

# INSTALLATION INSTRUCTIONS

**FUEL RAIL, MITSUBISHI, EARLY 4G63** 

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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. Remove the rear bench from the vehicle.



2. Using a Phillips head screwdriver, remove the fuel pump access cover.

To relieve fuel pressure, temporarily disconnect the fuel pump connector.



3. Start and idle the vehicle and allow the engine to stall.

Turn the ignition OFF and remove the key. Allow the engine to cool down.



4. Disconnect the (-) negative battery terminal.



5. Find the fuel filter mounted on the firewall.

Using a 19mm socket, carefully impact the banjo bolt from the top of the fuel filter. Catch any fuel that may spill from this connection and properly dispose.



6. Using pliers, remove the return hose from the fuel pressure regulator. Catch any fuel that may spill from this connection and properly dispose.



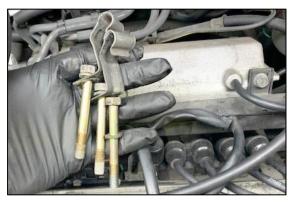
7. Before removing the spark plug wires from the ignition coils, label them for the proper reinstallation sequence.



8. Gently pry the cable(s) from the fuel rail stays. NOTE: The first 4G63 engine variations will have 2 cables.

Using a 12mm socket wrench, remove the 3 mounting bolts. The cable brackets will be reused. The mounting bolts will NOT be reused.

Remove or disconnect all necessary components to get the fuel rail out (injector plugs, vacuum lines, electrical connectors, PCV valve hose, etc.)



9. Carefully pull the fuel rail upwards away from the cylinder head. Be careful not to lose the 3 OEM insulating spacers.



10. Be sure to find the lower injector O-rings as the will sometimes get stuck in the cylinder head. Inspect the condition of both the upper and lower injector O-rings and replace if necessary.



11. Press the 4 fuel injectors back into the lower ports on the cylinder head.

Place the 3 insulating spacers into the cylinder head's fuel rail mounting areas.



12. When installing the 3 mounting feet to the fuel rail, apply a high strength thread locker to the six M5x0.8mm bolt threads. Secure using a 4mm Allen wrench.



## 13. For 20-0533-PK Fuel Rail Plumbing Kit ONLY

Find the 6AN to metric adapter fitting in the kit. Be sure there is a crush washer on the metric side of the fitting as shown.



## 14. For 20-0533-PK Fuel Rail Plumbing Kit ONLY

As shown, screw the fitting on to the top of the OEM fuel filter. Tighten using a 5/8" (16mm) wrench.



15. Install fittings to the 4 ports. Lubricate all O-rings prior to securing.

#### For 20-0533-PK Fuel Rail Plumbing Kit ONLY

The 4 fittings should be installed exactly as depicted

Fuel Pressure Regulator (FPR) Notes:

- 1. Remove the FPR from the OEM fuel rail using a 10mm socket wrench.
- 2. Reuse the OEM bolts to secure the FPR to the provided adapter.
- 3. The first generation 4G63 engines will use the green FPR flange.
- 4. The second generation 4G63 engines will use the black FPR flange.
- 16. Lubricate the fuel rail injector ports.

Carefully place the fuel rail down onto the injectors. Be cautious not to bump the 3 insulating spacers.



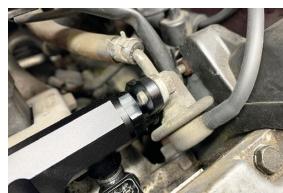


17. Place the 3 phenolic washers onto the 3 provided M8x1.25mm bolts.

Secure the fuel rail using a 6mm Allen wrench.



18. Reconnect the OEM parts in reverse order.



# 19. For 20-0533-PK Fuel Rail Plumbing Kit ONLY

Lubricate the hose barbs on one of the PushLok hose ends and insert into one side of the provided hose as shown.



## 20. For 20-0533-PK Fuel Rail Plumbing Kit ONLY

Using a 11/16" wrench, secure the hose to the fuel filter adapter fitting.

NOTE: An aluminum wrench (shown) will prevent surface finish marring.



#### 21. For 20-0533-PK Fuel Rail Plumbing Kit ONLY

Route the hose towards the 6AN fitting on the fuel rail. Cut the hose to length allowing slack for engine movement.



## 22. For 20-0533-PK Fuel Rail Plumbing Kit ONLY

Lubricate the hose barbs on the other PushLok hose end and insert into the cut end of the hose as shown.



#### 23. For 20-0533-PK Fuel Rail Plumbing Kit ONLY

Using a 11/16" wrench, secure the hose to the 6AN fuel rail fitting.

NOTE: An aluminum wrench (shown) will prevent surface finish marring.



24. Position the cable bracket stays 180 degree from how they were oriented with the OEM fuel rail. The single cable bracket variation is shown. The early dual cable bracket variation will slightly differ.

Secure the brackets using a 4mm Allen wrench and the provided M6x1mm bolts.

Press the cable(s) into the bracket stays, as shown.



25. After everything is reinstalled in a reverse order, cycle the key a few times (without starting engine). This allows the fuel pump to prime the system.



26. CHECK FOR LEAKS! If no leaks are found, start the engine and check for leaks again while the engine is running.

# **Installation Complete**

