

# MSD INSTALLATION INSTRUCTIONS

## Competition Fuel Pressure Regulator For Fuel Injection PN 29389

**IMPORTANT:** This regulator must use a fuel return line. The fuel return line runs between the fuel bypass port of the regulator and the fuel tank. Fuel pressures cannot be adjusted if the fuel return line is absent.

### Parts Included in this kit:

1 - Fuel Pressure Regulator	2 - 3/8" NPT Pipe Plugs
1 - Bracket	2 - AN-8 Fittings
2 - Bracket Mounting Screws	2 - O-rings for Fittings

### SPECIFICATIONS:

Port thread sizes: 3/8" NPT and AN-8  
Adjustment range: 30-100 PSI  
Fuel Application: Gasoline and Alcohol/Methanol

### GENERAL INFORMATION

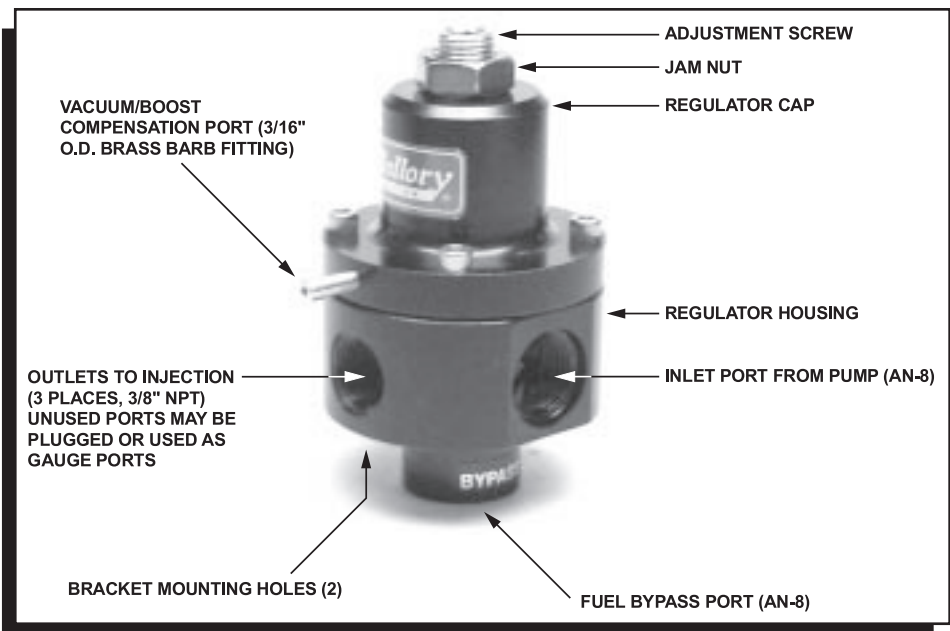
Mallory's 4305M regulator regulates fuel pressure between high pressure fuel pumps and fuel injection systems. The regulator is recommended for Mallory Fuel 60FI, 110FI, or any fuel injection pump designed to produce 30-100 PSI.

The 4305M regulator is a return style fuel pressure regulator. The excess fuel and fuel pressure is sent back to the fuel tank through the fuel return line. The fuel return line runs between the fuel bypass port of the regulator and the top of the fuel tank. The fuel tank must have provisions for a fuel return line.

This regulator is equipped with a vacuum/boost compensation port (brass barb fitting) that can be used to momentarily decrease fuel pressure

(vacuum compensation) at idle and part throttle, or increase fuel pressure under blower boost (boost compensation). While it is not necessary to connect a hose to the vacuum/boost compensation port, it may be beneficial in some cases. However, the small plug on the barb must be removed before use.

You can mount the 4305M regulator at any angle. For maximum efficiency, mount it as close as possible to the fuel injection system. DO NOT mount the regulator on or near exhaust manifolds. A bracket is provided for convenient mounting.



# **INSTALLATION INSTRUCTIONS**

## **INSTALLING THE 4305M REGULATOR**

1. Connect the fuel line and the return line. The return line must be attached to the bottom port on the regulator. The fuel line must be attached to the upper -8AN port on the regulator. Fittings must be purchased to adapt the fuel line and the return line to the regulator. The unused port(s) in the regulator can be plugged or used as gauge port(s).
2. Turn the fuel pump on and check for leaks. If leaks are found on the NPT (tapered) fittings, make sure the threads are covered properly with Teflon sealer.  
**Note:** If the fuel system will not prime properly, back the adjustment screw all the way out of the regulator until the system is primed. Then reinstall the adjustment screw.
3. Connect the vacuum hose that was originally connected to the stock regulator to the small nipple on the Mallory regulator. This will reduce fuel pressure at idle and during light-throttle cruise.
4. Set the fuel pressure. Loosen the jam nut on the top of the regulator and turn the brass adjustment screw to adjust the pressure. Clockwise increases pressure.

## **FUEL LINE SIZE (FROM PUMP TO REGULATOR)**

Fuel line size is determined by the horsepower of the engine.

- Up to 350 HP: 5/16" or -4AN
- Up to 500 HP: 3/8" or -6AN
- Up to 700 HP: 1/2" or -8AN
- Up to 1200 HP: 5/8" or -10AN

## **RETURN LINE SIZE**

The size of the return line is determined by the output of the fuel pump.

- Up to \*29 gal/hr (110 liter/hr): 5/16" or -4AN
  - Up to \*45 gal/hr (170 liter/hr): 3/8" or -6AN
  - Up to \*90 gal/hr (340 liter/hr): 1/2" or -8AN
  - Up to \*180 gal/hr (680 liter/hr): 5/8" or -10AN
- \*Pump output at 40 psi.**

## **PUMP SIZE**

Pump size is determined by horsepower.

Multiply horsepower by .083 to determine pump size in gallons per hour.

Example: 500 HP x .083 = \*42 gal/hr  
Multiply horsepower by .314 to determine pump size in liters per hour.

Example: 500 HP x .314 = \*157 liters/hr

\*Pump output at 40 psi.

**Note:** Add 25% larger pump for supercharged applications.

### **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.msdpower.com/rma](http://www.msdpower.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.