AEROMOTIVE
Part # 11103 & 11106
INSTALLATION INSTRUCTIONS

CAUTION:

Installation of this product requires detailed knowledge of automotive systems and repair procedures. We recommend that this installation be carried out by a qualified automotive technician.

Installation of this product requires handling of gasoline. Ensure you are working in a well ventilated area with an approved fire extinguisher nearby. Extinguish all open flames, prohibit smoking and eliminate all sources of ignition in the area of the vehicle before proceeding with the installation.

When installing this product, wear eye goggles and other safety apparel as needed to protect yourself from debris and sprayed gasoline.

WARNING!

The fuel system is under pressure. Do not open the fuel system until the pressure has been relieved. Refer to the appropriate vehicle service manual for the procedure and precautions for relieving the fuel system pressure.

The enclosed Aeromotive fuel pump utilizes o-ring sealed AN-08 style inlet and AN-06 outlet ports; these ports are **NOT PIPE THREAD** and utilize **NO THREAD SEALANT**.

Maximum continuous operating pressure should not exceed 70 psi.

A high capacity, 100 micron fuel filter must be installed between the fuel tank and pump inlet. We recommend an Aeromotive p/n 12304 filter. Call us for info.

The enclosed Aeromotive fuel pump does not utilize a check valve on the pumps outlet. If your application requires a check valve on the fuel pump outlet please order Aeromotive p/n 15106.

To use this pump in your vehicle's fuel system, we strongly recommend the following:

- **A by-pass style fuel pressure regulator must be used in the system.**
- **Gravity feed the pump by mounting it lower than and as close as possible to the fuel tank.**
- **If you are using a stock fuel tank, install a reservoir style sump in the bottom-rear of your fuel tank. Exercise extreme caution and follow all manufacturer's recommendations when installing a reservoir style sump.**
- **If you choose not to install a reservoir style sump, then you must install a high flow capacity fuel tank pickup.(Installing a high flow pickup instead of a reservoir style sump may shorten the fuel pump life and cause driveability problems. Stock fuel tanks have a small inlet reservoir that is quickly emptied by a high flow fuel system, causing pump starvation and cavitation. When using a pickup, you should maintain at least ½ tank of fuel in the vehicle at all times, to avoid emptying the stock inlet reservoir.)**
- **Utilize AN-08 size high pressure fuel lines, fittings and o-rings for all connections from the fuel tank pickup to the fuel rails in the engine compartment. (Call Aeromotive for availability.)**

Failure to follow the above recommendations may result in fuel leakage, bursting of the fuel lines, poor vehicle performance and/or decreased fuel pump life! Improper installation will void all warranties for this product!

Aeromotive system components are not legal for sale or use on emission controlled motor vehicles.

The following steps are typical of most installations:

1. Once the engine has been allowed to cool, relieve the fuel system pressure and disconnect the negative battery cable.

2. Raise the vehicle and support it with jack stands.

3. Referring to the appropriate vehicle service manual for instructions, remove the OEM fuel pump.

4. Install an after-market high flow capacity fuel tank pickup, per the manufacturer's instructions.

Note: Failure to mount the pump lower than and close to the fuel tank may cause the pump to run dry, resulting in extreme pump wear! Make sure the pump is located lower than and as close as possible to the fuel tank, so that the pump is always supplied with fuel!

5. Find a suitable place on the vehicle chassis to mount the Aeromotive fuel pump. Make sure the location will accommodate the pump mounting bolts, will position the pump lower than the fuel tank, is clear of the exhaust, is clear of any moving suspension or drivetrain components and will keep the pump clear of road obstructions or debris.

6. Using the bracket as a template, mark and drill four mounting holes to accept ¼" bolts. Mount the fuel pump using four ¼" bolts, nuts and lock washers.

Note: Be sure to route all fuel lines clear of any moving suspension or drivetrain components, and any exhaust components! Protect fuel lines from abrasion and road obstructions or debris.

7. Connect the fuel tank pickup to the fuel filter inlet and the fuel filter outlet to the fuel pump inlet. The inlet side of the fuel pump is where most fuel system problems occur; it is important to minimize any restrictions in this area.

8. Connect the fuel pump outlet to the vehicle's fuel rails in the engine compartment. See figure 1 for recommended system plumbing. **Make sure you use high pressure(150 psi minimum) fuel line for this connection!**

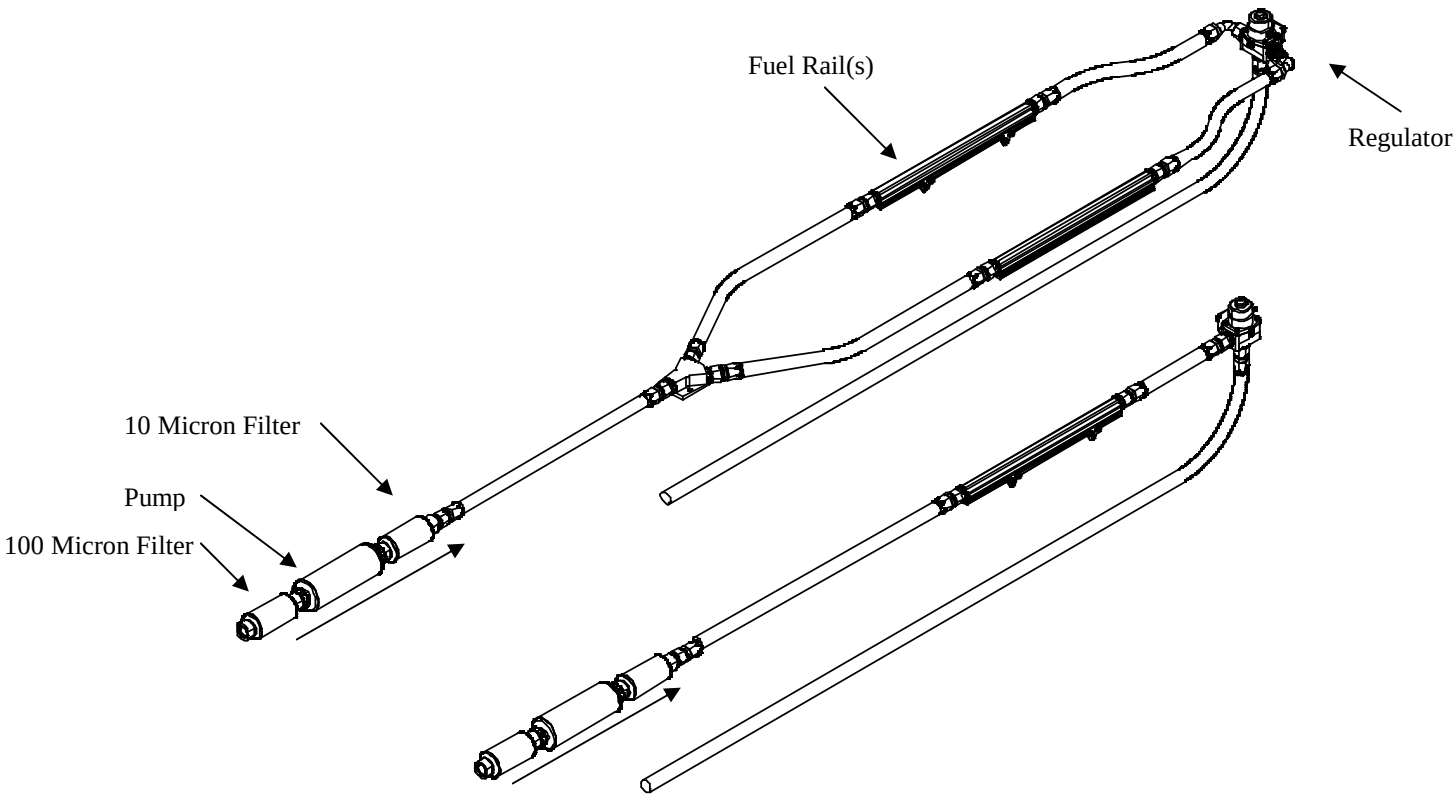
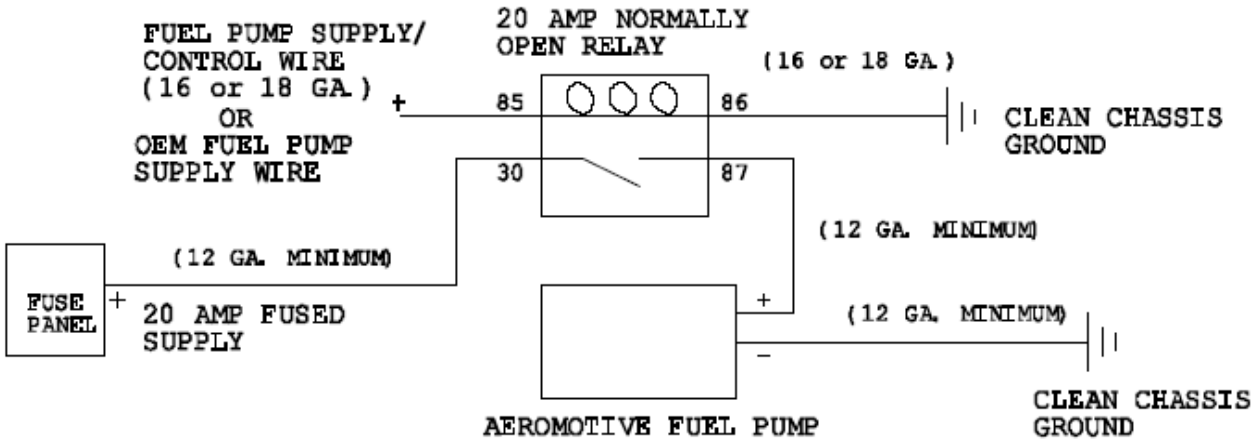


Figure 1

Note: Be sure to route all electrical wires clear of any moving suspension or drivetrain components and any exhaust components! Protect wires from abrasion and road obstructions or debris.

9. There are two ways to connect electrical power to the pump, depending on your fuel injection system. Make sure you use stranded, insulated copper wire, in the sizes shown, with matching crimp-type connectors for all connections. If your vehicle has an after-market ECM(Electronic Control Module) for running the fuel injection system, use step 10. If your vehicle has an OEM ECM, use step 11.

10. Locate the OEM fuel pump supply wire, if using an after-market ECM, locate the electrical terminal that controls the fuel pump. From that terminal, connect the Aeromotive fuel pump as shown in the following diagram.



11. Attach a suitable fuel pressure gauge to the fuel system schrader valve, fuel rail or fuel pressure regulator.

12. **Ensure that any spilled fuel and any fuel soaked shop towels are cleaned up and removed from the vicinity of the vehicle!**

CAUTION: ***While performing the following steps, if any fuel leaks are detected, immediately turn the ignition to OFF, remove any spilled fuel and repair the leak(s) before proceeding!***

14. Turn the ignition to ON **without starting the engine**, allow the pump to run for several seconds and check the fuel pressure. If there is no pressure, turn the ignition to OFF, wait one minute, then turn the ignition to ON and recheck the pressure. Repeat this ignition OFF and ON procedure until the gauge registers pressure or you detect a fuel leak. If no pressure is registered on the gauge after running the pump for several seconds and you have found no leaks, check all fuel and electrical connections to determine the cause.

15. Once the fuel pressure gauge registers pressure, start the engine. The fuel pressure gauge should register between 40 and 70 psi. If you have installed an adjustable fuel pressure regulator, adjust it to the desired setting.(For maximum fuel system performance, we recommend using an Aeromotive adjustable fuel pressure regulator; call us for info.)

16. Shut the engine off. Using suitable clips and other mounting hardware, secure the newly installed fuel lines and electrical wires by attaching them to the vehicle chassis.

17. Carefully lower the vehicle to the ground.

18. Test drive the vehicle to insure proper operation and re-check the fuel system for leaks. **If any leaks are found, immediately discontinue use of the vehicle and repair the leak(s).**