

INSTALLATION INSTRUCTIONS

Top Feed Upgrade Fuel Rails, Subaru

P/Ns: 20-0467 & 20-0479

Document: 19-0198

Support: info@radiumauto.com

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.

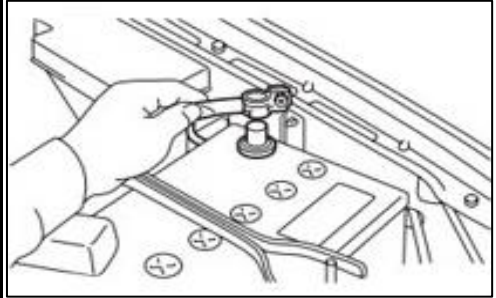


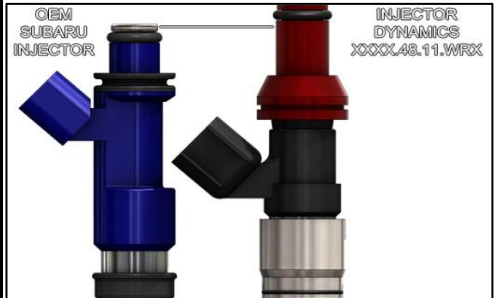
Gasoline and other fuels are flammable and can be explosive.


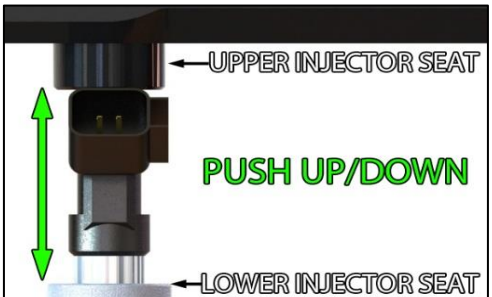
Only install in a well-ventilated location to minimize buildup of fuel vapors.

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.

STEP	TOOLS NEEDED	INSTRUCTIONS	PHOTO
1		It is necessary to have access to a Factory Service Manual. Remove fuel pump fuse and start engine. Allow engine to stall to relieve fuel pressure. Remove ignition key and disconnect battery (as shown).	
2		The procedure for removing the OEM fuel rails and associated piping will vary from model to model and will not be covered in this document. Proceed to the next step after the OEM rails and piping are removed.	
3	Non-marring wrenches	Prepare the Radium fuel rails by installing the appropriate fittings or accessories into the ports. This will vary by application. All ports are 8AN ORB. Compatible fittings must have an o-ring installed. Lubricate all o-rings with oil. If reusing the OEM Subaru (2-bolt flange type) fuel pressure regulator, transfer to the appropriate Radium OEM FPR adapter. Visit radiumauto.com for details. If Radium 20-0478 Fuel Rail Plumbing kit was purchased, refer to those specific installation instructions. NOTE: It is highly recommended that fittings are installed and tightened down before the rails are mounted to the engine. Tightening fittings while the rails are bolted down puts undue stress on the mounting hardware.	
	Oil Lubrication		
4	Oil Lubrication	These fuel rails are compatible with OEM injectors and any injector that has the same fitment as OEM injectors. 11mm upper O-rings must be used (same as OEM Subaru injectors). For flexibility, there are 2 sets of phenolic spacers (15mm/20mm lengths) included. OEM Subaru injectors require the short 15mm phenolic spacers. Injector Dynamics have OEM replacements that are taller than OEM injectors (as shown) and require the taller 20mm phenolic spacers. Lubricate each injector's upper O-ring with light oil. Gently press the fuel injector into each of the 4 fuel rail injector ports.	

5	5mm Hex Wrench	<p>If Radium 20-0372 was purchased, use the included bolts and Allen wrench to secure in place. Secure the adapter as shown for the 2.5i EJ253 engine. Slide the adapter in the opposite direction for the Version 8 and Version 9 EJ207.</p> <p>Position and line up each fuel rail over the intake manifold then press firmly on the fuel rail to seat the injectors' lower O-rings into the intake manifold (or TGV). Once positioned correctly, install the provided M8 bolts. Torque to 10ftlbs (120inlbs, 13.6Nm) using a 6mm Allen wrench.</p>	
	6mm Hex Wrench		
6		<p>For fitment verification, push the fuel injectors downward until they bottom out in their respective seat. Now confirm each injectors' upper O-ring is still inserted into the fuel rail bores. Do not pressurize the fuel system until the proper height is achieved.</p> <p>If wiring harness adapters were included with the fuel injectors, install them now per the instructions provided by the manufacturer. Note: wiring polarity on each injector does not matter. Orientate the fuel injectors such that the electrical connectors do not experience any interference with the surrounding area.</p>	
7		<p>NOTE: Some early Subaru coolant expansion tanks are larger than others and require modification to allow proper top feed fuel rail height clearance.</p> <p>The fuel rails do not include adapter fittings or hoses. For a complete plumbing kit, consider Radium P/N: 20-0478 Fuel Rail Plumbing.</p>	