INSTALLATION INSTRUCTIONS

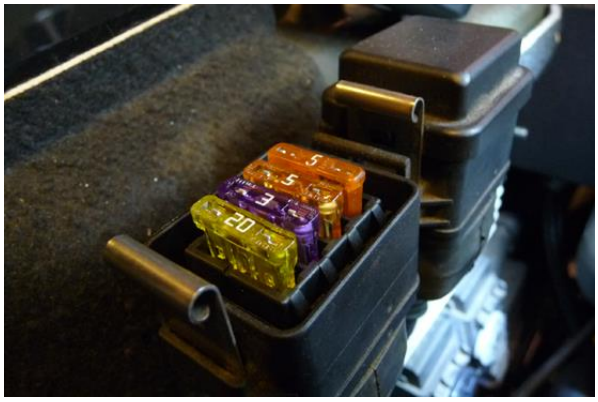
Radium Engineering Fuel Rail
Toyota 2ZZ-GE Engine

Support: info@radiumauto.com
Document: 19-0001

1. To relieve fuel pressure, the fuel pump must be temporarily disabled.

On the Lotus Elise/Exige, pull the No. R1 20A fuse (06' model shown). The 4-position fuse holders are located at the front left of the engine compartment on the cabin bulkhead.

On 2ZZ-GE equipped Toyota models, remove the C/OPN Relay located in the engine bay near the left strut mount.



2. Start the engine and allow it to stall.

Disconnect the negative terminal of the battery.

Disconnect all 4 injector clips.

Use the included fuel line tool to disconnect the factory fuel line.

3. Insert the tool into the end of the fuel fitting. Make sure to surround the area with shop towels to absorb fuel contained in the pipe. While squeezing and applying pressure, pull the fitting away from the fuel pipe to release it from the fuel hose.

Remove the M6 mounting bolt that secures the fuel pipe to the cylinder head. Remove the two M8 bolts securing the factory fuel rail to the cylinder head.

4. Carefully remove the fuel rail with the injectors still attached.

Keep close track of rubber grommets at the base of the injectors. These will be needed later.

Remove the fuel injectors from the fuel rail by gently pulling. Caution: Fuel remaining in the rail may spill out.

5. On the OEM fuel rail, locate the fuel pulse damper. Gently pry up on the tabs that hold it in place.

Toyota Fuel Pulse Damper, P/N: 23270-22010

6. When all the tabs are bent out of the way, pull the pulse damper out by pulling straight out. Do not pull unevenly or pry from one side, as this may distort fuel pulse damper.

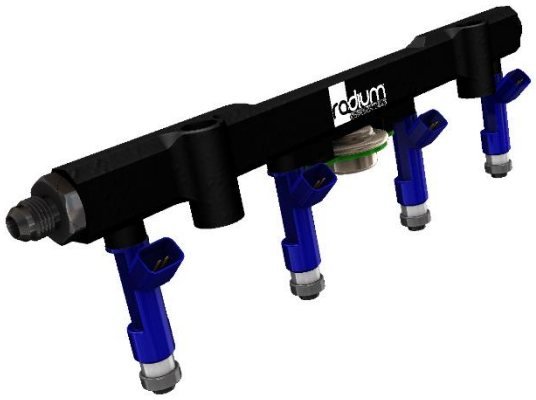
7. **To prevent failure, lightly lubricate the o-ring on the damper** and install into the center port on the Radium fuel rail.

Be very careful not to damage the O-ring. A damaged O-ring can cause a fuel leak.

Use the included green anodized mount to hold the fuel pulse damper in place. Secure with the two included M5 Allen bolts.

8. Install proper end fittings at this time. **To prevent failure, use a small amount of light oil on the O-rings.**

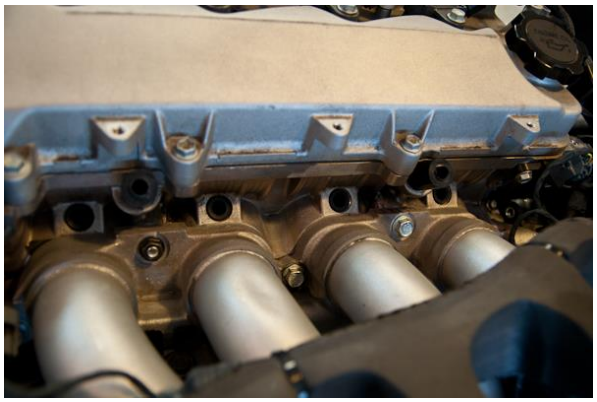
Install the injectors into the fuel rail ports. **To prevent failure, use a small amount of light oil on the O-rings.** Orient the injectors such that the electrical plug is on the same side as the 2 fuel rail mounting bosses.



10. Prepare the cylinder head for the new fuel rail.

Verify that the lower fuel injector grommets are in the injector ports.

Check to ensure the long factory plastic mounting spacers are in place.



11. NOTE: If installing on a 2-Eleven or supercharged Exige-S with intercooler, some grinding is required of the intake manifold's aluminum boss as circled in the picture.

WARNING: DO NOT GRIND DOWN THE FUEL RAIL!

Grind the boss down until acceptable clearance (about 3mm) with the fuel rail is achieved. Protect injector ports from any debris from the grinding process. Thoroughly clean the area before final installation of the fuel rail.

12. Install the Radium Engineering fuel rail.

Pay attention to make sure each injector is sitting squarely in its grommet.

Fasten down the fuel rail using the included M8 socket head bolts. No washers are needed on these bolts.

Plug in all 4 fuel injector connectors.

13. If installing 20-0012-00 or 20-0012-PK, the OEM fuel feed line will be reused. When tightening the hose to the fuel rail, hold the fuel rail fitting in place with a wrench. This avoids over-stressing the fuel rail mounting tabs.

Use the included clamp and the OEM bolt to secure the hose in place. Attach the OEM fuel hose by pushing it into the Radium adapter hose until a solid "click" is felt.

14. Connect the battery and turn the ignition switch to the ON position (without starting the engine) to allow the fuel pump to prime the system.

Repeat this process again to ensure fuel has filled the rail. Check for leaks. If no leaks are found, start the engine and check for leaks while the engine is running.

Installation complete