



INSTALLATION INSTRUCTIONS

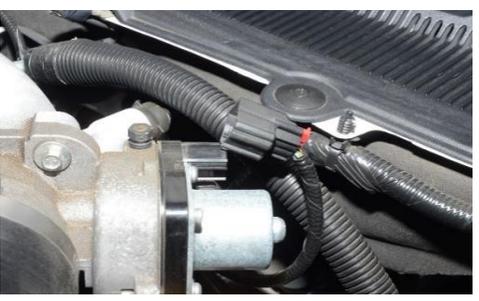
FUEL RAILS

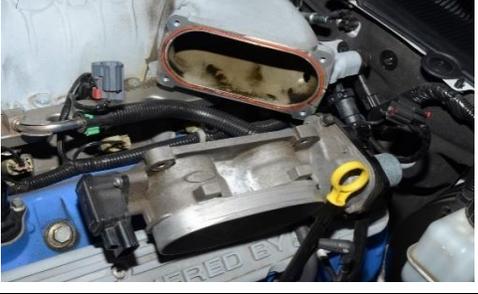
07-14 Ford Shelby GT500

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CLEAN UP ALL FUEL SPILLS IMMEDIATELY. WORK IN A WELL VENTILATED AREA.

STEP	TOOLS NEEDED	INSTRUCTIONS	PHOTO
1	8mm Wrench	Pull the fuel pump fuse and run the engine until the engine stalls. This will relieve any fuel pressure remaining in the lines.	
		Disconnect the negative battery terminal.	
2		Disconnect the throttle position sensor.	
3		Disconnect the electrical connector for the throttle motor.	
4		Disconnect the MAF sensor.	

5	Screwdriver	Loosen the hose clamp for the intake coupler at the throttle body and carefully remove the intake system from the vehicle. Your intake may look slightly different than shown in this picture.	
6		Undo the lock mechanism and pull the vacuum hose off the throttle body elbow.	
7	8mm Socket	Remove the four bolts holding the throttle body to the elbow. Remove the throttle body from the vehicle.	
8		Unplug the vacuum line connection and electrical connection from the throttle body elbow.	
9	8mm Socket	Undo the four screws and remove the throttle body elbow.	
10		Locate where the high pressure fuel hose attaches to the fuel rail. Release the green clip then slide the fuel hose off the fuel rail fitting.	

11		Unplug the connector for the sensor located just inboard of the fuel rail input fitting.	
12		On the opposite side of the engine unplug the electrical connector and vacuum hose from the fuel pressure sensor.	
13		Unplug all 8 fuel injectors.	
14	8mm Socket	Remove all four fuel rail mounting bolts. Firmly pull upward on the fuel rails which will dislodge the injectors from the intake manifold. Be prepared to clean up any fuel that spills out of the rail.	
15		Remove any injector o-rings that remain in the intake manifold. Clean all injector ports on the intake manifold to remove any dirt or debris that has accumulated in these locations.	
16		Clean the injectors as well.	

17		Remove the injector clips and remove all of the fuel injectors from the rail. FUEL WILL SPILL OUT, BE PREPARED. Clean all injectors and make sure the original O-rings are installed at each end of the injectors.	
		If installing aftermarket injectors, make sure the proper O-rings are installed and the new injectors are the same height as OEM.	
18		Prepare the Radium fuel rails for installation by installing the port fittings and plugs into the appropriate ports.	
		The fuel rail with 5 threaded ports is for the RH side, and the rail with 3 threaded ports is for the LH side. The front-facing ports on both rails must be plugged. If using the plumbing kit, install the 8AN ORB to 6AN adapters in the rear ports of both fuel rails.	
		Lubricate the injector O-rings and install them into the fuel rail as well. The clips will NOT be reused.	
19	15/16" Wrench	Lubricate the O-ring and install the gray anodized adapter fitting into the forward-most top port of the RH fuel rail. This is where the OEM fuel pressure sensor will be located.	
20		Place the fuel rails onto the intake manifold, as shown. Push down firmly to seat the injectors into the bores on the intake manifold.	
21	5mm Allen Wrench	Using the four screws included in the kit, secure the fuel rails to the intake manifold. Reconnect the electrical plug to the sensor shown.	
22	8mm Socket	Remove the fuel pressure sensor from the OEM fuel rail.	

23	8mm Socket	Install the black anodized 2-bolt flange included with the fuel rail kit on to the gray fitting. Make sure the side of the flange with the recess is facing upward.	
		Lubricate the o-ring on the sensor and install it into gray fitting. Rotate the flange around until the holes and threads line up. Re-use the factory screws and secure the sensor in place. Make sure it is clocked correctly before fully tightening the screws.	
24		Connect the vacuum line and electrical plug to the fuel pressure sensor.	
25		Plug in all of the fuel injectors.	
26	11mm Wrench	<p>If a gauge is needed, use the RH fuel rail top, rear port. The following Radium Engineering parts will be required and are sold separately:</p> <p>(1x) Fuel Pressure Gauge, P/N: 20-0029 (1x) 8AN ORB to 1/8" NPT Female, P/N: 14-0119 (1x) 1/8" NPT Male/Female 90 Deg Adapter, P/N: 14-0332</p> <p>Always use PTFE paste on NPT (pipe) threads. Do not to use an excessive amount. To tighten a pipe thread fitting, screw in until finger tight, then use a wrench to turn another 1.5 to 3 turns until clocked correctly.</p>	
	9/16" Wrench		
	7/8" Socket		
27	11/16" 6AN Wrench	Follow Steps 27-31 if installing the plumbing kit.	
		Assemble the plumbing kit, as shown. Attach the straight/straight hose to the single branch of the "Y" fitting and to the SAE adapter. Tighten these fittings.	
		Attach the other hoses as shown, but do not yet tighten the hose end fittings.	
28	3/8" EFI Disconnect Tool	Locate the high pressure fuel hose/hard line connection under the brake master cylinder. Remove the safety retaining clip, then use a 3/8" EFI disconnect tool and remove the rubber hose from the hard line. The picture shows the hard line after the hose has been removed.	

29		Set the hose aside. It will not be reused.	
30		Install the hose assembly from step 27 as shown. Clip the SAE adapter on to the hard line from step 28. Make sure it is fully engaged.	
		Route the hoses to the rear port of each of the fuel rails.	
31	11/16" 6AN Wrench	Attach the hoses to the rear port fittings of each fuel rail. Tighten the hose ends.	
		Once hose routing is finalized, tighten the hose-end fittings at the "Y" fitting. Double check to make sure all connections are tight.	
		Plumbing installation is complete.	
32	8mm Socket, 1/4" drive	Proceed to re-assemble the intake manifold and throttle body. When installing the throttle body elbow, it will be necessary to use a socket extension and a universal joint to access the bottom bolts.	
	1/4" Socket Extension		
	1/4" Universal Joint		
		Reconnect the vacuum line and electrical connectors removed in step 8.	
33	8mm Socket	Reinstall the throttle body and reconnect all electrical connections.	
34		Reinstall the intake system and connect any remaining electrical plugs. Double check all fasteners and fittings for tightness.	
		Reconnect the battery. Start the engine and check for any leaks and address any found.	
		INSTALLATION IS COMPLETE.	