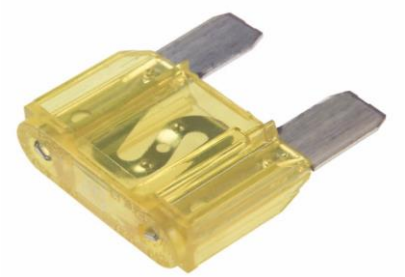
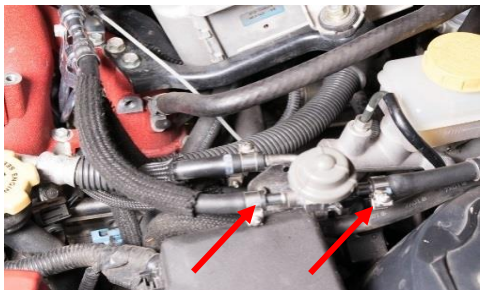
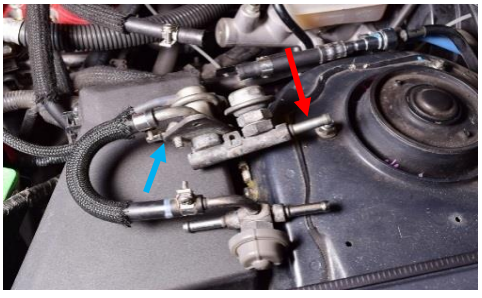
INSTALLATION INSTRUCTIONS

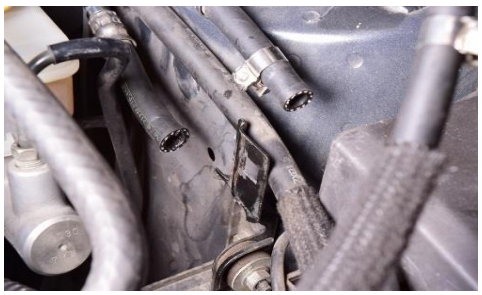
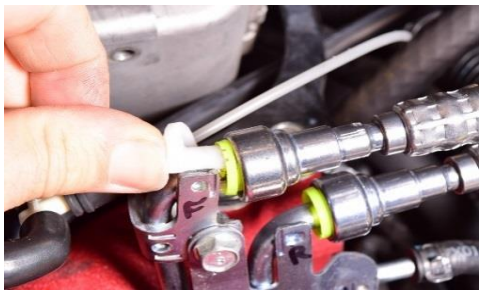
FUEL PRESSURE REGULATOR KIT

2008-2017 SUBARU STi EJ257

WARNING: DO NOT EXPOSE WORK AREA TO SPARK OR FLAME. CLEAN UP ALL FUEL SPILLS IMMEDIATELY. MAKE NOTE OF FUEL PRESSURE BEFORE BEGINNING THIS INSTALLATION.

This kit replaces the factory loop-style fuel routing with a traditional flow-through system.

STEP	TOOLS NEEDED	INSTRUCTIONS	PHOTO
1		To relieve fuel pressure, remove the fuel pump fuse. Start the engine and allow it to stall. Disconnect the negative battery cable.	
2	Phillips Screwdriver	Find the tan colored plastic fuel pulse damper in the engine bay near the left stut tower. This is the fuel feed line. Loosen the hose clamps on each side of the damper (red arrows). Do not loosen the clamp on the hose coming out perpendicular and going to the pressure regulator.	
3		Once the hose clamps are loose, pull the fuel hoses off the damper.	
4		Underneath the damper is the fuel pressure regulator. Loosen the hose clamp on the regulator outlet (shown with red arrow). Pull the fuel hose off. Leave this hose connected to the hard line on the firewall. The last hose to disconnect from the pressure regulator goes from the engine to the fuel pressure regulator input (blue arrow).	

5		With the hoses disconnected, remove the regulator and damper as well as the plastic mounting clip.	
6		Find the fuel line connections on the engine, between the #2 and #4 intake manifold runners. The top hose is the feed line, which routes fuel to the rails. The bottom hose is the high pressure return line which routes back to the regulator. This kit will require removing the feed line, but the return line will stay connected.	
7	EFI Disconnect Tool	Use the included EFI fuel hose disconnect tool to release the fuel hose from the engine fuel piping. Insert the tool between the fuel pipe and plastic retainer clip (bright green). Push the tool in until it is fully inserted.	
8		Once the tool is fully inserted, rotate and pull the hose off of the fuel pipe. This hose will not be reused.	
9	EFI Disconnect Tool	Use the same EFI disconnect tool to remove the fuel feed hose from the hard line at the firewall. This is the hard line with the black plastic coating. This hose will not be reused.	
10	3/4" deep socket 5/16" Allen wrench	Use the fittings included in the kit and prepare the fuel pressure regulator, as shown. Lubricate all O-rings before installing. See step 12 if installing a Radium fuel pressure gauge. **Make sure the correct orifice is installed inside the regulator. For single pump (below 255LPH) applications, start with the black orifice. For dual pumps, or single pumps over 350LPH, start with the silver orifice. See the MPR instructions for more details.**	

11	1/4" Allen wrench 3/4" deep socket 5/64" Allen wrench	Use the fittings included in the kit and prepare the fuel pressure regulator, as shown. Lubricate all O-rings before installing. This is also a good time to take note of which direction the vacuum nipple on the regulator is pointing. This can be changed by removing the 5 small flat-head Allen bolts and re-clocking the top piece of the regulator.	
12	15/16" Socket PTFE Teflon Paste	To install a pressure gauge, Radium part number 20-0029 (0-100psi pressure gauge) and 14-0119 (-8AN ORB adapter) and 14-0332 (90deg adapter) will be needed, sold separately. Install the 14-0119 adapter into the large -8AN port on the regulator, then install the 90deg adapter. Make sure PTFE "Teflon" paste is used on the NPT threads. Tighten the elbow finger tight then keep tightening another 1 to 2.5 turns until the proper clocking is achieved.	
13		Place the fuel pressure regulator in the engine bay. The side with 3 ports should be facing toward the front of the car. Connect the fuel return hose coming from the engine to the fitting in the front of the regulator, as shown. Reuse the OEM EFI hose clamp.	
14	Phillips screwdriver	Connect the short hose coming from the firewall hard line to the bottom/rear port of the regulator. Reuse the OEM EFI hose clamp.	
15	4mm Allen wrench 10mm socket	Locate the long M6 bolt and washer included in the kit. Place the washer on the bolt and install it through the square hole in the OEM bracket and through one of the regulator mounting holes. Choose which regulator mounting hole to use based on fitment and length of the hoses. Install the included M6 nut on the end of the bolt. Hold the regulator level and tighten the M6 nut while holding the bolt with an Allen wrench.	
16	7/16" Wrench	If not installing a pressure gauge, continue to next step. Now install the pressure gauge into the 90deg adapter. Make sure to use a small amount of PTFE paste on the threads. Thread until finger tight, then use a wrench to tighten another 1 to 2.5 turns.	

17	11/16" Wrench 5/8" Wrench	Find the -6AN hose included in the kit and install the SAE quick connect adapters into each end and tighten. Beginnning in Nov. 2016, Radium started shipping this kit with new low-profile SAE adapters. These can be identified by the included green anodized retainer clips and small screws. Screw the black anodized parts of the adapters into the hose ends and tighten.	
18	5/64" Allen Wrench	Push the new hose onto the fuel pipe on the engine until it "clicks" into place. Pull on the hose to make sure it is securely engaged. If using the Radium low profile SAE adapters, slide the adapter onto the fuel pipe. Then install the green retainer clip, making sure the small hole lines up with the threaded hole in the black fitting. Then install the included small stainless steel screw in the small hole and tighten.	 
19		Route the new hose to the fuel hard line on the firewall (the one with the black plastic coating). Push it on until it "clicks" into place. If using the Radium low profile SAE adapters, refer to the previous step for assembly instructions.	
20	Hose cutter	Splice the included hose barb "Y" fitting into the vacuum hose for the boost recirculation valve (blow off valve). Use the included vacuum hose and connect it to the "Y" fitting. Route the other end of the new vacuum hose to the Radium FPR and cut to length. Do not connect the hose on to the vacuum fitting on the FPR until after base pressure has been set. Use the included vacuum cap to plug the vacuum fitting on the #4 intake manifold runner. Plug the vacuum line to prevent a vacuum leak.	
21	3/32" Allen wrench 3/8" wrench	Connect the battery and key-on the ignition to activate the fuel pump. It may be necessary to do this 2 or 3 times to fully prime the system. Check for leaks at all connections. If no leaks are found, start the engine and adjust fuel pressure. Once target pressure is reached, lock down the adjustment screw and connect the vacuum line to the regulator and secure with small zip tie. Consult the installation guide for the Radium MPR fuel pressure regulator for details on setup, operation and servicing the regulator.