit

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 50 minutes, the accessory relay will shut down.

Inspecting the Electrical Connection

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 connector.

Pay attention to ground wires.

For wiring harness connector locations, refer to *WIRING HARNESS AND CONNECTORS* subsection.

DIAGNOSTIC GUIDELINES (GAUGE)

MULTIFUNCTION GAUGE WILL NOT COME ON

1. Multifunction gauge not powered up.
 - Check fuse (F4), refer to POWER DISTRIBUTION subsection.
 - Test diode D11, refer to WIRING DIAGRAM.
 - Test multifunction gauge 12 Vdc input and ground circuits as per MULTIFUNCTION GAUGE WIRE IDENTIFICATION in this subsection. Refer to WIRING DIAGRAM.
2. Defective Multifunction Gauge.
 - Replace multifunction gauge.

RELAYS/SPEEDO FUSE (F4) BURNS OUT REPEATEDLY

1. Taillight/Brake light system short circuit.
 - Check taillight/brake light bulbs and circuit

MULTIFUNCTION GAUGE COMMUNICATION ERROR

1. Multifunction gauge CAN circuit open.
 - Ensure multifunction gauge is properly connected and powered up.
 - Check for applicable fault code using B.U.D.S., refer to DIAGNOSTIC AND FAULT CODES subsection.
 - Carry out a MULTIFUNCTION GAUGE CAN RESISTOR TEST in this subsection.
 - Carry out a continuity test of the multifunction gauge CAN wires, refer to WIRING DIAGRAM.

NO FUEL QUANTITY INDICATION

1. Defective fuel level sender or wiring.
 - Refer to FUEL TANK AND FUEL PUMP subsection.
2. Defective Multifunction Gauge.
 - Replace multifunction gauge, refer to MULTIFUNCTION GAUGE in this subsection.

DIAGNOSTIC GUIDELINES (LIGHTS)

LOW AND HIGH BEAM HEADLIGHTS WILL NOT COME ON SIMULTANEOUSLY

1. Jumper JP1 is open circuit or missing.
 - Check jumper (fuse) JP1 in front fuse box, refer to POWER DISTRIBUTION subsection.

BRAKE LIGHTS WILL NOT COME ON WHEN BRAKES APPLIED

1. Defective brake relay.
 - Test brake relay (R8), refer to POWER DISTRIBUTION subsection.
2. Defective brake light switch(es).
 - Refer to BRAKE LIGHT SWITCHES in the BRAKE subsection.
3. Defective wiring/connectors.
 - Test wiring continuity, refer to applicable WIRING DIAGRAM.

TURN SIGNAL LIGHTS WILL NOT COME ON WHEN SELECTED (CE MODELS)

1. Accessories fuse (F7) open circuit (turn signals inoperative only).
 - Test fuse, refer to POWER DISTRIBUTION subsection.
2. Clock/Hazard fuse (F10) open circuit (turn signals and hazard lights inoperative).
 - Test fuse, refer to POWER DISTRIBUTION subsection.
3. Defective Flasher Module.
 - Replace flasher module, refer to FLASHER MODULE in this subsection.
4. Defective wiring/connectors.
 - Test wiring continuity, refer to applicable WIRING DIAGRAM.

HAZARD LIGHTS WILL NOT COME ON WHEN SELECTED (CE MODELS ONLY)

1. Clock/Hazard fuse (F10) open circuit.
 - Check fuse, refer to POWER DISTRIBUTION subsection.
2. Hazard lights 12 Vdc input circuit open.
 - Check wiring and connectors as per TURN SIGNAL/HAZARD LIGHTS WIRE IDENTIFICATION in this subsection. Refer to WIRING DIAGRAM.
3. Hazard lights selector switch defective.
 - Test switch as per TURN SIGNAL/HAZARD LIGHTS WIRE IDENTIFICATION in this subsection. Refer to WIRING DIAGRAM.
4. Defective wiring/connector between hazard lights selector switch and flasher module.
 - Refer to WIRING DIAGRAM.
5. Flasher module ground circuit open.
 - Test wiring and connectors, refer to WIRING DIAGRAM.

Subsection 07 (LIGHTS, GAUGE AND ACCESSORIES)

6. Defective flasher module.

- Replace flasher module, refer to *FLASHER MODULE* in this subsection.

HAZARD LIGHTS COME ON WITHOUT BEING SELECTED (CE MODELS ONLY)

1. Hazard lights switch or wiring short circuit.
 - Check for water in LH multifunction switch.
 - Test hazard light switch and wiring, refer to *WIRING DIAGRAM*.
2. Resistor R1 in flasher module input circuit is open.
 - Test resistor R1, refer to *WIRING DIAGRAM*.

TURN SIGNAL/HAZARD LIGHTS INDICATOR IN MULTIFUNCTION GAUGE WILL NOT COME ON WITH TURN SIGNAL OR HAZARD LIGHTS SELECTED ON, IGNITION SWITCH ON (CE MODELS ONLY)

1. Signal wire from flasher module to multifunction gauge open circuit.
 - Test circuit continuity from flasher module (3-MC2-4) to multifunction gauge (1-C1-8).
2. Defective flasher module.
 - Replace flasher module, refer to *FLASHER MODULE* in this subsection.
3. Defective multifunction gauge.
 - Replace multifunction gauge.

HAZARD LIGHTS INDICATOR NOT WORKING WITH IGNITION SWITCH OFF (CE MODELS ONLY)

1. Diode D10 open circuit.
 - Test diode, refer to *WIRING DIAGRAM*.

POSITION LIGHTS WILL NOT COME ON (CE MODELS ONLY)

1. Accessories fuse open circuit.
 - Test fuse F12, refer to *POWER DISTRIBUTION* subsection.
2. Power or ground circuit wiring.
 - Check wiring continuity, refer to *WIRING DIAGRAM*.
3. Defective light bulbs
 - Test/replace light bulbs.

HORN WILL NOT FUNCTION (CE MODELS ONLY)

1. Burnt Clock/Hazard fuse (F10)
 - Check fuse
2. Defective horn.
 - Test horn by applying 12 Vdc and ground jumper to horn.
3. Defective horn switch.
 - Test horn switch as per *HORN WIRE IDENTIFICATION* in this subsection. Refer to *WIRING DIAGRAM*.
4. Defective wiring.
 - Check wiring continuity as per *HORN WIRE IDENTIFICATION* in this subsection. Refer to *WIRING DIAGRAM*.

PROCEDURES

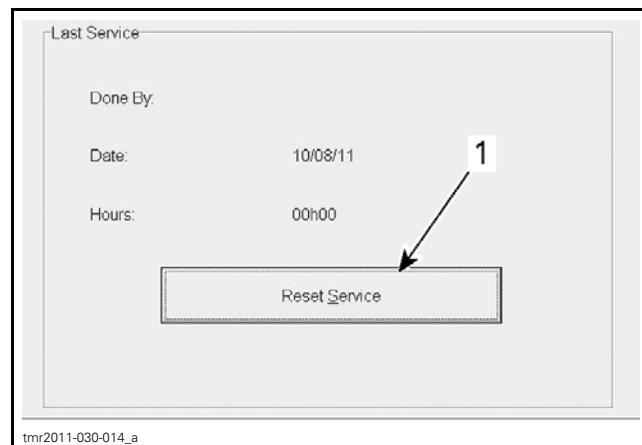
MULTIFUNCTION GAUGE

Resetting the Maintenance Required Message

Connect to the latest applicable B.U.D.S. software version. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.

Select **Vehicle** tab.

Click on the **Reset Service** button.



TYPICAL

1. Reset Service button

Multifunction Gauge Wire Identification

FUNCTION	PIN	COLOR
12 volt input from fuse F4	17	ORANGE/YELLOW
12 volt input from fuse F10 (Clock)	16	RED/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

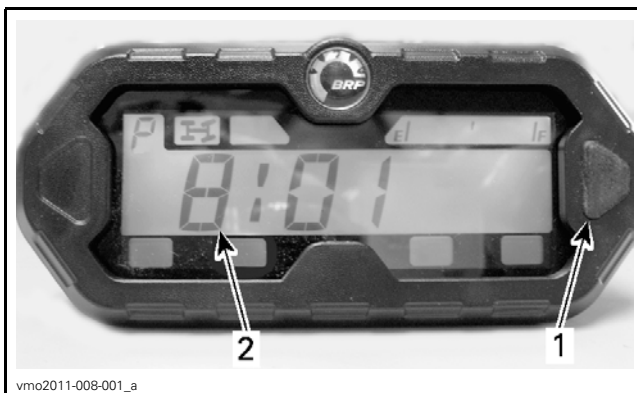
Multifunction Gauge Circuit Protection

CONDITION	CIRCUIT PROTECTION
Supplied at all times	Fuse 10 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)

Setting the Clock with Gauge Selector Button

To set current time, proceed as follows:

1. Select the clock display.



1. Selector button
2. Time

2. Press and HOLD selector button.

NOTE: The display will flash.

3. Choose the 12-hour (12H) or 24-hour (24H) format by pressing button.

4. If the 12-hour format was selected, choose Am (A) or Pm (P) by pressing button.
5. Choose hour first digit by pressing button.
6. Choose hour second digit by pressing button.
7. Choose minutes first digit by pressing button.
8. Choose minutes second digit by pressing button.
9. 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.

Setting the Multifunction Gauge with B.U.D.S.

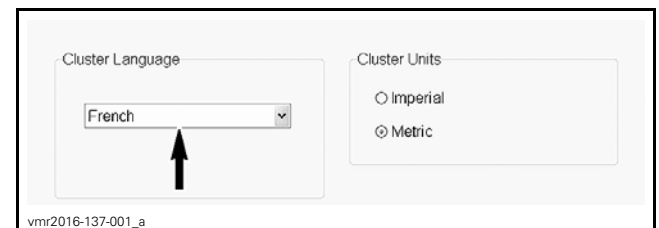
Connect to the applicable B.U.D.S. software. Refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.

Language Selection

In B.U.D.S., select the:

- Setting page tab
- Cluster page tab.

Scroll and select the desired display language in the **Cluster Language** box.

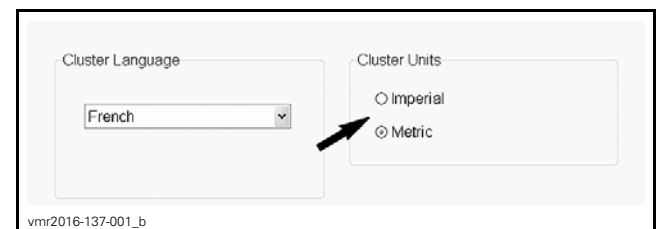


Units of Display Selection

In B.U.D.S., select the:

- Setting page tab
- Cluster page tab.

Select **Imperial** or **Metric** in the **Cluster Units** box.



Subsection 07 (LIGHTS, GAUGE AND ACCESSORIES)

Clock Setting

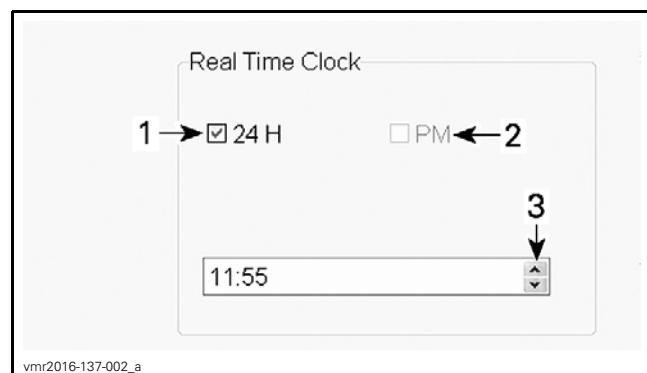
In B.U.D.S., select the:

- **Setting** page tab
- **Cluster** page tab.

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.



TYPICAL
1. 24 H box
2. PM box
3. Arrows

Testing the Multifunction Gauge with B.U.D.S.

Connect to the latest applicable B.U.D.S. software version. 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.

In B.U.D.S., select the:

- **Activation** page
- **Cluster** tab.

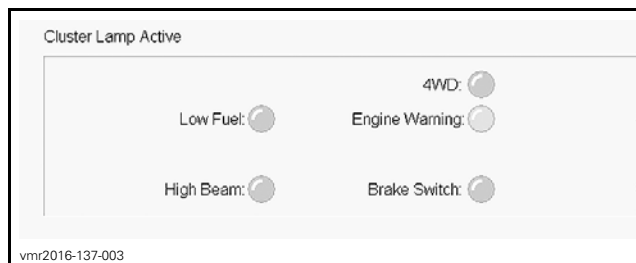
Click on the **WOW Test** button.

Indicator Lights Monitoring

In B.U.D.S., select the:

- **Monitoring** page
- **Cluster** tab.

Use the **Cluster Lamp Active** box to monitor different indicator lights outputs.



TYPICAL - CLUSTER LAMP ACTIVE BOX

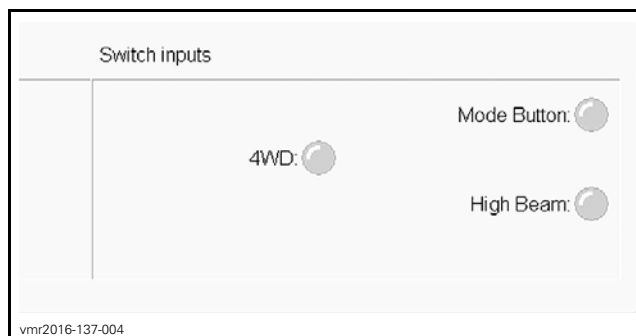
This function confirms that the signals are broadcasting and the indicator lights should be ON in the multifunction gauge.

Switch Input Monitoring

In B.U.D.S., select the:

- **Monitoring** page
- **Cluster** tab.

Use the **Switch Inputs** box to monitor different switch inputs as you activates the switches.



TYPICAL - SWITCH INPUTS BOX

This function confirms that the multifunction gauge receives the inputs.

Vehicle Parameters Monitoring

In B.U.D.S., select the:

- **Monitoring** page
- **Cluster** tab.

In the upper area of the B.U.D.S. cluster page, the following indications are displayed.

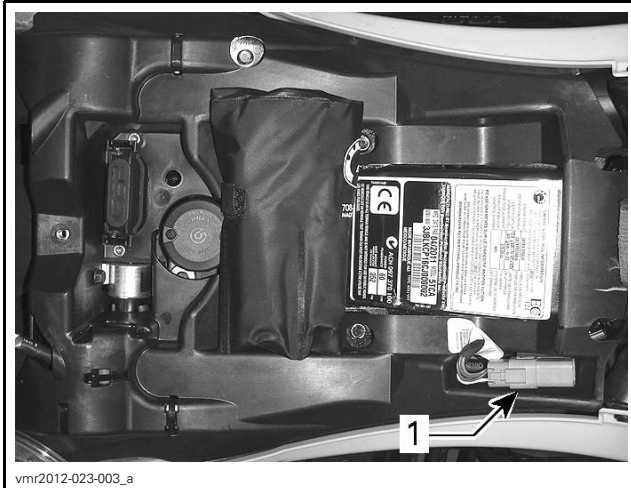
- Engine speed (RPM)
- Vehicle speed
- Fuel level.

These indications confirm that the applicable signals are transmitted and the information should be displayed in the multifunction gauge.

Testing the Multifunction Gauge CAN Resistor

1. On so equipped models, disconnect DPS1 connector (control) from the DPS module, refer to *STEERING SYSTEM* subsection.

2. Remove seat to access diagnostic link connector (DB).
3. Remove diagnostic link connector from its holder.



1. Diagnostic link connector (DB)

4. Measure the resistance of the CAN resistors as follows.

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

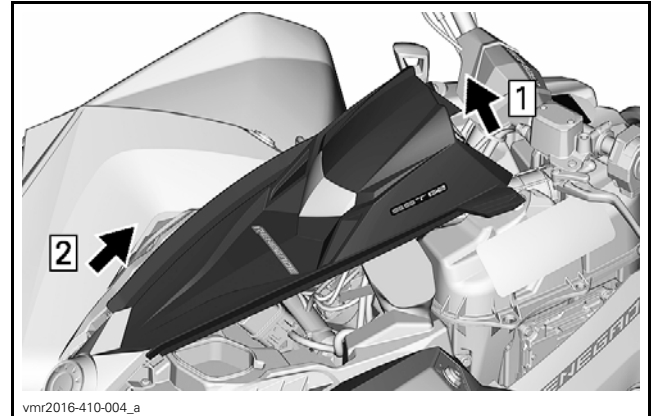
CAN RESISTOR TEST	
DIAGNOSTIC LINK CONNECTOR	RESISTANCE
Pins 1 and 2	Approximately 60 Ω

NOTE: This tests both the ECM and the Cluster CAN resistors and wires.

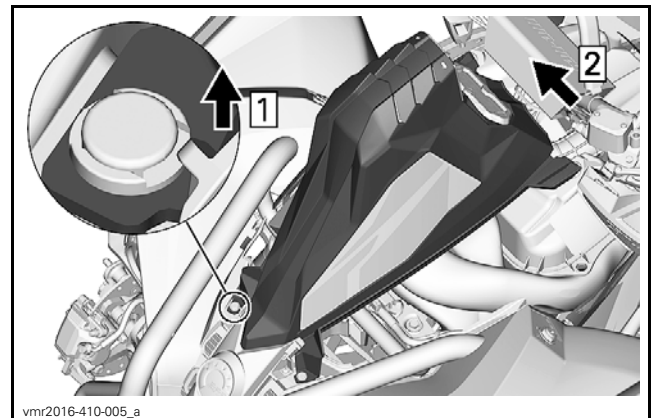
TEST RESULT	
READING	POSSIBLE CAUSE
Approximately 60 Ω	ECM and CLUSTER CAN wires and resistors good
Approximately 120 Ω	CAN wire to CLUSTER open CAN wire to ECM open CLUSTER CAN resistor open ECM CAN resistor open
Infinite (open circuit)	CAN wire to DB connector open circuit

Removing the Multifunction Gauge

1. Remove console panel, refer to *BODY* subsection.
2. Pull gauge support from vehicle.

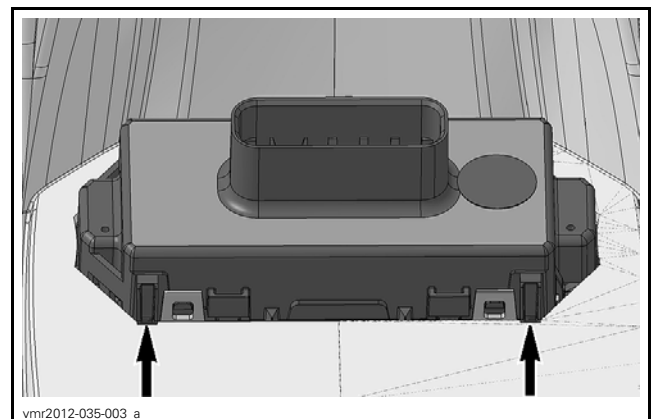


EXCEPT X MR MODEL



X MR MODEL

3. From the back of the gauge support, release the gauge retaining tabs and remove the gauge from its support.



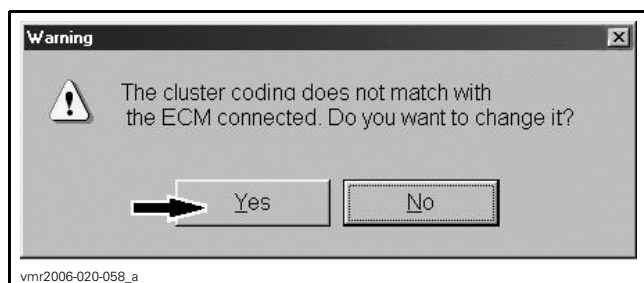
GAUGE RELEASE TABS (4)

Installing the Multifunction Gauge

For the installation, reverse the removal procedure.

New Multifunction Gauge Registration (coding)

Whenever the multifunction gauge is replaced, B.U.D.S. must be used to register it in the ECM. Simply click **Yes** when the following message appears.



12 VOLT POWER OUTLET

Removing and installing the 12 Volt Power Outlet

Refer to *BODY* subsection and remove the RH inner fender panel.

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 (from accessories relay R3)

HEADLIGHTS

Headlight Wire Identification

HEADLIGHTS RELAY (R5)		
FUNCTION	PIN	COLOR
12 volt input from fuse F11 (headlights power)	C6	YELLOW/BLACK
12 volt input from ignition switch pin A (relay winding input)	D6	YELLOW/BLUE
12 volt output to headlights low beam and low/high beam switch	D7	RED/BLUE
Relay winding ground (from ECM K2)	C7	ORANGE/BLACK

HEADLIGHT LOW/HIGH BEAM SWITCH		
FUNCTION	PIN	COLOR
12 volt input from headlights relay	MG2-4	RED/YELLOW
12 volt output to high beam headlights	MG2-5	BLUE
12 volt output to low beam headlights	MG2-2	GREEN

Headlights Circuit Protection

CONDITION	CIRCUIT PROTECTION
Supplied when headlights relay (R5) activated	Fuse 11

Testing the Headlight

1. Disconnect LOW beam and HIGH beam headlight connectors. Refer to *BULB REPLACEMENT*.
2. Set ignition switch to ON (with lights).
3. Measure the voltage on headlight connector as follows.

SWITCH POSITION	WIRE COLOR		VOLTAGE
LO beam	GREEN (Low beam connector)	BLACK	Battery voltage
HI beam (only on vehicle with DPS)			
HI beam	BLUE (Hi beam connector)		

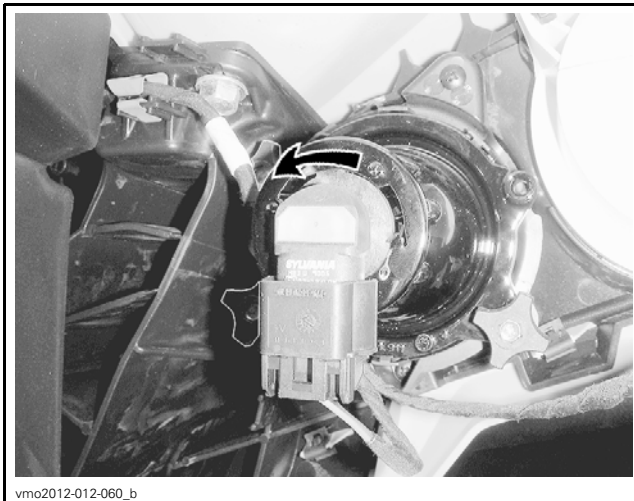
4. Remove the JP1 jumper/fuse, refer to *POWER DISTRIBUTION* subsection.
5. Measure the voltage on headlight connector as follows.

SWITCH POSITION	WIRE COLOR		VOLTAGE
LO beam	GREEN (Low beam connector)	BLACK	Battery voltage
HI beam			No voltage
LO beam	BLUE (Hi beam connector)		No voltage
HI beam			Battery voltage

Replacing the Headlight Bulb

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.

1. Unplug connector from bulb.
2. Rotate bulb.



TYPICAL

3. Pull bulb out.
4. Properly reinstall removed parts in the reverse order of their removal.
5. Validate headlight operation.

Adjusting the Headlamp Beam

NOTE: Load vehicle as per normal use.

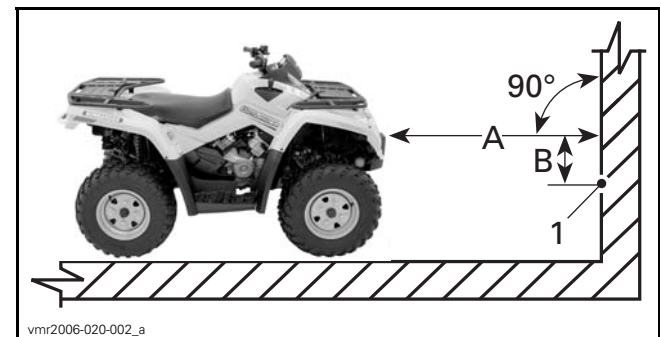
1. Position vehicle on a level surface 5 m (16 ft) in front of a test surface (wall or screen) as in first illustration.

2. Measure the distance from the center of each headlight to the ground (high beam and low beam).
3. Trace a line on the test surface parallel to the ground at each measured height (one for high beam and one for low beam).

Low beam aiming is correct when the crest of the low beam is **below** the applicable horizontal center line traced on the test surface as per specification.

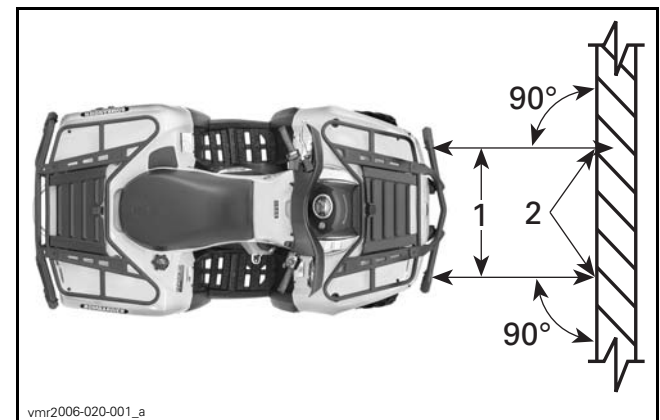
High beam aiming is correct when the center of the high beam (focus point) is **below** the applicable horizontal center line traced on the test surface as per specification.

SPECIFICATION	
Low beam crest (top of low beam)	25 mm to 125 mm (1 in to 5 in) below applicable line
High beam center (focus point)	



TYPICAL

1. Light beam center
- A. 5 m (16 ft)
- B. Beam aiming specification

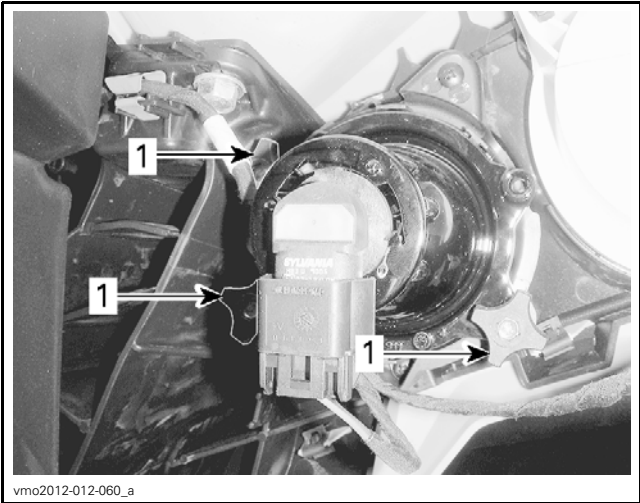


TYPICAL

1. Headlight center lines
2. Light beam center

Beam Aiming Adjustment

Turn adjustment knobs to adjust beam height and side orientation to specification.



LOW AND HIGH BEAMS
1. Adjustment knobs

TAILLIGHTS/BRAKE LIGHTS

Brake Light Switch

For brake light switch location and testing, refer to *BRAKES* subsection.

Brake Light Wire Identification

BRAKE LIGHT RELAY (R8)		
FUNCTION	PIN	COLOR
12 volt input from fuse F14 (brake light power)	C8	RED/VIOLET
12 volt input from F4 (relay winding input)	D8	ORANGE/GREEN
12 volt output to LH and RH brake lights	D9	WHITE/ORANGE
Relay winding ground (from brake light switch(es))	C9	RED/ORANGE

Brake Light Circuit Protection

CONDITION	CIRCUIT PROTECTION
Supplied when: Accessories relay R3 activated Brake relay R8 activated	Fuse 14 (from Accessories relay R3)

Taillight Wire Identification

FUNCTION	PIN	CIRCUIT PROTECTION
Supplied when Accessories relay R3 activated	3	RED/VIOLET
Ground from BK2	2	BLACK

Taillight Circuit Protection

CONDITION	CIRCUIT PROTECTION
Supplied when Accessories relay R3 activated	Fuse 14 (from Accessories relay R3)

Replacing the Taillight/Brake Light Bulb

- 1. Unplug connector from bulb.
- 2. Rotate light bulb counterclockwise to remove it from taillight.



ROTATE BULB COUNTERCLOCKWISE

- 3. Remove bulb socket from taillight.
- Installation is the reverse of the removal procedure.

TURN SIGNALS/HAZARD (CE MODELS ONLY)

Turn Signal/Hazard Lights Wire Identification

FLASHER MODULE		
FUNCTION	PIN	COLOR
12 volt input from fuse F10	MC2-1	RED/WHITE

FLASHER MODULE		
FUNCTION	PIN	COLOR
12 volt input from fuse F7	MC1-5	RED/BLACK
RH turn 12 volt input from turn signal switch	MC1-1	BEIGE/BROWN
LH turn 12 volt input from turn signal switch	MC1-2	BEIGE/GRAY
Output to RH turn signal lights	MC2-2	BROWN
Output to LH turn signal lights	MC2-3	GRAY
Output to multifunction gauge (turn signal indicator)	MC2-4	ORANGE
Ground	MC1-4	BLACK
Hazard 12 volt input from hazard switch	MC1-6	BEIGE/RED

TURN SIGNAL SWITCH (IN MULTIFUNCTION SWITCH)		
FUNCTION	PIN	COLOR
12 volt input from fuse F10	MG3-3	RED/BLACK
RH turn 12 volt output to flasher module	MG3-1	BEIGE/BROWN
LH turn 12 volt output to flasher module	MG3-2	BEIGE/GRAY

HAZARD SWITCH		
FUNCTION	PIN	COLOR
12 volt input from fuse F10	MG3-3	RED/BLACK
12 volt output to flasher module	MG3-5	BEIGE/RED
12 volt output to wake up gauge		

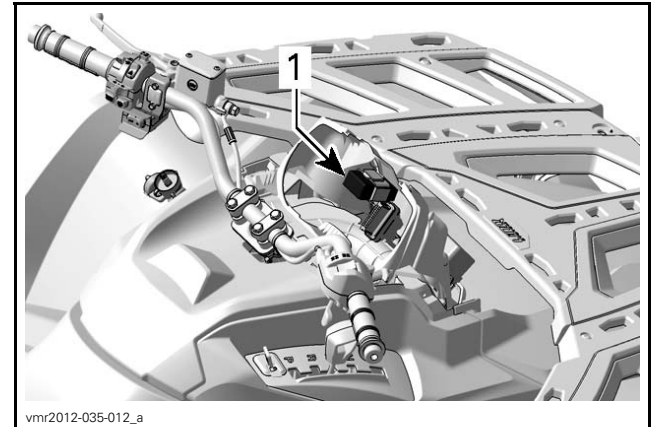
Turn Signal/Hazard Circuit Protection

TURN SIGNAL CIRCUIT	
CONDITION	CIRCUIT PROTECTION
Supplied with Accessories relay (R3) activated	Fuse 7 (from Accessories relay R3)
Battery power (continuous)	Fuse 10

HAZARD CIRCUIT	
CONDITION	CIRCUIT PROTECTION
Battery power (continuous)	Fuse 10

Flasher Module Access

Remove multifunction gauge.



1. Flasher module location

HORN (CE MODELS ONLY)

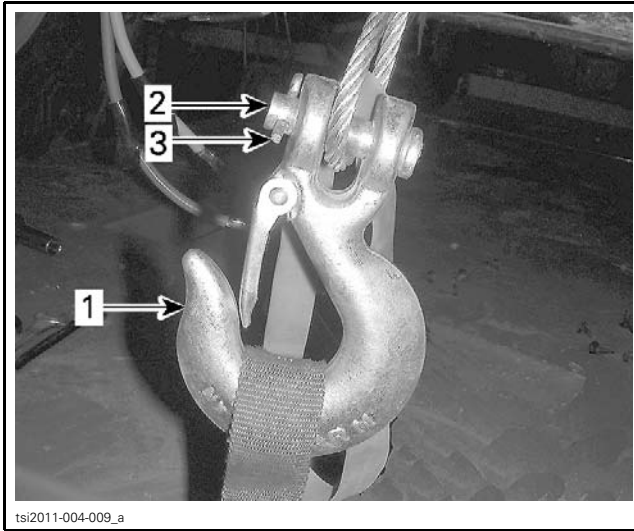
Horn Wire Identification

HORN SWITCH (IN MULTIFUNCTION SWITCH)		
FUNCTION	PIN	COLOR
12 volt input from fuse F10	MG3-3	RED/BLACK
12 volt output to horn	MG3-4	BEIGE/BLACK

HORN		
FUNCTION	PIN	COLOR
12 volt input from horn switch	2	BEIGE/BLACK
Ground	1	BLACK

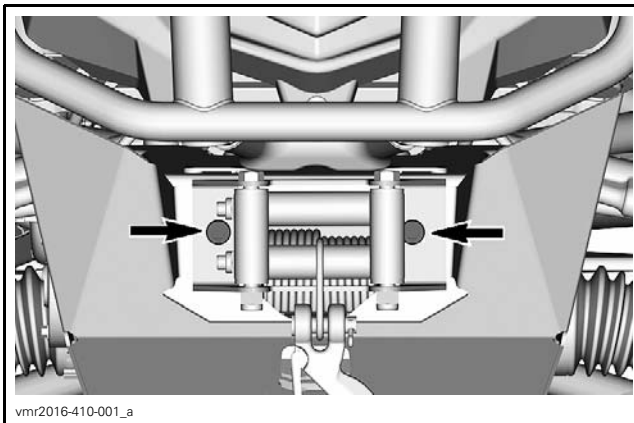
Horn Circuit Protection

CONDITION	CIRCUIT PROTECTION
Battery power	Fuse 10

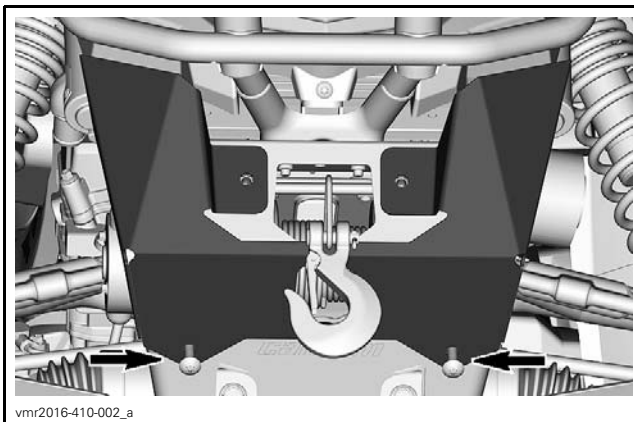


1. Hook
2. Hook pin
3. Cotter pin

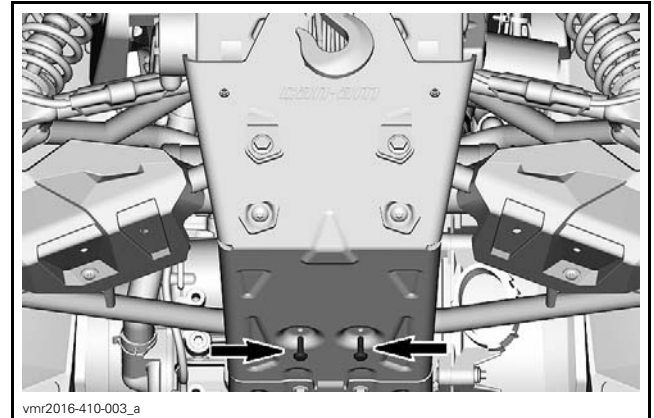
3. Remove the winch cable fairlead.



4. Remove the Front lower fascia.

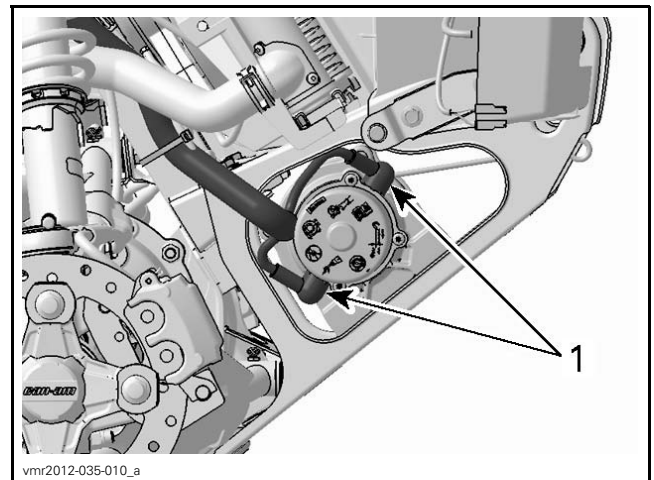


5. Remove the front skid plate.



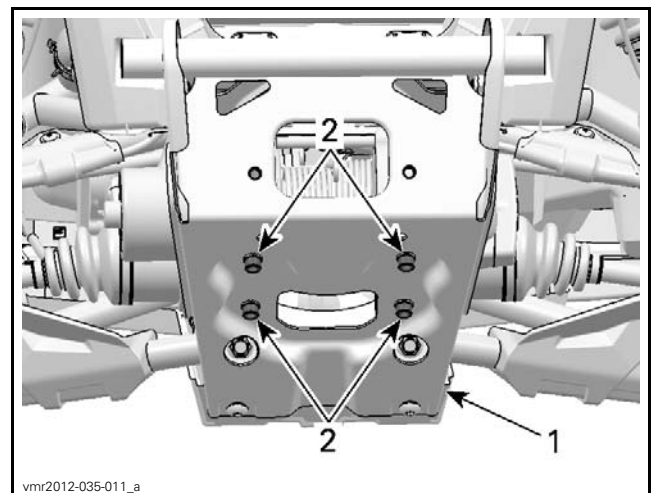
6. Disconnect both winch power cables.

NOTE: Note the position of the power cables for reinstallation.



1. Winch power cables

7. Remove the four winch retaining screws from the front bumper support.



1. Front bumper support
2. Winch retaining screws

8. Remove winch.

Installing the Winch

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

Connect winch power cables as noted at removal.

NOTE: If the winch power cables are not connected correctly, the winch motor will operate in the reverse direction of selection.

TIGHTENING TORQUE	
Winch retaining screws	16 N•m ± 2 N•m (142 lbf•in ± 18 lbf•in)
Winch power cables	7 N•m ± .5 N•m (62 lbf•in ± 4 lbf•in)
Winch fairlead elastic nuts	4.5 N•m ± .5 N•m (40 lbf•in ± 4 lbf•in)

Install a **NEW** cotter pin on the hook pin.