

INSTALLATION INSTRUCTIONS

FUEL RAILS FOR GM LS1/2/3/6/76/99

P/N: 20-0232

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Document# 19-0117

CAUTION

Only a qualified technician following applicable safety procedures should perform the installation of this product. One must have knowledge in repair and modification of fuel systems and general vehicle modifications to install this product.

Gasoline and other fuels are flammable and can be explosive.

Only install in a well-ventilated location to minimize buildup of fuel vapors.

No sparks, open flames, smoking or other ignition sources are to be present. Draining and removal of all fuel from the fuel system is recommended.

Proper eye and personal protection is required at all times during installation.

WARNING

The fuel system is under pressure! Do not loosen any connections until relieving the fuel system pressure.

Consult a service manual for instructions on relieving fuel pressure safely. This product is designed for off-highway and racing use only.

Fuel system components may not be legal for sale or use on emissions controlled motor vehicles. Consult local, state, and federal laws.

NOTES ON FUEL INJECTOR SELECTION AND FITMENT

This fuel rail kit is directly compatible with 48mm or 60mm height fuel injectors. See below for common GM fuel injector specifications. All fuel injectors must have the standard GM/common standard 14mm upper and lower O-rings.

COMMON FUEL INJECTORS FOR GM LS RAILS



If using LS3/LS7 or aftermarket fuel injectors that are 34mm tall, you must install spacers on the injectors to increase the height from 34mm to 48mm. These spacers (or hats) are commonly available from most injector manufactures and other performance parts retailers. See photo below as an example of a 34mm height injector with a spacer to make it a 48mm injector.



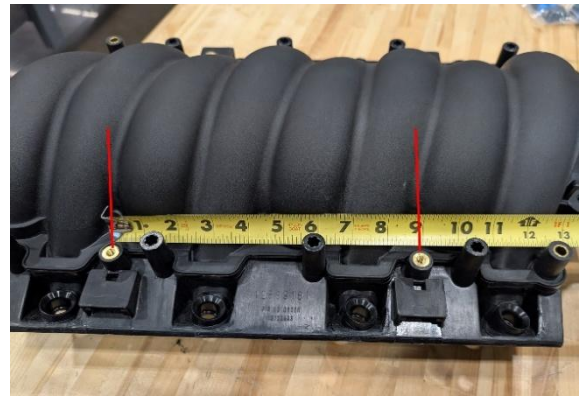
1. Prepare the Radium Engineering fuel rails by determining the mounting feet positioning and orientation. Start by measuring the spacing of the mounting bosses on the intake manifold.

The spacing should either be:

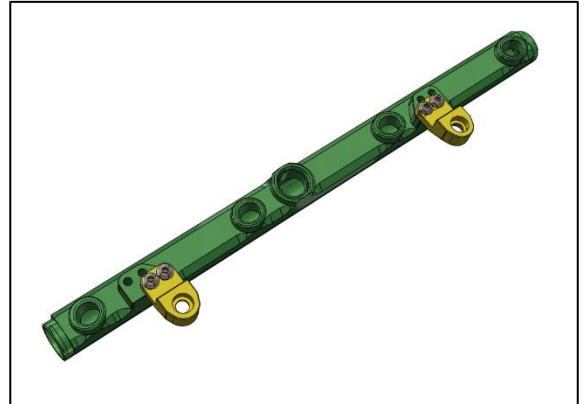
Approx: 8-1/4" (or 209mm exactly)

or

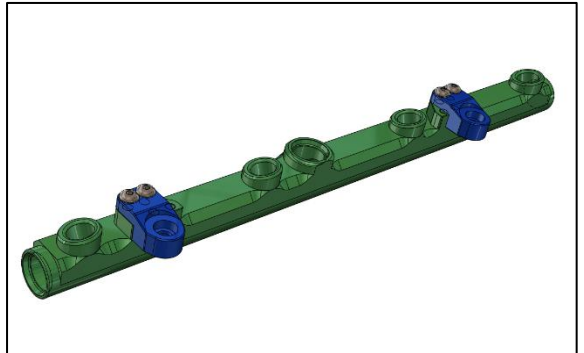
Approx: 8-3/4" (or 224mm exactly)



2A. If the spacing is closer to 8-1/4" (209mm), install the fuel rail feet on the inner holes, as shown.

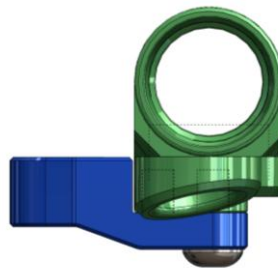
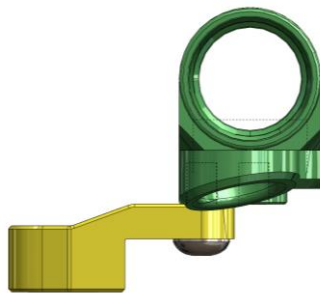


2B. If the spacing is closer to 8-3/4" (224 mm), install the fuel rail feet on the outer holes, as shown.



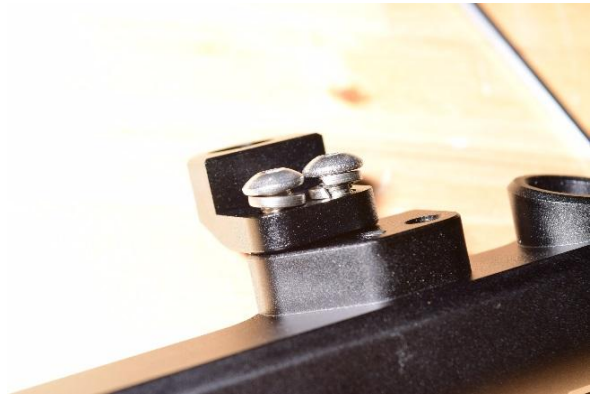
2C. For 60mm height injectors, orient the mounting feet as shown in the first (yellow) diagram.

For 48mm tall injectors, orient the mounting feet as shown in the second (blue) diagram.



3. To secure the mounting feet to the fuel rails, install the included split lock washer and M5 screws (as shown) using a 3mm Allen wrench.

Torque screws to 68 in-lbs (7.7Nm).



4. Install any fittings, plugs or accessories into the fuel rail ports. Lubricate all ORB O-rings with some oil to avoid damaging them.

Next, insert the fuel injectors into the fuel rails. Apply a light amount of oil to the O-rings and make sure they do not get pinched or damaged during this process.



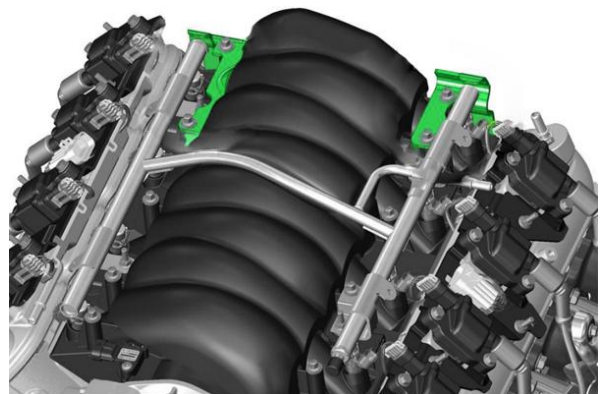
5. Clean out any dirt or debris found in the intake manifold injector seat bores and seat the fuel rails to the intake manifold.

Using a 5mm Allen wrench, torque the four M6 mounting screws to 89 in-lbs (10Nm).



NOTES:

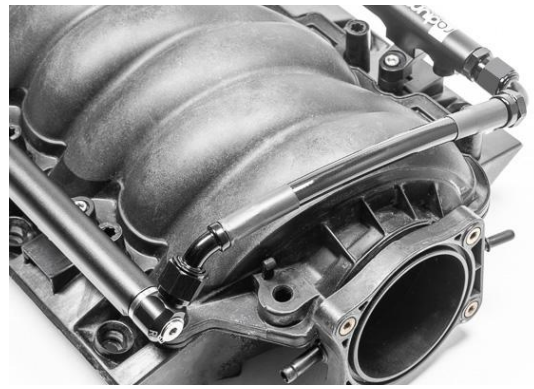
1. On some LS engines, there are OEM brackets at the rear of one or both of the rails (shown in green). If there is interference, slight modifications to these brackets may be required or they will need to be removed.
2. The decorative intake manifold covers on some engines may not fit with aftermarket fuel rails.



20-0232-PK Fuel Rail Plumbing Kit ONLY

Install the 8AN straight fitting in the front LH port and the 8AN 90 degree swivel fitting in the front RH port. Install the 8AN ORB to SAE quick connect fitting in the LH center port. Install the 8AN ORB plugs in the unused ports. When installing the crossover hose, secure the 45 degree hose end to the swivel fitting and 90 degree hose end to the straight fitting.

Lubricate and push the OEM feed hose onto the SAE fitting until a click is felt. Gently pull to test the connection.



6. Reinstall all components previously removed.

Cycle the key a few times (without starting engine). This purges the system of air and allows the fuel pump to prime the system. **CHECK FOR LEAKS!** If no leaks are found, start the engine and check again while the engine is running.

NOTE: OEM fuel pressure is 4 bar (GM states "55-60psi").

INSTALLATION COMPLETE

