



## INSTALLATION INSTRUCTIONS

# COMP PUMP® SERIES 110FI ELECTRIC FUEL PUMP

PART NO. 5110FI

**NOTE: DO NOT RUN THIS PUMP WITHOUT FUEL (EXCEPT FOR BRIEF PERIODS WHILE PRIMING).**

### PARTS INCLUDED IN THIS KIT

- 1 COMP PUMP® 110FI Series Electric Fuel Pump
- 2 Fittings, 3/4-16 x #8 AN Flare
- 2 O-rings, Nitrile 0.644ID x 0.087THK

### SPECIFICATIONS

**Maximum recommended operating pressure:**

75 PSI continuous, 100 PSI intermittent

**Fuel pump thread sizes:** Inlet/outlet, 3/4-16 (#8AN)

Air bleed system, 1/8" NPT

**Recommended fuel line size:** 1/2" (or #8AN)

**Current draw:** 12 AMP Typical

**Oil pressure switch rating:** 25 AMP

**Fuel pump over current protection:** 25 AMP fuse

**Fuel application:** Gasoline

Use Seal/Repair Kit Part No. 3168 to convert the COMP PUMP® SERIES 110FI Electric Fuel Pump to alcohol/methanol.

### GENERAL INFORMATION

The COMP PUMP® 110FI Series Electric Fuel Pump is a high pressure fuel pump designed for fuel injection applications. In all cases, this fuel pump **must** be used with a return style (bypass) fuel pressure regulator. Using the pump with any other type of regulator (or no regulator) will result in severe fuel pump damage. We recommend the following return style fuel pressure regulators:

4–25 PSI      Part No. 4307M (gasoline or alcohol)

30–100 PSI    Part No. 4305M (gasoline or alcohol)

As stated earlier, you must use a return style (bypass) regulator with this fuel pump. You must install a fuel return line between the fuel return port of the regulator and the fuel tank. We recommend at minimum a #8 AN (1/2") fuel return line.

An air bleed system is located at the bottom of the fuel pump to assist in priming the fuel pump. The air bleed line is plumbed to the fuel return line. If you are running 10 PSI fuel pressure or less, install a 1/8" NPT plug in the air bleed port, When installing the plug, use a thread sealant compound on the fitting threads) purchase 1/8" NPT fittings or plugs, as well as thread sealant compound, at any hardware store). Do not use teflon tape. Teflon tape can get into the Gerotor and lock the pump. Also, do not overtighten the fitting. This could damage the pump housing.

Be sure to install a suitable fuel filter (max. 100 micron) between the fuel tank and the fuel pump, such as the Mallory COMP FILTER® Series Part Nos. 3140 or 3500. This prevents debris from becoming wedged in the fuel pump's Gerotor and locking it.

An additional fuel filter (maximum 10 micron, such as the COMP FILTER® 160 Series Part No. 3160) must be installed between the fuel pump and the injectors. This prevents debris from clogging the injectors.

### SERVICE PARTS:

Part No. 3167    Seal/Repair Kit, Gasoline (may be used to convert alcohol/methanol fuel pumps to gasoline)

Part No. 3168    Seal/Repair Kit, Alcohol/Methanol (may be used to convert gasoline fuel pumps to alcohol/methanol)

## MOUNTING PROCEDURE

### Step 1

Mount the pump as close as possible to the fuel tank (at or below the level of the fuel tank pickup) in a well ventilated area with minimal exposure to road debris. Avoid exposing the pump and fuel lines to moving parts and hot surfaces, such as the exhaust system. **NOTE: Increasing distance between the pump and tank will decrease pump efficiency.**

### Step 2

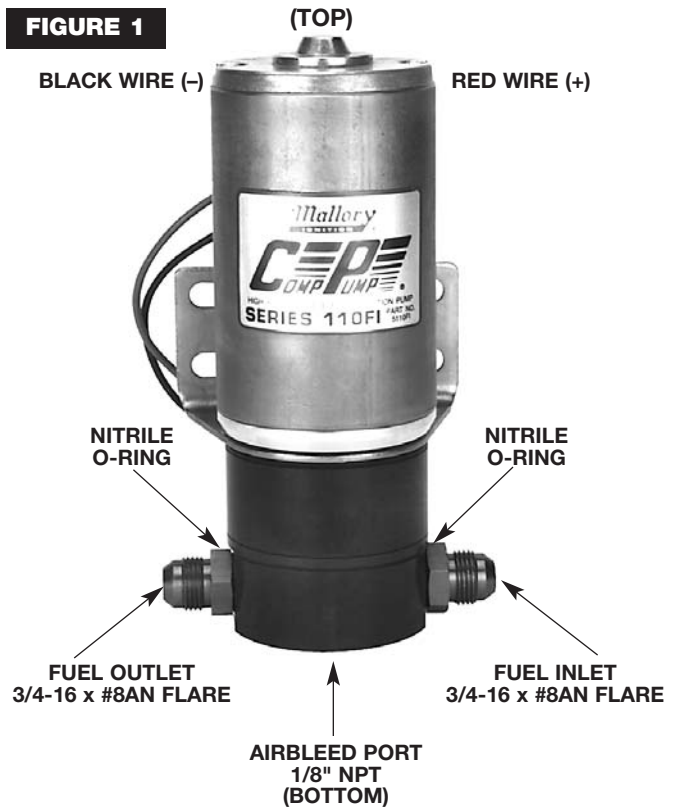
Using the pump mounting bracket as a template, locate mounting holes on a solid member, such as the vehicle chassis. Drill clearance holes for 5/16" bolts. See Figure 1.

### Step 3

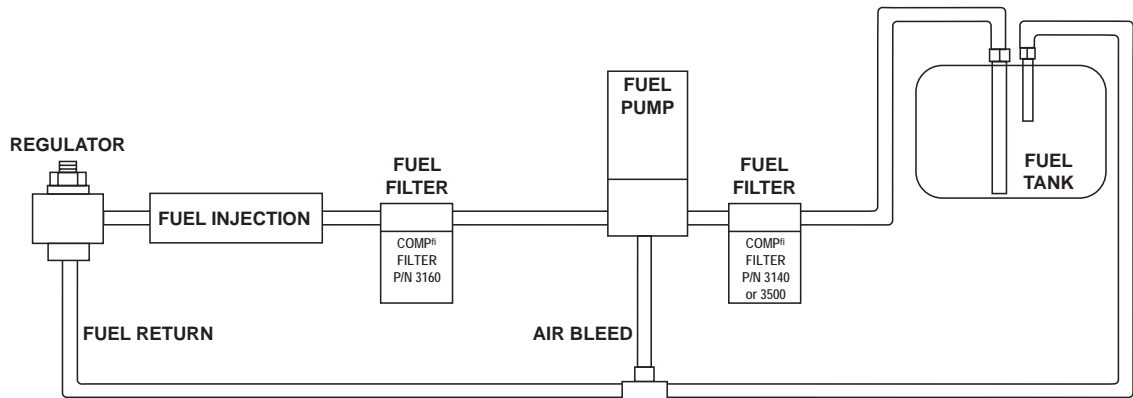
Connect 1/2" or larger fuel lines as shown in Figure 2. The 1/8" NPT outlet on the bottom of the pump is for an air bleed line to assist pump priming. This air bleed line is not necessary if the regulated pressure of your system is less than 10 psi. **NOTE: Use a thread sealant compound on the fitting threads. Don't use teflon tape because it could get into the Gerotor and lock the pump.**

### Step 4

Your system must have a Return Style Fuel Pressure Regulator near the injection system. See the General Information section on page 1 for recommendations. For maximum efficiency, mount the pressure regulator as close as possible to the injection system. See instructions packaged with the regulator. The regulator may be installed just before or just after the fuel injection.



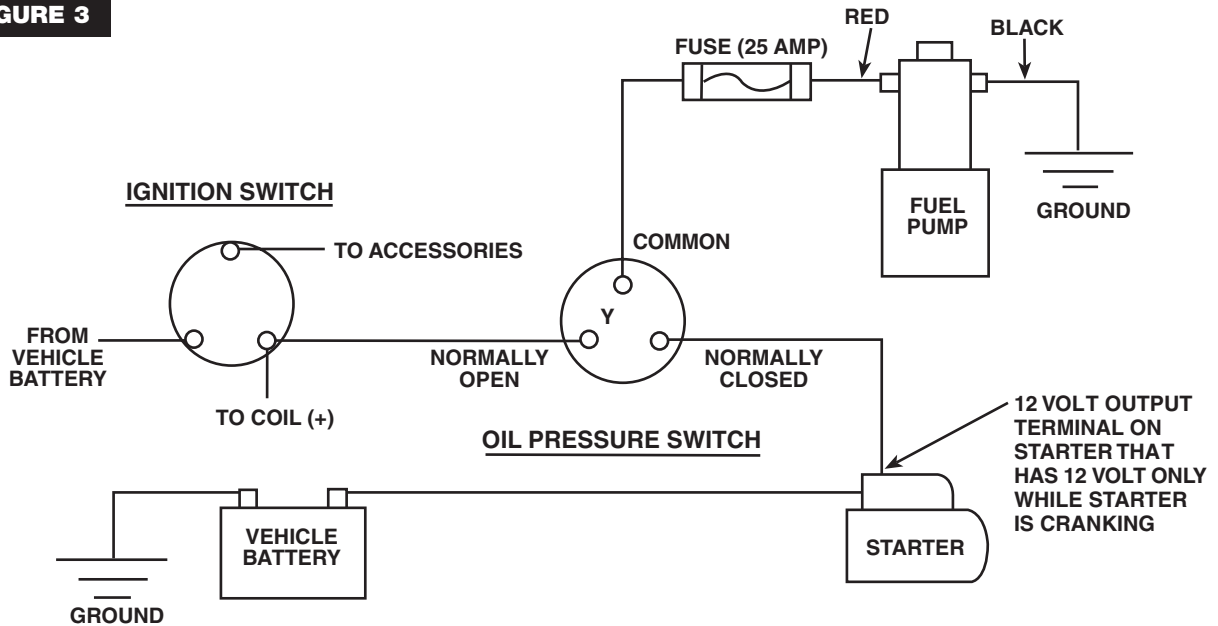
**FIGURE 2**



## WIRING PROCEDURE

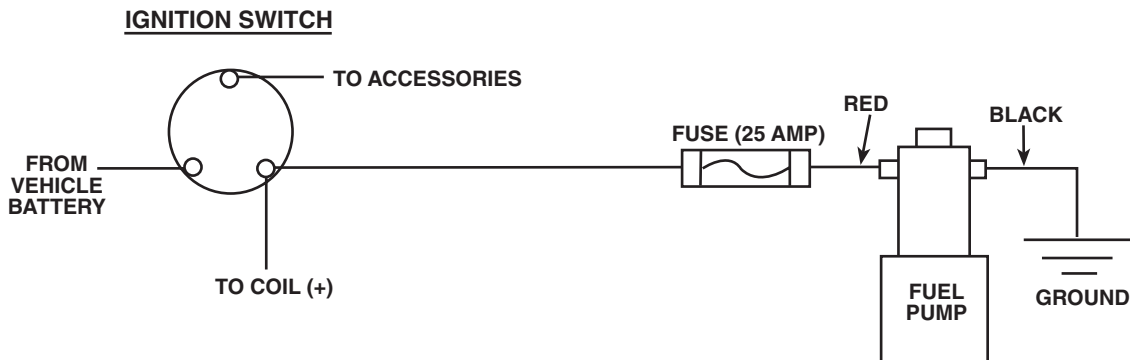
Wiring a pump to an oil pressure switch will provide power only when the ignition switch is on and the engine is running. This will prevent the pump from running if your engine stalls. Use 12 gauge wire or larger and be sure to disconnect the battery ground cable before wiring the pump. Refer to Figure 3 when connecting the pump to an oil pressure switch.

**FIGURE 3**

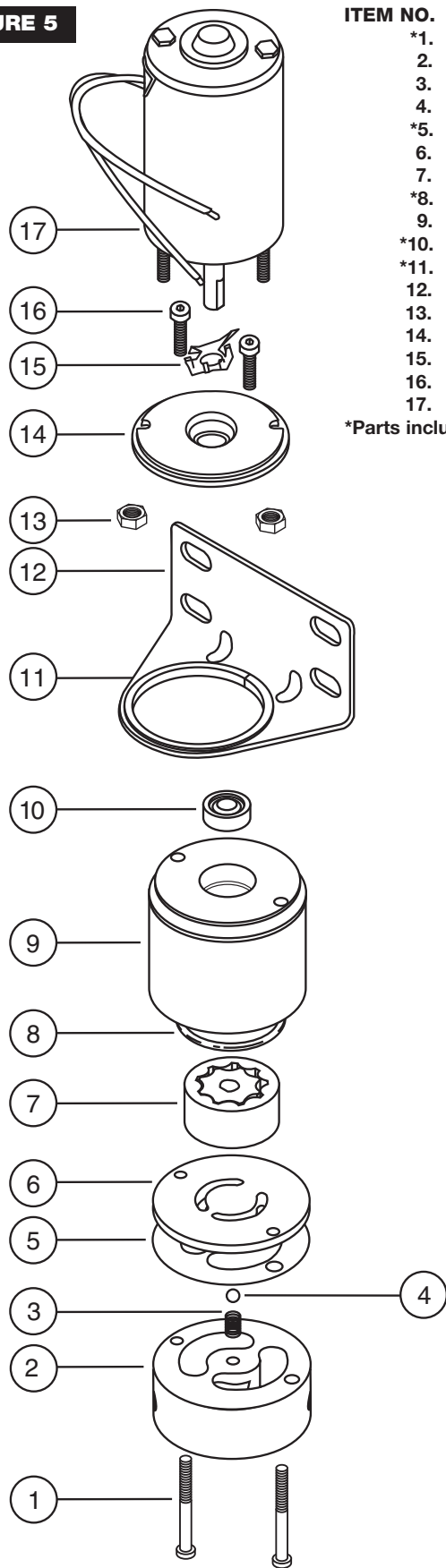


**FIGURE 4**

The pump may also be wired directly to the ignition "ON" terminal and grounded to the frame or battery. Refer to Figure 4 when connecting the pump to the ignition switch "ON" terminal.



**FIGURE 5**



- | ITEM NO. | DESCRIPTION               |
|----------|---------------------------|
| *1.      | Screw, Fuel Chamber (2)   |
| 2.       | Fuel Chamber              |
| 3.       | Spring, Air Bleed         |
| 4.       | Ball, Air Bleed           |
| *5.      | Gasket, Fuel Chamber      |
| 6.       | Port Plate                |
| 7.       | Gerotor                   |
| *8.      | O-Ring                    |
| 9.       | Pump Housing              |
| *10.     | Seal                      |
| *11.     | Gasket, Bracket Vibration |
| 12.      | Bracket                   |
| 13.      | Nut, Motor Housing (2)    |
| 14.      | Adapter, Motor            |
| 15.      | Washer, Spring            |
| 16.      | Screw, Motor Adapter (2)  |
| 17.      | Motor                     |

\*Parts included in Seal Kit

**SERVICE PARTS**

- |                                 |                |
|---------------------------------|----------------|
| <b>Seal and Repair Kit</b>      | <b>PN 3167</b> |
| COMP PUMP Series 110FI Gasoline |                |
| <b>Seal and Repair Kit</b>      | <b>PN 3168</b> |
| COMP PUMP Series 110FI Alcohol  |                |

**MAINTENANCE – PUMP DISASSEMBLY**

If your pump fails to produce adequate pressure or volume, it may require cleaning. Follow the steps below to disassemble and clean your Mallory Electric Fuel Pump. Refer to Figure 5 while performing the following steps.

**Step 1**

Remove the pump from the vehicle and clean pump exterior. Place the pump on its side on a clean work surface. Scribe or draw a line across the pump housing, port plate and fuel chamber so that you can reassemble the pump correctly.

**Step 2**

Remove the two fuel chamber screws from the bottom of the pump. Remove the fuel chamber and port plate.

**NOTE: Do not drop the Gerotor from the pump cavity.**

**Step 3**

Separate the port plate from the fuel chamber.

**NOTE: Do not drop the air bleed check ball and spring from the fuel chamber.**

**Step 4**

Place your hand beneath the Gerotor and hold the pump in an upright position. The gerotor should slide out of the pump and into your hand. **NOTE: Observe the position of the Gerotor and be careful not to reverse it when you reassemble the pump.** Inspect the gerotor housing and port plate for wear. If the gerotor has worn through the plating, return pump to Mallory for repair.

**Step 5**

Inspect the O-ring and gasket. Replace them if necessary. Reinstall the air bleed spring and check ball in the fuel chamber. Place the gasket and port plate on the fuel chamber. Install the fuel chamber assembly on the pump housing. Torque the fuel chamber screws.

**NOTE: DO NOT OPERATE THE PUMP WITHOUT FUEL. (Except for brief periods while priming).**

**IMPORTANT: Turn fuel chamber screws by hand until they contact the chamber. Then torque to 24 inch/pounds**