

## **DODGE Turbo Diesel '98.5-'02**

Remember, **safety first**. The fuel line should be purged to avoid fuel from spilling on you while performing the pump relocation. Fuel level in the fuel in tank should be below 1/2. Avoid using any tools that could cause sparks, heat, or flame when working near fuel. Use eye protection when working under the truck. Be sure the ignition is off, and secure vehicle from rolling while working near the vehicle. Do not attempt to start the engine while someone is near the engine compartment or under the vehicle.

### **Hose Preparation:**

For '98.5-'99 engines, cut one piece of the 1/2" hose to 15-inches. For '00-'02 engines, cut the 1/2" hose to 13-inches. This will be your fuel filter to VP44 hose.

The remaining 1/2" hose will be your pusher pump to fuel filter hose. The short piece of the 3/8" hose is your hard fuel line to pusher pump hose.

Heat the end of the hoses with a heat gun or hot water to soften, lubricate the barbs on the brass push lock fittings and push the preheated hose onto the barbs. Use 1/2" barb on each end of the 13-inch or 15-inch hose you cut. Use one 1/2" barb on one end of the long 1/2" hose. The other 1/2" barb will be installed later after final measurements are taken. The 3/8" barb goes on the short piece of 3/8" hose.

### **Installation Instructions:**

Remove the factory banjo bolts from the VP-44 injection pump, the fuel filter canister and the lift pump. Remove the fuel lines between the lift pump and fuel filter, the fuel filter and VP-44, and at the lift pump inlet. Unplug and remove the lift pump from its stock location. **Do not remove the pump bracket from the block as it seals off a block opening.**

Install the metric/JIC adaptors with seals in the VP-44 and fuel filter inlet/outlet. **Tighten these adaptors to no more than 15 ft.-lbs. Do not over tighten. Do not use any tape or sealant on the metric or JIC connections. When installing the JIC swivels onto the adaptors, use two wrenches, one on the JIC fitting and one on the adaptor, to prevent over-tightening of the adaptor.**

Screw the 90o fitting onto the adaptor with the tapped adaptor installed on the VP-44 injection pump. Install the pre-assembled hose between the fuel filter outlet and the VP-44. Install the supplied 1/4" X 1/8" NPT fitting onto the 90° fitting on the injection pump, and install your gauge line or use the supplied cap. You may also use other 1/8" NPT gauge connections in that port.

Install the longer piece of the 1/2" fuel line to the fuel filter housing inlet. Secure with clamp. Run the line down along the firewall. Plug in the extended harness, and run it down along the firewall with the hose.

Now it is time to go below the truck. Remove the bolts that secure the OEM hard fuel line clamps and the fuel lines. You will be reusing one of the bolts to mount your new pusher pump bracket.

Continued on Next Page ►



If you need more assistance, we are only a phone call away.

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1150 Samples Industrial Drive  
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Going back to the fuel tank, you will use a small tubing cuter to cut the hard line about 18 to 20 inches in ahead of the tank. This will make your final cut much easier by being able to pull the line away from the frame for clearance. Be wary of fuel that may still be in the line. Do not use any tool(s) that may cause spark, heat, or flame. Use eye protection while under vehicle. Remove the stock fuel line from this point forward.

Mount your pump bracket on the frame using one of the OEM bolts that was removed earlier. Place the new bracket over one of the existing holes (closest to the tank), and install the bolt and tighten. Short chassis trucks will use the mounting hole adjacent to the open section of frame near the cross member. We recommend that you use a short piece of fuel line split down the middle and put it over the fuel return and brake lines to protect them from rubbing on the bracket. Reinstall the plastic clamps that hold the return fuel line to the frame. Connect the wiring harness to the pump.

Install the metric adaptors on the transfer pump (now pusher pump). Mount the pump to the bracket and tighten all the bolts. **Tighten the adaptor fittings to no more than 15 ft.-lbs. Do not over tighten.**

Route the 1/2" fuel line and wiring harness along the frame, and mark the spot to cut the hose to length. Cut the hose and install the supplied push-lock fitting. Install the new hose onto the fuel filter inlet and transfer pump outlet. Tighten the JIC fitting. **When installing the JIC swivels onto the metric adaptors, use two wrenches, one on the JIC and one on the adaptor, to prevent over tightening of the adaptor.**

Connect the supplied section of 3/8" fuel line with the JIC fitting (if needed) and mark where you will make your final cut on both the hard line and the supplied fuel hose. Be sure to cut the hose so it will slip over the hard line a couple of inches. Remove the fitting from the pump inlet and make your cuts to the hard line and hose. Slip the supplied clamp over the hose, and slip over the hard line. Connect and tighten the fitting to the adaptor using two wrenches to prevent over-tightening.

Give your work a close inspection. When you are satisfied everything is secure, begin priming the system.

To prime system, bump the starter, but do not attempt to start the engine. Let the key remain in the "run" position for approximately 15 seconds. Listen for the fuel transfer pump to run and prime the system. After three bump/run priming cycles, try to and start the engine. If it does not start, repeat this cycle until it does. Some trucks will start after only a couple of times while others take several cycles. When running through the priming procedure, check for leaks. If one is detected stop and fix the problem before proceeding. After the engine is running, check for leaks again to be certain all lines and fittings are secure.

### **Fuel Pressure Gauge Connection:**

For your convenience, the kit comes with one of the 90° fittings drilled and tapped at 1/8" NPT. Each kit also contains a 1/4" × 1/8" fitting and cap which is used to replicate the Schrader valve connection. Simply thread this 1/4" × 1/8" fitting onto the 90° fitting with the tapped hole, and attach your gauge line to it. If you have a gauge line that is 1/8" NPT, you may connect directly to the tapped 90° fitting. If you do not wish to install a pressure gauge, use the supplied cap to seal off this connection.

**Using An Aftermarket Fuel Transfer Pump:**

In your kit we have included two pipe-to-JIC fittings and two insulated ring terminals to facilitate the use of an aftermarket pump. Should you decide to use a Carter or Holly style pump, you will need to use the supplied adaptors.

You will also need to do one of two things: either cut off the end of the supplied wiring harness and install the ring terminals, or use the OEM harness. To do this, simply cut off the male plug end and install the ring terminals on the section of the harness that has the female end. The supplied harness has the red wire as hot. Also, on the plugs there is a tiny number 1 on the hot side. Of course mounting these pumps is a bit different as both of types of pumps usually have their own brackets.