



INSTALLATION INSTRUCTIONS

FUEL RAIL FOR MAZDA 1.6L B6 ENGINE

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Document# 19-0263

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

Start the vehicle and allow the engine to stall.

Turn the ignition OFF, remove the key, and the fuel fill cap.



2. Before disconnecting the battery, be sure to have the anti-theft code for the OEM radio, if applicable. Write down the frequencies for the radio's preset buttons.

Access the battery. Remove the negative (-) terminal using a 10mm wrench.

Unlatch and prop the hood.

Allow the engine to cool before proceeding.



3. Refer to the Mazda Service Manual for proper fuel rail disassembly.

Removing the IACV (shown) specifically will make the install easier.

Using pliers, remove the soft fuel lines that connect from the underneath the intake manifold to the frame rail. They will be reused. Catch all spilled fuel.



4. Using a 12mm socket wrench, remove the 2 fuel rail mounting bolts. Carefully pull the fuel rail from the engine.

Do not lose the two OEM black spacers (shown) found under the fuel rail mounting tabs. They will be reused along with the OEM M8x1.25mm bolts (shown).

Inspect all seals and O-rings. Replace if necessary.



5. Now is a good time to carefully clean all critical areas, especially the lower injector seat bores.

Reminder: The basic 20-0769-02 fuel rail kit does not include fittings. For custom setups, plumbing items such as fittings, hoses, etc. can be purchased at www.radiumauto.com.



6. 20-0769-PK Fuel Rail Plumbing Kit ONLY

Remove the OEM fuel pressure regulator using a 10mm socket wrench.



7. 20-0769-PK Fuel Rail Plumbing Kit ONLY

Install the 8AN ORB plugs to the front and rear ports using a 5/16" Allen wrench.

Install the 8AN ORB to barb fitting to the bottom port using a 4mm Allen Wrench.

Install the 8AN ORB FPR adapter to the top rear port using a 7/8" wrench.

Pre-lubricate all O-rings.



8. 20-0769-PK Fuel Rail Plumbing Kit ONLY

Next, lubricate the O-ring and insert the FPR into FPR adapter port.

Lineup the provided FPR flange bracket and secure the FPR using the OEM M6x1 bolts and a 10mm socket wrench.



9. 20-0769-PK Fuel Rail Plumbing Kit ONLY

Attach the OEM fuel lines to the fuel feed barb fitting and the FPR return barb. Secure the hoses using the OEM spring clamps with pliers.



10. Lubricate the fuel injector top and bottom O-rings with oil. Fully insert the injectors into the Radium fuel rail bores.

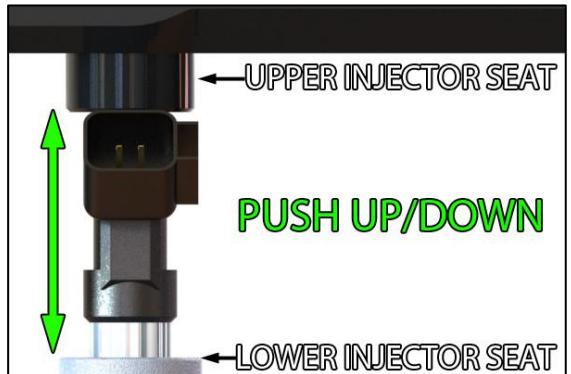
Position the rail assembly onto the intake manifold. When all injectors are lined up, press the fuel rail down. The OEM insulating spacers (shown) must be reused.

Tighten the fuel rail bolts using a 12mm socket wrench.

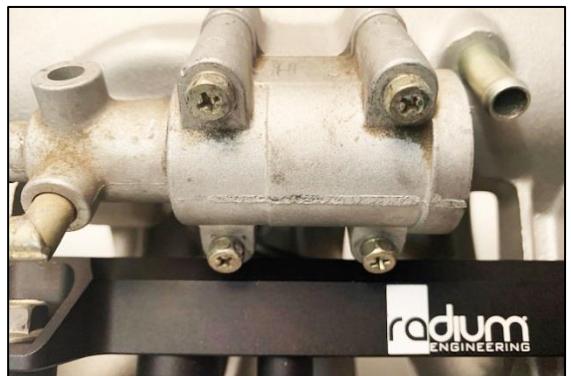


11. As a test, push the fuel injectors downward until they bottom out. Now inspect the injector upper O-rings and confirm they are still inserted into the fuel rail injector bores. Do NOT pressurize the fuel system until the proper height is achieved.

Orientate the fuel injectors such that the electrical connectors do not experience any interference with the surrounding area. Plug in the injector connectors.



12. Reassemble all remaining components in reverse order.



13. Cycle the key a few times (without starting engine). This allows the fuel pump to prime the system.

CHECK FOR LEAKS!

If no leaks are found, reassemble everything. Start the engine and check for leaks again while the engine is running.

INSTALLATION COMPLETE

