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2015 Chevrolet Colorado V6 Catch Can and Clean Air Oil Separator installation guide

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Why use a catch can and oil separator on this Direct Injection engine? In a DI (Direct Injection) engine, the fuel is sprayed under high pressure directly into the combustion chamber. This can help increase power and MPG but there is a downside. The downside is that the carbon build up will not get washed and removed from the back of the valves.

On a non-DI engine, the fuel is sprayed under lower pressure in the intake manifold and will help wash the back of the valves to keep them clean. On a DI engine, the un-burnt oil vapors or fuel vapors that come back up through the PCV will end up sticking to the valves and can make this problem worse. If the buildup gets bad enough, it can cause rough idling, lack of power, and lower MPG. We want to stop it before it happens!

In addition to the catch can, we also decided to install a Clean Side Separator (CSS). This will prevent any oil vapor from coming up through the crank case side and entering the intake manifold. The goal for this is to prevent ANY oil or fuel vapor from getting into the intake manifold. This is why we chose to equip our 2015 Chevrolet Colorado with the Elite Engineering Catch Can and Clean Air Oil Separator kit to prevent any issues for engine performance later down the road.

Tools required:

1. T40 Torx size Socket
2. 3/8 Ratchet and Extension
3. 1/4 Ratchet and Extension
4. 8mm Socket
5. 13mm Wrench
6. 4mm Allen Key
7. WD-40
8. 1/2" to 3/8" Adapter (For Clean Side Separator Only)
9. 1/2" Vacuum Cap (For Clean Side Separator Only)
10. Needle Nose Pliers
11. Heavy duty cutters
12. Hose clamps (3/8" and 1/2")

Time required: ~ 1.5 hours



We will first start with the Long "L" mounting for the Elite Engineering Catch Can.



To start – Remove the 4 bolts that hold the engine cover on. 1 Torx in the front, 1 Torx on the passenger side, and 2 mm on the backside towards the firewall. Loosen the hose clamp on the airbox.



Loosen the throttle body hose clamp. Picture of location is below. We found it was easiest if you go to the passenger side of the car and do it. (Took the picture off the car for better illustration)



Push down on the gray part of this connector. Rotate till the end that is currently pointing towards the firewall, towards the hood. Pull towards the passenger side of the car and the end should come right off. After this you can remove the oil cap. Then pull the whole engine cover towards the front of the car. It should come off.



We assembled and mounted the catch can on the passenger side of the vehicle using a bolt to the left of the radiator. The bolt is pointing towards the firewall. Don't forget to put some Teflon paste or Teflon tape on the ends of the threads going into the can since they are NPT threads. The AN sides will not need any Teflon paste or Teflon tape.



One end of the PCV hose goes to the passenger side valve cover while the other side is located in the intake manifold. To remove the end on the valve cover, feel around the back of the fitting. There will be a nub that sticks out. Push that towards the driverside and then lift up. It should come right off.



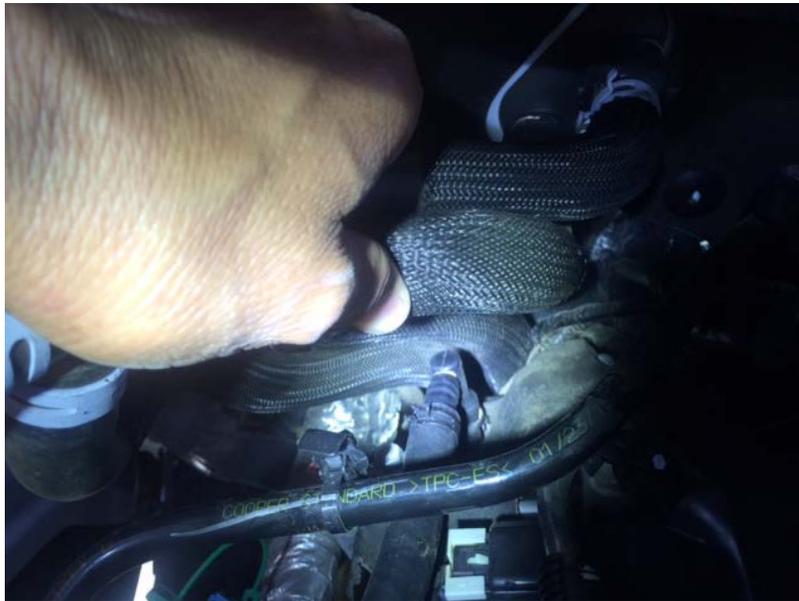
Circled in blue is the other end of the PCV attachment. We remove this by twisting it 90 degrees and pulling up.



You have now removed the PCV hose from the engine. Cut each end off but make sure to leave enough room to attach the Rubber hose that was included with your kit along with the hose clamp shown below. We recommend you put some lubricant before trying to push any hose ends on. A little goes a long way!



Stick the PCV for the Valve Cover end back on. You should hear a click. Then run the rubber line keeping clear of the exhaust manifold and pulleys to the catch can.



Route the PCV Valve Cover end to the top (Inlet) of the Elite Engineering Catch Can. Attach the fittings and hose clamp and then attach it to the catch can.



Take the end of the Intake Manifold side for the PCV and attach the supplied hose and clamp to it. We routed it this way because we found that the PCV couldn't pop back out easily.



After routing this hose, attach the hose ends. We can go now ahead and attach it to the side port (outlet port) of the Elite Engineering Catch Can.



The install of the Elite Engineering Catch Can is complete! From now on, no oil should enter into the intake manifold through the PCV.

Onto the Clean Side Separator (CSS) install portion. In order to do this we must go back to the gray connector that we had to remove in order to take off the engine cover.



Follow this hose all the way back to near the driver side firewall. There will be another hose clamp on that end. Grab your needle nose pliers, take the clamp off, and pull the hose off.

If you also purchased a Clean-Side Separator (CSS). The following instructions will apply:

The next three pictures illustrate how what the CSS looks like. Instructions continue after the next three pictures.
First half picture below



Second half picture below.



All connected (again, without the engine cover in place)



Let's go ahead and put on the engine cover now. Do not put in any of the fasteners that tighten down the engine cover just yet. Take the end that plugs into the engine cover and snap it back in. Now thread the first half of the CSS to the oil fill cap with the supplied hose attached and then attach the second half. We will now need to cut off the end that attaches to the driver side valve cover on the OEM piece. We ended up cutting it where the hose ended up running parallel to the firewall. This is also where we cut the rubber hose to meet with the OEM hose.



We will now use a 1/2" to 3/8" reducer to splice into the Clean Side hose line.



Make sure there are no leaks.

Slip the 3/8" hose into the barb fitting adapter and put a hose clamp around it. Fasten down the engine cover with the (2) Torx bits and (2) 8mm screws in the back.



We have now completed the install of the CSS! We are now protected from the PCV and Crankcase side for oil vapors getting into the intake manifold. The engine should now breathe better and we will not have to worry about losing any engine performance due to oil or fuel vapors.

Happy motoring everybody!

By: Go Ham Industries