

## Ford 7.3L Diesel Fuel Drain O-ring Replacement Instructions (Kit #7-001)



1. Locate the drain tube that comes from the fuel bowl. It is under the passenger side valve cover, directly below the A/C compressor. Slide a 30" piece of hose over the tube and route it to the shop floor. You should place a catch can under the hose so when the fuel bowl is drained, the fuel will be contained in the catch can.



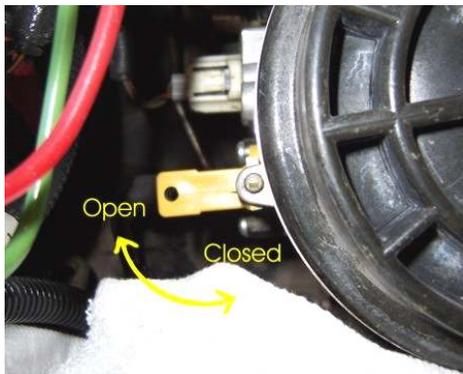
4. Shut the fuel valve off once the bowl has drained. Pull the drain tube connector off of the valve. The nipple that the hose connects to is plastic so be careful not to force it up or down, just pull straight towards the rear of the block. There are four screws holding the valve assembly to the bowl. (pre-99 OBS 7.3L have only 2 screws)



2. Remove the engine cover to gain better access to the fuel bowl. The black nut caps that hold the cover require a 13mm deep socket. If your caps are missing, the nuts are 12mm.



5. The screws require a #20 torx bit. Using a 1/4" ratchet and socket to hold the torx bit, remove all four screws. It will be helpful to keep a magnetic pick up tool or grab tool handy in case you drop your wrench in the engine block valley.



3. Move the drain valve lever from the closed position to the open position as shown here and allow the fuel bowl to drain.



6. Once you have removed the drain valve, use a pick tool to remove the old o-rings.

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7. There is a reinforcement piece of nylon in the top of the valve stem that needs to be removed. Once this is removed, you will be able to grasp the stem with a pair of needle nose pliers. With a #8x32 machine screw, thread into the reinforcement tube only a couple of threads. Pull the wedged tube from the valve body but be careful not to lose the small check valve ball that sits just below the wedged tube. With the tube out, there will be enough room to grasp the top of the stem with a pair of needle nose pliers with one jaw in the center of the stem, the other on the outside of the white stem.



8. Turn the valve stem 180 degrees from normally open. You will see a flat side on the upper ball area through the top port opening in the valve body when you have it positioned correctly. At this point you can pull the valve stem out of the valve body. The flat side of the valve stem must be aligned properly for the stem to be removed. Remove the old o-ring from the top of the stem. Clean out the bottom of the valve body with Brake Klean. Clean the yellow Teflon residue from the valve body and the back side of the fuel bowl with a shop rag dipped in lacquer thinner. Install the new o-ring on the stem by 'rolling' it over the top. Lube the new o-ring with a very light coating of light oil or Vaseline. Align the three flat sides of both balls of the valve stem and re-insert it into the valve body.

Use the yellow handle to finish pushing the stem into the valve until it seats. Drop the small check valve ball into the stem and insert the wedged tube on the top.



9. Lubricate the new main sealing o-rings with clean diesel fuel and press them into the valve with your thumb. Place the lever back on the valve and rotate the valve so you can see the opening in both the top and bottom o-rings. Note that the lever should be facing towards the rear of the valve in the position shown here. It will be important that you maintain this orientation when the valve is re-installed.



10. Place the valve against the rear of the fuel bowl so that the lever fits into the guide hole of the fuel bowl. Install the four screws and tighten them to 5-8 Lb-in. Re-attach the fuel drain tube to the drain valve's plastic nipple.

Turn the ignition key to the on position but do not attempt to start the engine yet. Listen for the fuel pump to quit running. Check for leaks around the fuel bowl and drain tube under the engine.

11. If no leaks are found, cycle the fuel pump 2 more times. Check for leaks again. Remove the drain hose you initially slipped over the drain tube under the engine. Stop the engine and replace the engine cover over the fuel bowl. **For a complete fuel bowl rebuild kit, see DieselOrings.com Kit #7-003.**