

**Professional
Products®**

Instructions for 10608 Fuel Rail Kit

This kit is specifically designed to be used with a Professional Products Intake Manifold. It will fit on manifolds #52038 or #52039. These manifolds are designed to fit a small block Chevy engine.

Kit #10608 - Fits Professional Products Intake Manifolds #52038 or #52039.

NOTE: Check the drawing and bill of materials on the back side of these instructions to make sure you have all the parts listed. This kit is supplied with an adjustable fuel pressure regulator. We supply both a -6AN and a -8AN inlet fuel fitting. A -6AN fitting is supplied for the return line. We recommend the -6 inlet fitting for most low to medium performance street applications up to about 450 hp and the -8 for more powerful engines. If you do not have room to mount the regulator to the end of the fuel rail, as shown in the drawing, it can be positioned on the firewall or inner fender panel. You will then need a length of -6 or -8 hose with appropriate hose ends to plumb from the regulator to the rail. These parts are not included in this kit. Note that depending upon your configuration and engine layout, if you have room, the regulator can be mounted on the front or rear of either rail.

REMOVAL OF EXISTING FUEL RAILS (if applicable)

1. Disconnect the ground connection to your vehicle's battery. This is a safety precaution. Allow engine to cool before proceeding.
2. Your stock fuel rails will have a valve on them that looks like a tire valve. This will usually be at the front end of one rail and will have a black plastic cap on it. Remove the cap. If you press on the core of the valve, it will release the pressure in the fuel rails. Caution!! Fuel will spray out and you should have a towel or other absorbent cloth to catch any fuel that is released. Bleed system until flow stops. Wipe up any spills that may occur.
3. Remove any bolts or screws that hold the rails to the engine. You may want to save these screws as some of them have other uses. However, new stainless screws are provided in the kit for reattaching our rails if you do not need or want to use the stock screws.
4. Detach electrical connections from each injector. Disconnect anything attached to fuel rails. Remove the fuel rail assembly. Each injector has an o-ring on each end of it. One end fits tightly into the rail and the other end fits tightly into the manifold. When you lift up on the rails, it may pull off of the injectors or it may bring some of them with it. If so, be careful that they do not drop out and become damaged. Handle injectors with care.
5. Inspect the o-rings on the injectors. If you see any deterioration or cuts or slices, they must be replaced. It's not a bad idea to replace them in any event if the vehicle is not new.

INSTALLATION OF FUEL RAIL KIT

1. Lubricate O-rings on both ends of injectors with a light oil or WD-40 or equivalent.
2. Carefully push injectors into manifold. Do not cock them sideways when you do this or you can damage the O-ring.
3. Install all necessary fittings into fuel rails. Clamp rails in a vise with special jaws to protect finish. Follow these instructions for installing fittings.
4. Determine which end of which rail you want to mount the fuel pressure regulator. Or, you can mount it on the firewall or inner fender panel with a hose to the regulator. If you mount it on one of the rails, thread the blue 3/8-NPT to 3/8-NPT nipple fitting (#9) into selected rail. Do not use Teflon tape as it can shred and get into the fuel system, clogging the injectors. Use a special sealant for pipe threads available in any hardware store, such as Loctite #569. Please carefully follow these steps when installing any fitting into any of the fuel rail parts. Thread fitting (with pipe sealer on threads) into rail. Tighten it with a wrench until it stops. Then back it out about a half a turn. Then retighten it. Each time you do this, it will go in a little further. Keep doing this until it is securely tight. Do not over tighten as the rail may split.
5. Thread the 3/8-NPT to -6AN fittings (#1) into ports on bottom side of rails in the center. Crossover hose goes under the plenum on this installation. Follow same procedure as outlined in step 4.
6. Thread the reducer fitting (#14) into the end of one of the rails. Then thread the supplied 1/8-NPT pipe plug (#15) into the reducer. If you want to utilize a factory style fuel pressure bleeder valve, you can get one from a Ford dealer and thread it into the reducer instead of the pipe plug. The Ford part number for the valve is E0AY-9H321-A. This valve is used for relieving pressure from the system if needed for service. The plug the remaining open 3/8-NPT ports in the rails with the 3/8 pipe plugs (#13).
7. The supplied fuel pressure regulator has two 3/8-NPT ports in the sides of the body and one at the bottom. Either port in the side can be an inlet or an outlet. We supply both a 90° 3/8-NPT to -6AN (#3) and a 90° 3/8-NPT to -8

AN (#4) fuel inlet fitting. For installations up to 450-500 hp, you can use the -6 fitting (#3) as an inlet and for higher horsepower, use the -8. Thread the supplied blue 45° 3/8-NPT to -6AN adapter fitting (#6) into bottom of regulator. This is for your return line to the fuel tank. Attach the regulator to the rail by threading it onto the previously installed 3/8 nipple. Do this before installing rail to manifold.

8. Position each fuel rail over the injectors and with lubrication on the injector O-rings, carefully but firmly push rails down until you feel them seat.

9. Thread supplied M6 x 65 screws (#12) and flat washers (#11) through rails and standoffs (#8). Thread screws into tapped holes on the manifold. Tighten screws with a Phillips screwdriver.

10. Attach crossover hose assembly (#5) to the two fittings in the bottom of the rails threading hose assembly under the plenum chamber of manifold.

FINAL STEPS OF INSTALLATION

11. Go over entire system and check that every single connection is tight.
12. Reconnect battery.
13. Turn on ignition so that electric fuel pump begins pumping but do not start car. Recheck all connections for any leaks. This includes where injectors go into fuel rails. If leaks occur, turn off ignition. Correct any problems. Wipe up any gas puddles.
14. Repeat step 13, again carefully checking for any leaks.
15. Once you are confident that no leaks occur, start engine and check for leaks again with engine running. Check where injectors seat into manifold. Again, if you see any leaks, immediately stop engine and fix the problem.
16. It is a good idea to check your system on a regular basis to make sure that no leaks develop, especially in the first few days you drive the vehicle. Gasoline leaks can turn into a very dangerous and expensive proposition.

SPECIAL INSTRUCTIONS FOR FUEL PRESSURE REGULATORS

Special Instructions for Fuel Pressure Regulators: The regulators used in these fuel rail kits are factory pre-set for 40 PSI of fuel pressure. We suggest you check the pressure with a fuel pressure gauge. **Pressure adjustments must always be made with the engine idling.** Turn the top adjustment stud clockwise for more pressure, counter-clockwise for less. Tighten lock nut once desired pressure is obtained. Typically pressure should be set in the 40 to 50 PSI range for EFI equipped engines depending upon the application. Check specifications for your specific system. The 3/8-NPT port on the bottom of the regulator is the bypass or return line. Either of the the two 3/8-NPT ports on the sides of the regulator can be used as inlet or outlet. The 1/8-NPT port in the side is for a fuel pressure gauge. You can use a Professional Products #11113 fuel pressure gauge (or equivalent) which will thread directly into this port.

Special Note on Alternate Mounting/Plumbing System: See our website at www.professional-products.com. Go to the Fuel Rail section and look for a link called "Alternate Regulator Mounting" for a diagram showing another way you can plumb your fuel inlet, return, and regulator location.



10671



10673

Professional Products offers two styles of EFI regulators. A 2-port model (far left) supplied in this kit, and a 4-port model, which can be used to run a separate inlet line into both fuel rails. Plug unused port with a 3/8-NPT pipe plug. For alternative regulator mounting with this rail, see our web site.

Optional Professional Products Fuel Fittings - If this is an engine swap and you are using this setup in a late model vehicle and want to connect the system up to the stock fuel lines, the following fittings will be useful. These fittings are made of stainless steel. All have 3/8-NPT threads except the 52185 which has -6AN threads. The 52185 fitting can be used to create an extension hose from the end of the rail to the factory inlet line if needed.



52180



52181

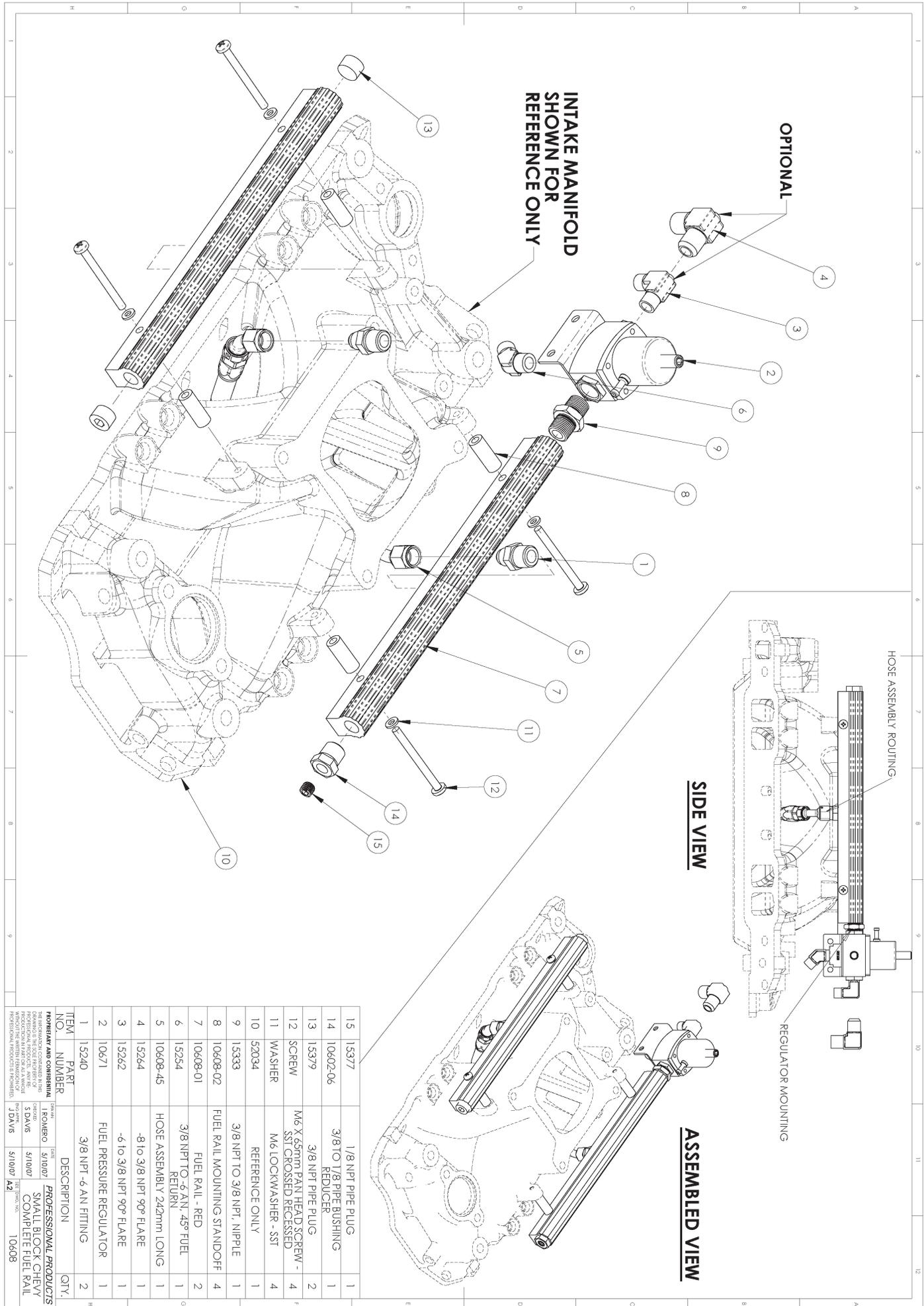


52183



52185

52180 - Connects to fuel inlet
52181 - Connects to fuel inlet
52183 - Connects to fuel return
52185 - Connects to fuel inlet



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	15240	3/8 NPT -6 AN FITTING	2
2	10671	FUEL PRESSURE REGULATOR	1
3	15262	-6 to 3/8 NPT 90° FLARE	1
4	15264	-8 to 3/8 NPT 90° FLARE	1
5	10608-45	HOSE ASSEMBLY 242mm LONG	1
6	15254	3/8 NPT TO -6 AN 45° FUEL RETURN	1
7	10608-01	FUEL RAIL - RED	2
8	10608-02	FUEL RAIL MOUNTING STANDOFF	4
9	15333	3/8 NPT TO 3/8 NPT, NIPPLE	1
10	52034	REFERENCE ONLY	1
11	WASHER	M6 LOCKWASHER - SST	4
12	SCREW	M6 X.65mm PAN HEAD SCREW - SST CROSSBED RECESSED	4
13	15379	3/8 NPT PIPE PLUG	2
14	10602-06	3/8 TO 1/8 PIPE BUSHING REDUCER	1
15	15377	1/8 NPT PIPE PLUG	1

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