

# FUEL INJECTION ELECTRIC FUEL PUMP REPLACEMENT INSTRUCTIONS

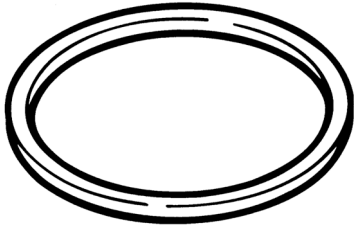
## PRECAUTIONS FOR FUEL SYSTEM SERVICE

TO REDUCE THE RISK OF FIRE AND PERSONAL INJURY, IT IS NECESSARY TO OBSERVE THE FOLLOWING PRECAUTIONS:

- Perform this repair **ONLY** in a properly equipped service facility.
- Position the vehicle in a clear, level, well-ventilated work area.
- Make sure there are no sources of spark or combustion near the work area.
- Perform work in a no-smoking area, or post no-smoking signs in the area selected.
- Have readily available a fully functional Class B fire extinguisher of adequate size (such as a 5 pound CO-2 as a minimum).
- Disconnect the ground cable from the vehicle's battery before performing any operation involving gasoline, gasoline tanks or gasoline lines. Allow the vehicle to cool before performing any operation, which could possibly expose gasoline or gasoline vapors to hot parts such as catalytic converters, hot light bulbs, or similar components.
- Avoid using extension cords or lights that might overheat or cause sparks.

- Avoid inhaling gasoline fumes and prolonged skin contact with gasoline. Promptly wash any body areas that have been in contact with gasoline.
- Wear approved safety glasses while performing any repairs.
- When raising the vehicle to perform under-vehicle services, use proper hoisting or jacking equipment along with approved safety supports.
- When removing the gasoline from a fuel tank use an OSHA approved pump, which is specifically designed for handling gasoline. **DO NOT USE** any other type of pump. Gasoline removed from a fuel tank must be stored in approved gasoline containers.

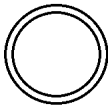
It is impossible to anticipate all possible risks and conditions under which repairs may be made to a fuel system. Therefore, in addition to the safety concerns listed, you are urged to carefully evaluate the hazards involved in such a service procedure and take whatever further precautions may be necessary.



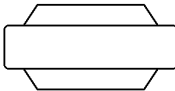
TANK SEAL



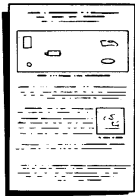
DISASSEMBLY  
TOOL



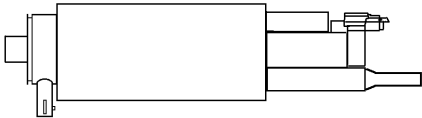
FILTER  
O-RING



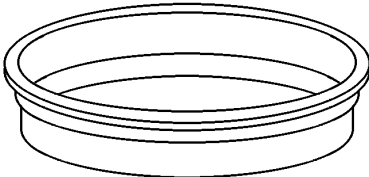
LOWER  
GROMMET



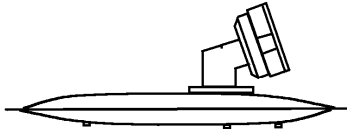
INSTRUCTIONS



FUEL  
PUMP



TANK SEAL



OUTER  
FILTER

**WARNING:** This rotary fuel injection pump **WILL NOT** work on carbureted fuel systems. It is for electronic fuel injection only.

**CAUTION:** Read these instructions thoroughly from start to finish before attempting to replace the fuel pump.

### MINIMUM TOOL REQUIREMENTS:

- Hoist or end lift jack
  - OSHA approved safety stands
  - OSHA approved fuel transfer pump
  - OSHA approved fuel storage containers
- Variety of mechanics hand tools

## FUEL PUMP REPLACEMENT INSTRUCTIONS

NOTE: The words "Tank Unit" used throughout these instructions mean fuel pump module assembly including flange, bucket, hoses, and level sender.

### I PREPARATIONS

- A) Relieve fuel system pressure

NOTE: The fuel system can retain gasoline under pressure for a considerable period of time. Opening a pressurized line could spray fuel creating a risk of fire and personal injury.

- 1) Remove the fuel cap from the tank to relieve any tank pressure.
- 2) Locate the Power Distribution Block and remove the fuel pump relay. Relay locations are described inside the cover of the Power Distribution Block.
- 3) With the fuel pump relay removed, crank the engine to bleed down fuel system pressure. The engine will start and stall several times. Continue to momentarily crank the engine several more times. Be sure to turn the ignition switch completely to the off position between cycles. Once the engine no longer tries to start, the fuel system pressure is relieved.

- B) Disconnect the negative (-) cable from the battery and position it so it cannot accidentally make contact with the negative (-) battery post during the fuel pump replacement procedure.

NOTE: Be sure an appropriate fire extinguisher is readily accessible before continuing with the service procedure.

- C) Drain the fuel tank with an OSHA approved gasoline transfer pump. Place the suction hose of the pump into the fuel tank through the filler neck. Note: Be sure the hose is completely inserted into the tank. All of the fuel must be drained before trying to remove the fuel tank.

### II FUEL TANK REMOVAL

**NOTE: Fuel tank removal is not necessary on all models. If the tank unit can be accessed without tank removal proceed to Section III Line B in these instructions.**

- A) Remove the fuel filler and vent hoses from the fuel tank.
- B) Remove the skid plate and any shields that may interfere with removal of the fuel tank (if so equipped).
- C) Support the fuel tank and remove the tank retaining straps.
- D) Remove the fuel filler neck hose and tank vent hose.
- E) Lower the fuel tank enough to access the top of the fuel tank.
- F) Remove the fuel line connector safety retainers. Disconnect the fuel lines.
- G) Remove any other lines and electrical connections from the tank.
- H) Carefully lower the fuel tank out of the vehicle.

III REMOVE THE TANK UNIT FROM THE FUEL TANK

- A) Thoroughly clean the top of the fuel tank to prevent any dirt from getting into the fuel tank when the pump bracket is removed.
- WARNING: HAVE ABSORBENT SHOP TOWELS READILY AVAILABLE WHEN REMOVING THE PUMP BRACKET. SOME FUEL WILL SPILL WHEN THE TANK UNIT IS REMOVED.**
- B) Remove the tank unit retainer ring from the tank.
- C) Carefully remove the tank unit from the fuel tank. Be careful not to bend the float arm or damage the float.
- D) Check the inside of the fuel tank for foreign debris and clean out the tank if necessary.

IV REMOVE AND REPLACE FUEL PUMP

- A) Disconnect the electrical connector from the flange.

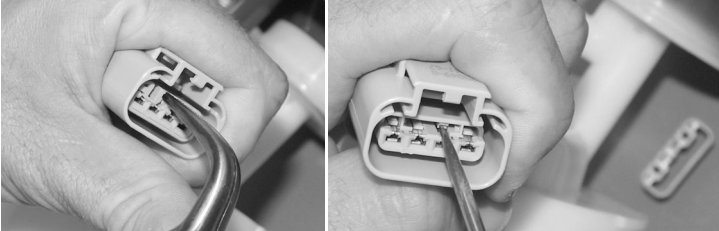


Figure 1

- B) Carefully remove the level sender wires from the electrical connector, note the level sender wire locations and release them from the connector. Route the wires down through the pump retainer hole. (See Fig. 1)
- C) Separate the top of the tank unit from the bottom by carefully inserting the special tool. (See Fig. 2)
- D) Carefully pry the module apart. (See Fig. 2)
- E) Set the reservoir aside. (See Fig 3)
- F) Disconnect the pump power supply wires from the electrical connector (see Fig 1). Be sure to note the position of the positive and

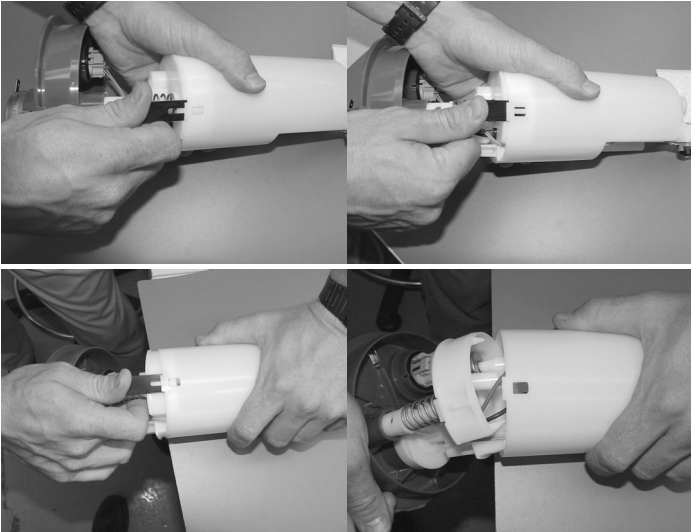
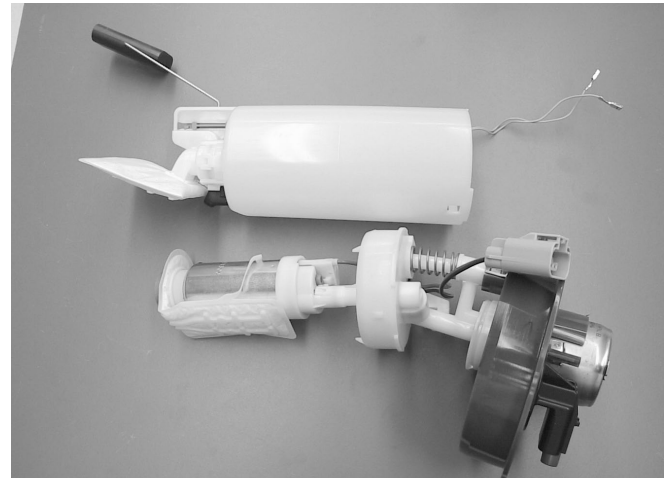


Figure 2

negative wires before disassembly.

- G) Carefully remove the pump.
- H) Remove the outer filter and o-ring from the tank unit reservoir.
- I) Install the new lower pump grommet onto the new fuel pump assembly.



- J) Install the new pump and components into the tank unit cover.
- K) Carefully re-assemble the tank unit. Be sure the lower pump grommet is aligned into its proper location in the reservoir housing.
- L) Install the pump power wires into their appropriate locations in the electrical connector.
- M) Install the level sender wires into their appropriate location in the electrical connector and snap the blue terminal retainer back into the plug.
- N) Plug the electrical plug into the bulkhead on the bottom side of the flange.
- O) Install the new outer filter o-ring and filter onto the tank unit reservoir.

V INSTALLATION OF TANK UNIT INTO FUEL TANK

- A) Install the new tank seal onto the fuel tank or onto the tank unit for some applications.
- B) Be sure the fuel tank is clean inside and carefully install the tank unit assembly into the fuel tank.
- C) Re-install the retaining ring and tighten to manufacturers' recommended specifications.

VI INSTALL FUEL TANK INTO VEHICLE

- A) Lift the fuel tank into position in the vehicle leaving enough room to access the top of the tank. Re-install all fuel lines and electrical connections. Be sure all vent hoses, electrical connections and fuel lines are properly installed before raising the fuel tank up into the vehicle all the way.
- B) Install the fuel tank retaining straps and tighten the retaining bolts. Do not over-tighten the retaining strap bolts.
- C) Re-install the filler neck and vent hoses.
- D) Re-install any skid plates and shields that may have been removed.

VII WRAP UP

- A) Using only equipment designed for use with gasoline, refuel the fuel tank with gasoline. **(NOTE: Be sure to clean up any fuel spills before proceeding.)**
- B) Inspect the fuel system for leaks and correct them as necessary.
- C) With the ignition switch off, reconnect the negative (-) cable to the battery.
- D) Re-install the fuel pump relay in the power distribution center.
- E) Start the engine and inspect the fuel lines and connections for leaks. Correct any leaks as necessary.
- F) Clear any trouble codes in the electronic control system that may exist as a result of the fuel pump replacement procedure. If necessary, use the specific vehicle service manual for assistance.

TROUBLE SHOOTING

Should the pump fail to operate:

Check the fuel pump fuse and fuel pump relay as outlined in the service manual.

If the pump has power and proper polarity, check the remainder of the fuel system as outlined in the service manual.

**NOTE: This pump will not remedy malfunctions of the regulator, injectors, or other fuel system components.**