



INSTALLATION INSTRUCTIONS

TOYOTA 3UZ-FE / 1UZ-FE VVT-I FUEL RAILS

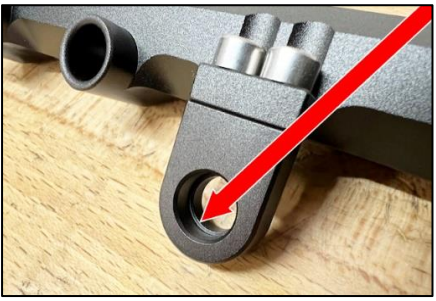



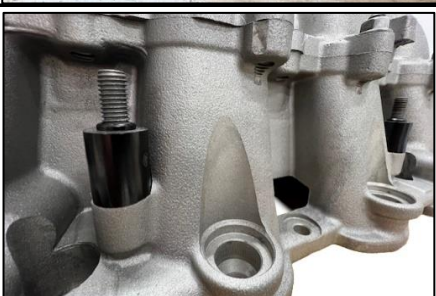

P/Ns: 20-0963



Document: 19-0373

Support: info@radiumauto.com

CAUTION
<p>Only a qualified technician following applicable safety procedures should perform the installation of this product. One must have knowledge in repair and modification of fuel systems and general vehicle modifications to install this product. Gasoline and other fuels are flammable and can be explosive. Only install in a well-ventilated location to minimize buildup of fuel vapors. No sparks, open flames, smoking or other ignition sources are to be present. Draining and removal of all fuel from the fuel system is recommended. Proper eye and personal protection is required at all times during installation.</p>
WARNING
<p>The fuel system is under pressure! Do not loosen any connections until relieving the fuel system pressure. Consult a service manual for instructions on relieving fuel pressure safely. This product is designed for off-highway and racing use only. Fuel system components may not be legal for sale or use on emissions controlled motor vehicles. Consult local, state, and federal laws.</p>

STEP	TOOLS NEEDED	INSTRUCTIONS	PHOTO
1	10mm Socket Wrench	First, turn OFF the ignition and disconnect the battery. CAUTION: Disconnecting the battery may cancel the fault memories of some control units.	
2		Because of the various compatible vehicles, removal of the fuel lines, fuel rails, and fuel injectors will not be covered. It is recommended to have a factory Workshop Service Manual. NOTES: 1. The OEM M8x1.25mm flanged nuts will be reused. 2. Leave the 4 factory thermal insulating spacers on the M8x1.25mm studs, as they will be reused.	
3	Rag	When removing the injectors from the fuel rails, have a rag handy. FUEL INJECTOR COMPATIBILITY: 1. Factory air-assist fuel injectors (shown). These injectors do NOT require the 8 injector seats provided with the rails. 2. Aftermarket "60mm" tall fuel injectors with 11mm upper and 14mm lower O-rings. These injectors require the 8 billet injector seats provided with the rails. See the following step for installation.	
4	Oil	<i>This step is only used if using aftermarket injectors. Do NOT install the injector seats if reusing OEM air-assist injectors.</i> Thoroughly clean the injector seat areas on the intake manifold. Be sure the O-rings are installed into the injector seat grooves. Lubricate the intake manifold seats and the O-rings and push or tap to fully seat the injector seats into place. NOTE: Using these injector seats, eliminates the air-assist feature on these intake manifolds.	

5	4mm Allen Wrench	In the next step, the included mounting feet will be installed to the fuel rails. However, they must be positioned so the machined internal "step" is visible from underneath, as shown. This is necessary for proper mating with the OEM thermal insulating spacers in a later step.	
6	4mm Allen Wrench	As depicted, be sure not to mistakenly use the extra outer mounting location shown.	
7	Oil	Because this will be a custom fuel rail installation, adapter fittings are NOT included. Each fuel rail has three 8AN ORB (3/4"-16) ports. Go to www.radiumauto.com to find an array of compatible adapter fittings, fuel pressure regulators, pulse dampers, etc. that can be used. NOTE: Lubricate the O-rings prior to installation.	
8	Oil	For ease of installation, lubricate the injector O-rings, intake manifold injector seats, and fuel rail injector bores. Fully insert the injectors into the fuel rail bores, as shown.	
9		Confirm all 4 OEM thermal insulating spacers are installed to the intake manifold studs, as shown.	
10		Line-up and place the fuel rail assemblies onto the intake manifold. Once everything is positioned correctly, push the fuel rails downward to fully seat the injectors. NOTE: This picture is depicted with aftermarket fuel injectors.	

11	12mm Socket	Secure the fuel rail using the OEM M8x1.25mm hex flanged nuts.	
		Orientate the fuel injectors so the connectors can be plugged in.	
12	10mm Wrench	After all the necessary fuel rail plumbing is installed, reconnect the battery. Cycle the keyed ignition switch ON/OFF a few times (without starting the engine). This allows the fuel pump to prime the system. Check for leaks.	
		Start the engine and confirm again while the engine is running.	
		INSTALLATION COMPLETE	