

Volkswagen MK6 TSI 2.0T Catch Can System Installation Instructions - ES2959979



Skill Level
1 - Easy
Basic Skills
Required















INTRODUCTION

ECS Tuning Catch Can System

Today's direct fuel injection systems have taken engine performance to a whole new level, but there is a drawback. With no fuel vapors to clean the intake valves, the oil vapors that are drawn into the intake from the PCV system will deposit themselves onto the valves and intake ports. Over time, this will result in an excessive carbon buildup, resulting in lost power and poor driveability. At ECS Tuning, we have taken our already successful catch can and designed a kit specifically for your VW MK6 TSI. While the original crankcase ventilation system on your car is very well designed and has built in oil separation, there are still fine oil vapors that get through. The baffled construction and engineered flow of our catch can will separate and store these vapors in an easy to clean remote mount reservoir.

Installing one of our catch can systems is an easy project, and we're going to take you through the entire process step by step so your install can go smoothly and quickly. The end result is a functional system with a great factory like appearance that you'll be proud to show off! Thank you for looking to ECS Tuning for all your performance and repair needs, we appreciate your business!

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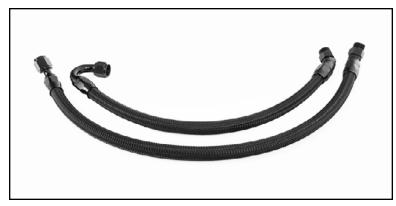
KIT CONTENTS



Catch Can Reservoir (QTY 1)



Baffled Separator (QTY 1) 2.5mm Allen Key (QTY 1) Dipstick (QTY 1)



Preassembled Feed and Return Lines (QTY 1ea)



MK6 Catch Can Mounting Bracket (QTY 1)



M6 Bolt & Nut (QTY 1ea)



KIT CONTENTS (CONTINUED)



Turbo Inlet Adapter & Clip (QTY 1ea)



PCV Cap & Clip (QTY 2ea)



PCV Adapter (QTY 1)



-10AN Spacer (QTY 1)



Billet Line Separator (QTY 2)



REQUIRED TOOLS

Note: The tools required for each step will be listed by the step number throughout these instructions.

Standard Automotive Tools

Required For This Install

Available On Our Website

Protecta-Sockets (for lug nuts) <u>ES#2221243</u>	• 1/4" Drive Ratchet
• 3/8" Drive Ratchet <u>ES#2765902</u>	• 1/4" Drive Deep and Shallow Sockets ES#2823235
• 3/8" Drive Torque Wrench	• 1/4" Drive Extensions <u>ES#2823235</u>
• 3/8" Drive Deep and Shallow Sockets ES#2763772	• Plier and Cutter Set <u>ES#2804496</u>
• 3/8" Drive Extensions <u>ES#2804822</u>	• Flat and Phillips Screwdrivers <u>ES#2225921</u>
Hydraulic Floor Jack <u>ES#2834951</u>	• Jack Stands <u>ES#2763355</u>
• Torx Drivers and Sockets ES#11417/8	Ball Pein Hammers
• ½" Drive Deep and Shallow Sockets <u>ES#2839106</u>	• Pry Bar Set <u>ES#1899378</u>
• ½" Drive Ratchet	• Electric/Cordless Drill
• ½" Drive Extensions	 Wire Strippers/Crimpers
• ½" Drive Torque Wrench <u>ES#2221244</u>	 Adjustable (Crescent) Type Wrenches
• ½" Drive Breaker Bar <u>ES#2776653</u>	 Punch and Chisel Set
Bench Mounted Vise	Hex Bit (Allen) Wrenches and Sockets ES#11420
Crows Foot Wrenches	• Thread Repair Tools <u>ES#1306824</u>
• Hook and Pick Tool Set <u>ES#2778980</u>	Open/Boxed End Wrench Set <u>ES#2765907</u>

Specialty Tools

• Schwaben Ignition Coil Puller <u>ES#240943</u>



INSTALLATION NOTES

- **RH** refers to the *passenger side* of the vehicle.
- **LH** refers to the *driver side* of the vehicle.
- Always use the proper torque specifications.
- If applicable to this installation, torque specifications will be listed throughout the document and at the end as well.
- Please read all of these instructions and familiarize yourself with the complete process **BEFORE** you begin.

GENERAL PREPARATION AND SAFETY INFORMATION

ECS Tuning cares about your health and safety, please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- Whether lifting a vehicle using an automotive lift or a hydraulic jack, be sure and utilize the factory specified lift points.
- Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- **ALWAYS** support the vehicle with jack stands.
- **ALWAYS** read and follow all safety information and warnings for the equipment you are using.

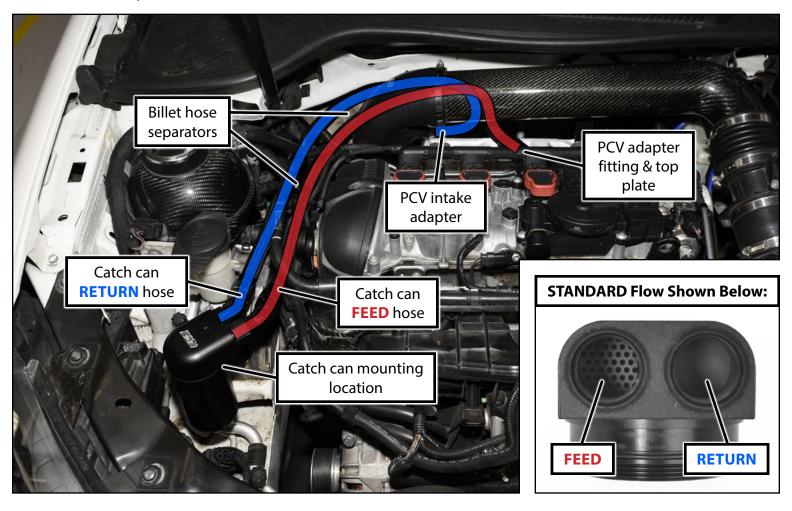


NEVER get underneath a vehicle that is supported only by a jack, and **ALWAYS** make sure that the vehicle is securely supported on jack stands.



Here is an overview of the MK6 GTI TSI engine compartment. As you can see, the catch can will be mounted on the front RH (passenger's) side just behind the headlight.

Take a look at the photo below and familiarize yourself with the mounting location and hose routing for this system. It's important to note that the catch can system needs to be setup in **STANDARD FLOW**. Be sure to confirm that your catch can is set up for reverse flow **BEFORE** connecting the hoses (see inset photo below).



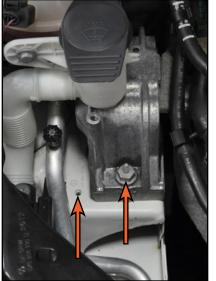


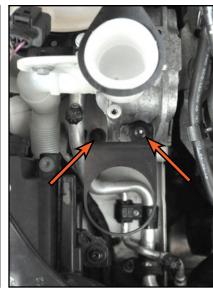
Step 1:

10mm Socket & Ratchet

Our catch can mounting bracket utilizes a threaded hole and stud on the engine mount (shown in the LH photo).

Use the included bolt and nut to secure the bracket into place (shown in the RH photo).



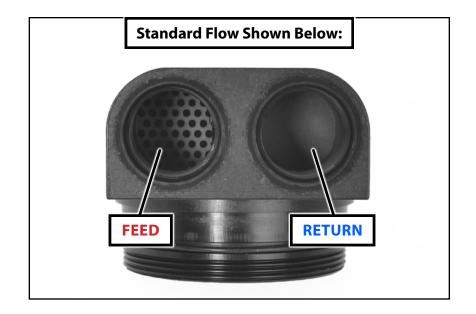


Step 2:

If you haven't done so already, now is the time to confirm that the catch can is set up for **STANDARD FLOW** (shown in the photo on the right).



If your catch can is not set up for **STANDARD FLOW**, please click **HERE** to jump ahead to our instructions on reversing the flow of your catch can.





Step 3:

Install the catch can separator into the bracket by doing the following:

- Unthread the catch can reservoir **and** remove the O-ring from the catch can separator.
- Place the separator into the bracket (shown in the LH photo).
- Lubricate the O-ring with clean engine oil, then install it into the groove in the separator.
- Thread the reservoir onto the separator, but leave it loose at this time (shown in the RH photo). We'll need to swivel the separator around later on in the install.
- Lubricate the dipstick O-ring with clean engine oil, then thread it into the separator (not shown).





Step 4:

Remove the engine cover by pulling up at the four corners.





Step 5:

Remove the crank vent hose between the PCV assembly and the intake manifold by squeezing the knurled section of the connector ends together (see inset photo) and pulling the hose off each end. You will not be reusing this hose.



Step 6:

Now, locate and inspect the end of the PCV assembly (arrow in LH photo).

If the end of the PCV assembly has a lip on it (highlighted in **RED** in the RH photo) you will need to file it off in order for the PCV cap to fit. This soft plastic lip is very easy to remove. File away the lip so that the end is completely flush.







Step 7:

Lubricate the seals with clean engine oil, then push a PCV cap onto the PCV assembly until it is fully seated (LH photo). Install one of the PCV cap retaining clips into place (RH photo).





Step 8:

Lubricate the seals with clean motor oil, then install the remaining PCV cap and clip onto the intake manifold.





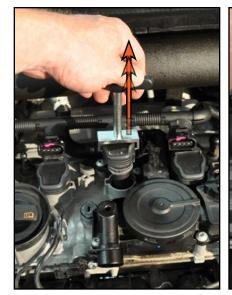
Step 9: **Small Angled Pick**

Disconnect the four ignition coils and push the harness off of the coils. The easiest way to release the connectors is to insert an angled pick as shown and twist it backwards gently until you hear the faint "click" of the locking tab releasing.



Step 10: Schwaben Ignition Coil Puller, T30 Torx

Once you've pushed the harness off of the coils, remove the #3 coil by pulling it straight up (LH photo). Remove the securing bolt for the original PCV line which runs from the valve cover to the intake pipe (RH photo).





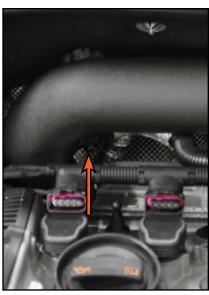


Step 11:

Pull the original PCV line out of the PCV valve assembly in the valve cover (LH photo).

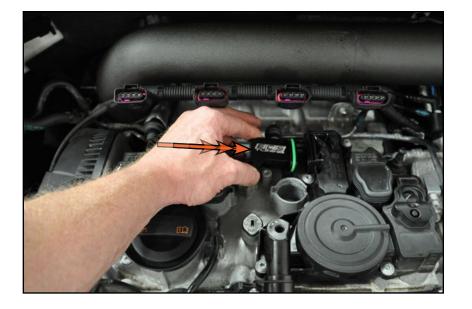
Pull the PCV hose off of the intake pipe (RH photo) using the same method as used in step 5 on Page 10. You will not be reusing this hose.





Step 12:

Lubricate the o-ring seal with clean engine oil, then push the new ECS PCV valve adapter into the PCV valve assembly until it is fully seated. Install and tighten the securing bolt.





Step 13:

Install the intake adapter onto the curved end of the catch can return line. Tighten the adapter onto the line using a pair of crescent wrenches or open end wrenches. It is not necessary to use excessive force to tighten these fittings.





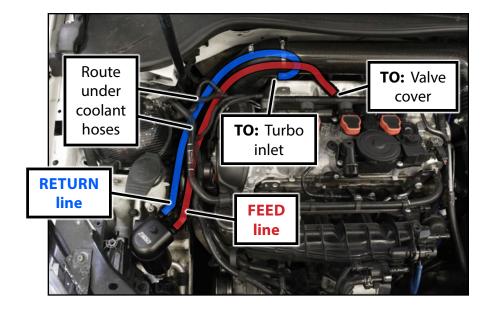
AN fitting wrenches are designed specifically to tighten these without damaging the fitting or the finish. Using them carefully, crescent type wrenches will also do the job but it's best to apply masking tape to the fitting before tightening to protect the finish.





Step 14:

Route the **FEED** and **RETURN** lines from the catch can to the fittings on the PCV valve adapter and intake tube. Be sure to route the lines underneath the coolant hoses as shown.



Step 15:

Push the intake adapter (on the curved end of the **RETURN** line) down onto the fitting on the intake tube, then install the metal retaining clip into the groove to lock it in place.





Step 16:

Tighten the feed line on the PCV adapter. Be sure to hold the line up as you tighten it to make sure that it does not rub the exhaust heat shield.



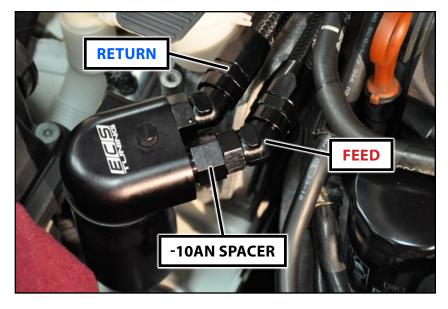
Step 17: AN Fitting Wrench - or - Crescent Wrench

Follow the hoses from the turbo inlet and valve cover so you can identify their position at the catch can.

- The **FEED** hose runs from the adapter on the back of the valve cover to the **FEED** side of the catch can.
- The **RETURN** hose runs from the turbo inlet adapter to the **RETURN** side of the catch can.

Connect and tighten the **RETURN** hose to the catch can separator Install the -10AN spacer onto the **FEED** side of the separator, then connect and tighten the **FEED** hose into the spacer.

Tighten the catch can reservoir to lock the catch can in place in the mounting bracket.





Step 18:

Reinstall the #3 ignition coil and connect all four coils. You should be able to hear a faint "click" when the connectors are fully seated.



3/16" Hex (Allen) Wrench Step 19:

Install the two line separators, using your discretion for optimum placement.

Reinstall the engine cover.

Your Catch Can installation is complete!



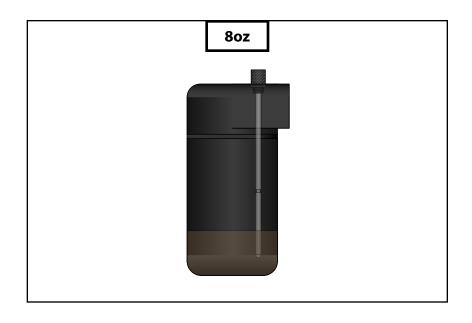


Step 1:

We recommend that you check the level of the waste in your catch can on a regular basis. Start with once a week until you determine the amount of time it takes your car to fill the reservoir.

Note that all MK6 TSI catch can kits come with an 8oz reservoir. The dipstick will not reach all the way to the bottom of the reservoir, so the dipstick won't register all of the build up inside.

Empty and clean the reservoir when the waste registers approximately 2" up on the dipstick.

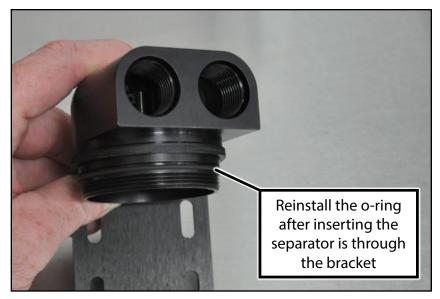


Step 2:

About twice a year, we recommend that you remove the separator for cleaning. To remove it, unthread the reservoir, disconnect the lines, remove the o-ring seal and lift the separator out of the bracket.



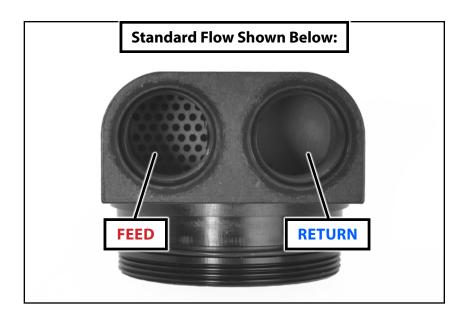
If the o-ring seal needs to be replaced, it is available as a replacement part on our website: ES#3097721.





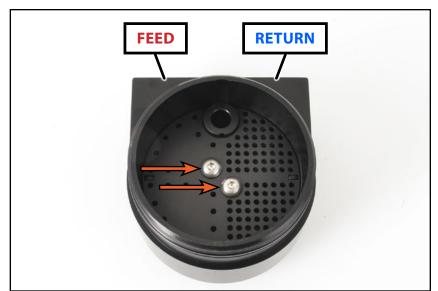
Step 3:

Once you have removed the separator, note the orientation of the baffle inside. The feed side of the separator has a number of small holes in it, the return side looks like a flat plate.



Step 4:

Using the 2.5mm allen wrench included with the kit, remove the two baffle plate screws.





Step 5:

Lift the baffle plate out of the separator housing.



Step 6:

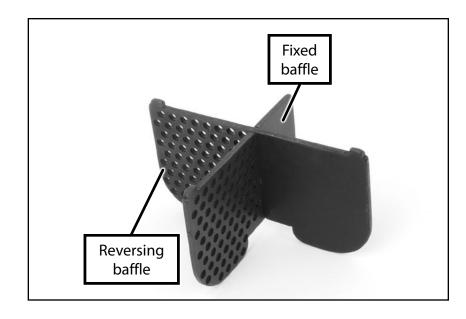
Lift the remaining baffles out of the separator housing.





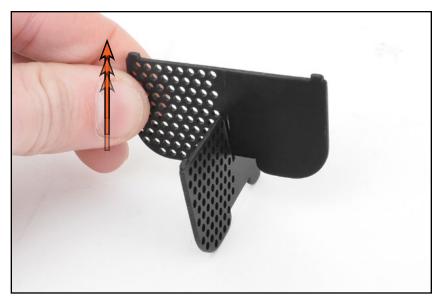
Step 7:

Note the positions of the fixed baffle and the reversing baffle.



Step 8:

Slide the two baffles apart.



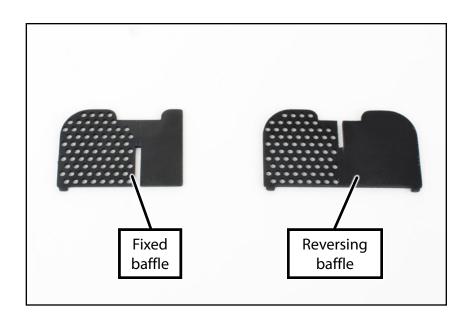


Step 9:

Clean the separator baffles, housing, and reservoir, using any mild cleanser or solvent. Note in the picture on the right that the fixed baffle is shorter than the reversing baffle.

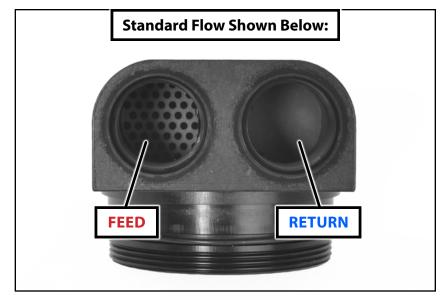


Any mild cleanser or solvent can be used to clean the catch can, however we recommend that you test all cleansers on an inconspicuous area inside the reservoir to check for discoloration before you clean the outside surfaces.



Step 10:

Reassemble the baffles into the separator housing and make sure that the baffles have not been reversed and the feed and return sides are positioned correctly. Reference step 4 in this section to make sure it is properly installed.





CLEANING AND MAINTENANCE - COLD WEATHER

COLD TEMPERATURE WARNING

In cold temperatures, the crank vent system will generate a much greater amount of moisture which can present a risk of freezing.

When the temperature outside approaches freezing, your catch can should be cleaned on a weekly basis to prevent freeze up of the crank vent system and damage to engine seals.

When the temperature drops below freezing, we recommend reinstalling your original crank vent system components to prevent freeze up of the crank vent system and damage to engine seals.

NEW PRODUCT DETAILS

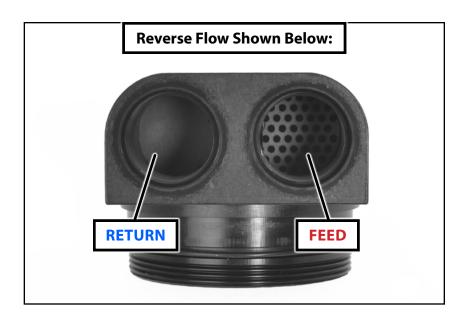
• ECS Tuning has designed a new Cold Weather Bypass Hose for those who plan to drive during the winter months. This hose installs quickly and easily, eliminating the need to completely remove the system when temperatures drop. This hose can be found on our website at ES#3183805.





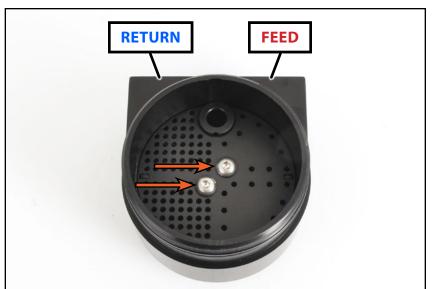
Step 1:

You can reverse the flow of your catch can in order to create the best mounting location and hose routing for your application. To begin, look into the separator and identify where the feed and return sides are oriented from when the catch can was originally assembled. The feed side of the separator has a number of small holes in it, the return side looks like a flat plate.



Step 2:

Using the 2.5mm allen wrench included with the separator, remove the two baffle plate screws (arrows).





Step 3:

Lift the baffle plate out of the separator housing.



Step 4:

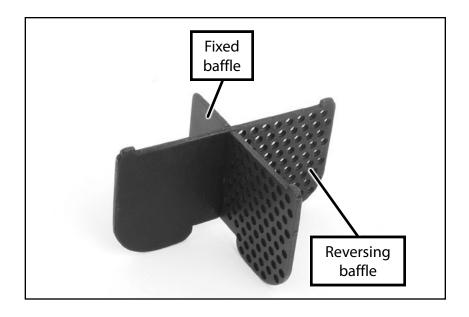
Lift the remaining baffles out of the separator housing. Note the position of the inlet screen on the reversing baffle (arrow).





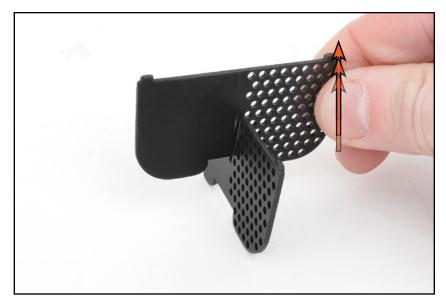
Step 5:

Note the positions of the fixed baffle and the reversing baffle.



Step 6:

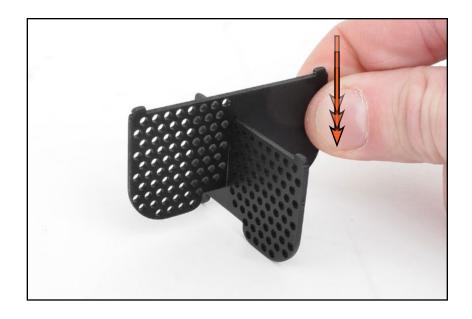
Slide the two baffles apart.





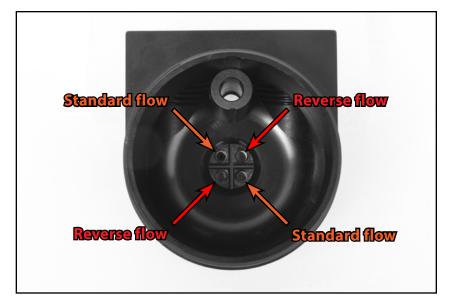
Step 7:

Flip the reversing baffle and slide it back onto the fixed baffle.



Step 8:

Inspect the inside of the separator housing. You will see that there are two sets of threaded holes for the baffle plate screws. When you reverse the flow, you will use the opposite holes when reinstalling the baffle plate screws.





Step 9:

Reinstall the baffles into the separator housing. Note that the inlet screen on the reversing baffle should now be located on the opposite side.



Step 10:

Flip the baffle plate so it is opposite of the removal position and place it back into the separator housing.





Step 11:

Reinstall the baffle plate screws utilizing the opposite holes in the separator housing. Compare the new baffle plate position with step 2 in this section to make sure it is properly installed for standard flow.

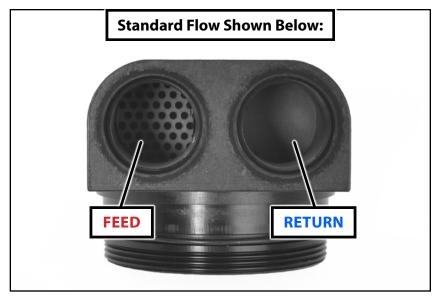


Step 12:

Your standard flow separator will now have the feed side and return side located as shown in the photo.



If you need to return to the installation steps please click **HERE**.



Your Catch Can System installation is complete!



These instructions are provided as a courtesy by ECS Tuning

Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

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