

**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 fuel pump fuse.

To relieve pressure in the fuel lines, start the engine and allow it to stall.

Unscrew the fuel filler cap.



2. Reinstall the fuel pump fuse and the fuel filler cap.

Disconnect the negative battery terminal using a 10mm wrench.

Remove the upper intake manifold.

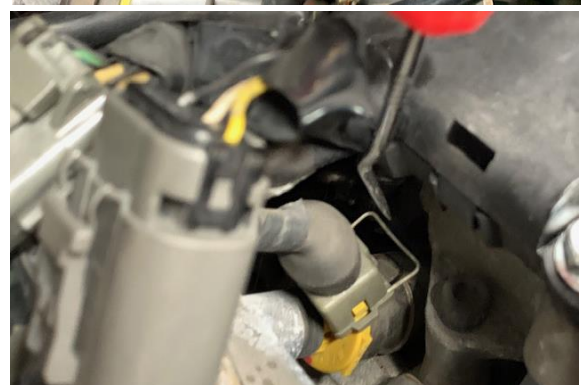


3. Carefully pull the vacuum tubing off the fuel pressure regulator (FPR).

Using a Phillips head screwdriver, loosen and remove the fuel feed and fuel return hoses at the fuel rail. Catch all spilled fuel.



4. Pry the electrical metal locking clips from the 6 fuel injector connectors.



5. Be careful not to lose the metal fuel injector clips in the engine bay.



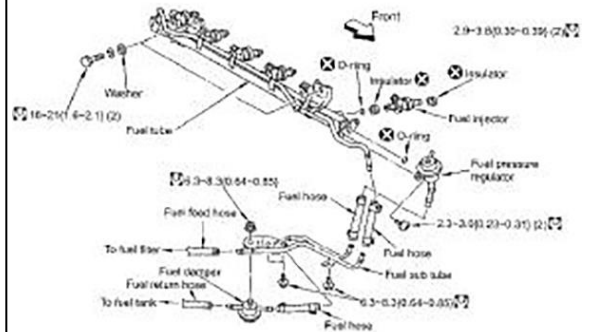
6. Pull the 6 connectors off the fuel injectors.



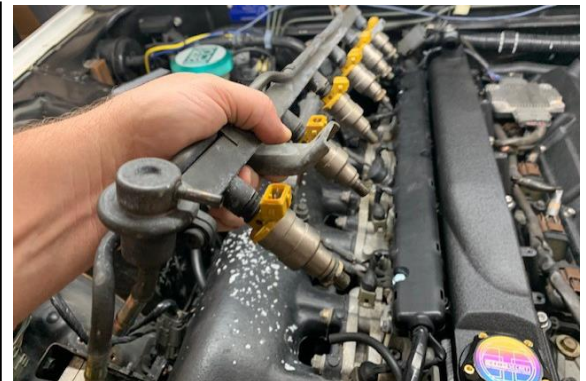
7. Use a 12mm socket wrench to remove the two M8x1.25mm mounting bolts and washers.



8. The OEM hardware will not be reused.



9. Gently lift the fuel rail up being careful not to lose anything in the engine bay.



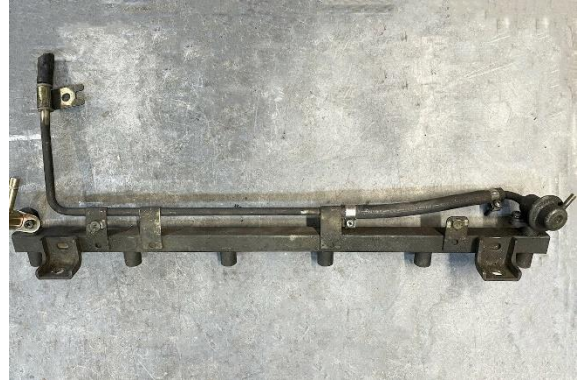


10. Remove the fuel rail from the vehicle. It will contain fuel.

Pull the injectors out and drain the excess fuel into a safe container for disposal.

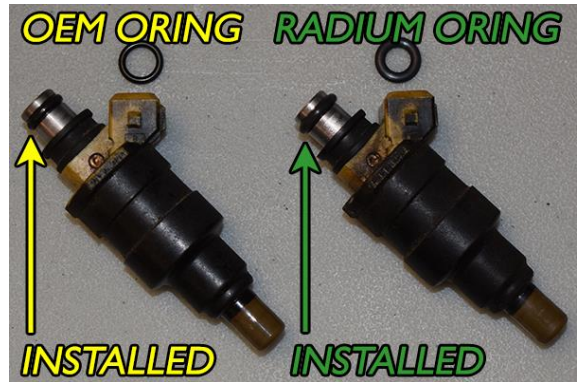


11. Reference the 2 OEM fuel rail pictures. Note that there are a couple different variations for the RB20DET engine.



12. The Radium Engineering fuel rail is compatible with 11mm upper injector O-rings. This is a very common size for injectors (Denso).

OEM Nissan RB20DET injectors (JECS) use 10.45mm upper O-rings. This is a very uncommon size.



13. If the OEM RB26DETT fuel injectors will be reused, replace the upper O-rings with the 6 O-rings included in the kit. This will effectively convert the stock 10.45mm (JECS) injectors to 11mm (Denso) fitment.



14. Install all fittings into the ports (front, center, rear, gauge port).

NOTES:

1. Lubricate O-rings prior to installing to avoid damage.
2. Depending on the application, the IACV may create an interference.
3. The basic fuel rail does not include adapter fittings or fuel hoses.

***20-0217-PK If the fuel rail plumbing kit was purchased, install as follows:***

***-Front Port: 8AN ORB FPR Adapter***

***-Center Port: 8AN ORB Plug***

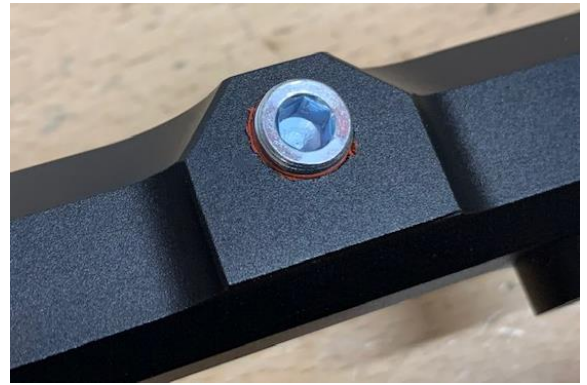
***-Gauge Port: 1/8" NPT Plug***

***-Rear Port: 8AN ORB to 6AN Male***



15. When installing a fitting into the small 1/8" NPT port, **use a small amount of PTFE paste on the male threads.** NOTE: Many fittings feature pre-impregnated sealant on the threads, as shown. In this case, extra PTFE is not required.

Tighten until finger tight. Then, using a wrench, add another 1.5 to 3 turns.



16. If reusing the OEM FPR, unscrew the 2 bolts using a Phillips head screwdriver.

To release, pull the FPR from the fuel rail.



17. If reusing the OEM FPR, first lubricate the O-ring found on the black threaded portion of the adapter. Next, tighten to the front port of the fuel rail.

Slide the green portion onto the adapter. Insert the OEM FPR to the Radium FPR adapter.

If reusing the OEM FPR, the Radium FPR adapter (shown) will need to be clocked for best fitment orientation.



18. Lubricate the 6 upper injector O-rings. Press the injectors into the fuel rail injector ports. Thoroughly clean out any dirt or debris found in the intake manifold injector seat bores. Using oil, lubricate the injector seats and lower injector O-rings.

Carefully, place the fuel rail assembly onto the intake manifold and lineup each injector one by one. Once everything is in position, push the rail towards the intake manifold to fully seat the injectors.

Torque the 2 mounting bolts to 10ftlbs (13.6Nm) using a 6mm Allen wrench.



19. **20-0217-PK**

***If the fuel rail plumbing kit was purchased, remove the fuel feed and fuel return hard lines underneath the intake manifold.***

***Next, completely remove all of the OEM rubber fuel lines downstream of the fuel filter. This includes the OEM rubber fuel lines from the FPR to the return hard line on frame rail. Do not remove the rubber fuel line from the frame rail hard line to the fuel filter inlet.***





20. **20-0217-PK**

*If the fuel rail plumbing kit was purchased, install the provided 5/16" (5AN) fuel line from the frame rail hard line (for the return) to the FPR. This hose will need to be cut to length.*

*Secure both ends with the small EFI hose clamps (shown) included in the kit.*



21. **20-0217-PK**

*If the fuel rail plumbing kit is installing into a R32 (ONLY), loosen the fuel filter inlet hose clamp using a Phillips head screwdriver. Next, loosen the fuel filter mounting bracket.*

*The OEM fuel filter outlet normally points towards the front of the fuel rail. However, the fuel rail inlet will now be at the rear of the fuel rail. Spin the fuel filter so the outlet is pointing towards the rear of the vehicle.*



22. **20-0217-PK**

*If the fuel rail plumbing kit was purchased, find the 3/8" (6AN) hose and the 6AN PushLok hose end in the kit.*

*Apply oil lubrication to the PushLok barbs. Fully seat the PushLok hose end into one side of the 3/8" (6AN) hose. NOTE: PushLok hose ends do NOT require clamps.*



23. **20-0217-PK**

*If the fuel rail plumbing kit was purchased, screw the hose end to the 6AN male fitting on the rear fuel rail port, as shown.*

*Route the hose to the fuel filter outlet and cut to length. Secure the hose using the large EFI clamp provided in the kit. Be sure to cinch this clamp until it bottoms out.*

*Tighten the PushLok hose end using an 11/16" wrench. NOTE: An aluminum wrench will help prevent surface finish marring.*



24. Plug in all electrical connections. Reconnect the vacuum hose to the FPR. Reinstall the upper intake manifold.



25. 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**

