

# FUEL TANK AND FUEL PUMP

## SERVICE TOOLS

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## SERVICE PRODUCTS

Description	Part Number	Page
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**NEW**

**NEW**

40 N·m  
(30 lbf·ft)

**NEW** = Component must be replaced when removed.

mmr2013-026-001\_a

## GENERAL

**NOTE:** It is a good practice to check for fault codes using B.U.D.S. software as a first troubleshooting step. Refer to *DIAGNOSTIC AND FAULT CODES*.

### **⚠ WARNING**

Always disconnect battery prior to working on the fuel system.

### **⚠ WARNING**

Always disconnect the magneto connector prior to:

- Disconnecting any fuel hose.
  - Removing a fuel injector.
  - Removing a spark plug cable or spark plug.
- Otherwise, if the engine is cranked, fuel vapors may ignite in presence of a spark creating a fire hazard.

### **⚠ WARNING**

Proceed with care and use appropriate safety equipment when working on the fuel system. Wear safety glasses and work in a well ventilated area.

When disconnecting a fuel line, cover the connection with an absorbent shop rag and proceed slowly to minimize spilling.

### **⚠ WARNING**

Do not allow fuel to spill on hot engine parts and/or on electrical connectors. Wipe off any fuel spillage in the engine compartment. Fuel is flammable and explosive under certain conditions.

### **⚠ WARNING**

After working on the fuel system, always carry out a fuel system pressurization test to check for leaks.

## SYSTEM DESCRIPTION

### Electric Fuel Pump

An electric fuel pump is mounted in the upper RH front part of the fuel tank.

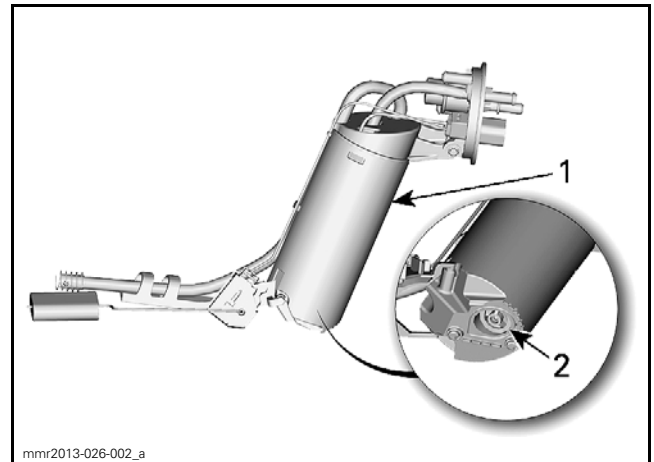
A 12 Vdc high pressure fuel pump with an integrated jet pump is used.

**NOTE:** Although the fuel pump is connected to the 55/60 Vdc system, the ECM modulates the voltage (Pulse Width Modulation) between 9 and 16 Vdc depending on the engine RPM. The fuel pump output will change as voltage changes.

As soon as the START/RER button is depressed, the electric fuel pump turns on for a few seconds to pressurize the fuel system in preparation for the engine start. When the engine runs, the fuel pump is ON continuously to provide a constant fuel pressure to the injectors.

To ensure a constant delivery of fuel to the engine for all riding conditions when the fuel level is low, a rear pickup and a fuel pump reservoir is used.

The fuel pump reservoir is actually the housing of the fuel pump module in which the fuel pump is located. A check valve at the bottom of the housing allows the fuel in the tank to enter the fuel pump reservoir.



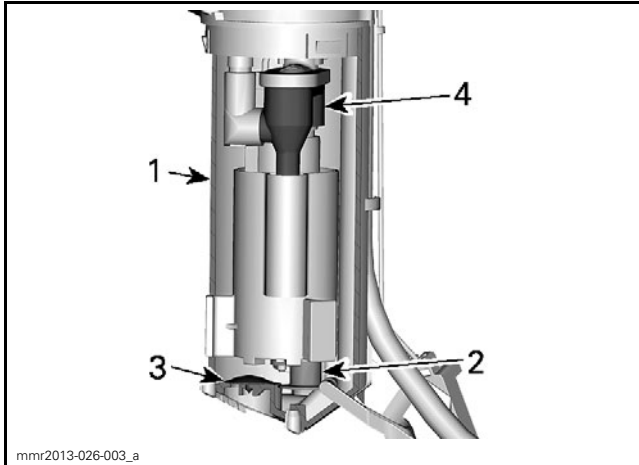
**TYPICAL**

1. Fuel pump reservoir
2. Check valve

When the fuel pump runs, it draws the fuel from the fuel pump reservoir and feeds it to the injection system. This causes fuel in the tank to be drawn into the fuel pump reservoir through its bottom inlet check valve.

At the same time, a portion of the fuel flow from the electric fuel pump flows through a jet pump that contains a venturi.

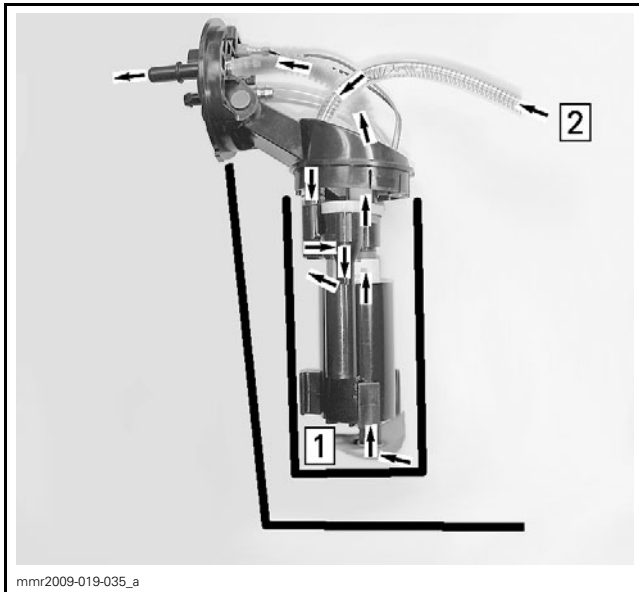
## Subsection XX (FUEL TANK AND FUEL PUMP)



**TYPICAL - VIEW INSIDE FUEL PUMP RESERVOIR**

1. Fuel pump reservoir
2. Bottom inlet
3. Check valve (open upwards)
4. Venturi

As the fuel accelerates through the venturi, it generates a low pressure area at a connection to the remote pickup, which draws fuel into the fuel pump reservoir from the remote pickup.



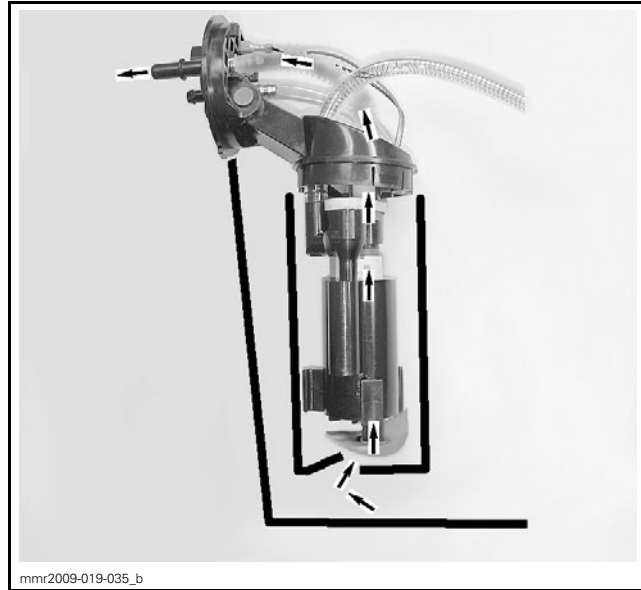
**TYPICAL**

- Step 1: Bottom inlet draws fuel from fuel pump reservoir  
Step 2: Low pressure from venturi draws fuel from rear pickup into fuel pump reservoir

When riding the vehicle on a level surface, fuel is drawn into the fuel pump reservoir through its check valve and through the remote pickup simultaneously, as long as there is enough fuel in the tank to cover the remote pickup.

When riding downhill with a low amount of fuel in the tank, the fuel moves towards the front of fuel tank. The check valve opens and fuel enters the

fuel pump reservoir from the fuel tank through the check valve only as there is no fuel at the remote pickup.



When riding uphill with a low amount of fuel in the tank, the fuel moves towards the rear of the fuel tank. The check valve closes and traps the fuel in the pump reservoir. The fuel pump continues to draw fuel from the fuel pump reservoir, which is now only fed by the jet pump using the rear pickup. This prevents air from being drawn into the fuel lines from the fuel tank.

The continuous fuel flow cools down the fuel pump, the injectors and the ECM. To cool these components, the fuel circulates as follows:

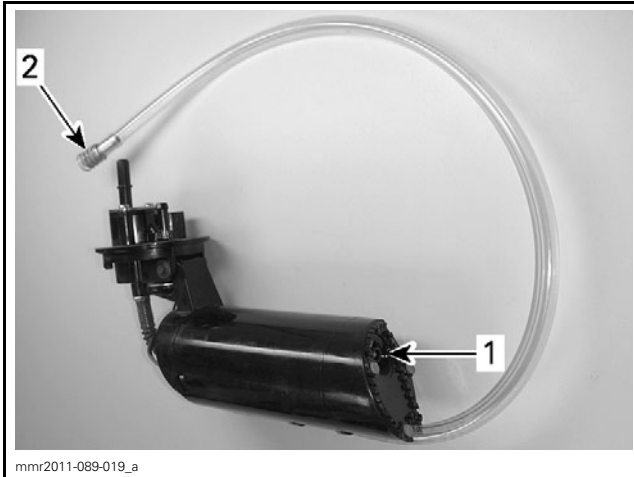
- Out of fuel pump
- Through the ECM
- To the injectors (around the voice coils)
- Through the pressure regulator
- Back to fuel tank.

**NOTE:** The hose loop between the MAG injector outlet and the ECM dampens the engine torque reaction movement.

### Fuel Pickup

Fuel enters the fuel pump reservoir from either a check valve at the bottom of the fuel pump reservoir, or from a remote pickup in the rear portion of the fuel tank.

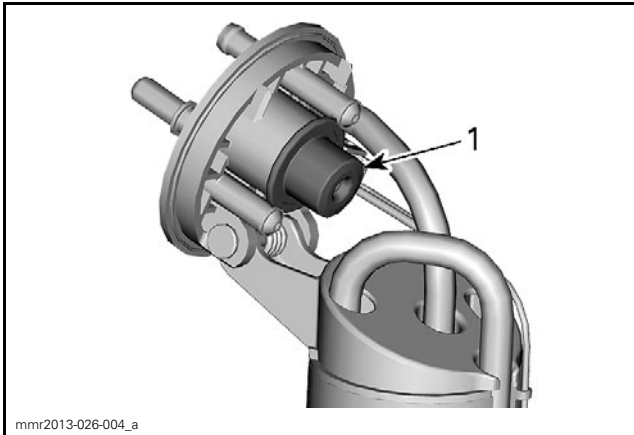
The remote pickup uses a replaceable steel mesh strainer to filter out relatively large dirt particles and prevent clogging of the jet pump. The fuel entering the fuel pump reservoir through the check valve will be filtered by the fuel pump prefilter.



mmr2011-089-019\_a  
1. Fuel pump reservoir check valve  
2. Remote pickup with steel mesh strainer

### Fuel Pressure Regulator

An integrated fuel pressure regulator is mounted on the fuel pump flange. It is basically a spring loaded valve that opens and closes the path of fuel returning to the tank, thus maintaining a constant fuel pressure in the system.



mmr2013-026-004\_a  
1. Integrated fuel pressure regulator

#### FUEL PRESSURE

Approximately 303 kPa (44 PSI) at 2000 RPM  
(will be lower at idle)

### Fuel Tank Vent

The fuel tank is vented through a combination type check valve that allows ambient air pressure to enter fuel tank at all times.

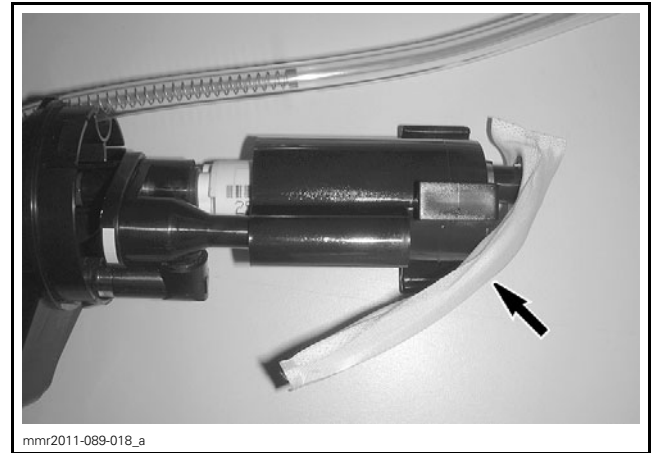
As fuel is consumed by the engine, a negative pressure would occur in the fuel tank. This could eventually prevent the fuel pump from drawing enough fuel. The **negative pressure relieve function** of the valve allows the higher outside air pressure in.

If pressure builds up and exceeds 2.0 kPa to 4.8 kPa (.3 PSI to .7 PSI) in the fuel tank, the check valve opens and lets the excess pressure vent out of the tank.

### Fuel Filters

#### Fuel Pump Pre-Filter

A fuel pump pre-filter is used at the electric fuel pump inlet. It is a replaceable nylon mesh filter located within the fuel pump module housing (fuel pump reservoir).



mmr2011-089-018\_a  
FUEL PUMP PRE-FILTER (FUEL RESERVOIR REMOVED)

The fuel pump pre-filter protects the fuel pump and prevents clogging of the fuel passages within the fuel pump module.

#### In-Line Fuel Filter

An in-line filter on the supply side is located at front of the fuel tank, above the oil injection tank. It is a replaceable metallic canister type filter used to deliver dirt-free fuel to the injectors.

### Fuel Level Indication

A float type fuel level sensor varies its resistance with fuel level thus providing a signal to the multifunction gauge for fuel level indication.

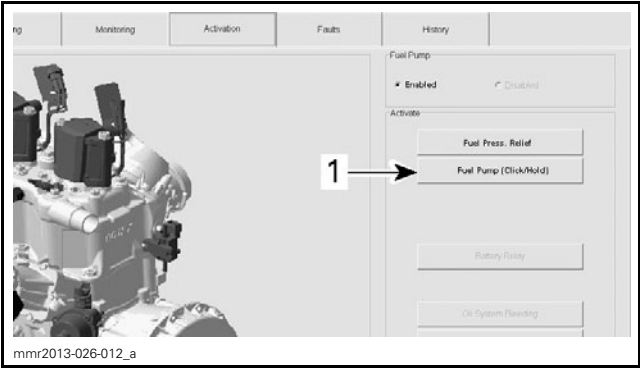
## INSPECTION

### FUEL SYSTEM PRESSURIZATION AND LEAK TEST

Using B.U.D.S., active the fuel pump to apply a pressure in the fuel system. Check to detect any leak.

- Select **Activation** and **ECM** tabs.
- Click on the **Fuel Pump (CLick/Hold)** button in the **Activate** field.

Subsection XX (FUEL TANK AND FUEL PUMP)

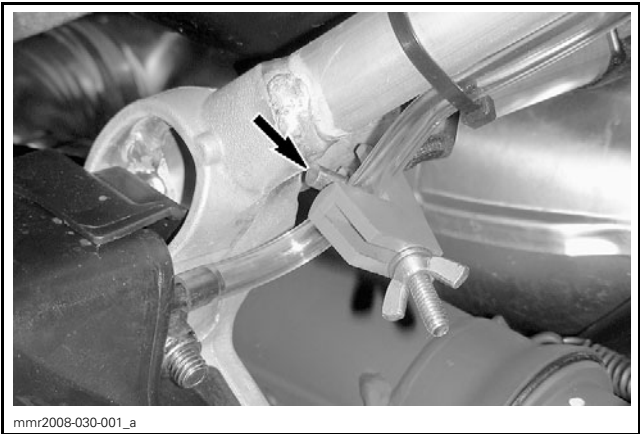
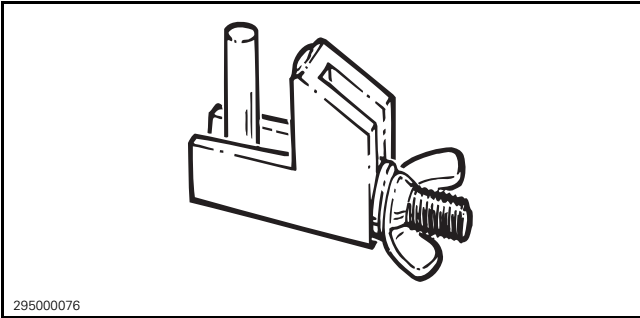


1. Press here to activate fuel pump

**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 pressurization test could result in severe injury or a life threatening situation should a leak occur.

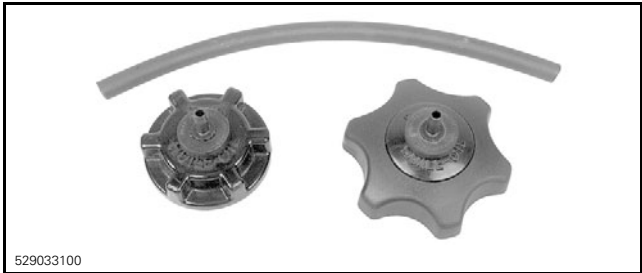
FUEL TANK LEAK TEST

- 1. Fill up fuel tank.
- 2. Open the left side panel to access the fuel vent tube.
- 3. Install a SMALL HOSE PINCHER (P/N 295 000 076) on the vent tube.

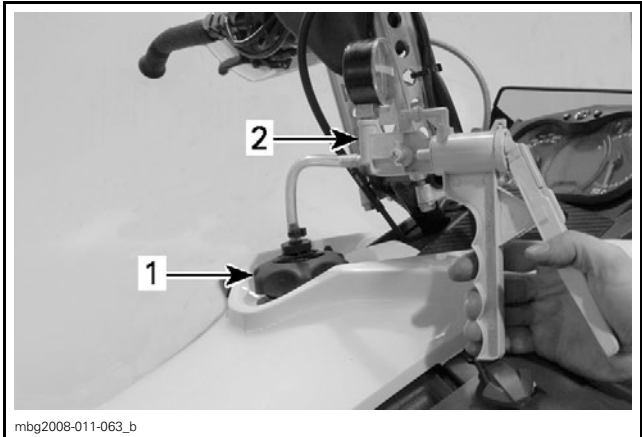


TYPICAL - HOSE PINCHER ON FUEL VENT TUBE

- 4. Install the appropriate test cap from the LEAK TEST KIT (P/N 529 033 100) on fuel tank inlet.



- 5. Install VACUUM/PRESSURE PUMP (P/N 529 021 800) on pressure test fuel cap.



TYPICAL  
1. Pressure test fuel cap  
2. Vacuum/pressure pump

- 6. Set pump selector to pressure.
- 7. Pressurize fuel tank as follows.

PRESSURE	TIME WITHOUT PRESSURE DROP
21 kPa (3 PSI)	3 minutes

If pressure drops, locate fuel leak(s) and repair or replace leaking component(s).

To ease locating leak(s), spray soapy water on components; bubbles will indicate leak location(s).

### Fuel Tank Vent Valve Test

1. While the fuel tank is still pressurized as in the previous test, carry out the following:
2. Place a finger over the vent hose outlet.
3. When removing hose pincher, alternately touch and release vent hose outlet. You should feel pressurized air flowing out indicating the pressure relief valve function is working.
4. Release any remaining pressure in the fuel tank by slowly unscrewing fuel tank cap.
5. Remove the pressure test fuel cap.
6. Remove the fuel tank vent tube from its fitting on the lower left front body panel.
7. Install the VACUUM/PRESSURE PUMP (P/N 529 021 800) on the vent tube and apply air pressure through the vent valve. Air must flow freely towards the fuel tank neck.



TYPICAL - VACUUM/PRESSURE PUMP ON VENT TUBE

**NOTE:** If fuel vent check valve does not function as indicated in test, replace vent valve.

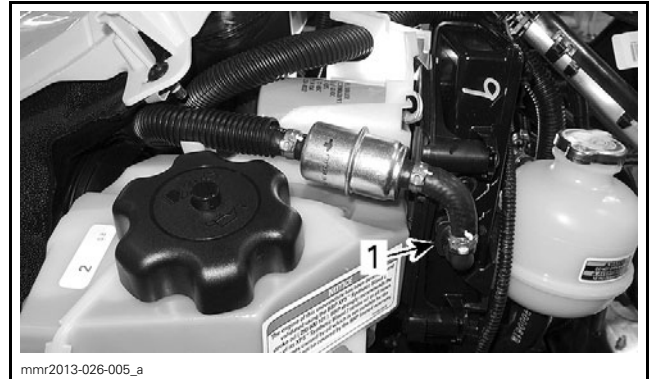
8. Remove vacuum/pressure pump.
9. Install vent tube on its fitting.
10. Install normal fuel tank cap.

### FUEL PUMP PRESSURE TEST

The pressure test provides an indication of the available fuel pressure at the fuel pump outlet. It validates the pressure regulator and the fuel pump.

1. Ensure there is enough gas in fuel tank.
2. Install a rag under the ECM hose quick connect to catch fuel spillage.

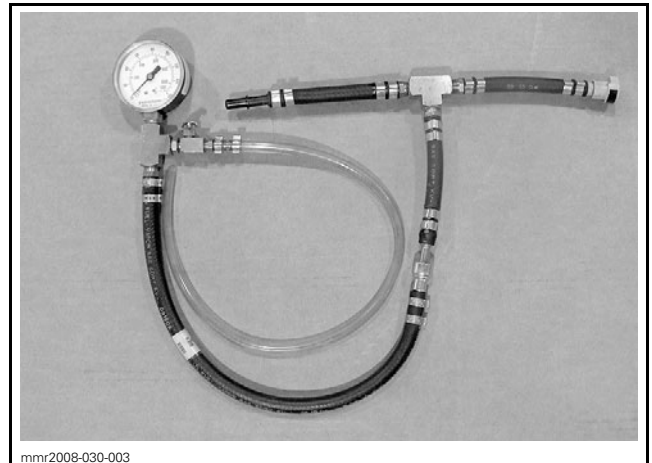
3. Disconnect fuel pressure hose from ECM.



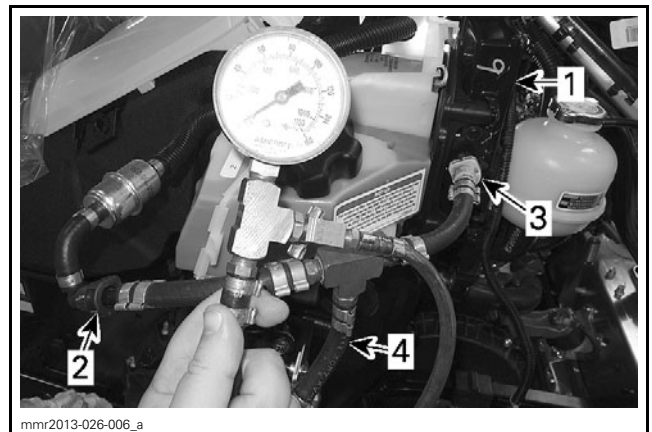
TYPICAL

1. Disconnect here

4. Install the FUEL HOSE ADAPTER (P/N 529 036 023) and the PRESSURE GAUGE (P/N 529 035 709) between fuel pressure hose and ECM.




PRESSURE GAUGE WITH FUEL HOSE ADAPTER



1. ECM
2. Fuel pressure hose fitting
3. Fuel hose adapter to ECM fitting
4. Fuel hose adapter to pressure gauge

Subsection XX (FUEL TANK AND FUEL PUMP)

 **WARNING**

When carrying out pressure test, ensure fuel is not leaking from test equipment onto hot exhaust system or electrical components. Ensure fuel hose do not come into contact with hot engine parts or hot exhaust system.

5. Start engine.
6. Run engine above 2000 RPM and observe the fuel pressure.

FUEL PRESSURE
303 kPa (44 PSI)

If pressure is lower than specified, momentarily block the return hose while monitoring the pressure gauge.

**NOTICE** Do not block the fuel return for more than 2 seconds.

If pressure rises to reach or exceed specification with the fuel return blocked, replace fuel regulator.

If pressure does not rise with the fuel return blocked, refer to *PRESSURE BELOW SPECIFICATIONS* in the following table.

FUEL PRESSURE TROUBLESHOOTING	
RESULT	POSSIBLE CAUSE
Pressure above specifications	Defective fuel regulator
	Clogged fuel filter
	Poor electrical connection
	Defective fuel regulator
	Defective fuel pump
Pressure below specifications	Leak in the fuel system circuit

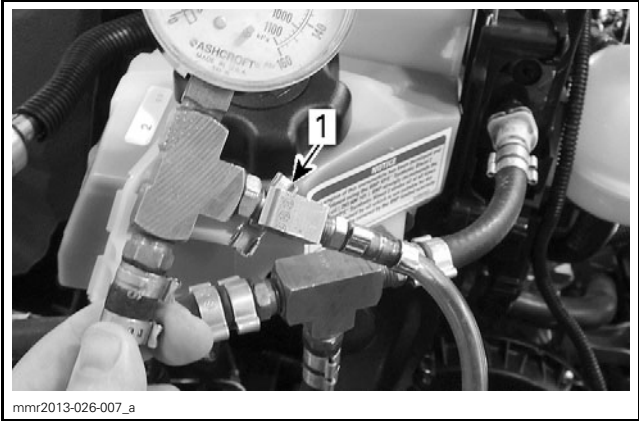
7. Stop engine.
- Fuel pressure should remain stable.
8. If fuel pressure drops, check the following for leaks:
- Tools

– Hoses

– Fuel injectors

– Fuel pressure regulator

– Fuel pump.
9. Bleed away any remaining fuel in the pressure gauge and fuel hose adapter using the bleed valve on the fuel hose adapter.



1. Pressure gauge bleed valve


10. Remove pressure gauge and fuel hose adapter.
11. Reinstall the fuel pressure hose on ECM and gently but firmly pull on hose to ensure quick disconnect fitting is properly locked and secure on the ECM.
12. Reinstall all remaining removed parts.

PROCEDURES

FUEL HOSE AND OETIKER CLAMPS

Fuel Hose Replacement

When replacing fuel hoses, be sure to use hoses 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

- Never use a hose pincher on high pressure hoses.
- Never change the routing of a fuel hose.
- Always reinstall the corrugated protective tubing on fuel hoses.
- Secure fuel hoses using the appropriate locking tie or fastener to prevent contact with sharp edges or hot, rotating and moving parts.
- After connecting a hose or a quick connect fitting, pull on the hose near the fitting to make sure it is securely locked.
- Always validate fuel system tightness by performing a *FUEL SYSTEM PRESSURIZATION AND LEAK TEST*.

### Oetiker Clamp Replacement

#### REQUIRED TOOL

OETIKER PLIERS  
(P/N 295 000 070)



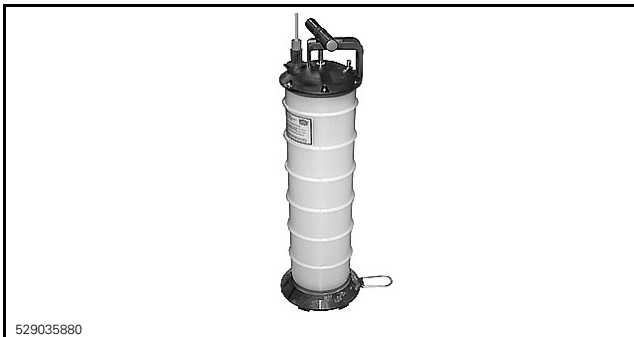
### ⚠ WARNING

Whenever removing a hose in the fuel system, always use new Oetiker clamps at assembly.

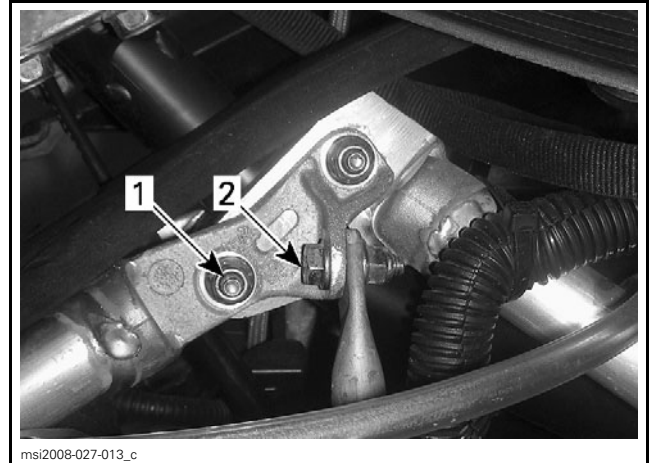
## FUEL TANK

### Fuel Tank Removal

1. Remove the following items, refer to *BODY* section:
  - Seat
  - Upper body module
  - Console.
2. Drain fuel tank as much as possible using the SUCTION PUMP (P/N 529 035 880).

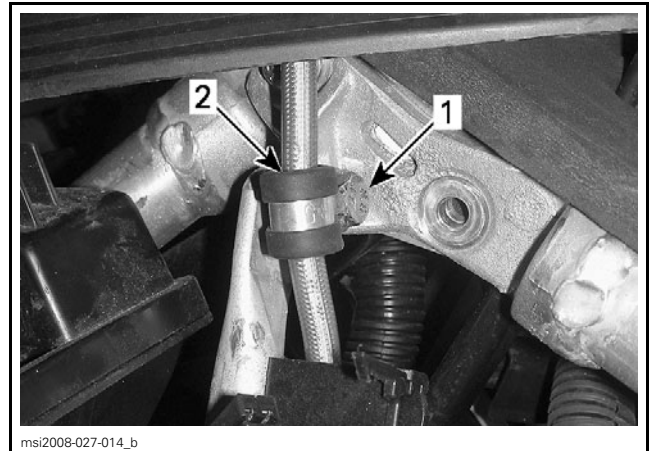


3. Remove the aft mounting bolt from the rear frame member forward mount, and the top mounting bolts from upper column support as indicated on the illustration. Discard the elastic nuts.



#### RIGHT SIDE SHOWN

1. At mounting bolt on rear frame member forward mount
2. RH top mounting bolt on upper column support



#### LEFT SIDE SHOWN

1. Top mounting bolt on LH upper column support
2. Brake hose retaining clamp

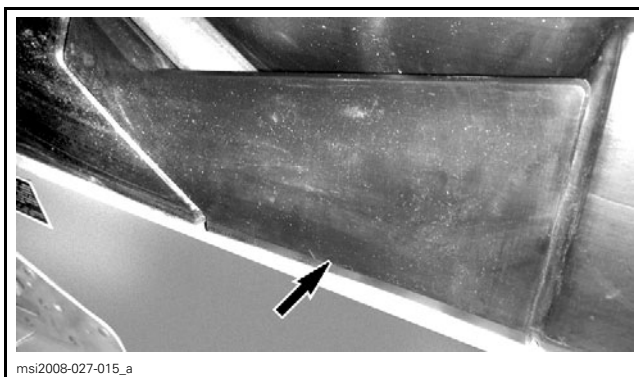
4. Release the torque applied to the mounting bolt on the front frame member, but do not remove bolt and elastic nut.

## Subsection XX (FUEL TANK AND FUEL PUMP)

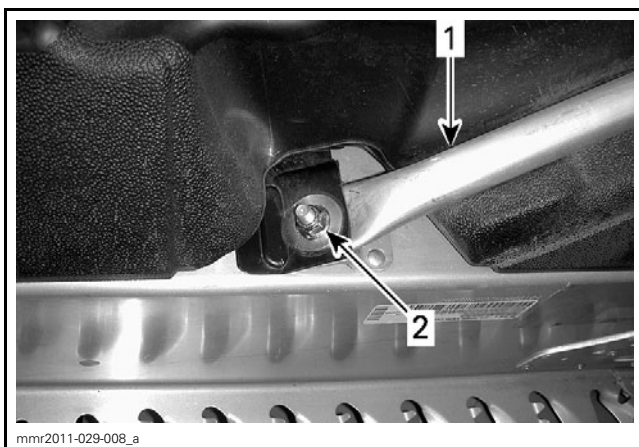


1. Mounting bolt, front frame member

5. Remove trim panels covering the aft end of the rear frame members by pulling upwards, then pulling out (one each side).



6. Remove elastic nut and shoulder bushing retaining the rear frame members (one each side) to the tunnel (discard nuts, keep shoulder bushings).



1. Frame member  
2. Elastic nut

7. Disconnect the fuel tank vent tube at the check valve.



TYPICAL - DISCONNECT FUEL VENT TUBE

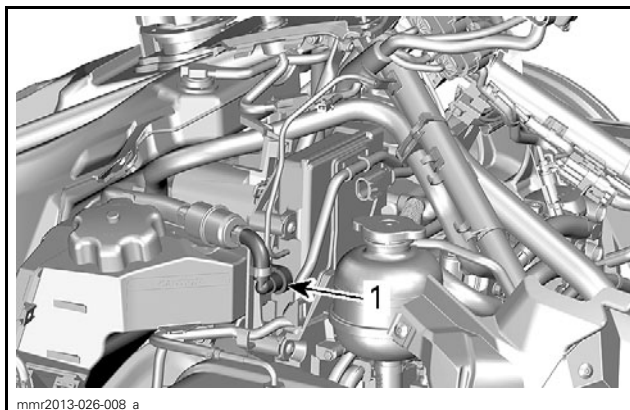
8. Disconnect the magneto connector.

### **⚠ 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 engine is cranked, fuel vapors may ignite in presence of a spark creating a fire hazard.

9. Install a rag around the ECM hose quick connect to catch fuel spillage.

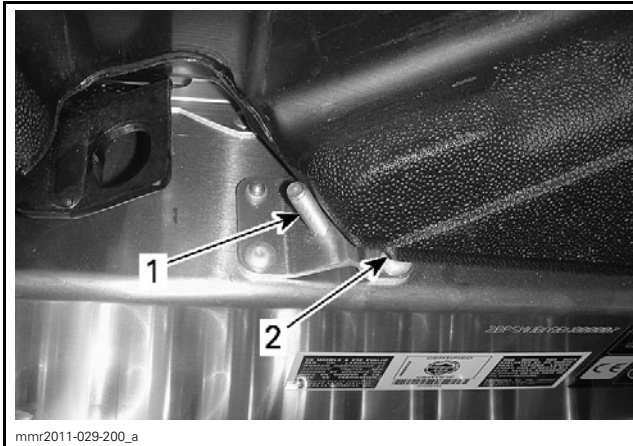
10. Disconnect fuel pressure hose from ECM.



TYPICAL

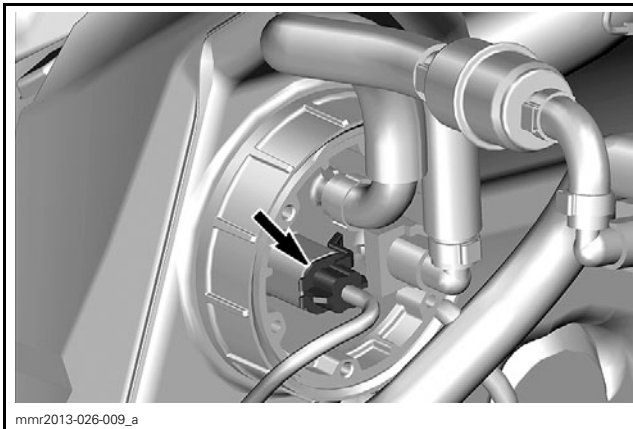
1. Fuel pressure hose fitting at ECM

11. Move the fuel tank backwards until it contacts the studs.



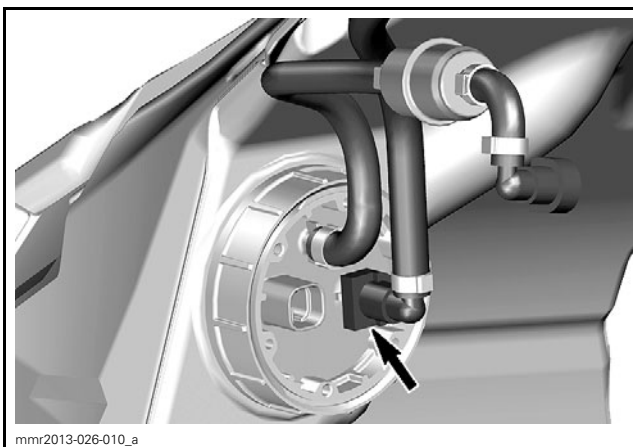
1. Stud
2. Fuel tank

12. Disconnect fuel pump electrical connector.



FUEL PUMP CONNECTOR TO DISCONNECT

13. Carefully disconnect fuel return hose from fuel pump.



FUEL RETURN HOSE TO DISCONNECT

**NOTE:** Place a container under the return hose end to recover the fuel remaining in the system.

14. Carefully and slowly lift the aft end of the fuel tank from the side frame mounting studs and remove it from vehicle.

### Fuel Tank Installation

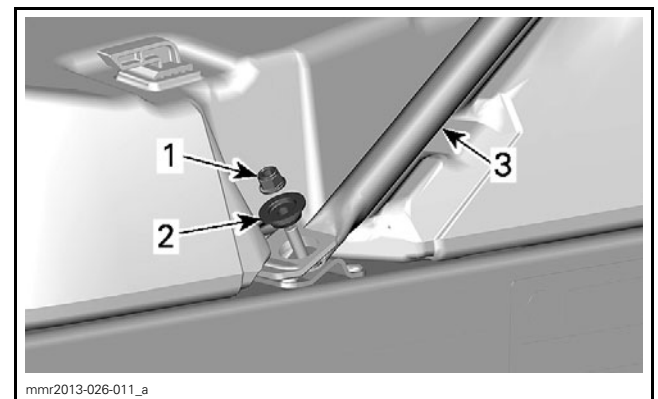
Installation is the reverse of the removal procedure however, pay attention to the following.

Connect return hose to fuel pump. Pull on hose to ensure it is properly locked and secure.

When installing vent hose, ensure it is not kinked or pinched.

Secure the rear frame member using new elastic nuts and previously removed shoulder bushings.

TIGHTENING TORQUE	
Rear frame member retaining nuts	31 N•m (23 lbf•ft)



1. New elastic nut
2. Previously removed shoulder bushing
3. Rear member frame

Secure all frame members at the top of pyramid using new elastic nuts.

TIGHTENING TORQUE	
Frame member upper bolts	14 N•m (124 lbf•in)

Validate fuel system tightness by performing a *FUEL SYSTEM PRESSURIZATION AND LEAK TEST*. Refer to *INSPECTION* at the beginning of this subsection.

Reinstall all other removed parts and refill the fuel tank.

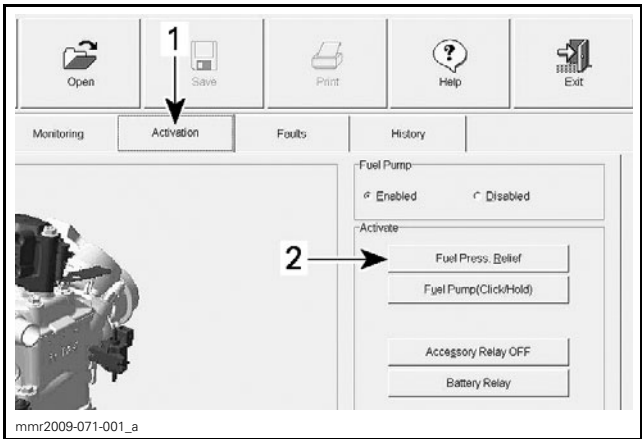
## FUEL PUMP

### Fuel Pressure Release

1. Connect vehicle to the latest applicable B.U.D.S. software, refer to the *COMMUNICATION TOOLS AND B.U.D.S.* subsection.
2. Select the **Activation** and **ECM** tabs.

Subsection XX (FUEL TANK AND FUEL PUMP)

3. Click on the **Fuel Press. Relief** button in the **Activate** field.



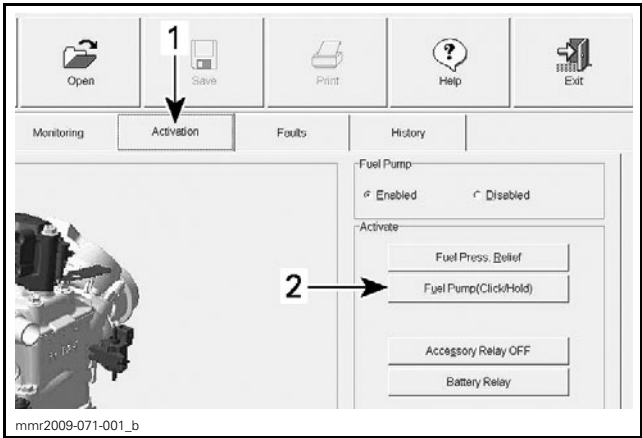
RELEASING FUEL SYSTEM PRESSURE IN B.U.D.S.

1. Activation tab  
2. Fuel Press. Relief button on ECM page

Electric Fuel Pump Test with B.U.D.S.

**NOTE:** Activating the fuel pump as described in this procedure can be used for purging air from the fuel system whenever a fuel hose has been disconnected and reconnected. The pump should be activated for 15 seconds to ensure proper purging of the system.

1. Connect vehicle to the latest B.U.D.S. software, refer to *COMMUNICATION TOOLS AND B.U.D.S.* subsection.
2. Select the **Activation** and **ECM** tabs.
3. Click on the **Fuel Pump (Click/Hold)** button in the **Activate** field.



1. Activation tab  
2. Fuel Pump (Click/Hold) button

4. Listen for fuel pump operation.

**NOTE:** The fuel pump should run as long as you hold the **Fuel Pump (Click/Hold)** button in B.U.D.S.

If you do not hear the pump come ON, select the **Faults** tab in B.U.D.S. and check for fault codes.

If there is no fault code, connect a known good fuel pump to the vehicle harness (in parallel) and repeat the test.

**NOTE:** No voltage test can be done when the fuel pump is disconnected.

If the second fuel pump functions when connected to the vehicle harness, then replace the fuel pump installed in the vehicle.

Electric Fuel Pump Pressure Test

Refer to *INSPECTION* in this subsection.

Electric Fuel Pump Removal

1. Release the fuel pressure in the system. Refer to *ELECTRIC FUEL PUMP (E-TEC)* in this subsection.
2. Disconnect magneto connector.

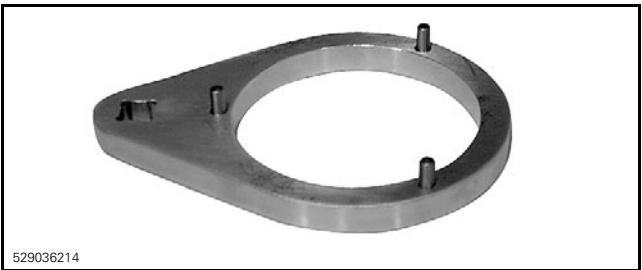
**⚠ WARNING**

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

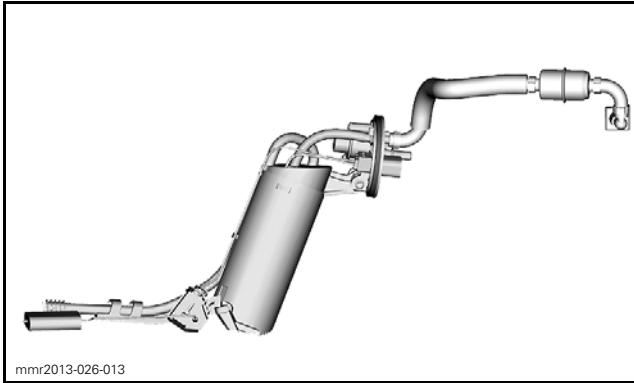
Follow procedures for removing fuel tank and move fuel tank back for access to fuel pump. Refer to *FUEL TANK REMOVAL* in this subsection.

3. Disconnect fuel pump as described in the *FUEL TANK REMOVAL* procedure in this section.
4. Remove fuel pump spanner nut.

REQUIRED TOOL
FUEL PUMP NUT TOOL (P/N 529 036 214)

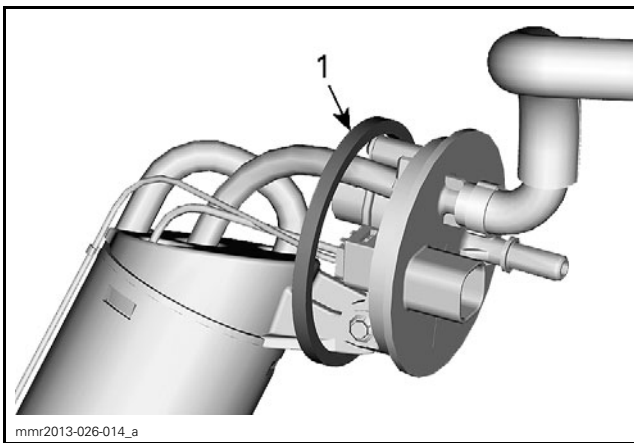


5. Remove fuel pump assembly from fuel tank.



TYPICAL — ELECTRIC FUEL PUMP ASSEMBLY

6. Remove and discard fuel pump gasket.



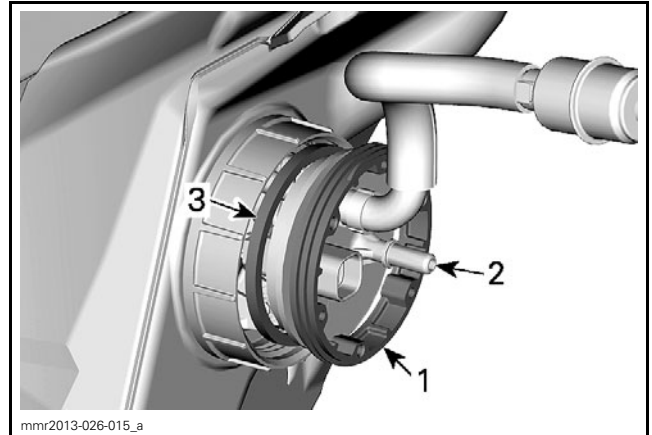
1. Fuel pump gasket

## Electric Fuel Pump Installation

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

1. Make sure the rear pick-up is inserted all the way to the rear of fuel tank and does not interfere with the fuel level sensor float.
2. Install a **NEW** gasket on the fuel pump prior to installing the pump in the tank.

**NOTE:** The gasket must be installed on the fuel tank side so it is located between the pump and the fuel tank.



TYPICAL - FUEL PUMP INSTALLATION

1. Fuel pump spanner nut
2. Fuel pump face plate
3. Fuel pump gasket

3. Install a torque wrench perpendicularly (90°) to FUEL PUMP NUT TOOL (P/N 529 036 214).

TIGHTENING TORQUE	
Fuel pump spanner nut	40 N•m (30 lbf•ft)

4. To reconnect fuel pump and install fuel tank, refer to the *FUEL TANK INSTALLATION* procedure in this subsection.
5. Carry out a *FUEL TANK LEAK TEST* and a *FUEL SYSTEM PRESSURIZATION AND LEAK TEST* as detailed in this 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.

## FUEL PUMP INLET FILTER

### Fuel Pump Inlet Filter Replacement

1. Remove fuel pump assembly from fuel tank. Refer to procedure in this subsection.
2. Pull rear pickup hose to make room.

## Subsection XX (FUEL TANK AND FUEL PUMP)



1. Rear pickup hose

3. Unlock sump tank by carefully inserting a small screwdriver between the tab and the sump tank.

**NOTICE** Be careful not to damage tabs while pushing them.

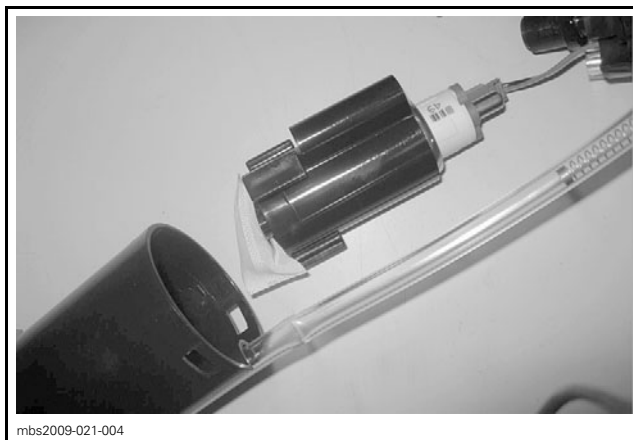


Step 1: Insert screwdriver between tab and sump tank

4. Completely remove sump tank from pump by pulling it carefully.

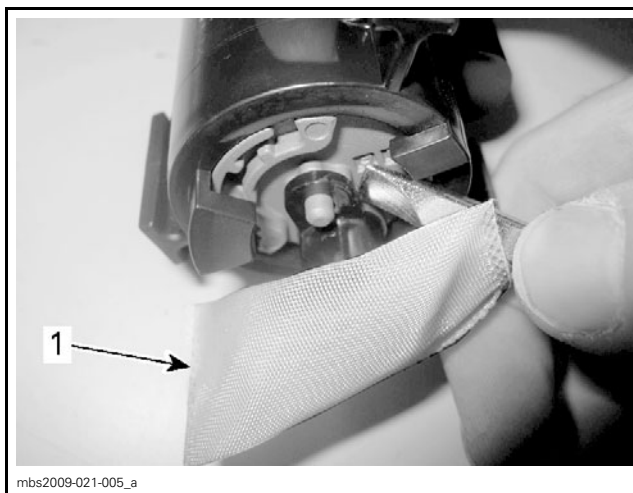


1. Sump tank



FUEL PUMP REMOVED

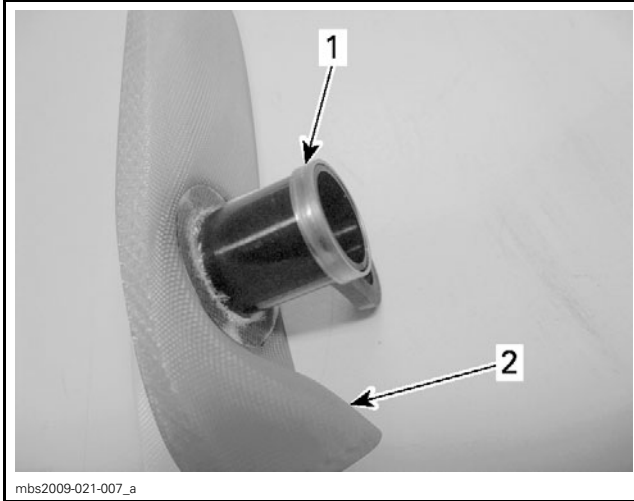
5. Remove inlet fuel pump filter using a small screwdriver.



1. Inlet fuel pump filter

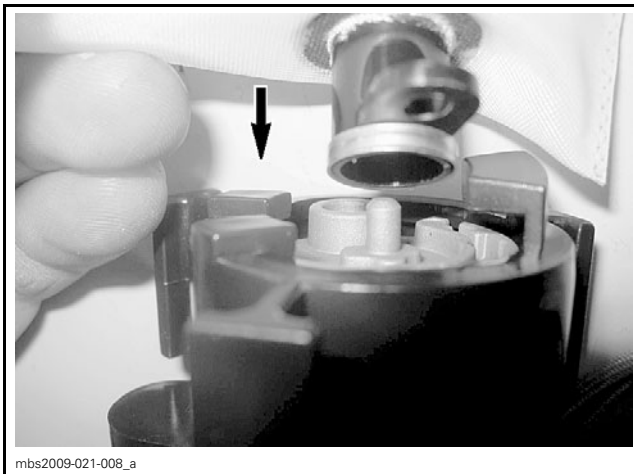
6. Discard inlet fuel pump filter and steel ring.  
7. Install **NEW** steel ring on **NEW** inlet filter.

**NOTE:** Steel ring can be installed on both sides. If steel ring is loose during installation, it will tighten when plastic will contact fuel, the plastic will swell.

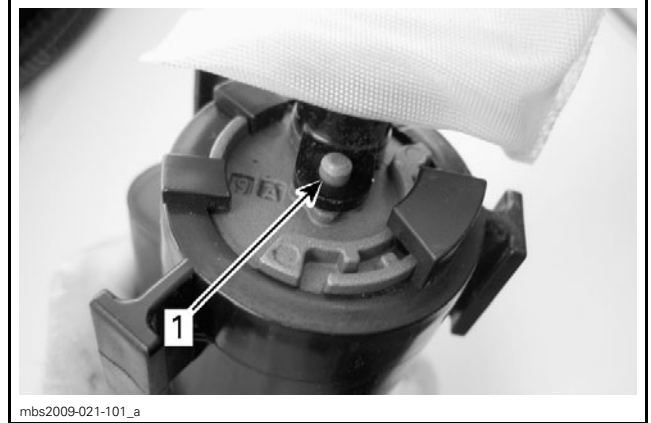


- 1. Steel ring
- 2. Inlet filter

8. Insert inlet filter into fuel pump by pressing it downward.

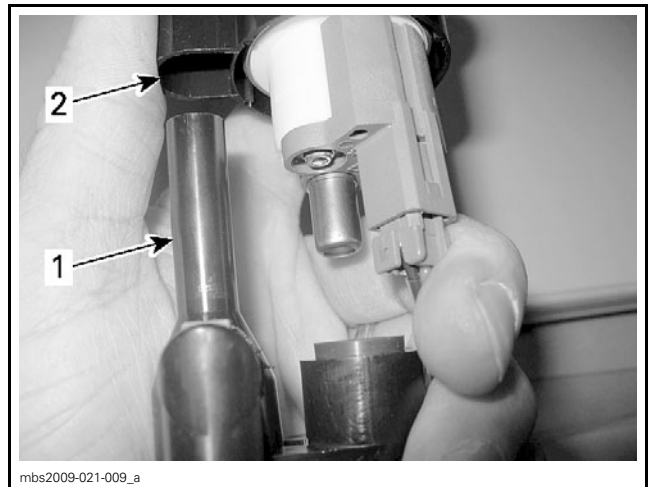


9. Ensure that the filter hole is properly positioned into the pin.



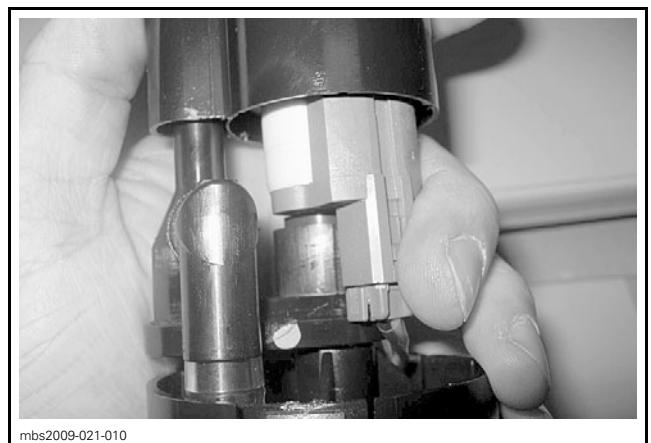
- 1. Pin

10. Align jet pump outlet into its opening.



- 1. Jet pump outlet
- 2. Opening

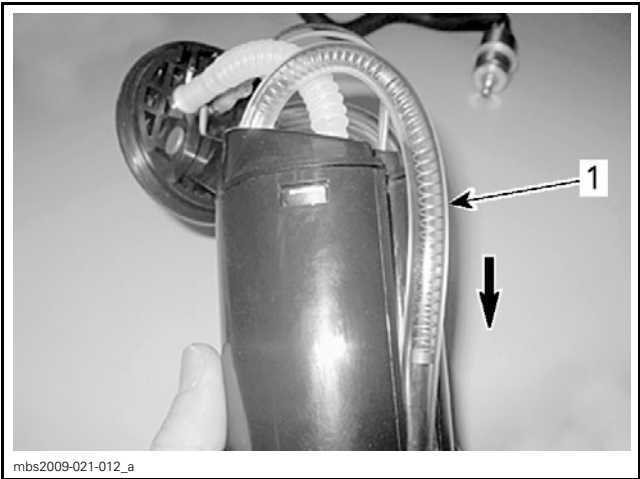
11. Install motor into jet pump.



12. Install sump tank carefully and ensure that all parts are properly positioned.



- 13. Ensure that sump tank tabs are properly locked.
- 14. Position rear pickup hose by pulling it downward.



1. Rear pickup hose

- 15. Reinstall fuel pump from fuel tank. Refer to procedure in this subsection.

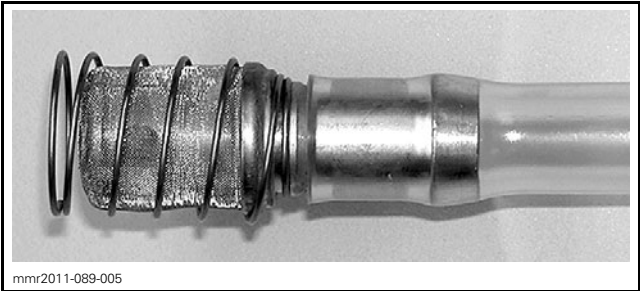
STEEL MESH FILTER

Steel Mesh Filter Location

The steel mesh fuel filter is located on the remote pickup of the fuel pump module.

Steel Mesh Filter Cleaning

- 1. Remove fuel pump from fuel tank, refer to *FUEL PUMP REMOVAL* in this subsection.
- 2. Clean steel mesh filter on fuel pump remote pickup using low pressure filtered air and XPS BRAKES AND PARTS CLEANER (USA) (P/N 219 701 705) or XPS BRAKES AND PARTS CLEANER (CAN) (P/N 219 701 776).



STEEL MESH FILTER, FUEL PUMP REMOTE PICK-UP

- 3. Install and reconnect fuel pump module (pressure hose and electrical connector), refer to *FUEL PUMP INSTALLATION* in this subsection.
- 4. Carry out a *FUEL TANK LEAK TEST* and a *FUEL SYSTEM PRESSURIZATION AND LEAK TEST* as detailed in this subsection.
- 5. Install remaining parts in the reverse order of removal, refer to *FUEL TANK INSTALLATION* in this subsection.

FUEL PRESSURE REGULATOR

Fuel Pressure Regulator Replacement

Remove fuel pump from fuel tank. Refer to *ELECTRIC FUEL PUMP REMOVAL* in this subsection.

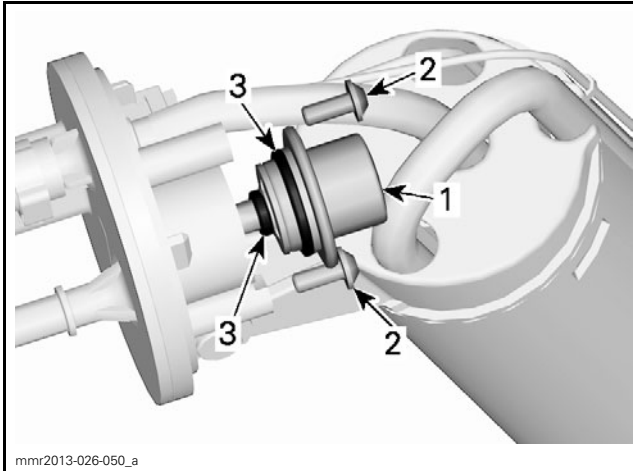
Remove screws securing fuel pressure regulator on fuel pump.

Discard fuel pressure regulator with its O-rings.

Install new O-rings on the new fuel pressure regulator.

Install the regulator on fuel pump and secure it using previously removed screws.

TIGHTENING TORQUE	
Fuel pressure regulator screws	Hand-tight



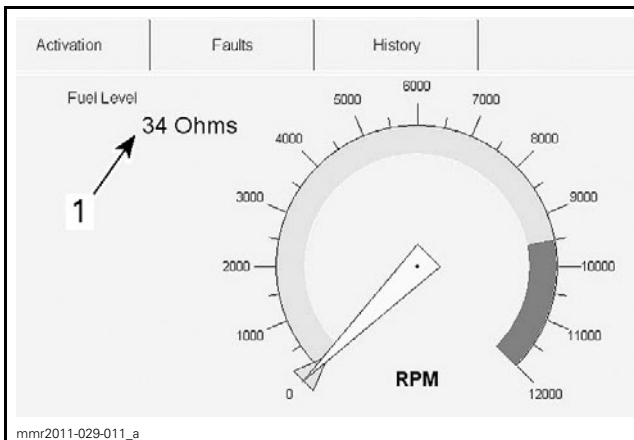
1. Fuel pressure regulator
2. Retaining screws
3. New O-rings

## FUEL LEVEL SENSOR

**NOTE:** Verify the gauge functions related to the fuel level sensor before testing the sensor. Refer to *GAUGE* in *LIGHTS, GAUGE AND ACCESSORIES* subsection.

### Fuel Level Sensor Test with B.U.D.S.

1. Connect vehicle to the latest applicable B.U.D.S. version.
2. Select the **Monitoring** and **Cluster** tabs.
3. Monitor the fuel level sensor resistance under **Fuel Level** and compare to the table below.



1. Fuel level sensor resistance

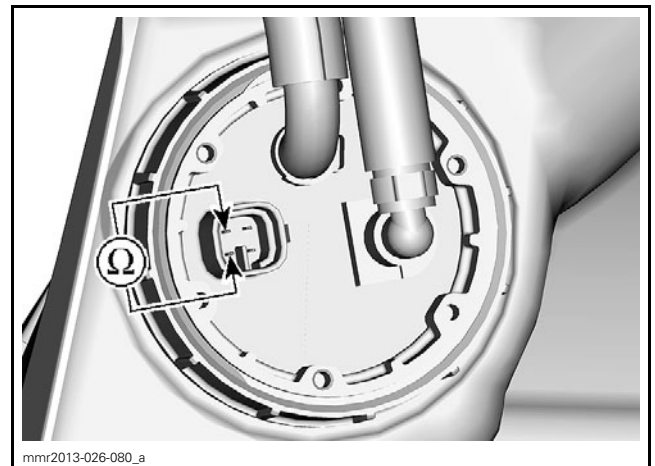
FUEL LEVEL SENSOR RESISTANCE TABLE	
Full level resistance value	$7 \Omega \pm 3 \Omega$
Empty level resistance value	$95 \Omega \pm 5 \Omega$

If resistance is within specifications, the fuel level sensor, wiring and fuse are ok.

If resistance is not within specifications, carry out the *FUEL LEVEL SENSOR RESISTANCE TEST*.

### Fuel Level Sensor Resistance Test

1. Move fuel tank back to obtain access to the fuel pump connector. Refer to *FUEL TANK REMOVAL* in this subsection.
2. Disconnect fuel pump.
3. Connect the FLUKE 115 MULTIMETER (P/N 529 035 868) between the two pins in the sensor connector and set it to  $\Omega$ .
4. Test resistance of sensor as follows.



**NOTE:** Lift the rear of fuel tank to change fuel level.

FUEL LEVEL SENSOR RESISTANCE TABLE	
Full level resistance value	$7 \Omega \pm 3 \Omega$
Empty level resistance value	$95 \Omega \pm 5 \Omega$

If resistance is within specifications, check the wiring between the fuel pump connector and gauge.

If resistance is not within specifications, replace fuel level sensor.

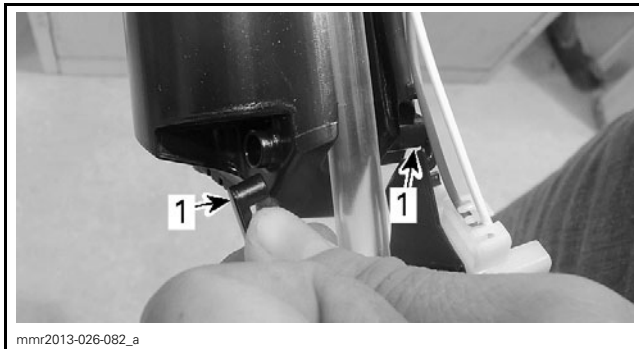
### Fuel Level Sensor Replacement

Open both fuel level sensor support tabs.

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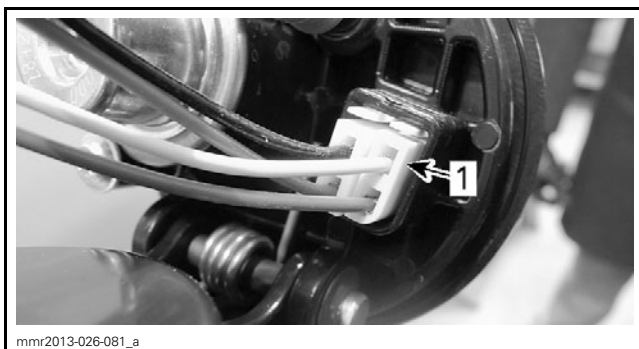
## Subsection XX (FUEL TANK AND FUEL PUMP)

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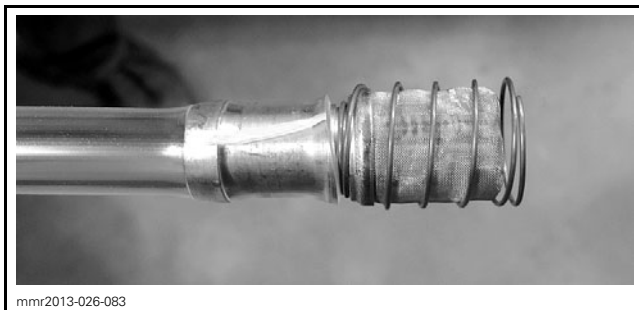
1. *Tabs of fuel level sensor support*

Disconnect the fuel level sensor connector from the pump module.



1. *Fuel level sensor connector (Yellow connector)*

Remove the steel mesh fuel filter from its hose.



Remove the fuel level sensor.

Reinstall the new one by reversing the procedure.