

# INSTALLATION INSTRUCTIONS

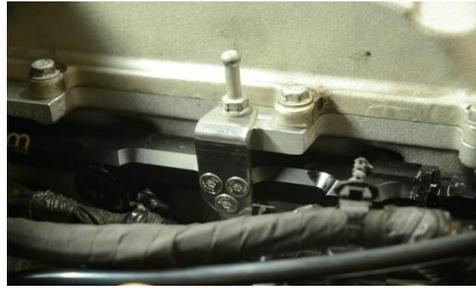
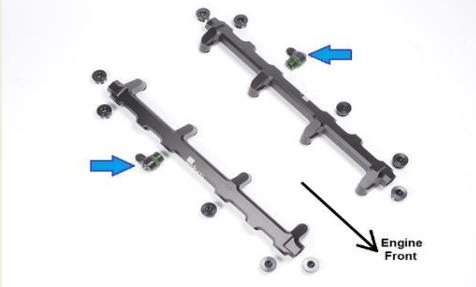
## GM LSA/LS9 Fuel Rails and Plumbing Kit

Document: 19-0171

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<b>CAUTION</b>
<p>Only a qualified technician following applicable safety procedures should perform the installation of this product.</p> <p>One must have knowledge in repair and modification of fuel systems and general vehicle modifications to install this product.</p> <p><b>Gasoline and other fuels are flammable and can be explosive.</b></p> <p>Only install in a well-ventilated location to minimize buildup of fuel vapors.</p> <p>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.</p> <p>Proper eye and personal protection is required at all times during installation.</p>
<b>WARNING</b>
<p>The fuel system is under pressure! Do not loosen any connections until relieving the fuel system pressure.</p> <p>Consult a service manual for instructions on relieving fuel pressure safely. This product is designed for off-highway and racing use only.</p> <p>Fuel system components may not be legal for sale or use on emissions controlled motor vehicles. Consult local, state, and federal laws.</p>

STEP	TOOLS NEEDED	INSTRUCTIONS	PHOTO
1		To relieve fuel pressure, open the Schrader valve located on the OEM fuel rail. <b>Warning:</b> If there is significant residual pressure in the system, fuel may spray out. While opening the valve, cover the valve with a rag.	
		Locate the fuel feed line attachment on the fuel rail, as shown. This will vary slightly between vehicle models.	
2	3/8" EFI Disconnect Tool	Use a 3/8" EFI quick disconnect tool to release the locks inside the end of the hose. Slide the hose off the fuel rail pipe.	
		Catch any fuel that may spill out.	
3	10mm Deep Socket	Remove all mounting bolts holding the fuel rail assembly to the supercharger. These fasteners will be reused.	
		Remove any adjacent components that will prevent the fuel rail assembly from being removed.	
4		Unplug all fuel injector electrical connectors.	
		Carefully remove the fuel rail with the injectors still attached. This requires patience and care. DO NOT force the fuel rail out. Some adjacent electrical components may need to be unplugged to allow clearance.	
		The fuel rail will contain residual fuel. Drain and dispose in an appropriate manner.	

5	3mm Allen Wrench	<p>Transfer the fuel injectors to the Radium fuel rails. Lubricate the injector o-rings with oil. The injector retaining clips can be re-used.</p> <p>Install the fuel rail mounting brackets and secure with the included small screws using a mild thread locker.</p> <p>At this time, plan out the plumbing of the fuel rail and install the appropriate fittings and plugs into the open ports. Apply oil to all O-rings. If installing plumbing kit 20-0545 refer to Step 7.</p>	
	Oil		
6	10mm Deep Socket	<p>Position the fuel rails to the engine. Make sure the injectors are seated squarely into the intake manifold ports.</p> <p>Line up the mounting brackets with the holes on the supercharger and install the screws removed in previous steps.</p> <p>Plug in all fuel injectors and any other electrical connectors that were removed in earlier steps.</p> <p>Prime the system by powering on the fuel pump and check for leaks.</p> <p><b>INSTALLATION COMPLETE</b></p>	
7	3/8" Allen Wrench	<p><b>Installation Instructions for 20-0545</b></p> <p>Configure the fuel rail as shown by installing the swiveling fittings into the side ports (shown with blue arrow) and the included plugs into the remaining 10 ports. Use oil on all o-rings.</p>	
	7/8" Wrench		
8		<p><i>The installation of this plumbing kit is shown on a 2010 Cadillac CTS-V. Other applications may vary slightly, but should follow the same general process for installation.</i></p> <p>Install the SAE quick connect adapter into the OEM feed hose located behind the engine on the firewall.</p> <p>Install the 90 degree female 6AN fitting on the SAE adapter and tighten. Loosely install the Y-adapter as shown, but do not tighten yet.</p>	
9		<p>Install a 45 degree hose end into one end of the included rubber hose. Apply oil to the barbs of the hose end fitting and push firmly into the hose until fully seated.</p>	
10		<p>For reference, the factory feed hose will route straight along the firewall and secure to the aluminum A/C piping as shown using 2 zip ties.</p> <p>Position the factory feed hose in place temporarily so the Y fitting is orientated where it will be after final install. Do not use zip ties at this time.</p> <p>Loosely attach the hose from Step 9 to the inboard branch of the Y-fitting and route the hose to the RH fuel rail swivel fitting.</p>	

11	Hose Cutter	Cut the hose from Step 10 to an appropriate length and install a straight hose-end in the same manner as Step 9.	
12	9/16" Wrench	Mock up the LH fuel line in the same way using the leftover section of hose. Once again, cut the hose to length and install the straight hose end.	
		After the hoses are mocked up, tighten all fittings.	
13		Secure the factory fuel feed line in place using the provided zip ties as shown. Make sure the fuel line is not kinked or twisted.	
		Reinstall any remaining components that were removed in earlier steps.	
		Prime the system and check for any leaks.	
		<b>INSTALLATION COMPLETE</b>	