



## INSTALLATION INSTRUCTIONS

## SUBARU FUEL RAILS, EXCLUDING BRZ

PART NUMBERS: 20-0372, 20-0479-02, 20-0567-02

20-0568-02, 20-0569-02, 20-0577-02, 20-0579-02

20-0763-02, 20-0764-02, 20-0765-02, 20-0869

Document: 19-0198

**Support:** [info@radiumauto.com](mailto: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.**

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

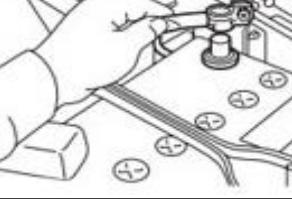
Only install in a well-ventilated location to minimize buildup of fuel vapors.  
No sparks, open flames, smoking or other ignition sources are to be present. Draining and removal of all fuel from the fuel system is recommended.  
Proper eye and personal protection is required at all times during installation.

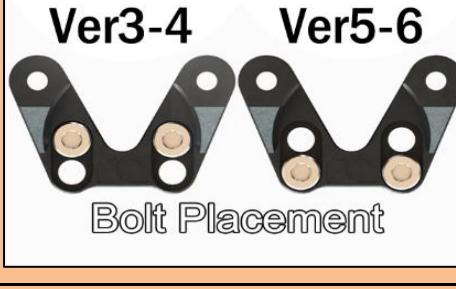
## WARNING

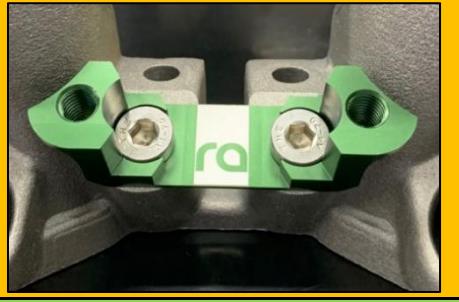
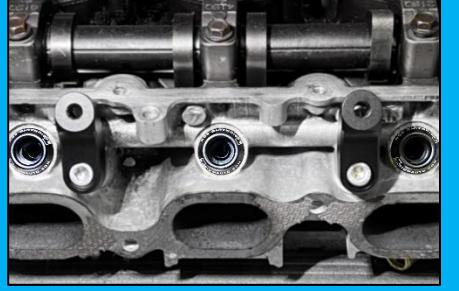
The fuel system is under pressure! Do not loosen any connections until relieving the fuel system pressure.

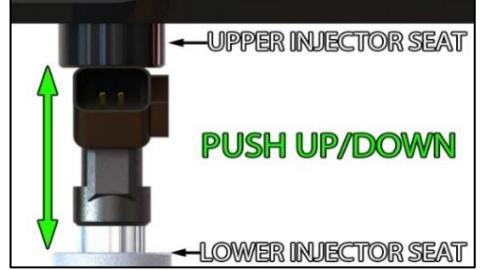
Consult a service manual for instructions on relieving fuel pressure safely. This product is designed for off-highway and racing use only.

**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		<p>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).</p>	
2		<p>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.</p>	
3	Non-Marring Wrenches	<p>Install the appropriate fittings into the 8AN ORB ports. This will vary by application. If reusing the OEM Subaru (2-bolt flange type) fuel pressure regulator, transfer to the appropriate Radium OEM FPR adapter. Visit <a href="http://radiumauto.com">radiumauto.com</a> for details. If Radium 20-0478, 20-0578, 20-0584, 20-0978, 20-0984 Fuel Rail Plumbing kits were purchased, refer to those specific installation instructions.</p>	
	Oil Lubrication		
		<p><b>NOTE: To avoid undue stress on the mounting hardware, it is highly recommended that fittings are installed and tightened down before the rails are mounted to the engine.</b></p>	
4		<p>For fuel injector compatibility, reference the product page at <a href="http://radiumauto.com">radiumauto.com</a></p>	

5		<p><b>P/N: 20-0764-02</b></p> <p>If replacing the OEM air-assist injectors and using the provided injectors seats, 48mm tall Bosch EV14 injectors with 11mm upper and 14mm lower O-rings must be used.</p>	
6	Pick	<p><b>P/N: 20-0869 ONLY</b></p> <p>If replacing the OEM air-assist injectors, 48mm tall Bosch EV14 injectors with 14mm upper and 14mm lower O-rings must be used.</p> <p>As shown, replace the lower injector O-ring with the larger black O-rings provided in the kit.</p>	
7	5mm Allen Wrench	<p><b>P/N: 20-0869 ONLY</b></p> <p>Use the included flat head bolts to secure the 2 adapters in place.</p>	
8	5mm Allen Wrench	<p><b>P/N: 20-0372 ONLY</b></p> <p>Use the included bolts to secure the 2 adapters in place.</p> <p>1. Secure the adapter to the position shown for the EJ253 and EJ259. 2. Slide the adapter in the opposite direction for the Ver8/9 EJ207.</p>	
9		<p><b>P/N: 20-0569-02 ONLY</b></p> <p>As shown, the provided mounting brackets will need to be installed based on the Subaru application.</p>	<p><b>Ver3-4      Ver5-6</b></p>  <p><b>Bolt Placement</b></p>
10	6mm Hex Wrench	<p><b>P/N: 20-0569-02 ONLY</b></p> <p>Install the fuel rail mounting brackets using the included screws. Subaru Version 3-4 Impreza STi intake manifold shown.</p>	

11	6mm Hex Wrench	<p><b>P/N: 20-0579-02 ONLY</b></p> <p>Install the fuel rail mounting brackets using the included screws. Subaru Version 1-2 Impreza WRX intake manifold shown.</p>	
12	4mm Allen Wrench	<p><b>P/N: 20-0763-02 ONLY</b></p> <p>Install the mounting feet to the fuel rails using the included socket head screws.</p>	
13	6mm Allen Wrench	<p><b>P/N: 20-0764-02 ONLY</b></p> <p>Using the provided M8x1.25mm socket head screws, install the fuel rail mounts to the cylinder heads, as shown.</p> <p>NOTES:</p> <ol style="list-style-type: none"> <li>1. Because each mount can swivel around the single bolt, be sure the mounts are vertical prior to tightening.</li> <li>2. If the bolts are not lining up when installing the fuel rails in the following steps, these mounts might need to be properly readjusted.</li> </ol>	
14	Oil Lubrication	<p><b>P/N: 20-0764-02 ONLY</b></p> <p>Do NOT install the provided billet injector seats unless aftermarket injectors will be used. These injector seats eliminate Subaru Air Assist. Check the <a href="http://radiumauto.com">radiumauto.com</a> for a list of compatible fuel injectors.</p> <p>If installing aftermarket injectors, first lubricate the injector seat O-rings. Now simply push them until fully seated, as shown.</p>	
15	Oil Lubrication	<p>Thoroughly clean the area where the lower injector O-ring resided.</p> <p>For fuel rails kits that included injector seats, install the provided O-rings into the injector seat O-ring grooves. Lubricate the O-rings and push or tap to fully seat them into place, as shown.</p>	
16	Pliers	<p><b>P/N: 20-0764-02 ONLY</b></p> <p>If eliminating Subaru Air Assist with the provided injector seats, the OEM air hose (shown) will no longer flow into the injector ports. The depicted cylinder head barb can be left open. However, the opposing intake side barb (not shown) must be capped to prevent a vacuum leak.</p>	

17	<p>Oil Lubrication</p> <p>Lubricate all fuel injector O-rings.</p> <p>As shown, push the upper injector O-rings into the fuel rail ports.</p>	
18	<p>For fuel rails kits that came with spacers, press the black insulating spacers into the fuel rail mounts. Next, insert the M8x1.25mm bolts. Finally, push a small O-ring over each of the bolt threads and fully seat it into the recess area, as shown.</p>	
19	<p>5mm Allen Wrench</p> <p>Position and line up each fuel rail then press firmly down to seat the lower injector O-rings into the ports. Once positioned correctly, install the provided M8x1.25mm bolts.</p>	
20	<p>For fitment verification, push the fuel injectors downward until they bottom out in their respective seat. Now confirm each upper injector O-ring is still inserted into the fuel rail bores. Do not pressurize the fuel system until the proper height is achieved.</p> <p>Orientate the fuel injectors such that the electrical connectors do not experience any interference with the surrounding area.</p>	
21	<p><b>INSTALLATION COMPLETE</b></p> <p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>1. Some early Subaru coolant expansion tanks are larger than others and require modification to allow proper top feed fuel rail height clearance.</li> <li>2: If installing FUEL RAIL PLUMBING kits (20-0478, 20-0578, or 20-0584, 20-0978, 20-0984), please reference those instructions specifically on the website at <a href="http://www.radiumauto.com">www.radiumauto.com</a>.</li> </ol>	