



## Dual feed line installation instructions 6.6 liter Duramax LB7



### Kit includes:

Qty:

- 1 High pressure fuel line **PN# DDF-001**
- 1 High pressure outlet fitting **PN# DDF-002**
- 1 Pressure inlet fitting **PN# DDF-003**
- 1 Rubber protection hose **PN# DDF-004**
- 2 Thermostat sealing o-rings **PN# 97300793**
- 5 Plastic zip ties

**Step 1:**

Disconnect the ground cables from the two batteries and remove the plastic cover plate from top of engine.

**Step 2:**

Remove the air intake tubes from air box, and turbo. Save all parts removed in this step. Disconnect both intercooler tubes from turbo.

**Note:** May be easier to remove both intercooler pipes from engine compartment for better access.

**Step 3:**

With all the air-to-air pipes (intercooler tubes) and intake piping out of the way. Unplug all electrical connections in the valley of the engine and any others that are in the way. Drain the antifreeze from the radiator and remove the fan belt from the engine.

**Note:** You will only need to drain out half of the engines coolant.

**Step 4:**

You will now need to unbolt the A/C compressor. **Note:** Do not disconnect the A/C compressor lines from the compressor. Lift the compressor from the bracket leaving the lines connected then lay the compressor across the passenger side of the engine. Unbolt and remove the alternator from the engine along with any wires in the way.

**Step 5:**

After the radiator is drained half way remove the thermostat housing manifold and the upper radiator hose from the engine. Unhook the coolant lines from the turbo to the thermostat housing. Set them aside.

Discard the O-rings that seal the thermostat in the housing.

**Note:** Leave both thermostats in the engine or plug the holes with clean rags.

**Step6:**

Remove all fuel lines and fuel line brackets from the injection pump to the junction block assembly. Unbolt the junction block assembly from the mounting bracket and remove the t-block for modification. As seen in (Figures 1-2)



(figure 1)



(figure 2)

**Step7:**

Remove the aluminum intake manifold from both of the cylinder heads by removing the four nuts and bolts holding it to each cylinder head. (figure 3) Set these parts aside for reassembly. **Note:** Put clean rags in each intake cylinder hole to keep dirt and debris out.



(figure 3)

**Installation of the high-pressure outlet fitting PN# DDF-002****Step 8:**

In the common rail injection pump start by using a T-50 torques bit. Place the bit in the plug located on the bottom of the injection pump under the gear pump. (figure 4) **Note:** Tap torques bit with hammer a few times before removing to prevent the plug from being stripped.

Using a mirror watch for the checkball in the pump, it will stay in the pump or fall into the valley as plug is removed. The checkball will be reused.



(figure 4)



(figure 5)



(figure 6)

Remove the pressure spring from the stock plug and press it onto the new high-pressure fitting. (figures 5-6) Using a mirror make sure the checkball is in the pump before installing the pressure fitting. Once you have verified the ball is in the pump you can proceed with installation of the fitting. If the checkball is not in the pump, using white lube/grease, stick it to the end of the pressure valve. Make sure it does not fall off as you install it into the pump. (figures 7-8)



(figure 7)



(figure 8)

#### Step 9:

Attach the high-pressure fuel line to the new fitting on the injection pump and tighten securely. (figure 9) Place rubber heat protection PN# DDF-004 around the high-pressure fuel line. Use the plastic zip ties to secure the protection cover to the fuel line. Run the high-pressure fuel line out of the injection pump up and in-between the turbo compressor housing and cylinder head. (figure 10) Make sure the rubber protection hose is completely protecting the high-pressure hose from rubbing on the compressor housing, cylinder head, or any other engine components.



(figure 9)



(figure 10)

With the hose attached to the injection pump, tightened, and remove the clean rags from the intake holes on the cylinder heads. Replace the intake manifold and secure it back to the engine.

**Step 10:**

Remove the pressure relief valve from the junction block and replace with the high-pressure inlet fitting PN# DDF-003. (Figures 11-13) Reinstall the junction block to the engine. Replace all fuel lines to and from junction block to rail and injection pump.



(figure 11)



(figure 12)



(figure 13)

**Step 11:**

Route the high-pressure fuel line around the intake and back into the new high-pressure inlet fitting on the junction block. (figure 14) Bend the stock pressure relief valve return line toward the front of the engine. After the high-pressure fuel line is installed and tightened, using the stock banjo bolt and pressure relief valve, reinstall and leave it hanging. (figure 15)



(figure 14)



(figure 15)

**Step 12:**

Reconnect any electrical connections and unhooked hoses. Replace the black rubber thermostat sealing o-rings PN# DDF-005. Reassemble the thermostat manifold to the engine, reconnect the upper radiator hose to radiator, reinstall the A/C compressor and the alternator. Reinstall all inter cooler tubes and any hoses left unhooked. (figures 16-17)



(figure 16)



(figure 17)

**Step 13:**

Reinstall the fan belt, refill the antifreeze (figure 18), hook up the air intake to the turbo, reattach the air filter, Reinstall engine nameplate, and hook up the batteries.

**Note:** Double check all of the connections, fuel lines, and junction block to the injection pump before starting the truck.



(figure 18)



Thank you for your continued business with Industrial Injection Services. We look forward to working with you in the future. If you have any questions or concerns please feel free to contact us:

**Industrial Injection Service**  
**1201 South 700 West**  
**SLC, UT 84104**  
**(801) 972-0476**  
**Or visit us on the web at:**  
**[www.industrialinjection.com](http://www.industrialinjection.com)**