

INSTALLATION INSTRUCTIONS

Subaru EJ Fuel Rail Plumbing Kit

Part Number: 20-0478

Document: 19-0204

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.

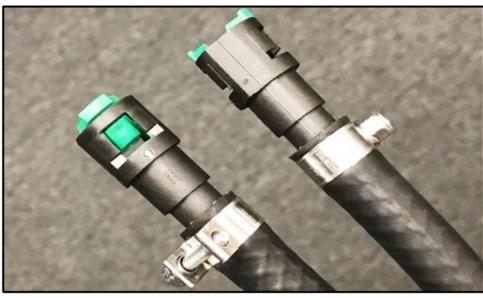
No sparks, open flames, smoking or other ignition sources are to be present. Draining and removal of all fuel from the fuel system is recommended. Proper eye and personal protection is required at all times during installation.

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.

These instructions should be performed after installation of Radium Engineering fuel rails.

STEP	TOOLS NEEDED	INSTRUCTIONS	PHOTO
1		<p>This procedure will vary depending on the model year as there is a diversity of Subaru fuel feed line configurations. Some have fuel pulse dampers (shown at right) and/or a fuel filter (shown in following picture) in the center of the fuel feed line. Some use SAE quick connectors while some use barb connections, etc.</p> <p>NOTE: Record the static fuel pressure prior to starting this installation.</p>	
2	Phillips Screwdriver	<p>Completely remove the OEM rubber fuel return line that runs from the firewall to the OEM pressure regulator pipe. Also disconnect the feed line on the fuel filter outlet. If the vehicle does not have an engine bay fuel filter, disconnect the feed line from the hard pipe near the firewall.</p> <p>Notes for early model Subarus only:</p> <ol style="list-style-type: none"> 1. Use a Phillips head screwdriver to release the lines. 2. The fuel hard lines near the firewall are not secured to the unibody, which means they cannot be pulled. It may be easier to cut a slit in the rubber hoses in order to remove them from the OEM barbs. 	
3	EFI Disconnect tool	<p>For late model Subarus only</p> <p>First fully insert the provided SAE quick connect tool inside the yellowish-green locking tabs, as shown.</p>	
4		<p>For late model Subarus only</p> <p>Push the OEM fitting further into the OEM pipe, then push the SAE tool in as far as it allows. To release, immediately pull the OEM fitting off the OEM pipe. This may take a couple of tries. Perform this step for the fuel feed and fuel return lines.</p>	

5	7/8" Wrench	<p>Apply a small amount of PTFE paste or tape to the fuel pressure gauge threads. Install the fuel pressure gauge to the inline adapter fitting.</p> <p>Next, install the inline adapter fitting to one of the front fuel rail ports using one of the swiveling adapters, as shown.</p>	
	7/16" wrench		
	PTFE Paste or tape		
6	Hose Cutter	<p>Using the provided -6AN Push Lok hose-ends, cut and assemble the hoses to length. Exact hose-end configurations will vary by application (straight vs 45deg vs 90deg). Extra hose-ends are included for this purpose. Determine optimal routing before cutting hose. The system is designed to be run in series with the feed line from the firewall ran to the turbo side fuel rail port first, as shown.</p> <p>NOTES:</p> <ol style="list-style-type: none"> Hose clamps are NOT necessary for the Push Lok hose ends. Apply oil to the hose-end barbs before pushing into the hose. 	<p>Series Fuel Flow Routing</p> 
	Oil Lubrication		
7	2.5mm Hex Wrench	<p>Tighten the included Direct Mount Regulator (DMR) fuel rail fitting to the LH rear fuel rail port. Next, install the plug and 6AN fitting into the DMR return ports. NOTE: both ports function identically. The 6AN fitting should be installed into the port which permits optimal hose routing. Make sure all o-rings are prelubricated with oil.</p> <p>Slip the regulator onto the DMR adapter fitting. Secure in place with the bracket and small screws. Avoid torquing any fittings while the DMR is installed to the rail as it may damage the bracket. Use a hose-end and hose from the kit to construct the return line from the DMR 6AN fitting to the <u>hard line near the strut tower</u>.</p>	
	Oil Lubrication		
	1" Wrench		
	9/16" Wrench		
8	Phillips Screwdriver	<p>Connect the vapor shield fuel hose to the OEM hard lines.</p> <p>For late model Subarus that use SAE quick connects, insert the provided SAE quick connect fittings to the hose and secure using the included EFI hose clamps, as shown.</p> <p>For early model Subarus that use barb connection, the included SAE quick connect fittings will NOT be used. Instead, insert the hose directly to the OEM hard line barbs and secure using the included EFI hose clamps.</p>	
9	3/8" Wrench	<p>After everything is installed, cycle the key a few times (without starting engine). This allows the pump to prime the system. CHECK FOR LEAKS!</p> <p>To adjust fuel pressure, tighten or loosen the screw in the top of the DMR. This should be done with the fuel pump running but the vacuum port open to atmosphere. Once adjusted, lock the screw in place using the jam nut. Note that when connecting the DMR barbed nipple, it is ideal to use an isolated vacuum source on the intake manifold plenum.</p> <p>For more information on the DMR, including changing it's internal orifice, consult the instructions on the associated product page at www.radiumauto.com.</p> <p>Installation Complete</p>	
	3/32" Allen Wrench		