

## Fuel Supply Line Purging Procedure

The following procedure will evacuate fuel from only the fuel supply line, for replacement of the fuel supply valve quick-connect fitting. The fuel supply valve quick-connect fitting must be replaced after performing this procedure. For any other fuel system repairs, follow the recommended fuel evacuation procedure.

### **DANGER**

*Technicians working with, or around, fuel systems should be properly trained to utilize extreme care and caution at all times. Failure to exercise extreme caution and care may lead to serious accidents which can result in property damage, personal injury and/or death.*

### **DANGER**

*LPG is under pressure, wear adequate eye protection. When LPG is discharged into the atmosphere, the rapid change in pressure can cause a refrigerant condition in the fuel (quick cooling) and can harm your skin or cause serious burns much like frostbite. Always wear appropriate protective gloves. Failure to heed this warning can result in serious personal injury.*

### **DANGER**

*Propane is heavier than air and seeks the lowest available level when released to the atmosphere. Keep heat, sparks, flames, static electricity or other sources of ignition out of the area when venting or purging the fuel lines or tank. Failure to heed this danger can result in severe personal injury or property damage.*

### **WARNING**

Liquid propane is cold. The temperature of propane in its liquid state at atmospheric pressure is  $-44^{\circ}\text{F}$  ( $-42^{\circ}\text{C}$ ). Wear eye and ear protection during venting and repair operations. Keep moisture away from the valves. Failure to heed this warning can result in personal injury.

1. Close the manual shutoff valve on the tank supply valve. Refer *Operating The Manual Shutoff Valve* for more information.
2. Remove the fuel pump fuse(s). This disconnects the power to the fuel pumps. Refer to the *Vehicle Specific Service Manual* for fuse location and quantity.
3. Start the engine and let it run until it stalls. This purges the fuel supply line of liquid propane.
4. Turn the key to the off position.
5. Remove the negative battery cable from the battery.
6. Using a 3/4-inch line wrench, slowly loosen fuel supply valve quick-connect fitting. Stop loosening as soon as propane begins to escape.
7. If the supply valve quick-connect fitting cannot be loosened with a 3/4-inch line wrench, refer to the *Fuel Line Purging* procedure to purge all fuel lines and fuel rails.
8. When propane is no longer escaping from the supply valve quick-connect fitting, the component can be replaced. Refer to the *Supply Valve Quick-Connect Fitting* removal and installation procedure.

### **NOTE**

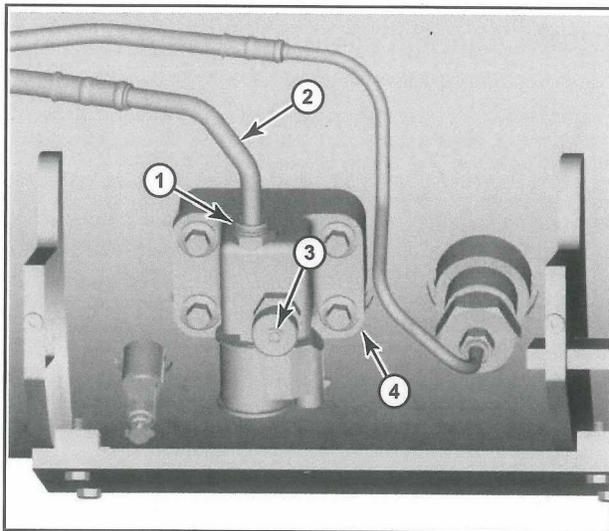
There may still be a small amount of propane in the lines after completing this procedure. Open the lines slowly and cautiously to bleed off any remaining propane.

Refer to the 2012 Ford E-150 / E-250 / E-350 / E-450 Service Manual available at [www.roushcleantech.com/service](http://www.roushcleantech.com/service)

**Supply Valve Quick-Connect Fitting**

**⚠ DANGER**

***A trace amount of propane fuel is released when loosening the fittings. Propane settles to the lowest available surface before dissipating into the atmosphere. Keep heat, sparks, flames, static electricity or other sources of ignition out of the area when venting or purging the fuel lines or tank. Failure to heed this danger can result in severe personal injury or property damage.***



**Rear Fuel Line Connections on Tank (Typical)**

1. Fuel Supply Valve Quick-Connect Fitting	3. Manual Shutoff Valve
2. Rear Fuel Supply Line	4. Fuel Supply Valve Assembly

5. Disconnect the rear fuel supply line at the fuel supply valve quick-connect fitting using the appropriate Jiffy-Tite disconnect tool. Refer to *Tools and Equipment, Special Tools* for more information.
6. Remove the fuel supply valve quick-connect fitting using a 3/4-inch line wrench.
7. If the fuel supply valve quick-connect fitting cannot be removed, replace the fuel supply valve assembly. Refer to the *Fuel Supply Valve Assembly* repair procedure for more information.

**INSTALLATION**

1. Clean and inspect threads in the fuel supply valve assembly.
2. Install the new fuel supply valve quick-connect fitting (part #85672). Lubricate the O-ring using O-ring lubricant and tighten to  $21.5 \pm 3.5$  N·m ( $15.9 \pm 2.6$  lb-ft).
3. Apply a small amount of o-ring lubricant to the tip of the rear fuel supply line.
4. Install the rear fuel supply line into the fuel supply valve quick-connect fitting. Pull back on the line to ensure a secure connection.
5. Connect the rear fuel supply line to the mounting brackets.
6. Connect the negative battery cable to the battery.
7. Once the repair is complete, refer to *Preparing Vehicle For Use After Service*.

**REMOVAL**

1. Close the manual shutoff valve on the tank. Refer to *Operating the Manual Shutoff Valve* for more information.
2. Purge the propane from the fuel supply lines. Refer to the included *Fuel Supply Line Purging Procedure* for more information.
3. Remove the negative battery cable from the battery.
4. Disconnect the rear fuel supply line from the mounting bracket clips. Refer to the *Vehicle Specific Service Manual* for fuel line retention points.

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