



# Deere 6081 CR Fuel System:

**Caution:** Wear safety glasses and protective clothing when working near High Pressure Common Rail (HPCR) engines that are running! Read the Deere Technical manual for complete safety instructions. These instructions supplement, but in no way replace the Deere CTM.

There are two methods to bleed the 8.1L fuel system:

**Recommended Method 1-**Start with a very clean (new) electronic fuel pump and place the electric pump up-stream of the engine (on the suction side of the fuel system). With an electric pump, the fuel bleeding kit (P/N 54026) available from MER, and a new primary filter-with the special funnel, the bleeding process is straight forward.

**Method 2-**It is much more difficult, but still possible to bleed the fuel system with the hand primer pump, using the MER fuel bleeding kit and a new primary filter, with its special funnel.

These instructions will describe both methods in detail.



Figure 1 Before bleeding the system, fill the new primary filter with the funnel shown here. Note: The fuel filter has a bottom bowl that must be installed before the filter is filled.

The purpose of the special funnel is to keep the fuel from running to the center of the filter (filtered side). This is very important because it keeps dust and grit from entering the fuel system.



Figure 2 Screw the funnel onto the top of the filter and fill it, before installing the new filter on the engine.

## Method 1-Bleeding the 8.1L Fuel System, Using an Electronic Primer Pump-

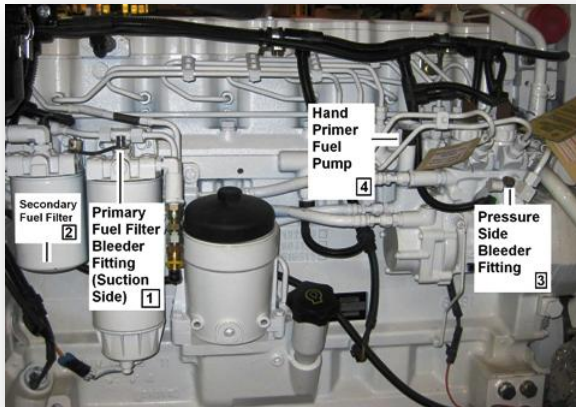


Figure 3 This photo illustrates the important parts of the system.



Figure 4 Next, plumb the electric fuel pump in-line with the incoming fuel to the primary filter as shown.

**After the incoming fuel is connected to the suction side of the electric pump, attach the MER fuel bleeder hose assembly to the primary filter bleeder fitting.**



Figure 5 Turn the knob on the top of the hand primer pump counter-clockwise to unscrew the pump plunger. When it turns three or four turns, the pump plunger is released and will move up and down.

**This fitting is labeled as number 1 in the photo on the previous page. Put the open end of the bleeder hose into a clean bucket to catch the fuel that bleeds out with the air.**

**Verify that there is actually fuel in the tank and that all fuel valves to the engine, including the Racor (water/fuel separator) filter valves, are indeed open.**

**Energize the electric pump, open the valve on the transparent MER Bleeder assembly, and let the electric pump run. A mixture of air and fuel will begin flowing into the bucket. When no more air appears, close the valve and turn off the electric pump.**

**Next, detach the bleeder assembly from fitting number 1 and connect it to the pressure side bleeder fitting. This fitting is labeled above as No. 3. Again, put the open end of the hose in the bucket and start the electric pump again, and open the valve on the bleeder hose assembly. While the pump is running, locate the hand primer pump, which is labeled as No. 4 above.**

**When no more air bubbles flow from the fuel system, close the valve and remove the MER bleeder assembly. Now, leaving the electric pump running, start the engine.**

Run the engine for 15 minutes with the electric pump running, and then shut it off.

Remove the electric pump from the system, taking care to minimize the amount of fuel that is lost while reconnecting the original fuel hose to the inlet fitting on the suction side of the fuel system.

If too much air enters the system, it will be necessary to start over.

### **Alternate Method 2-**

**Bleeding The 8.1L Fuel System, Using The Hand Primer Pump:**

Begin bleeding the fuel system by filling the primary fuel filter with the funnel as shown above, and then install the filter and attach the MER bleeder assembly to the pressure side bleeder fitting. This fitting is number 3 in the photo above.

Next, put the open end of the hose into the bucket and again open the fuel primer pump that is number 4 above. Open the valve on the bleeder assembly.

Pump the valve 100 times, or until there is no more air flowing with the fuel from the clear bleeder hose. Close the valve. Start the engine and run for 15 minutes

If the engine will not start, open the valve and pump the hand primer another 100 times, or until the air clears up, close the valve. Try it again.

