

## TYPICAL WALBRO FUEL PUMP INSTALLATION 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 which might overheat or cause sparks.
- Avoid inhaling gasoline fumes and prolonged skin contact with gasoline. Promptly wash any body areas which 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 that may be necessary.

## FUEL INJECTION IN-TANK FUEL PUMP REPLACEMENT INSTRUCTIONS

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.

NOTE: The word bracket used throughout these instructions means pump mounting bracket and fuel level sender assembly.

### I. Preparations:

A) Relieve fuel system pressure.

1) Remove the fuel pump fuse from the fuse block.

2) Start the engine and let it run until it consumes any fuel in the lines and runs out of fuel.

3) After the engine stops, crank it again for at least 3 seconds to assure relief of remaining pressure. (This procedure is necessary since 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/or personal injury.)

B) Remove the ground (-) cable from the battery and position it so that it cannot accidentally make a connection to the battery during the fuel pump replacement procedure.

C) Drain the vehicle fuel tank.

1) First make sure an appropriate fire extinguisher (Class B • flammable liquids designation, as a minimum) is at hand. Then using an OSHA approved gasoline transfer pump, remove as much fuel as possible through the fuel tank filler neck. Store the fuel in approved safety containers only.

2) Lift and safely support the vehicle with approved safety stands with enough height to gain adequate access and clearance to remove the fuel tank.

3) As it may not be possible to remove enough fuel from the tank through the filler neck, more fuel may possibly be drained through bracket connections once the vehicle is raised.

NOTE: Regardless of the method used to drain fuel from the tank, it is important to remove as much fuel as possible from the tank before its removal. This is necessary to prevent fuel spillage from being too full or injury from excessive weight while removing the tank.

## II. Tank Removal

WARNING: It is necessary to obtain help in removing and installing the fuel tank due to its size and weight.

NOTE: The following are general tank removal instructions and may not be specific enough for your application. It may be necessary for you to refer to the specific service manual for the vehicle you are working on for specific fuel tank removal instructions.

A) Disconnect the electrical connector at the fuel tank to main harness connector, supporting and partially lowering the tank if required.

B) Disconnect any hoses attached between the fuel tank and the vehicle. Be careful when disconnecting fuel lines to avoid fuel spillage. Note all hose connections to make certain hoses are properly reconnected upon installation.

C) Disconnect and remove fuel filler neck if necessary.

D) Support fuel tank and remove retaining straps to allow tank to be removed from vehicle. Remove the fuel tank being careful to avoid spilling fuel.

E) Note the position and condition of all fuel tank mounting pads and insulators used in isolating the fuel tank from the vehicle body. Misallocated, deteriorated, or incorrect pads and/or isolators can cause objectionable transmission of fuel pump noise into the vehicle.

## III. Bracket Removal

A) Thoroughly clean all dirt and debris from the top of the tank. Clean out any dirt from around the locking ring and retainer. This must be done to prevent dirt or foreign material from falling into the fuel tank while removing the bracket.

B) Remove the bracket retainer with proper service tools.

C) Carefully remove the bracket from the fuel tank. Take care not to bend the float arm or scratch the float when it is removed. Discard the fuel tank to bracket o-ring seal.

## IV. Remove **And** Replace Pump

Replace pump and filter using specific instructions provided with each kit.

## V. Installation **Of** Bracket Back Into The Fuel Tank

- 1) Inspect the inside of the fuel tank for dirt and debris. If excessive, clean out the fuel tank before installing the bracket.
- 2) Inspect the bracket to see that it is clean and ready for installation.
- 3) Obtain the new fuel tank seal o-ring from the installation kit and place it in the groove at the fuel tank opening. Place the bracket assembly into the tank using care not to disturb the o-ring seal or to hang the float assembly on any protrusions in the tank. Also use care not to fold or twist the filter as this could cause restricted fuel flow. Install the bracket retainer.

## VI. Install Fuel Tank **Into** Vehicle

- 1) Inspect the condition and location of all tank mounting pads, insulators, and brackets. Defective, missing, or unallocated pads and insulators will cause the transmission of excessive noise to the vehicle.
- 2) Inspect and correct any defects in the fuel hoses, filler neck connections or similar components related to the fuel tank installation.
- 3) Install the fuel tank in the vehicle and tighten the tank support strap bolts. Reconnect all lines and hoses and tighten securely. Connect the electrical connections.
- 4) Make certain that all hoses, fittings, and electrical connections are correctly and securely attached.
- 5) Make sure that all fuel lines are correctly routed and secured in any mounting brackets. Make sure that the electrical harness is installed in the original position and all wire clips and mounting devices are present.

## VII. Wrap Up

- 1) 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)
- 2) Inspect the system for fuel leaks and correct them, if required.
- 3) With the ignition switch off, install the fuel pump fuse and reconnect the ground (-) cable to the battery.
- 4) Start the engine and inspect fuel lines and connections for leaks. Correct leaks if any exist.
- 5) Clear any trouble codes in the electronic control system that may exist as a result of the fuel pump replacement procedure. Use the specific vehicle service manual for assistance, if necessary.

## TROUBLE SHOOTING

Should the pump fail to operate:

- 1) Check the fuel pump fuse and fuel pump relay as outlined in the service manual.
- 2) 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.