INSTALLATION INSTRUCTIONS

FUEL RAIL FOR NISSAN KA24DE

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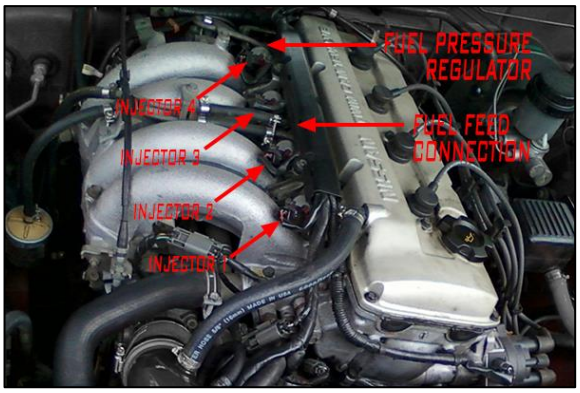
Document# 19-0384

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 fuel pump fuse and start engine. Allow engine to stall. This relieves pressure in the lines. Replace fuel pump fuse. Disconnect battery. Unplug injectors and disconnect harness from fuel rail. Carefully pull vacuum tubing off fuel pressure regulator (FPR).

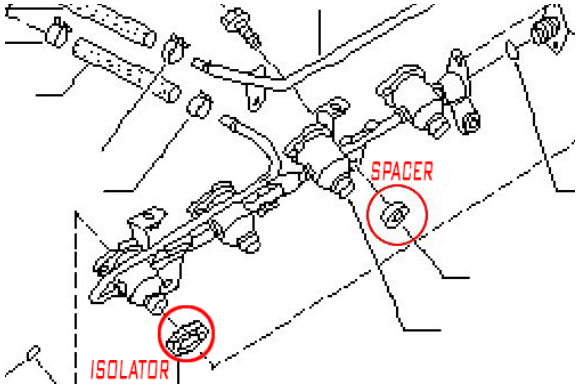
Release and pull back clamps on FPR return hose and fuel feed hose located between intake runners 2 and 3, as depicted. Gently disconnect both fuel hoses and catch all spilled fuel.



2. Use a 12mm socket wrench to remove the two primary M8x1.25mm mounting bolts.

Next, gently lift fuel rail up just enough to expose the 4 rubber fuel injector isolator cushions. They will either be stuck around the lower portion of the injector or still in the intake manifold injector ports. Also, find the 2 black plastic spacers found underneath each fuel rail tab. These pieces will NOT be reused.

Remove the fuel rail from the vehicle. It will contain fuel. Drain excess fuel into a safe container for disposal.



3. Install all fittings into the ports. To prevent failure, lubricate all adapter fitting O-rings.

If planning to re-use the factory pressure regulator, adapter part number 20-0303 (shown) will be required. This screws into an 8AN ORB port and is compatible with the stock fuel pressure regulator.

Follow the steps below to install an 1/8" NPT fitting in the upper center port:
1. Apply a conservative amount of PTFE paste to the male fitting threads.
2. Screw the fitting into the port and finger tighten.
3. Use a wrench to tighten another 1.5 to 3 turns.
NOTE: When installed, threads will be showing.

4. Thoroughly clean out any dirt or debris found in the intake manifold injector seat bores.

Next, lubricate the Radium Engineering injector seat O-rings with engine oil.

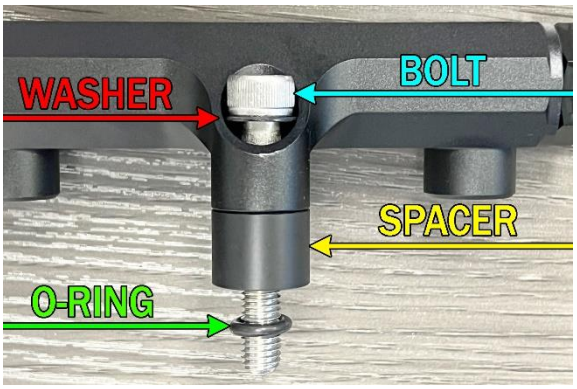
Press the Radium Engineering injector seats down firmly into the 4 intake manifold injector ports until fully seated. If necessary, use a small rubber mallet. Be careful not to damage the O-rings.

5. Press the small end of the spacers (YELLOW) into the underside of the fuel rail mounting bosses, as shown.

Place the small washers (RED) under the heads of the 2 mounting bolts (BLUE).

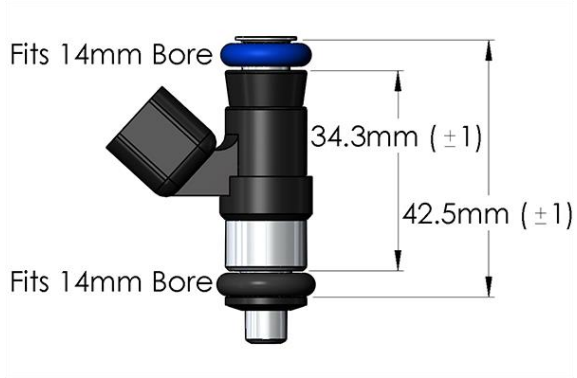
Insert the bolts through the fuel rail mounting boss and spacers.

Roll the O-ring (GREEN) up the bolt threads.



6. As shown, squeeze everything together. This will prevent any hardware from falling and getting lost in the engine bay.

7. For proper fitment, the top feed fuel injectors must match the dimensions shown.



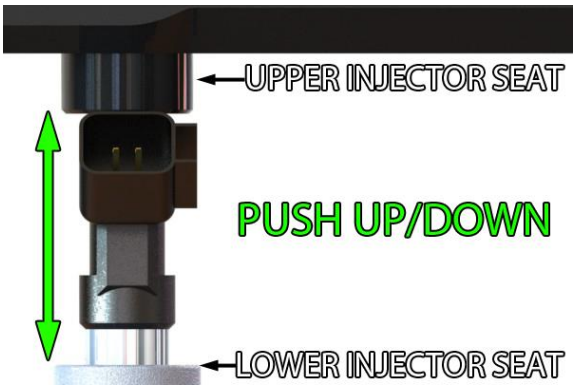
8. Lubricate the top and the lower fuel injector O-rings with engine oil.

Fully insert the injectors into the Radium Engineering fuel rail bores.

9. Place the fuel rail assembly onto the intake manifold. Push the injector lower O-rings into their respective injector seats.

Tighten down the fuel rail using a 6mm Allen wrench.

10. As a test, push the fuel injectors downward until they bottom out. Now inspect the injectors' 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.



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

If Nissan wiring harness adapters were included with the purchase of the top feed fuel injectors, install them now per the instructions provided by the manufacturer. NOTE: wiring polarity on each injector does not matter.

12. When all components and fuel lines are installed, prime the fuel system and check for leaks. Fix as needed.

Check again for leaks after the system has reached operating temperature.

INSTALLATION COMPLETE