

INSTALLATION INSTRUCTIONS

FUEL RAIL FOR NISSAN SR20DET S14/S15

Support: info@radiumauto.com

Document# 19-0086

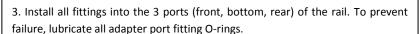
WARNING: DO NOT EXPOSE WORK AREA TO ANY SPARKS OR FIRE. DO NOT SMOKE WHILE OPERATING ON THE FUEL SYSTEM. CLEAN UP ALL FUEL SPILLS IMMEDIATELY. WORK IN A WELL VENTILATED AREA.

1. Remove fuel pump fuse and start engine. Allow engine to stall. This relieves fuel pressure in lines. Replace fuel pump fuse. Disconnect battery. Unbolt the upper plenum and permanently remove the air pipe (shown) from the intake manifold. NOTE: the included billet IACV spacer will internally close-off this passageway so an external block-off plate is not necessary for this 2-bolt flange.

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. Gently disconnect both fuel hoses and catch all spilled fuel.

2. Use a 12mm socket wrench to remove the three primary M8 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 3 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.



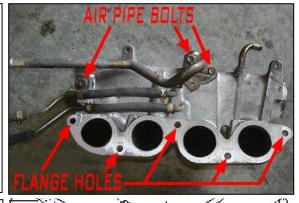
If reusing the OEM FPR, the Radium FPR adapter will need to be clocked for proper fitment once installed back on the engine. Transfer the OEM FPR from the OEM rail to the Radium adapter. NOTE: the OEM FPR will NOT clear the throttle body if using the OEM intake manifold. The rear port must be used.

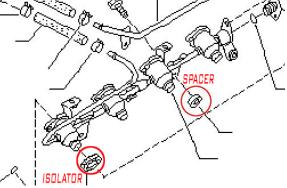
NOTE: The older version Radium SR20DET S14/S15 fuel rail (Radium 20-0159), uses a 3/8" NPT front port (shown). Use PTFE Teflon paste on the NPT fitting.

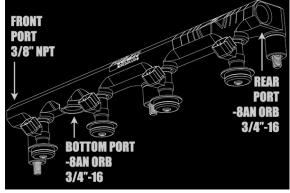
4. Thoroughly clean out any dirt or debris found in the intake manifold injector seat bores.

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

Press the Radium injector seats down firmly into the 4 intake manifold injector ports until fully seated. If necessary, use a small rubber mallet.









5. For proper fitment, the top feed fuel injectors that will be used must match the dimensions, as shown.

Reference the fuel rail product page at info@radiumauto.com for more information.

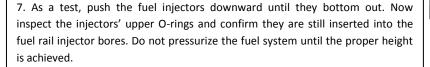
Lubricate each fuel injector's top and bottom O-rings with engine oil. Fully insert the injectors into the Radium fuel rail bores.



6. Confirm the Radium mounting spacers are lined up with the intake manifold bosses while positioning the rail in place. Make sure all injectors are lined up properly in the injector seats, then press firmly on the fuel rail to seat the injectors' lower O-rings.

Radium 20-0159 SR20DET S14/S15 Fuel Rail Only (shown). Install the included M8 bolts and tighten using a 6mm Allen wrench.

Radium 20-0359 SR20DET S14/S15 Fuel Rail Only. Install the included phenolic washers under the bolt heads. Torque all 3 bolts to 10 ft-lbs (13.6Nm).



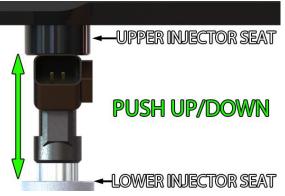
Orientate the fuel injectors such that the electrical connectors do not experience any interference with the surrounding area.

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.

8. Remove idle air control valve (IACV) from intake manifold plenum. Torque the included barbed fitting to the Radium IACV spacer using Teflon paste. Install Radium gasket and IACV spacer under the IACV and OEM gasket using included bolts. If OEM IACV gasket needs replacing they are available at <u>radiumauto.com</u>.

Reinstall the intake manifold plenum. Measure the distance from the charge pipe barb to the Radium IACV spacer barb and cut the provided hose to length. Secure IACV bypass hose using clamps.







9. Reminder: The Radium fuel rail kit does not include a feed supply hose as most applications require custom fuel hoses.

After everything is reinstalled, 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, start the engine and check again while the engine is running.

Installation complete.

