

# Fuel Filter Change

*www.CarboniteCummins.com*

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The key to keeping any vehicle running well is routine maintenance. We all know about changing the oil, but what else needs to be done? Simple items such as a fuel filter/water separator play a key role in keeping the engine running in excellent condition. The recommended change interval for a Ram with the 6.7L is 15,000 miles. Failing to change the filter on a regular basis will cause component failure that could easily exceed a \$10k repair bill. This article is dedicated to changing the filter on a 2008 Dodge Ram 2500 equipped with a 6.7L Cummins turbo diesel engine.

The fuel filter/water separator is located on the driver's side of the engine just below and aft of the intake horn. Cummins utilizes a single filter element that performs both fuel filtration and water separation. It has a stationary base that is bolted to the head and the filter medium screws into it from the bottom. On the bottom of the filter housing there is a Water in Fuel (WIF) sensor and a water drain valve. The WIF sensor will trip a light in the instrument cluster when water pools up in the bottom of the canister. The drain valve is then used to drain the water from the canister. Pretty simple, right?

When the 6.7L Cummins engine was first released, it used a one piece filter and housing assembly. You had to change both the filter and the housing as one assembly. Later, an updated two piece filter housing was released that had a separate canister and filter. You will need to check the part number of your filter housing to see whether or not you have the updated version. The part numbers for all of the filter assemblies are as follows:

Original one piece filter and housing assembly:

Mopar..... **05183410AA**

Fleetguard .... **FS43252**

Cummins ..... **4936025**

Updated housing with replaceable filter (included):

Mopar..... **68061633AA**

Fleetguard .... **FS43257**

Cummins ..... **5257769**

Replacement filters for updated housing:

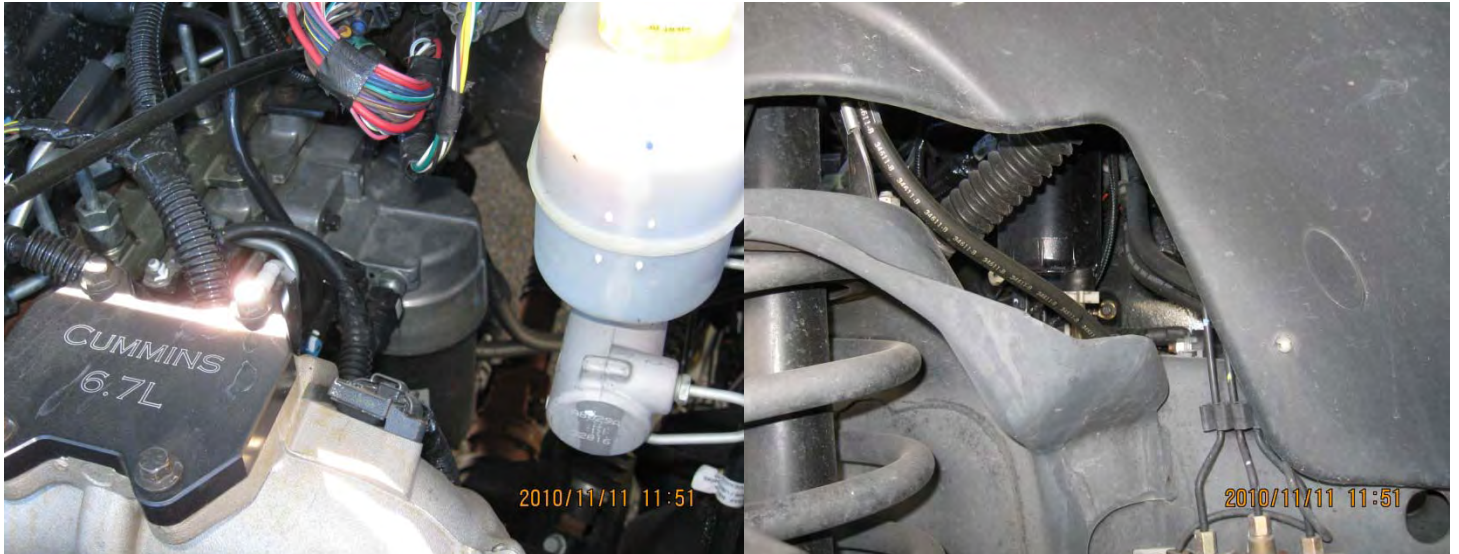
Mopar..... **68061634AA**

Fleetguard .... **FS43258**

Cummins ..... **5257768**

## **Step 1:**

Locate the fuel filter on the driver's side of the engine. It is just below and aft of the intake horn assembly. You can access it through the driver's side wheel well.



## **Step 2:**

Place a bucket under the truck and attempt to drain the fuel out of the canister by loosening the white drain valve assembly. Very little fuel came out of mine when I loosened the drain valve, and the bucket will only catch about 40% of the fuel that does come out. Be warned, you WILL make a mess while trying to change this thing.



### **Step 3:**

Please wear some sort of eye protection while taking this thing off; safety glasses, goggles, sun glasses, whatever. Diesel fuel in the eyes sucks really bad, you've been warned. Start by removing the wiring harness for the WIF sensor and remove the drain hose from the drain valve. Loosen the fuel filter housing assembly from the mounting base on the side of the engine. It simply screws in. There is a ½ inch square drive socket on the bottom of the fuel canister that allows you to use a ½ inch ratchet to spin it off. You will need an extension that is about 3 inches long to get the ratchet into the socket. My shortest ½ drive extension was 6 inches long, so I used an oil filter wrench to spin the canister. It is not recommended to use an oil filter wrench on the housing. It is plastic and you will damage it. I didn't really care since I was replacing the housing with the new one anyway. If you have the new style canister and are planning to reuse it, **DO NOT USE AN OIL FILTER WRENCH TO SPIN IT OFF**. When the filter finally comes loose, fuel will dump everywhere. Again, the bucket only catches about 40% of the fuel, so be sure to put something under the truck to soak up the mess. Once the housing is off, check to ensure the large o-ring for the housing and the small o-ring for the filter element have both come off with the filter. If not, remove them from the filter base.



#### **Step 4:**

Prepare the new filter assembly for installation. If you're re-using the canister, remove the old filter and check the inside for debris or any physical defects. If it's dirty, clean it out with some clean diesel and a rag. Do not use any harsh solvents to clean it because they will degrade the plastic. If it's physically damaged in any way, you must replace the housing. Insert the new filter into the housing, making sure it seats all the way in the canister. Lubricate the o-rings with clean engine oil and install them on the filter housing and the filter element. If you don't have any clean engine oil, at least use diesel fuel. **Do not** pre-fill the filter with diesel fuel. The truck has an electric pump that will automatically fill the housing when you turn the key on. If you pre-fill the housing, you run the risk of contaminating the fuel, which will go straight into your high pressure fuel pump, not a good thing.



#### **Step 5:**

Reinstall the new filter housing by screwing it onto the filter base. Use extreme caution to avoid knocking any dirt/debris into the filter housing while you put it back in place. Screw the filter on until the o-rings seat, then turn it another  $\frac{1}{2}$  turn. Once the housing is secured, reconnect the WIF sensor harness and attach the drain line to the drain valve.

#### **Step 6:**

**DO NOT TRY TO START THE TRUCK.** Turn the key to the ON position and let the fuel pump run for 20 seconds, then turn the key off and back on for another 20 seconds. This allows the electric fuel pump to run and prime the fuel system. After the second key cycle, turn the key off and then try to start the truck. Usually it will start, if not repeat the key cycles. If it doesn't work the second time, you've got something wrong. Double check to ensure the filter housing is fully seated and the drain valve is closed. Be sure to check the fuel filter for any signs of leaking.

**Comparison Pictures:** (The old one is covered in diesel fuel)

