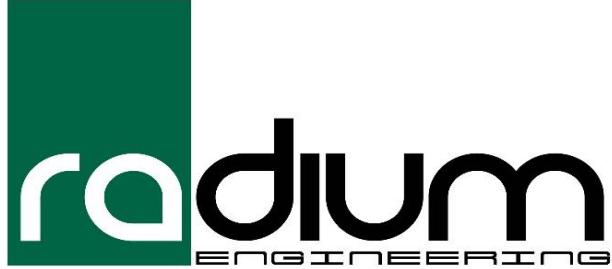


INSTALLATION INSTRUCTIONS

FUEL RAIL

MITSUBISHI EVO 4-9



Document: 19-0075

Support: info@radiumauto.com

CAUTION

This product is to be installed by persons with knowledge in the repair and modification of vehicle fuel systems and general vehicle modifications. Only a qualified technician who is aware of applicable safety procedures should perform the installation of this product.

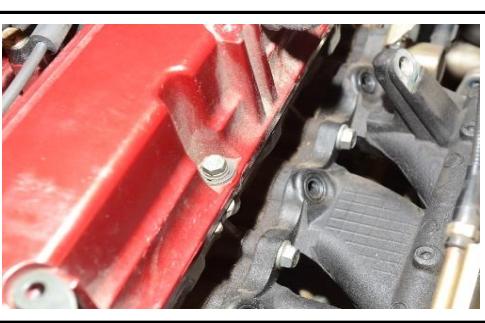
Gasoline and other fuels are flammable and can be explosive.

Installation must be performed in a well ventilated location to minimize build up 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.

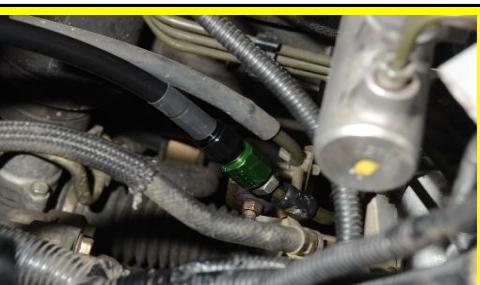
WARNING

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 component 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	10mm Socket	To relieve fuel pressure, temporarily remove the fuel pump fuse. Start the vehicle and allow the engine to stall. Disconnect the negative terminal on the battery.	
		Remove the two bolts holding the wiring harness to the back of the valve cover. This allows easier access to the fuel rail area.	
2	Pick	Use a pick to remove the metal clips on the fuel injector electrical connectors and pull the connectors off the injectors. Do not lose the clips.	
3	10mm socket	Remove the two bolts holding the fuel feed line to the end of the fuel rail.	
4	Rag	Pull the feed line out of the end of the factory fuel rail. NOTE: Catch the fuel spills from this connection.	

5	Pliers	Loosen the spring hose clamp and remove the return hose from the pipe on the fuel rail.	
6		Remove the vacuum line from the nipple on the fuel pressure regulator.	
7	12mm Socket	Remove the two mounting bolts holding the OEM fuel rail to the intake manifold. Be careful to not drop the spacers behind the engine.	
8		Remove the OEM fuel rail from the engine bay. Drain the fuel out of the rail into a fuel safe container.	
9		Inspect the injector seats in the intake manifold. Make sure the rubber donuts are in place. Clean each donut to remove dirt that may have built up in these areas.	
10		Transfer the fuel injectors into the new Radium Engineering fuel rail. Make sure the O-rings are clean and lubricated with a small amount of engine oil. If installing aftermarket injectors, make sure they are a direct fit OEM replacement.	

11	1/4" Allen wrench 1" Wrench	20-0119-10 or 20-0119-PK or 20-1119-PK: Install the port fittings included in the kit into the fuel rail corresponding to the picture at right. Lubricate all fitting O-rings with a small amount of oil before installing them. 20-0119-12: Install appropriate fittings for your custom installation. Lubricate all fitting O-rings prior to installation.	
	10MM Socket	Follow this step for 20-0119-10 or 20-0119-PK or 20-1119-PK Remove the OEM fuel pressure regulator from the OEM fuel rail.	
12		Follow this step for 20-0119-10 or 20-0119-PK or 20-1119-PK Install the flange for the fuel pressure regulator adapter as shown. Make sure the side with the recess is facing outward.	
	10MM Socket	Follow this step for 20-0119-10 or 20-0119-PK or 20-1119-PK Loosely install the OEM fuel pressure regulator into the adapter as shown. Do not tighten the bolts yet.	
14	12mm Socket	Place the fuel rail onto the intake manifold. Maneuver each injector into the donut seals. Re-use the plastic fuel rail mounting spacers that were used with the OEM fuel rail.	
	10mm Socket	For 20-0119-PK or 20-0119-10, the OEM fuel return line can be reused, as shown. Make sure the mounting brackets are installed under the bolt heads. Clocking of the OEM fuel pressure regulator might be necessary to get the brackets positioned correctly. Install the mounting bolts.	
16	Pliers 10mm Socket	For 20-1119-PK, push the included 1/4" (4AN) hose to the fuel pressure regulator barb. Secure using one of the spring clamps. Once properly orientated, tighten the two OEM fuel pressure regulator bolts. Plug in all fuel injector connectors and secure with the metal clips.	

17	<p>14mm Flare Nut Wrench 19mm Wrench</p> <p>Follow this step for 20-0119-10 or 20-0119-PK ONLY</p> <p>Disconnect the factory fuel feed line from the hard line in the RH side of the engien bay. Use a 14mm flare nut wrench and a 19mm open end wrench. Significant force will be required. Try not to bend/distort the OEM hard line.</p>	
18	<p>19mm Socket Rag</p> <p>Follow this step for 20-1119-PK ONLY</p> <p>Loosen the nut on top of the fuel filter and remove the banjo feed line connection.</p> <p>NOTE: Catch the fuel spills from this connection.</p>	
19	<p>14mm Flare Nut Wrench 19mm Wrench</p> <p>Follow this step for 20-0119-10 or 20-0119-PK ONLY</p> <p>Install the inverted flare adapter fitting included in the kit and tighten.</p>	
20	<p>16mm Socket</p> <p>Follow this step for 20-1119-PK ONLY</p> <p>Find the crush washer and the 6AN Male to M12x1.5mm fitting in the kit. Install them to the fuel filter outlet, as shown.</p>	
21	<p>Hose Cutter Pliers 11/16" wrench</p> <p>Follow this step for 20-0119-10 or 20-0119-PK or 20-1119-PK</p> <p>For 20-0119-10 and 20-0119-PK, install the OEM rubber fuel return line to the OEM return pipe (shown). For 20-1119-PK, run the provided 1/4" rubber line down to the hard line near the fuel filter and cut it to length. Secure the return line with a spring hose clamp.</p> <p>Locate the 6AN PTFE hose in the kit and attach the straight hose end to the 6AN fuel rail inlet fitting. Tighten the hose end.</p>	
22	<p>19mm wrench 11/16" wrench</p> <p>Follow this step for 20-0119-10 or 20-0119-PK ONLY</p> <p>Attach the other straight hose end to the feed line adapter fitting and tighten. It will be necessary to hold the adapter with a wrench while the hose end is tightened.</p>	

23	<p>11/16" wrench 16mm Wrench</p> <p>Follow this step for 20-1119-PK ONLY</p> <p>Attach the 90 degree hose end to the feed line adapter fitting and tighten. It will be necessary to hold the adapter with a wrench while the hose end is tightened.</p>	
24	<p>10mm Socket</p> <p>INSTALLATION COMPLETE</p>	