



INSTALLATION INSTRUCTIONS

POLARIS PROSTAR 900 1000 TURBO FUEL RAIL

P/N: 20-1137

Document: 19-0437

Support: info@radiumauto.com

CAUTION

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.

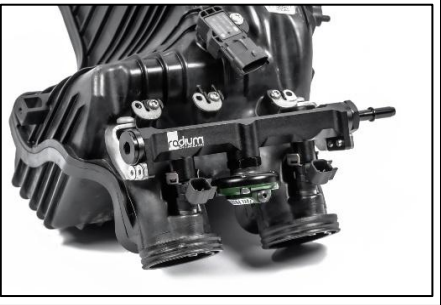
WARNING

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.

STEP	TOOLS NEEDED	INSTRUCTIONS	PHOTO
1		There are a few different manifolds compatible with this fuel rail. Furthermore, some of the fuel systems are traditional with a fuel rail mounted fuel pressure regulator (FPR). Other fuel systems are returnless, where the FPR is located inside the fuel tank. These OEM fuel rails commonly use a fuel pulse damper.	
		If the fuel rail has a built-in Schrader valve, the system pressure can be bled by pressing the internal needle valve. For all other vehicles, disconnect the fuel pump fuse and turn the engine over.	
2	10mm Socket Wrench	Because of the various compatible Polaris vehicles (ACE 900, Ranger XP 900, Ranger XP 1000, General 1000, RZR 900, RZR 1000, RZR XP Turbo, RZR Turbo S, RZR Turbo R, RZR Pro S, etc.) removal of the fuel lines, fuel rail, and fuel injectors will not be covered specifically.	
		It is recommended to have a factory workshop service manual to depressurize the fuel system properly. Be sure to turn OFF the ignition and disconnect the negative battery terminal (shown).	
3		To unplug the 2 fuel injector connectors, depress the locking thumb tabs and pull to release.	
4	Pick	UTVs will typically have dirt and mud everywhere. Prior to opening the fuel system, clean the surrounding area with compressed air.	
	Rag		
		To remove the SAE quick connect fuel lines, pry up on the plastic lock and pull to release. Be ready as fuel will leak from this connection.	

5	4mm Allen Wrench	For removing the fuel rails pictured, use a 4mm Allen wrench. These OEM screws will be reused. Carefully pull the fuel rail and injectors from the throttle body in 1-piece. Bring the assembly to a clean work bench. Pry the fuel injector clips from the fuel rail. Carefully pull each injector from the fuel rail. Have a rag handy.	
	Rag		
6	T20 Torx	For removing the fuel rail pictured, a T20 Torx is required to first remove the aluminum stays (shown) for the wire harness. Now use a T30 Torx to remove the fuel rail. Both sets of these OEM self-tapping screws will be reused. Carefully pull the fuel rail and injectors from the plastic intake manifold in 1-piece. Bring the assembly to a clean work bench. Pry the fuel injector clips from the fuel rail. Carefully pull each injector from the fuel rail. Have a rag handy.	
	T30 Torx		
	Rag		
7	8mm Socket Wrench	For removing the fuel rails pictured, use a 8mm socket wrench. These OEM screws will be reused. Carefully pull the fuel rail and injectors from the intake manifold in 1-piece. Bring the assembly to a clean work bench. Pry the fuel injector clips from the fuel rail. Carefully pull each injector from the fuel rail. Have a rag handy.	
	Rag		
8a	Threadlocker	Follow this step for turbo intake manifold applications. To orient the fuel rail so the RADIUM ENGINEERING logo is facing outward, install the 2 small mounting brackets as shown. NOTES: 1. The fuel rail is symmetrical down the length of the part. 2. The other 2 provided mounting brackets will NOT be used.	
	3mm Allen Wrench		
8b	Threadlocker	Follow this step for aluminum throttle body housing applications. To orient the fuel rail so the RADIUM ENGINEERING logo is facing outward, install the 2 small mounting brackets as shown. NOTES: 1. The fuel rail is symmetrical down the length of the part. 2. The other 2 provided mounting brackets will NOT be used.	
	3mm Allen Wrench		
8c	Threadlocker	Follow this step for plastic intake manifold applications. To orient the fuel rail so the RADIUM ENGINEERING logo is facing outward, install the 2 large mounting brackets as shown. NOTES: 1. The fuel rail is symmetrical down the length of the part. 2. The other 2 provided mounting brackets will NOT be used.	
	3mm Allen Wrench		

9	Threadlocker	Adapter fittings are NOT included with the fuel rail. As shown, the optional 20-1137-PK FUEL RAIL PLUMBING KIT, POLARIS PROSTAR 900/1000/TURBO includes all the necessary adapter fittings to reuse the OEM fuel line(s). For custom plumbing installations, the fuel rail has three 3/4"-16 (8AN ORB) end ports. Go to www.radiumauto.com to find an array of compatible adapter fittings, regulators, pulse dampers, etc.	
	3mm Allen Wrench		
10	Threadlocker	20-1137-PK FUEL RAIL PLUMBING KIT, PROSTAR 900/1000/TURBO The fuel pulse damper (FPD) vacuum port is #10-32 thread tapped. For these Prostar engines, fuel pressure operates within the specified FPD range so a vacuum reference is not required. If pressure falls out of this range, a vacuum reference will be required. Using a wicking thread locker, such as Loc-Tite 290, install one of the provided fittings to the port. The plug is shown.	
	1/8" Allen Wrench		
11	Oil Lubrication	20-1137-PK FUEL RAIL PLUMBING KIT, PROSTAR 900/1000/TURBO Lubricate all O-rings and install the provided fittings. NOTES: 1. The SAE quick connect fuel feed adapter can be on the right or left side. It depends on the specific application. 2. Depending on the fuel system type, either the 8AN ORB plug or the 8AN FPR adapter will be used.	
	7/8" Wrench		
	5/16" Allen Wrench		
12		This fuel rail is compatible with factory fuel injectors or equivalent.	
13	Oil Lubrication	Lubricate the 2 fuel rail injector bores and the upper injector O-rings and push them together. As shown, properly orient the connectors and slide the injector clips in place.	
14a	8mm Socket Wrench	Lubricate the lower injector O-rings and the corresponding intake manifold seats. Lineup the fuel rail assembly to the intake manifold ports and press downward to fully seat. Secure the rail using the OEM screws. Plug in the fuel injector connectors until they click in place.	

14b	5mm Allen Wrench	Lubricate the lower injector O-rings and the corresponding throttle body seats.	
		Lineup the fuel rail assembly to the throttle body ports and press downward to fully seat. Secure the rail using the OEM screws.	
		Plug in the fuel injector connectors until they click in place.	
14c	T20 Torx	Lubricate the lower injector O-rings and the corresponding intake manifold seats.	
	T30 Torx		
		Lineup the fuel rail assembly to the intake manifold ports and press downward to fully seat. Secure the rail using the OEM screws, as shown. Do not overtorque.	
		Plug in the fuel injector connectors until they click in place.	
15	20-1137-PK FUEL RAIL PLUMBING KIT, PROSTAR 900/1000/TURBO		
		Inspect the condition of the OEM fuel lines. Clean any debris and replace any parts that may be permanently damaged.	
		Push the OEM fuel lines onto the fuel rail inlet port (and/or FPR outlet). Push the lock down until it clicks in place. Gently give the line(s) a tug to confirm the connection has been made.	
16	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	