



## INSTALLATION INSTRUCTIONS

# COMPETITION FUEL PRESSURE REGULATOR FOR FUEL INJECTION PART NO. 4305M

**IMPORTANT:** This regulator must use a fuel return line. The fuel return line runs between the fuel by pass 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
- 1 Bracket
- 2 Bracket Mounting Screws
- 2 3/8" NPT Pipe Plugs
- 2 AN-8 Fittings
- 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

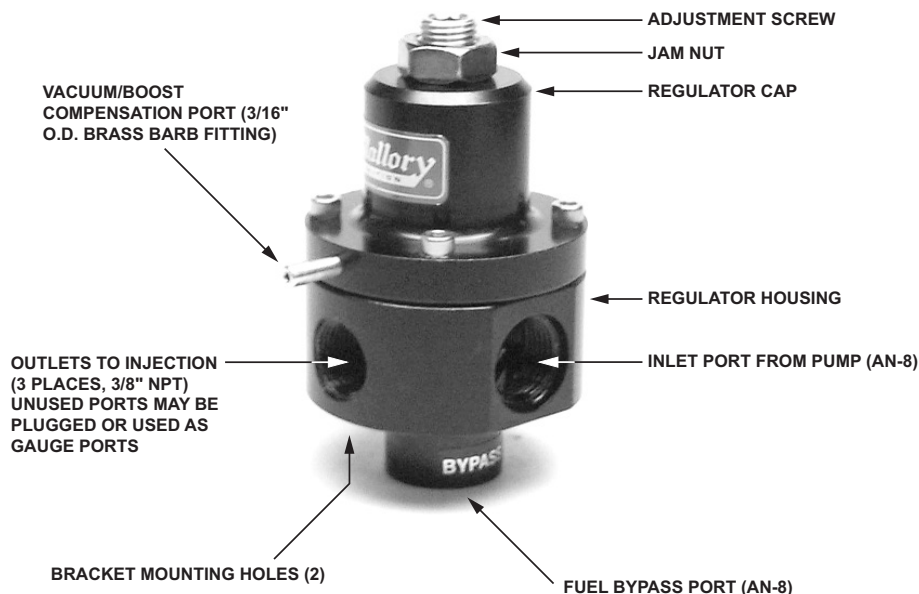
## GENERAL INFORMATION

Mallory's 4305M regulator regulates fuel pressure between high pressure fuel pumps and fuel injection systems. The regulator is recommended for Mallory COMP PUMP® 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.



## 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 thread 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.**



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