

**INSTALLATION INSTRUCTIONS****HIGH VOLUME FUEL RAILS
FOR GM TPI****Part No. 4311M****APPLICATIONS: Small Block Chevy V8 with TPI or Accel Super Ram
Electronic Fuel Injection.****PARTS LIST:**

1 Driver's side fuel rail	2 Crossover tubes	2 Fittings, brass 3/8NPT plug
1 Passenger side fuel rail	2 O-rings for crossover tubes	1 Fitting, -6AN to 3/8 Saginaw
1 Hose, -6AN braided 90°	3 Fittings, -8AN port to -6AN male	1 Fitting, -6AN to 5/16 Saginaw
1 Hose, -6AN braided 90°/45°	2 Fittings, -8AN port plug	1 Nut, 8mm x 1.25
1 Pressure regulator	1 Fitting, -8AN port to -6AN female	1 Lockwasher, 8mm
1 Regulator bracket	1 Fitting, -8AN port to cold start adapter	
2 Regulator bracket screws	6 O-rings, for -8AN ports	

GENERAL INFORMATION

A factory repair manual should be referred to during installation. Mallory fuel rails can be used on stock engines. However, the adjustable, high flow, remote mount regulator makes this kit ideal for high performance engines using high flow fuel pumps. Adapter fittings and -6AN lines are supplied which allow Mallory fuel rails to be connected to the stock fuel line and return line. However, applications over 500 horsepower should use larger-than-stock lines. Mallory fuel rails and regulator accept -8AN for those applications over 500 hp. Recommended line and pump sizes are listed after the installation portion of this form.

NOTE: These instructions show installation on an F-body (Camaro/Firebird). Installation on a Corvette is similar, however, the routing of the fuel lines and the mounting location of the regulator may be different.

ASSEMBLE THE FUEL RAILS AND REGULATOR**See Photos 1 and 2**

- 1) Make sure to install the supplied o-rings on all -8AN port fittings before installing the fittings into the rails and regulator.
- 2) The supplied -8AN port plugs may be hex or button head.
- 3) Engines equipped with a cold start injector will use the "-8AN port to cold start adapter" in the end of the driver's side rail. If a cold start injector is not used, install a -8AN port plug in the end of the rail.
- 4) O-rings are supplied for the crossover tubes. Be sure to lubricate o-rings with oil before pressing the tubes into the rails.
- 5) Connect the hoses to the rails and regulator, but leave the fittings loose until the rails are installed on the engine. This makes it easier to route the hoses around obstructions.
- 6) The extra ports on the regulator can be plugged with supplied plugs or used for gauge ports or used to supply fuel for a nitrous system. Be sure to use thread sealer on any tapered NPT fittings.

INSTALL RAIL ASSEMBLY ON THE ENGINE**See Photo 3 and Photo 4**

- 1) Remove the upper manifold, runners, and stock fuel rails (consult a repair manual for more information).

- 2) Remove the injectors from the stock fuel rails by removing the small metal clips near the top of each injector. Save these clips they must be re-used.

- 3) Re-install the metal clips onto the injectors. Lubricate injector o-rings with oil. Press the injectors into the Mallory rails.

NOTE: The clips must be on the injectors to prevent the injectors from extending too deep into the rails and damaging the o-rings.

- 4) Install the rail assembly (with injectors) onto the lower manifold. Oil on the lower o-rings will help the injectors press into the manifold easier. The stock bolts can be re-used to hold the rails to the lower manifold.

- 5) Connect the cold start injector (if applicable).

- 6) Using the nut and washer supplied, mount the regulator to the stud on the shock tower (see photo).

- 7) Connect the factory fuel line to the Mallory hose with the -6AN to 3/8 Saginaw fitting. Connect the factory return line to the return port on the bottom of the regulator.

- 8) Use one of the extra ports on the regulator to connect a pressure gauge (if desired).

- 9) Find the vacuum hose that was originally connected to the stock fuel pressure regulator. Connect this hose to the small barb on the Mallory regulator. Because the regulator is mounted remotely, an additional length of vacuum hose will be needed.

- 10) Turn the pump on and check for leaks.

NOTE: If the system will not prime properly, remove the adjustment screw from the regulator until the system is primed.

- 11) Reinstall the upper manifold, runner, and any other components that were removed earlier.

- 12) Set the fuel pressure. Loosen the jam nut on the regulator and turn the adjustment screw while the pump is running to adjust fuel pressure. Clockwise increases pressure. The best fuel pressure depends on many variables. However, a starting point of about 45 psi (with the vacuum line disconnected) is usually close.

FIGURE 1

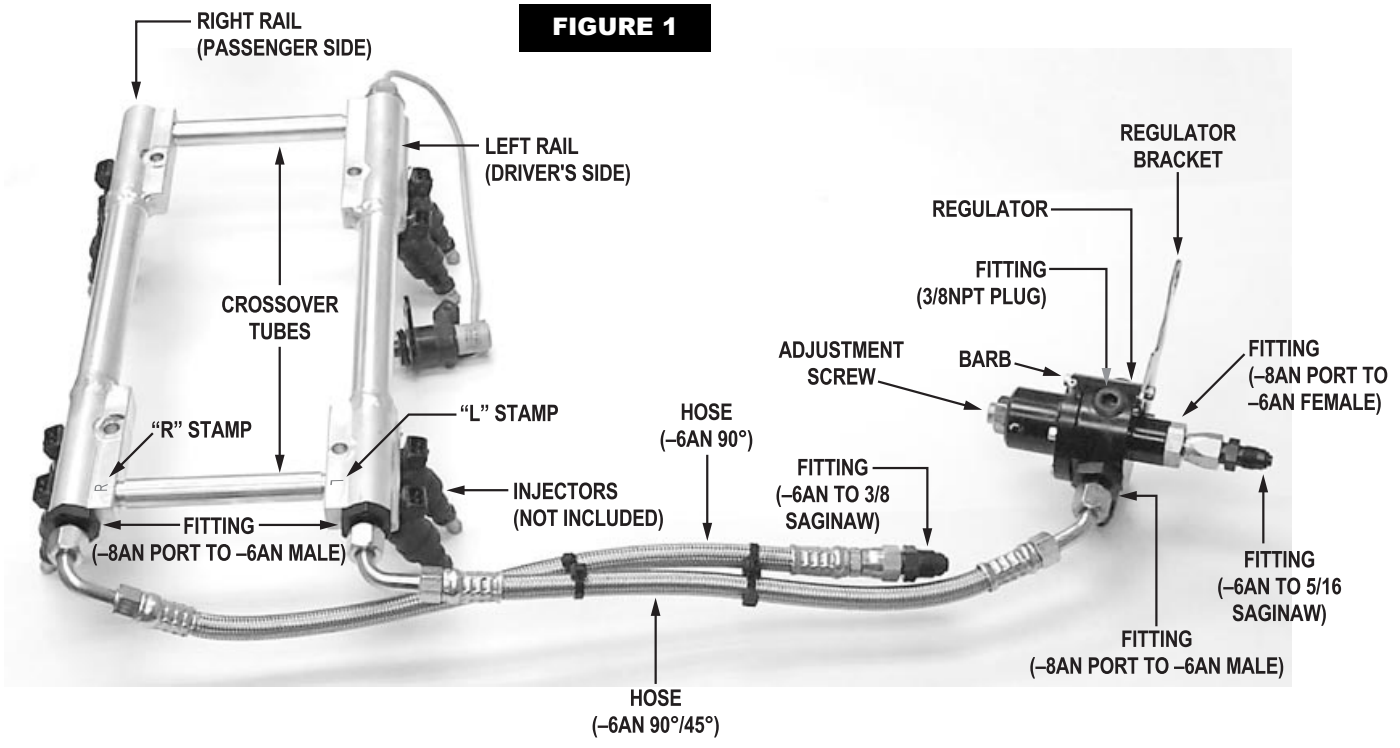


FIGURE 2

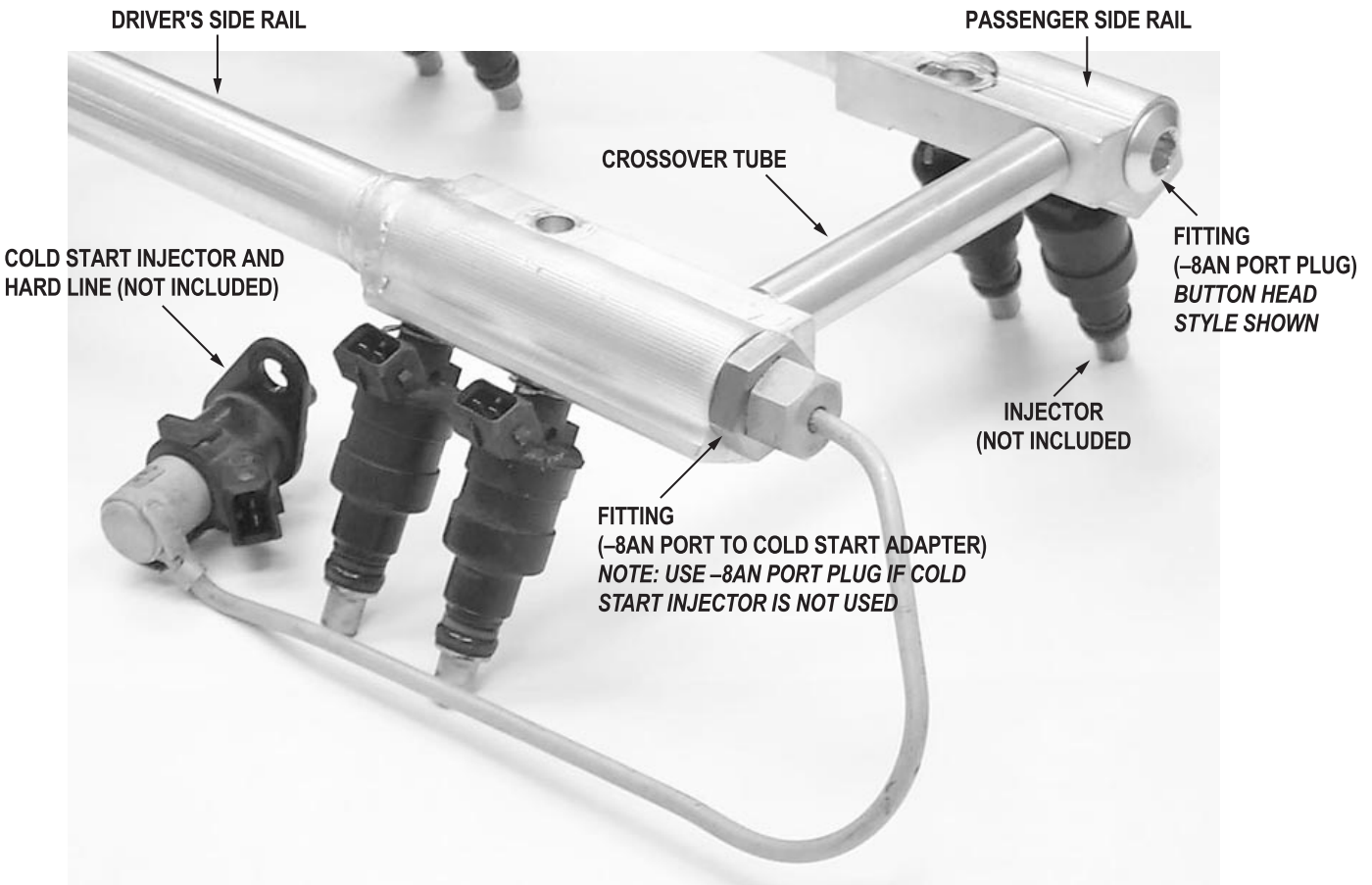


FIGURE 3



METAL INJECTOR CLIPS MUST BE IN PLACE BEFORE INSERTING INJECTORS INTO MALLORY RAILS.

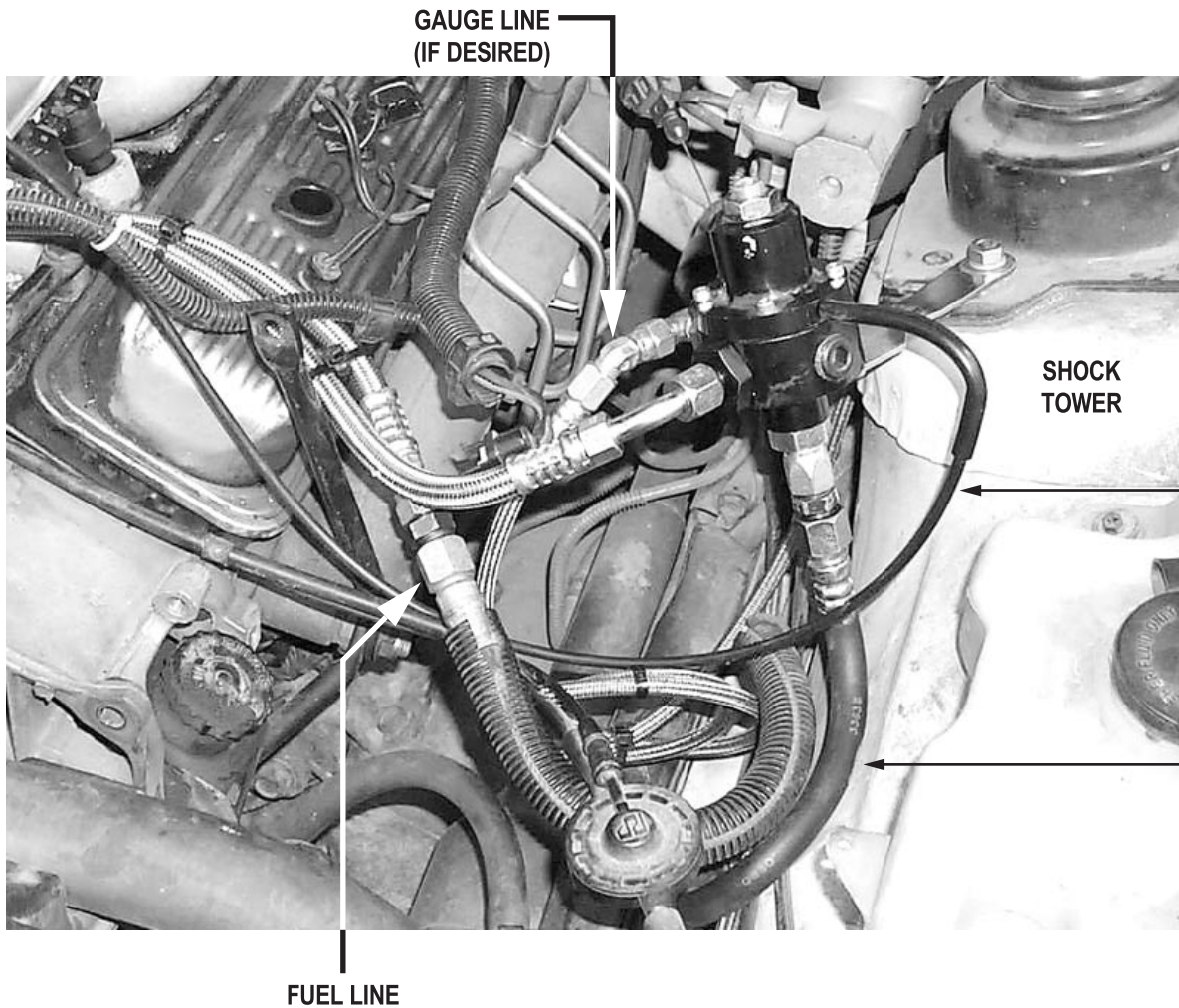


FIGURE 4

GAUGE LINE
(IF DESIRED)

SHOCK
TOWER

VACUUM HOSE

RETURN LINE

FUEL LINE

FUEL LINE SIZE

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

Return line size is determined by the output of the fuel pump.

Up to *29 gal/hr (110 liters/hr) 1/4" or -3AN

Up to *45 gal/hr (170 liters/hr) 5/16" or -4AN

Up to *90 gal/hr (340 liters/hr) 3/8" or -6AN

Up to *180 gal/hr (680 liters/hr) 1/2" or -8AN

*Pump output @ 45psi

PUMP SIZE

Pump size is determined by the horsepower of the engine.

Horsepower x .083 = gallons per hour @ 45 psi

Example: 500hp x .083 = 42 gal/hr

or

Horsepower x .314 = liters per hour @ 45 psi

Example: 500hp x .314 = 157 liters/hr

NOTE: add 25% to pump size for supercharged applications.



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