

INSTALLATION INSTRUCTIONS

BMW M50 M52 M54 S50 S52

P/N: 20-0770 Fuel Rail

P/N: 20-0807-PK M54 Plumbing Kit

Document: 19-0281

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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.

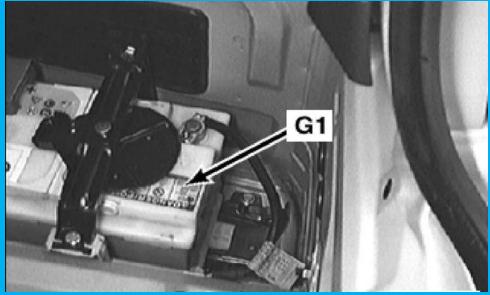
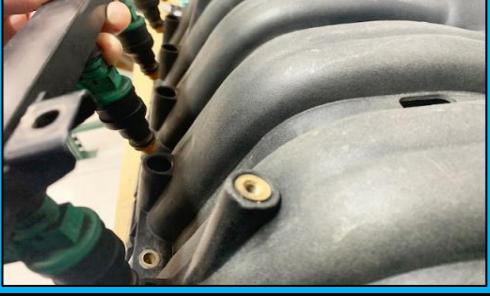
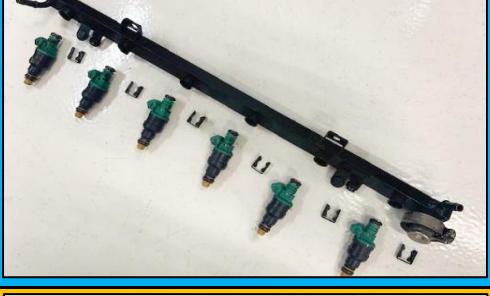
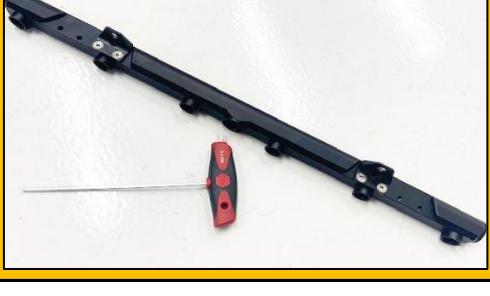
No sparks, open flames, smoking or other ignition sources are to be present. Draining and removal of all fuel from the fuel system is recommended. Proper eye and personal protection is required at all times during installation.

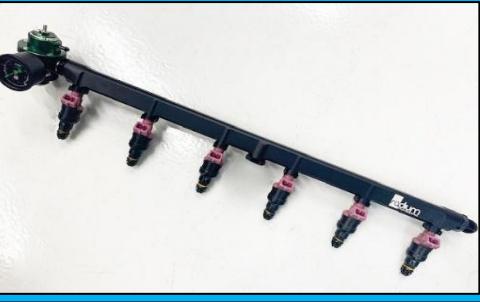
WARNING

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	10mm Wrench	<p>20-0770 FUEL RAIL INSTALLATION</p> <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> <p>CAUTION: Disconnecting the battery (G1) may cancel the fault memories of some control units.</p>	
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 when the OEM rails and piping are removed.	
3		<p>Slide and pull the injector locking clips off the top of the fuel injectors.</p> <p>Gently pull each fuel injector from the OEM fuel rail. Inspect all O-rings and replace if necessary.</p>	
4a	Threadlocker 3mm Allen Wrench	<p>BMW M50 and S50 (non ITB) Engines Only</p> <p>As shown, install the black aluminum mounting brackets to the fuel rail in the inner most position. Apply a medium-strength threadlocker to the threads.</p>	

4b	Threadlocker 3mm Allen Wrench	BMW M52 and S52 Engines Only As shown, install the black aluminum mounting brackets to the fuel rail in the center most position. Apply a medium-strength threadlocker to the threads.	
	Threadlocker 3mm Allen Wrench	BMW M52TU and M54 Engines Only As shown, install the stainless steel mounting brackets to the fuel rail. Apply a medium-strength threadlocker to the threads. NOTE: This fuel rail will mount to the M56 intake manifold but is not compatible with M56 injectors.	
	Oil	Install the adapter fittings (not included) to the three 8AN ORB (3/4-16) threaded ports. Be sure to lubricate the O-rings.	
	Oil	Lubricate the injector O-rings and each injector bore on the fuel rail. One by one, insert the injectors into the fuel rail ports, as shown.	
	Oil	As shown, slide the injector clips to secure the fuel injectors to the fuel rail. NOTE: OEM injectors have 2 slots at the top. Be sure to slide the injector clip through the upper slot. The lower slot would effectively make the injector too short.	
	10mm Socket	BMW M50 and S50 (non ITB) Engines Only Reinstall the two OEM M6x1.0mm mounting bolts.	

8b	<p>10mm Socket</p> <p>BMW M52 and S52 Engines Only</p> <p>Reinstall the two OEM M6x1.0mm mounting bolts.</p>	
8c	<p>10mm Socket</p> <p>BMW M52TU and M54 Engines Only</p> <p>Reinstall the four OEM M6x1.0mm mounting bolts.</p>	
9	<p>10mm Wrench</p> <p>After everything is reinstalled, reconnect the battery. Cycle the keyed ignition switch ON/OFF a few times (without starting the engine). This allows the fuel pump to prime the fuel system. CHECK FOR LEAKS! If none are found, start the engine and check for leaks while the engine is running.</p> <p>20-0770 FUEL RAIL INSTALLATION COMPLETE</p>	

10	<p>Oil Lubrication</p> <p>5/16" Allen Wrench</p> <p>7/8" Wrench</p> <p>Front Port: 8AN ORB Plug</p> <p>Center Port: 8AN ORB Plug</p> <p>Rear Port: 8AN ORB to 6AN Male</p>	<p>20-0807-PK FUEL RAIL PLUMBING KIT, BMW M54</p> <p>Lubricate the O-rings and install the provided fittings (shown gold) to the fuel rail ports, as follows:</p> 
11	<p>11/16" Wrench</p> <p>Vice</p> <p></p> <p></p> <p></p>	<p>As shown, install the 6AN male to SAE quick connect male fitting to the straight 6AN PushLok hose end.</p> 
12	<p>Hose Cutter</p> <p></p> <p></p> <p></p> <p></p>	<p>There is 12" (304mm) of 3/8" (6AN) EFI hose provided in the kit. If the fuel feed line is still in the OEM location, cut the EFI hose to 3.5" (88mm).</p> 
13	<p>Oil Lubrication</p> <p></p> <p></p> <p></p> <p></p>	<p>Lubricate the 90 degree and straight 6AN PushLok hose end barbs. With tremendous force, fully seat the hose ends into the EFI hose, as shown. NOTE: Hose clamps are not required for PushLok hose ends.</p> 
14	<p>11/16" Wrench</p> <p></p> <p></p> <p></p> <p></p>	<p>As shown, install the 90 degree hose end to the rear 6AN male fuel rail fitting.</p> <p>Find the OEM fuel feed line under the fuel rail near the firewall. Push the SAE quick connectors together until they lock in place.</p> 
15	<p></p> <p></p> <p></p> <p></p> <p></p>	<p>After everything is reinstalled, reconnect the battery. Cycle the keyed ignition switch ON/OFF a few times (without starting the engine). This allows the fuel pump to prime the fuel system. CHECK FOR LEAKS! If none are found, start the engine and check for leaks while the engine is running.</p> <p>20-0807-PK M54 PLUMBING KIT INSTALL COMPLETE</p> 