

INSTALLATION INSTRUCTIONS

VENTURI JET PUMP KIT

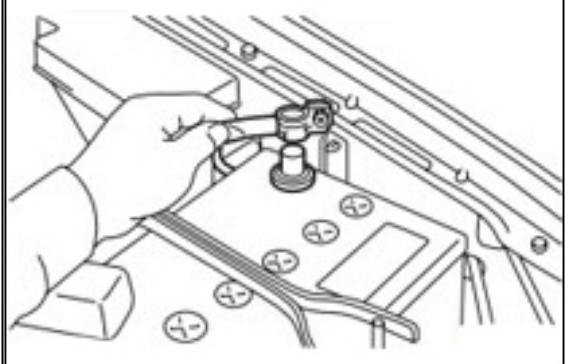
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WARNING: DO NOT EXPOSE WORK AREA TO ANY SPARKS OR FIRE. DO NOT SMOKE WHILE OPERATING ON THE FUEL SYSTEM. CLEAN UP ALL FUEL SPILLS IMMEDIATELY. WORK IN A WELL VENTILATED AREA.

A venturi jet pump uses fuel flow to create suction for vehicles that have saddle-style fuel tanks that require fuel to be pumped from the passive side to the active side (side with fuel pump). The venturi jet pump kit can be used to upgrade an internal OEM jet pump or could be mounted externally in a custom application but is designed to work with EFI systems only. All barbs can be used with 5/16" or 3/8" hose (not supplied). **Lubricate O-rings prior to assembly.**

1. Working with a full tank of fuel is not ideal. Consider running the gasoline out prior to beginning. Remove the fuel pump fuse and start engine. Allow engine to stall to relieve fuel pressure. Remove ignition key and disconnect the battery (as shown). Caution: Disconnecting the battery (G1) may cancel the fault memories of some control units. Consequently, before disconnecting the car's battery, always interrogate the fault memories. Unscrew the gas tank filler cap temporarily to relieve any residual air pressure.

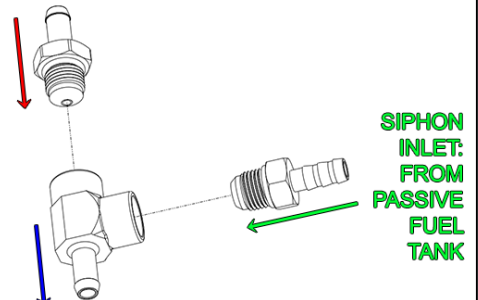


2. JET PUMP VENTURI INLET: Fuel returning from the FPR (or surge tank) should be plumbed to the venturi orifice inlet fitting. The Venturi Jet Pump Kit comes with 3 different orifice fittings with 8.5mm barbs:

- Green Orifice (large): best for multiple fuel pump applications (greater than 500 LPH).
- Black Orifice (medium): best for high flow single fuel pump applications (250-500 LPH).
- Grey Orifice (small): best for low flow single fuel pump applications (less than 250 LPH).

The proper size orifice will be determined by the backpressure in the return line. This is dictated by several factors; the flow rate of the pump(s), if the pumps are staged, engine fuel consumption, the diameter and length of the return hose, etc. Some experimentation may be necessary to find the right balance between cross-over suction and return line pressure.

VENTURI INLET: FUEL FROM FPR RETURN



OUTLET: TO ACTIVE SIDE OF FUEL TANK

3. JET PUMP SIPHON INLET: The included siphon inlet fitting should be connected to the lowest part of the passive side of the tank. If installing this system into an OEM fuel tank that was equipped with a crossover system, connect to the OEM crossover hose.

NOTE: If a OEM style SAE quick disconnect male fitting (shown) is required for the siphon inlet port, Radium has these available in different sizes (14-0146 and 14-0147). They can adapt to the jet pump's 6AN ORB (9/16-18 O-ring) female threads. Be sure to transfer the O-ring from the included barb fitting.

JET PUMP OUTLET: The 8.5mm outlet barb should deposit fuel near the fuel pump on the active side of the tank. **DO NOT FORGET TO REMOVE THE OEM VENTURI JET PUMP!** The system will NOT work properly if it's trying to push through the restrictive OEM venturi jet pump.

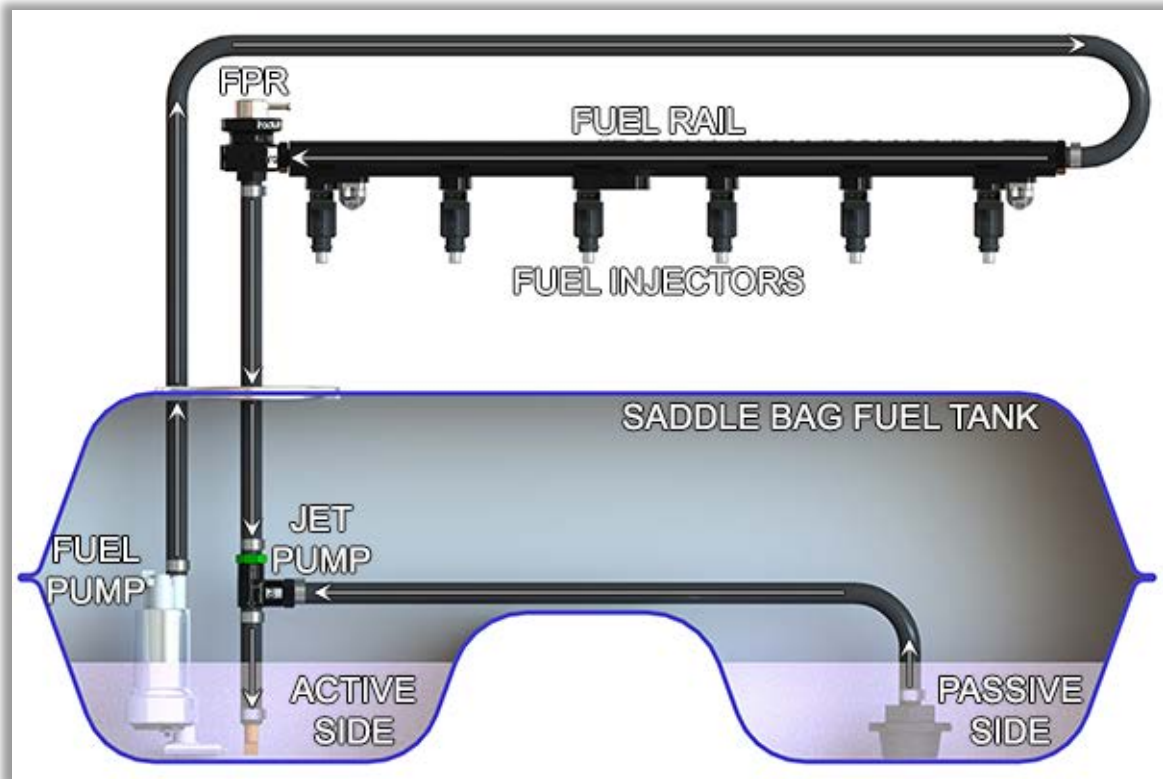


4. Reassemble all associated parts and reconnect the battery. Check the performance of the saddle tank fuel system by monitoring fuel pressure at idle.

- A. If the minimum static fuel pressure is higher than usual, there is likely too much backpressure in the FPR return line. In this case, a larger orifice should be installed into the venturi jet pump body.
- B. If the vehicle unexpectedly and prematurely runs out of fuel while driving, it is likely that the venturi jet pump is not creating enough suction to transfer fuel from the passive side of the fuel tank to the active side. In this case, a smaller orifice should be installed into the venturi jet pump body.



FUEL SYSTEM: Return Style



FUEL SYSTEM: Returnless Style

