



## INSTALLATION INSTRUCTIONS

# COMPETITION RETURN STYLE FUEL PRESSURE REGULATOR PART NO. 4307M

**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: 4-25 PSI NOTE: Exact adjustment range depends on pump capacity and return line size.

Fuel Application: Gasoline and Alcohol/Methanol  
Service Kit: Part No. 3178

### GENERAL INFORMATION

Mallory's 4305M regulator regulates fuel pressure between high pressure fuel pumps and carburetors or throttle body fuel injection systems. The regulator is recommended for fuel pumps up to 200 gallons per hour.

The 4307M 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 4307M regulator at any angle. For maximum efficiency, mount it as close as possible to the carb or throttle body. DO NOT mount the regulator on or near exhaust manifolds. A bracket is provided for convenient mounting.

### INSTALLING THE 4307M 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. 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)

Minimum fuel line size is determined by the horsepower of the engine.

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

### RETURN LINE SIZE

The minimum return line size 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 200 gal/hr (680 liter/hr): 5/8" or -10AN

VACUUM/BOOST  
COMPENSATION PORT (3/  
O.D. BRASS BARB FITTING)

OUTLETS TO CARBURETOR(S) —  
(3 PLACES, 3/8" NPT)  
UNUSED PORTS MAY BE  
PLUGGED OR USED AS  
GAUGE PORTS

BRACKET MOUNTING HOLES (2)



ADJUSTMENT SCREW  
JAM NUT  
REGULATOR CAP

REGULATOR HOUSING

INLET PORT FROM PUMP (AN-8)

FUEL BYPASS PORT (AN-8)



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