

## INSTALLATION INSTRUCTIONS FUEL RAIL FOR GM LS9/LSA ENGINE

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WARNING: DO NOT EXPOSE WORK AREA TO ANY SPARKS OR FIRE. DO NOT SMOKE WHILE OPERATING ON THE FUEL SYSTEM. CLEAN UP ALL FUEL SPILLS IMMEDIATELY. WORK IN A WELL VENTILATED AREA.

1. Disconnect the battery negative terminal, as shown. Allow the engine to cool before working with the fuel system. Have a rag handy and purge fuel pressure from the system using the Schrader valve on the side of the OEM fuel rail.

Disconnect the 8 fuel injectors. Note that the wiring harness is specific to the firing order. If the wiring harnesses are removed, they must be reinstalled on the correct engine bank and to each specific injector.

Uninstall the coolant manifold and all related components for the front charge cooler. Disconnect any wiring, vacuum lines, and throttle body components interfering with the installation process.

2. Using an SAE disconnect tool, remove the fuel feed hose. Catch all spilled fuel. Use a 10mm wrench to remove the M6 bolt that secures the fuel rail hardline to the front of engine. Next, remove the 4 fuel rail mounting stud bolts (1). These 4 OEM stud bolts will be reused.

Gently remove the fuel rails from the vehicle and place onto a bench. The injectors will remain attached. Pull out all 8 injector retaining clips as they will be reused. Cautiously pull and twist to remove the injectors. Note: the rail will contain residual fuel. Drain excess fuel into a safe container for disposal.

Clean out any dirt or debris found in the intake manifold injector seat bores.

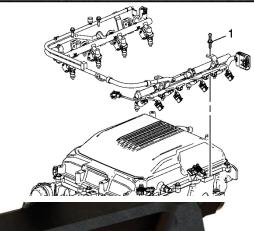
3. Prepare to install the necessary adapter fittings into each fuel rail port. The 20-0362 fuel rail does not include plumbing (adapters, fittings, hoses, etc). Take note that depending on what fittings are used in which ports, there may be interference. To avoid damage, lubricate all O-rings with oil prior to installing.

Before installing the fuel injectors, be sure the inlet cone filters are free from debris. Also, inspect the injector O-rings for any damage. Replace if necessary. For ease of installation, apply a light coat of oil to the injector O-rings, intake manifold injector seats, and fuel rail injector bores. Fully insert the injectors into the fuel rail bores. Reinstall the OEM injector clips, as shown.

4. Line-up and place each fuel rail assembly onto the engine. Once everything is positioned correctly, push the rail downwards to fully seat the injectors. Confirm all injector O-rings have been installed properly.

Apply a medium strength thread locker to the twelve provided M5 flat head countersink bolts. Using a 3mm Allen hex wrench, install the mounting brackets as shown.









5. Reinstall the 4 fuel rail mounting bolts.



6. Reinstall all components previously removed.

Cycle the ignition switch a few times (without starting engine). This purges the system of air and allows the fuel pump to prime the system.

CHECK FOR LEAKS! If no leaks are found, start the engine and check again while the engine is running. NOTE: OEM fuel pressure is 4 bar (GM states "55-60psi").

Installation complete.

