MSD INSTALLATION INSTRUCTIONS

Atomic EFI
PN 2920 - Fuel Pump Kit, 525 HP

⚠WARNING Installation of this product requires detailed knowledge of automotive systems and repair procedures. Installation of fuel system parts and any fuel tank modifications must be carried out by a qualified automotive technician. Installation of fuel system parts requires handling of gasoline. Ensure that work is performed 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 beginning the installation.

When working with fuel systems, eye goggles and other safety apparel should be worn to protect against debris and sprayed gasoline. The finished work must be thoroughly checked to ensure there are no fuel leaks.

Parts Included:
1 - Fuel Pump
1 - Small Parts Bag (screws, nuts & washers)
2 - Fuel Pump Clamps
1 - Pre Filter (pre pump)
1 - Post Filter (post pump)
15 ft 3/8" Fuel Line

Parts Bag:
1 - Clamp, Pre-filter
1 - Clamp, Post-filter
7 - Clamps, Fuel Line
2 - Self Tapping Screws
2 - Fitting, 6AN, 90°
2 ft. Black Wire
1 - 14g Ring Lug

⚠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 Fuel Pump Kit, PN 2920, contains all the components necessary to set up a returnless fuel system for the Atomic EFI. This means that a return line to the fuel tank is not required, which simplifies the fuel system installation. This kit can also be used with the MSD PN 2922 return kit, if a return line to the tank is needed.

NOTICE A Returnless fuel system does have limitations depending on your application and a few other variables. Please see the included addendum for determining whether a returnless system is right for you.

INSTALLING THE RETURNLESS FUEL SYSTEM

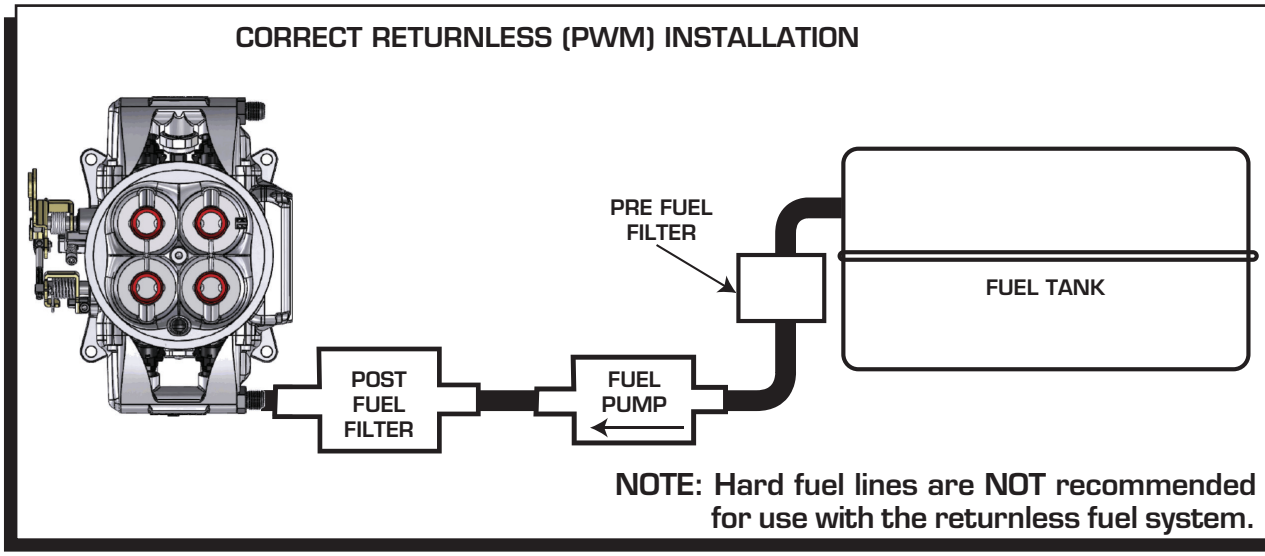


Figure 1 Atomic Returnless Fuel System.

INSTALLING THE FUEL PUMP

The Fuel Pump, PN 2920, is designed to support engines up to 525hp. The pump specifications will support the volume and pressure required when being used with a returnless or return style fuel system.

1. It is recommended to mount the pump close to the gas tank and in a position that is below the lowest point of the tank.
2. Before mounting the pump, it is recommended to install the ground wire to the negative terminal and the orange wire from the Atomic to the positive terminal with the hardware supplied in the small parts bag. Connect the ground wire to a clean, bare metal ground source.
3. Connect the fuel line to the pump and secure with a small fuel line clamps, and then mount the pump with the supplied clamps and self drilling screws.
4. Install the fuel filters. Find a suitable location for the supplied fuel filters and use the supplied clamps and self drilling screws to secure them to their mounting locations. The small filter is the pre-filter and needs to be mounted between the fuel tank and the fuel pump. The large filter is the post filter and needs to be mounted between the fuel pump and the throttle body. Both filters and the pump incorporate 3/8" beaded inlet/outlets. **Note:** Many carbureted fuel tanks have a 5/16" diameter supply line. The Atomic EFI requires a 3/8" diameter supply line. Fuel line size mismatching will cause fuel vapor lock, even if the vehicle qualifies for returnless using the points system(described (described in PN 2910 instructions.
5. Connect the supplied fuel hose from the pump to the filter using the supplied clamps.
6. Determine if the fuel line is going to be routed to the front or rear port on the throttle body. Route the hose to the inlet port making sure to secure it to the frame and away from heat sources and suspension components.
7. Install the 3/8" hose to the inlet of the Atomic throttle body using the -6 fitting supplied in the kit. It is recommended to use dish soap to push the hose over the fitting. Make sure the line is pushed all the way to the end of the fitting. **DO NOT** use a clamp on the push lock fitting.

⚠WARNING 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!

8. 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.

Failure to follow the above 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!

IN TANK MOUNT

The MSD pump can be used in the tank however it would require a sock, or filter element, on the pickup side. It is important to note that the wiring used to run the pump will need to meet requirements to be submersed in fuel. When wiring an in-tank pump, it is recommended to use a wire that conforms to SAE specifications J1128 and J378. This wiring features a Thermoplastic insulated wiring with polyvinyl chloride insulation for protection against gasoline, oil, and more.

In addition, different fuel line will be required internally if the pump is to be mounted in the tank. Fuel line that meets SAE30R10 specifications **MUST** be used. **DO NOT** use the included fuel line inside the fuel tank. Failure to do so will cause severe damage to the engine and/or fuel system.

RETURN STYLE FUEL SYSTEM

If you have decided that a returnless fuel system will not produce the best performance for your application, you will need to route a return line in the fuel system. There are many aftermarket fuel regulators available. The fuel can then be routed to the sending unit of the gas tank, or even the filling port of the tank. This will take modification. Figure 2 shows an example of a return style fuel system. The most efficient system is to return the fuel from the opposite outlet of the throttle body.

The fuel pressure required for a return fuel system is approximately 45psi. If the pressure is not enough the injectors will be over-worked and an "INJ DC" code will appear in the Diagnostics on the Handheld. If this happens increase the fuel pressure by 5 PSI increment and test again. A rule of thumb is to start at approximately 60 psi for engines over 400 horsepower.

NOTICE With a return style system you must connect the fuel lines as pictured below. Connecting them like in the lower picture can cause fluid hammer inside of the throttle body on transient operations. This will cause hesitatons and possibly dead zones at certain RPM ranges.

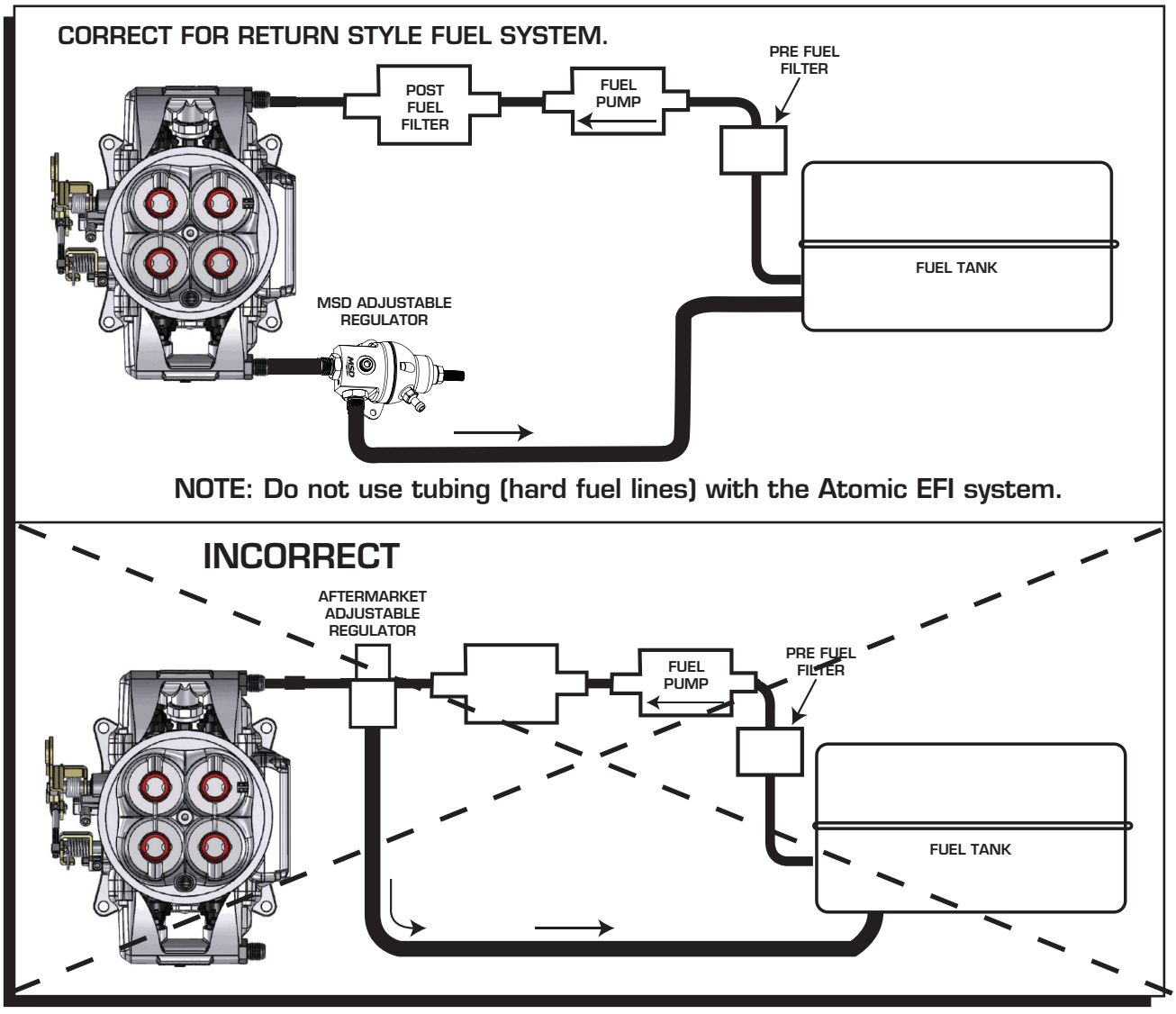


Figure 2 Atomic Return Style Fuel System.

The MSD Customer Support phone lines are available 7am-5pm Mountain Standard Time Monday through Friday to answer any technical questions you may have in regards to installing the Atomic EFI or other MSD parts (915) 855-7123.

TECH NOTES

Service

In case of malfunction, this MSD component will be repaired free of charge according to the terms of the warranty. When returning MSD components for warranty service, **Proof of Purchase** must be supplied for verification. After the warranty period has expired, repair service is based on a minimum and maximum fee.

All returns must have a Return Material Authorization (RMA) number issued to them before being returned. To obtain an RMA number please contact MSD Customer Service at 1 (888) MSD-7859 or visit our website at www.msdperformance.com/rma to automatically obtain a number and shipping information.

When returning the unit for repair, leave all wires at the length in which you have them installed. Be sure to include a detailed account of any problems experienced, and what components and accessories are installed on the vehicle. The repaired unit will be returned as soon as possible using Ground shipping methods (ground shipping is covered by warranty). For more information, call MSD at (915) 855-7123. MSD technicians are available from 7:00 a.m. to 5:00 p.m. Monday - Friday (mountain time).

Limited Warranty

MSD warrants this product to be free from defects in material and workmanship under its intended normal use*, when properly installed and purchased from an authorized MSD dealer, for a period of one year from the date of the original purchase. This warranty is void for any products purchased through auction websites. If found to be defective as mentioned above, it will be repaired or replaced at the option of MSD. Any item that is covered under this warranty will be returned free of charge using Ground shipping methods.

This shall constitute the sole remedy of the purchaser and the sole liability of MSD. To the extent permitted by law, the foregoing is exclusive and in lieu of all other warranties or representation whether expressed or implied, including any implied warranty of merchantability or fitness. In no event shall MSD or its suppliers be liable for special or consequential damages.

*Intended normal use means that this item is being used as was originally intended and for the original application as sold by MSD. Any modifications to this item or if it is used on an application other than what MSD markets the product, the warranty will be void. It is the sole responsibility of the customer to determine that this item will work for the application they are intending. MSD will accept no liability for custom applications.

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