Volkswagen MK5 2.0T FSI Baffled Oil Catch Can System Installation Instructions

Skill Level
1 - Easy

Basic Skills Required

INTRODUCTION

ECS Tuning Volkswagen 2.0T FSI Oil Catch Can System

Excess oil coating the inside of the intake from the crank vent system on your Volkswagen 2.0T FSI will lead to excessive deposits and carbon build up on the back of the intake valves, resulting in power loss and poor driveability. Stop the problem from developing and prevent expensive repairs by installing our ECS Tuning catch can. Fully serviceable and easy to clean, our new catch can separates and stores the excess oil as it travels through the crank vent system. Our FSI Oil Catch Can System offers the following features:

- Constructed of strong and lightweight 6061-T6 billet aluminum
- Black anodized for corrosion resistance
- In-house designed by ECS Tuning Engineers
- All mounting hardware included
- Easy installation
- Includes preassembled nylon braided feed and return lines with AN fittings
- Includes a dipstick to check content level
- Fully serviceable

This ECS Tuning Volkswagen Catch Can System fits the following 2.0T FSI equipped applications:

- MK5 Jetta
- MK5 GTI
- B6 Passat, EOS
- MK6 Golf R

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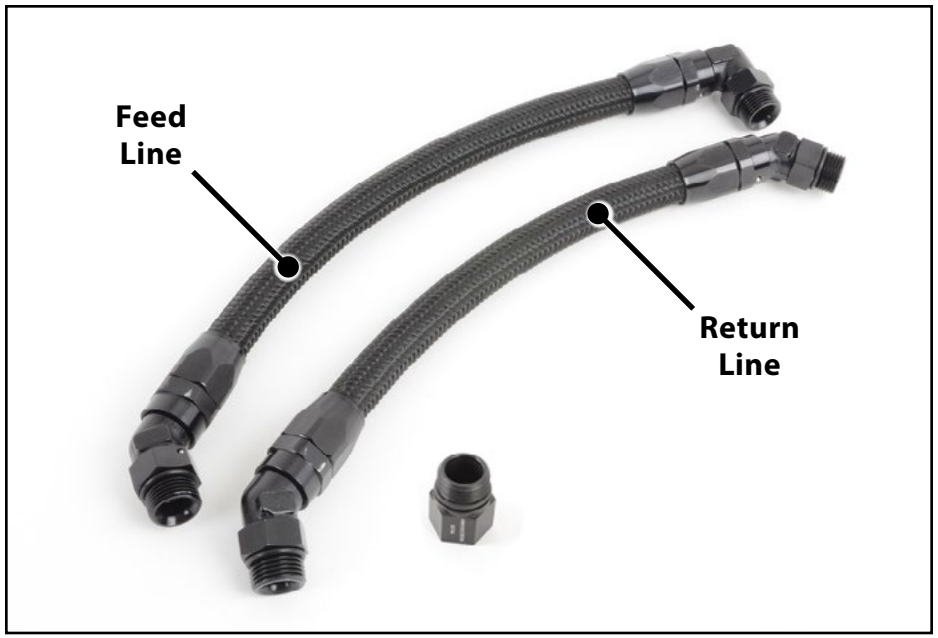
KIT CONTENTS

Catch Can w/Dipstick and Allen Wrench (for disassembly and cleaning)



Preassembled Feed and Return Lines and Catch Can Line Spacer

PCV Cap and Clip

Catch Can Mounting Bracket

PCV Adapter Plate

Bracket Mounting Hardware

REQUIRED TOOLS

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

Standard Automotive Tools

- Protecta-Sockets (for lug nuts) ..... ES#2221243
- **⅜" Drive Ratchet** ..... ES#2765902
- **⅜" Drive Torque Wrench** ..... ES#2221245
- **⅜" Drive Deep and Shallow Sockets** ..... ES#2763772
- **⅜" Drive Extensions** ..... ES#2804822
- Hydraulic Floor Jack ..... ES#2834951
- **Torx Drivers and Sockets** ..... ES#11417/8
- ½" Drive Deep and Shallow Sockets ..... ES#2839106
- ½" Drive Ratchet
- ½" Drive Extensions
- ½" Drive Torque Wrench ..... ES#2221244
- ½" Drive Breaker Bar ..... ES#2776653
- Bench Mounted Vise
- Crows Foot Wrenches
- **Hook and Pick Tool Set** ..... ES#2778980

Required For This Install

- **¼" Drive Ratchet** ..... ES#2823235
- **¼" Drive Deep and Shallow Sockets** ..... ES#2823235
- **¼" Drive Extensions** ..... ES#2823235
- Plier and Cutter Set ..... ES#2804496
- **Flat and Phillips Screwdrivers** ..... ES#2225921
- **Jack Stands** ..... ES#2763355
- Ball Pein Hammers
- Pry Bar Set ..... ES#1899378
- Electric/Cordless Drill
- Wire Strippers/Crimpers
- Drill Bits
- Punch and Chisel Set
- Hex Bit (Allen) Wrenches and Sockets ..... ES#11420
- Thread Repair Tools ..... ES#1306824
- Open/Boxed End Wrench Set ..... ES#2765907

Available On Our Website

Specialty Tools

- **VAG Connector Tool** ..... ES#2628676
- **Locking Hose Clamp Pliers** ..... ES#2702616
- **AN Fitting Wrench (or Crescent Wrench)**

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.

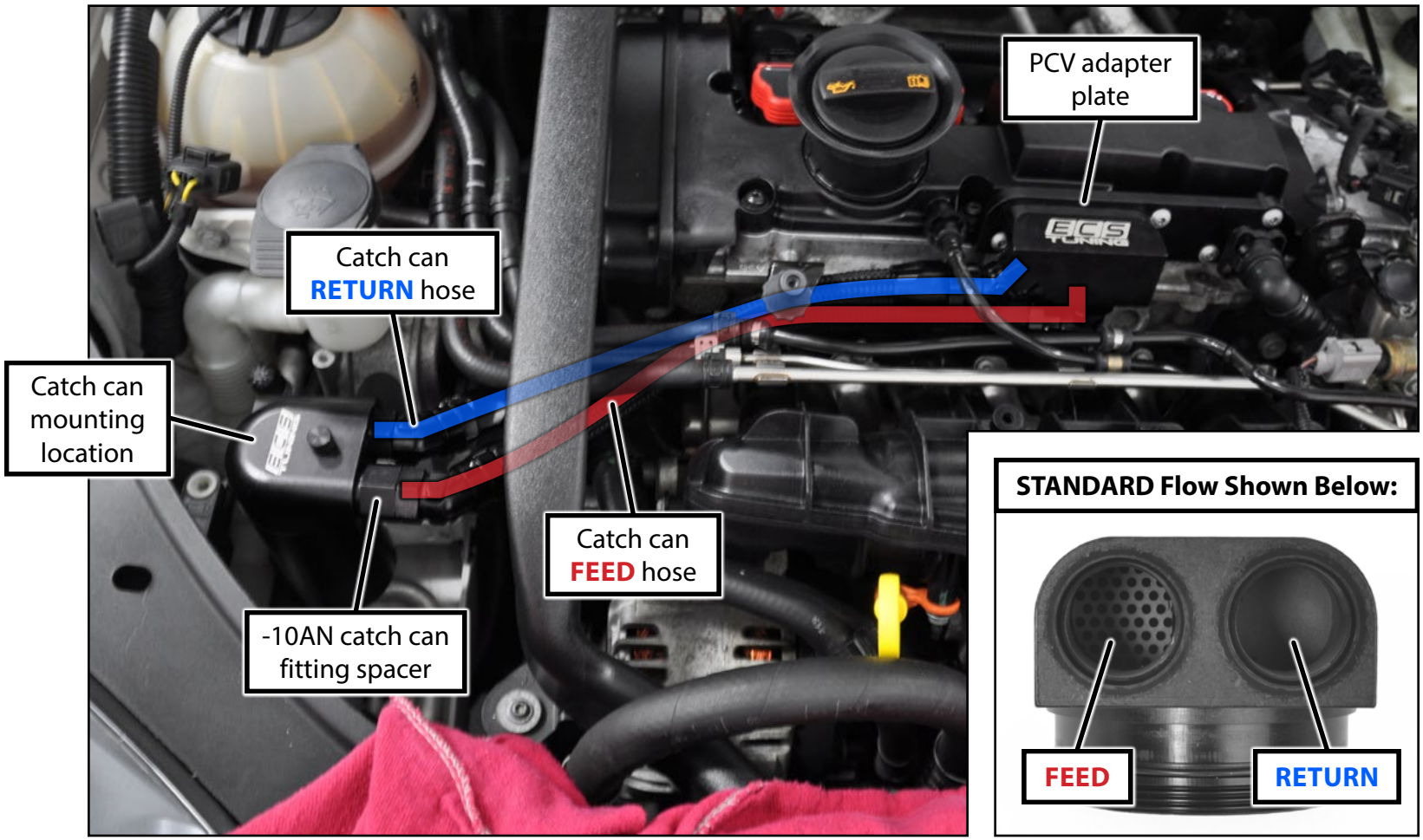
- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- 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.

INSTALLING THE CATCH CAN SYSTEM

Here is an overview of a MK5 FSI engine compartment. As you can see, the catch can will be mounted on the front RH (passenger's) side just behind the headlight.

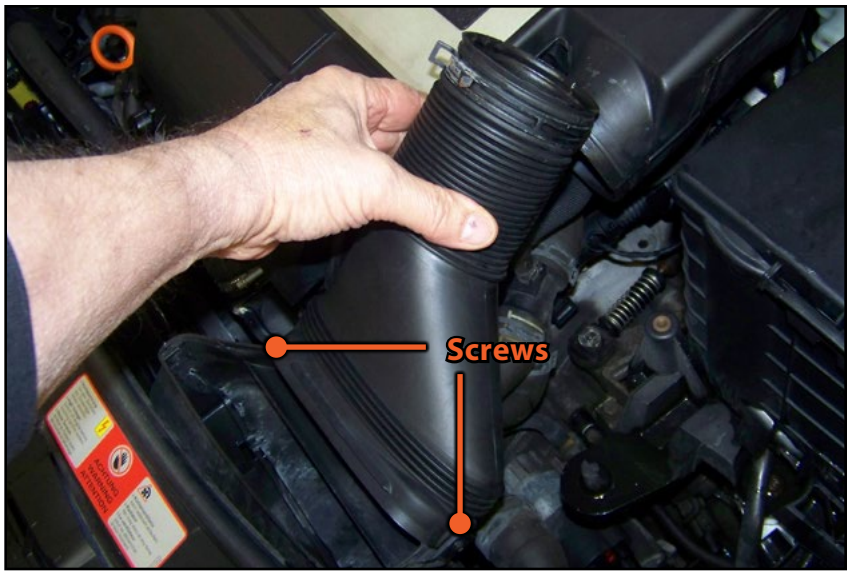
Take a look at the photo below and familiarize yourself with the mounting location and hose routing for this system. It's important to note that the catch can system needs to be setup in **STANDARD FLOW**. Be sure to confirm that your catch can is set up for standard flow **BEFORE** connecting the hoses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



INSTALLING THE CATCH CAN SYSTEM

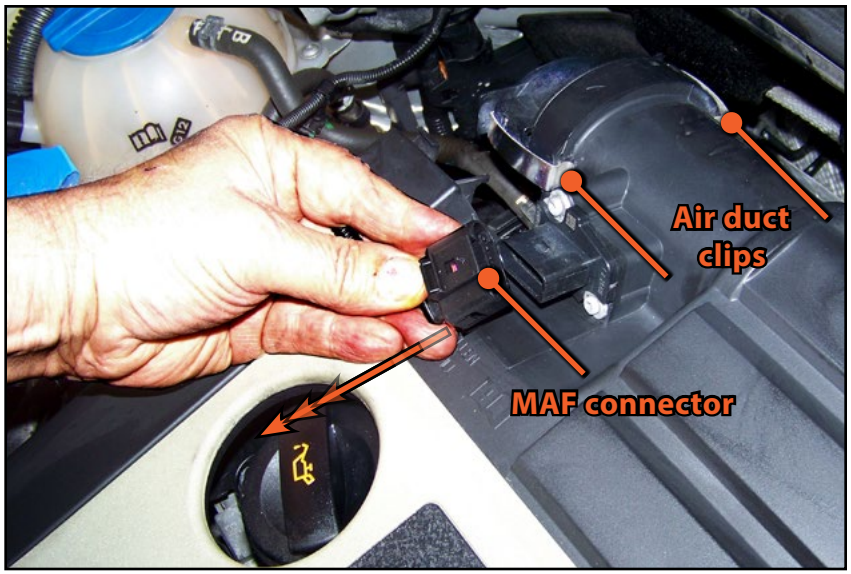
Step 1: T25 Torx, Hose Clamp Pliers

Remove the two screws which secure the air inlet hose to the core support. Squeeze the hose clamp on the air inlet hose to loosen it, then remove the air inlet hose from the vehicle.



Step 2: VAG Connector Tool

Disconnect the MAF electrical connector from the MAF sensor, then pop off the two spring metal clips which hold the air duct to the engine cover, and pull the duct away from the housing.

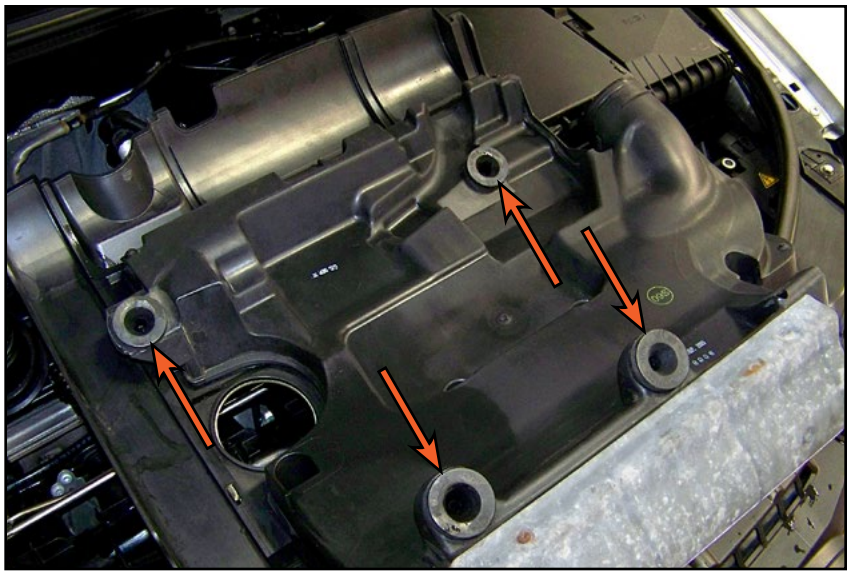


For tips on using the VAG Connector Tool, please refer to Page 42 for detailed photos and instructions.

INSTALLING THE CATCH CAN SYSTEM

Step 3:

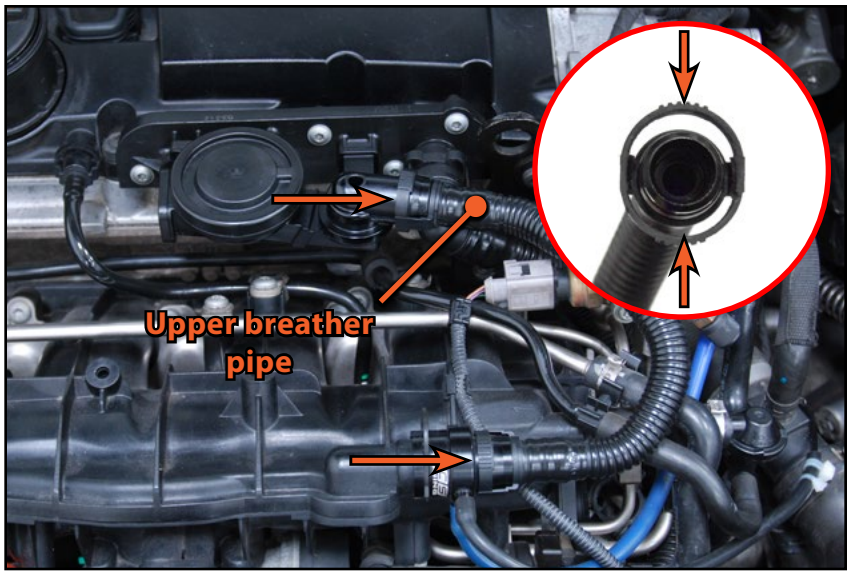
Grab the engine cover and lift the cover straight up one corner at a time to release the rubber mounting grommets from their mating pins on the engine. Reference the photo on the right, it shows the location of the rubber mounting grommets with the cover removed and flipped over.



Step 4:

Remove the upper breather pipe between the pressure control valve and the intake manifold by squeezing the pipe end retainers together and pulling it off of each end.

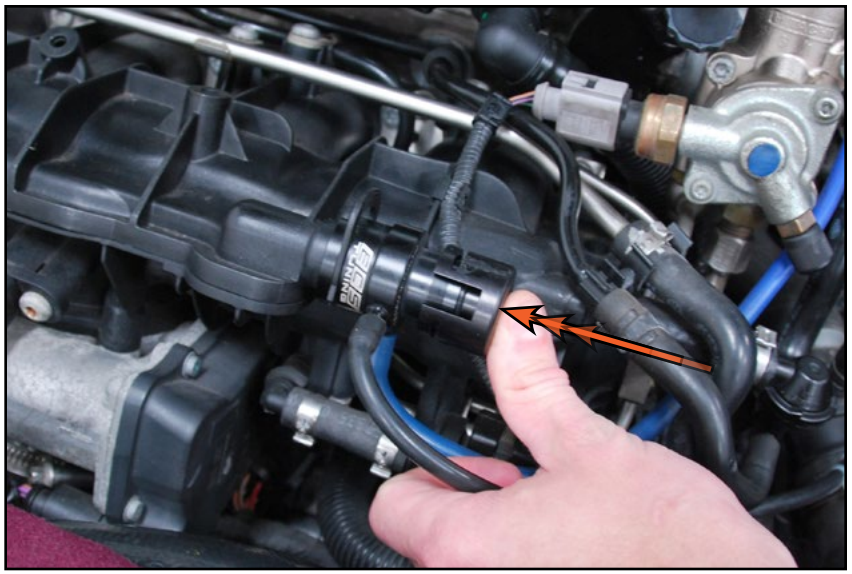
The inset photo shows a view of the end of the pipe. Squeeze the retainers where indicated by the arrows to release the locking tabs for removal.



INSTALLING THE CATCH CAN SYSTEM

Step 5:

Lubricate the o-rings on the ECS Tuning PCV cap with clean engine oil, then push the PCV cap onto the intake manifold port (or onto a boost tap as shown in the photo) where the breather pipe was connected. Push the cap into place and ensure it is fully seated.



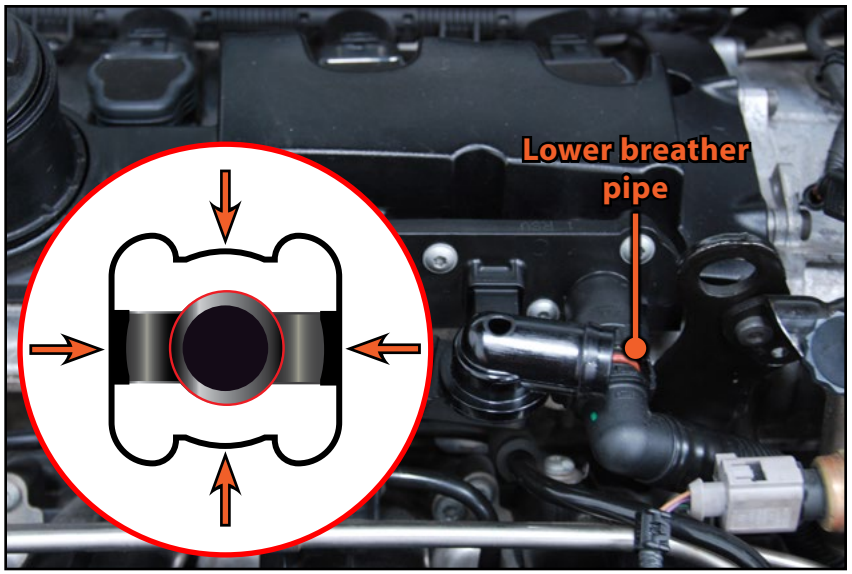
Step 6:

Install the supplied retaining clip into the groove in the PCV cap to lock it into place.

INSTALLING THE CATCH CAN SYSTEM

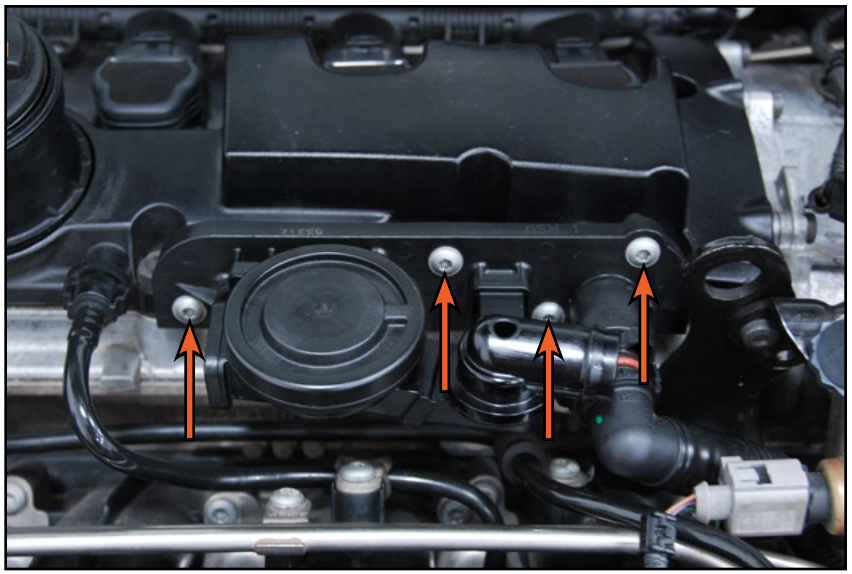
Step 7:

Disconnect the lower breather pipe from the pressure control valve. These connections can be a little tricky, the inset photo shows the end of the lower breather pipe and how it locks onto the pressure control valve at the four points indicated by the arrows. Begin by gently pulling back on the pipe, then slowly working your way around the connector and releasing it at each point. Pulling back on the pipe will prevent each point from re-locking onto the pressure control valve. Once you have released all four points, the pipe will slide off.



Step 8: T25 Torx

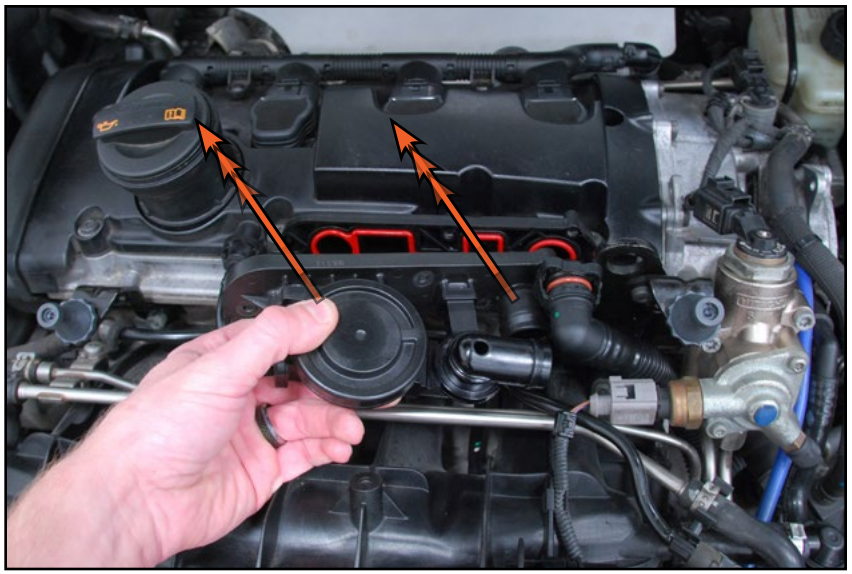
Remove the four screws on the pressure control valve. Set them aside but do not lose them, you will be reusing them in a later step.



INSTALLING THE CATCH CAN SYSTEM

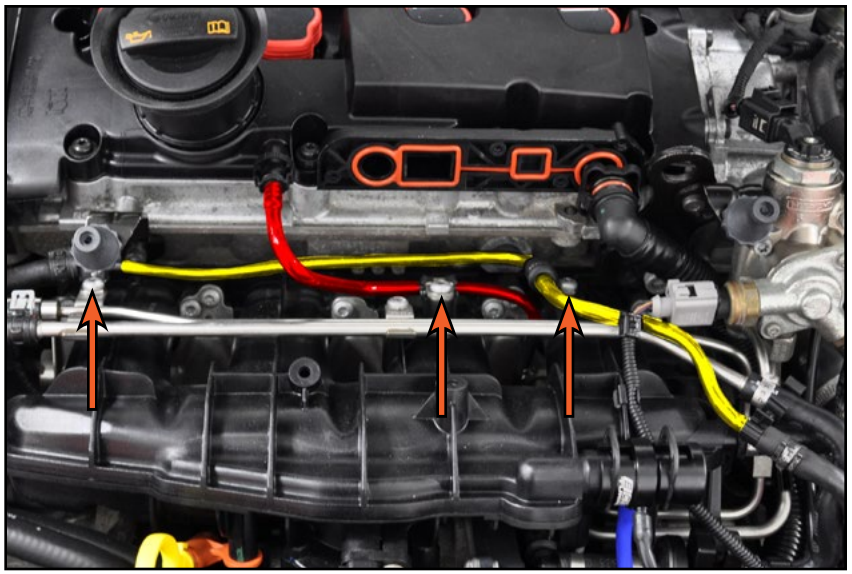
Step 9:

Lift the pressure control valve up and out of the engine compartment and set it aside.



Step 10: T30 Torx

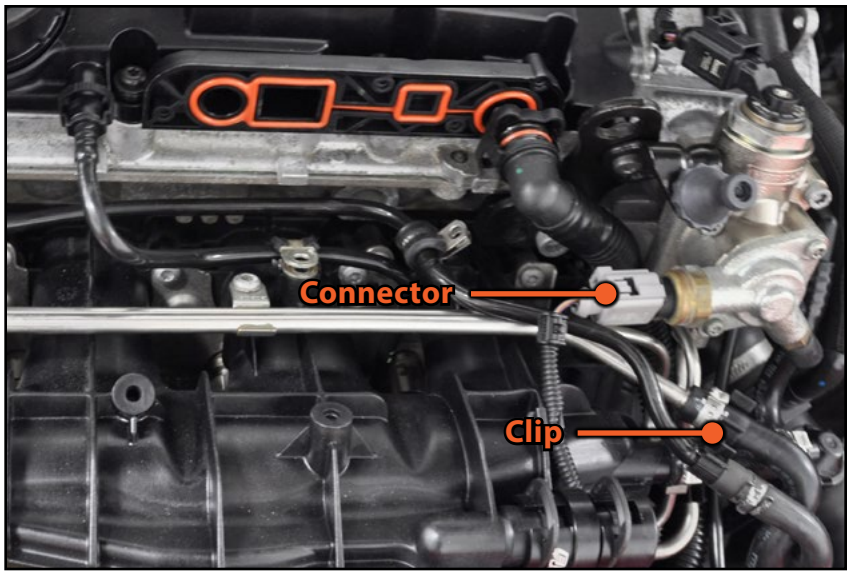
Locate the vacuum line which has been highlighted in **YELLOW**, and the vacuum tube which is highlighted in **RED** in the photo, we need to relocate these lines so that they follow the path shown in step 19 on Page 16. Begin by removing the three screws which secure the hold down clamps on the vacuum line and on the air tube (arrows).



INSTALLING THE CATCH CAN SYSTEM

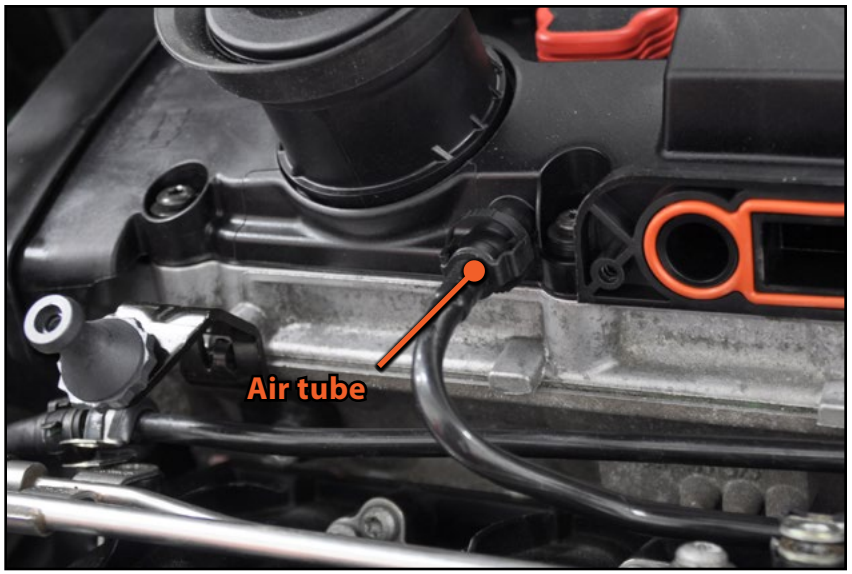
Step 11: VAG Connector Tool

Disconnect the HPFP fuel pressure sensor connector, then remove the plastic clip which attaches the vacuum line to the fuel line.



Step 12:

Disconnect the air tube from the valve cover by squeezing the tube ends together and pulling it off (the same method used for the PCV tube in step 4).



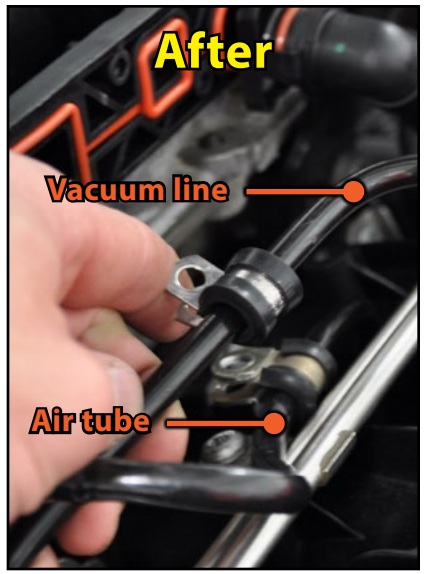
INSTALLING THE CATCH CAN SYSTEM

Step 13:

Locate the hold-down clamp on the air tube (**LH photo**), gently spread it apart and flip it over so that it is oriented as shown (**RH photo**).

Step 14:

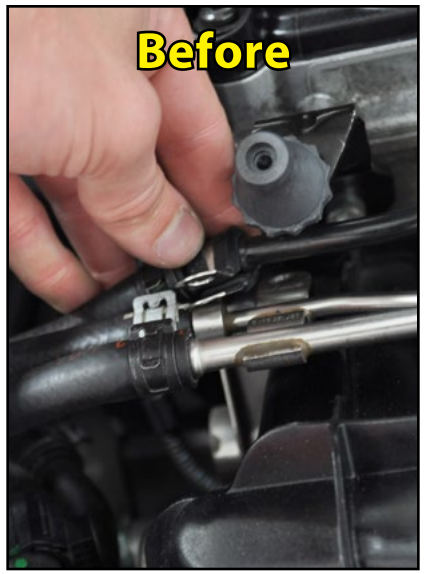
Locate the hold-down clamp on the vacuum line near the lower breather hose (**LH photo**). This bracket does not need to be removed from the line, simply slide it up the line so that it lines up with the bracket on the air tube as shown (**RH photo**).



INSTALLING THE CATCH CAN SYSTEM

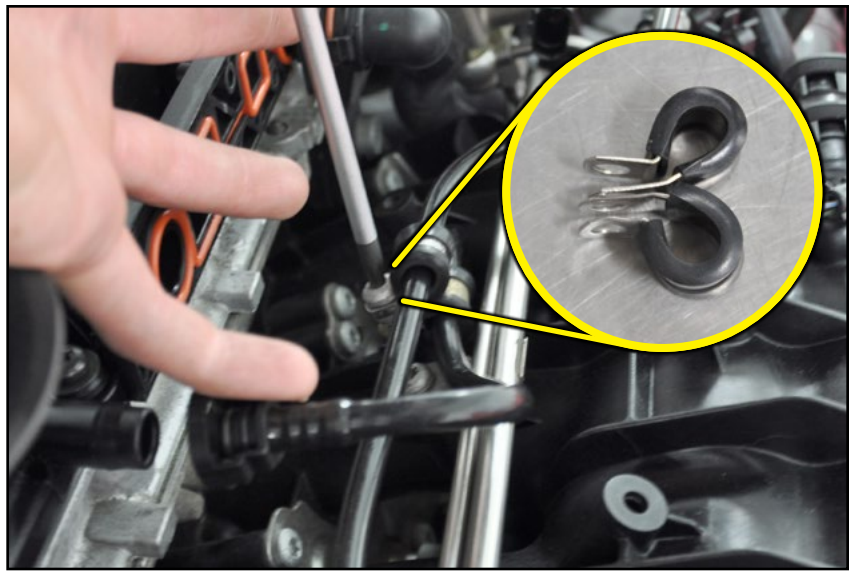
Step 15:

Locate the hold-down clamp on the vacuum line near the oil filler cap (**LH photo**), gently spread it apart and flip it over so that it is oriented as shown (**RH photo**).



Step 16: T30 Torx

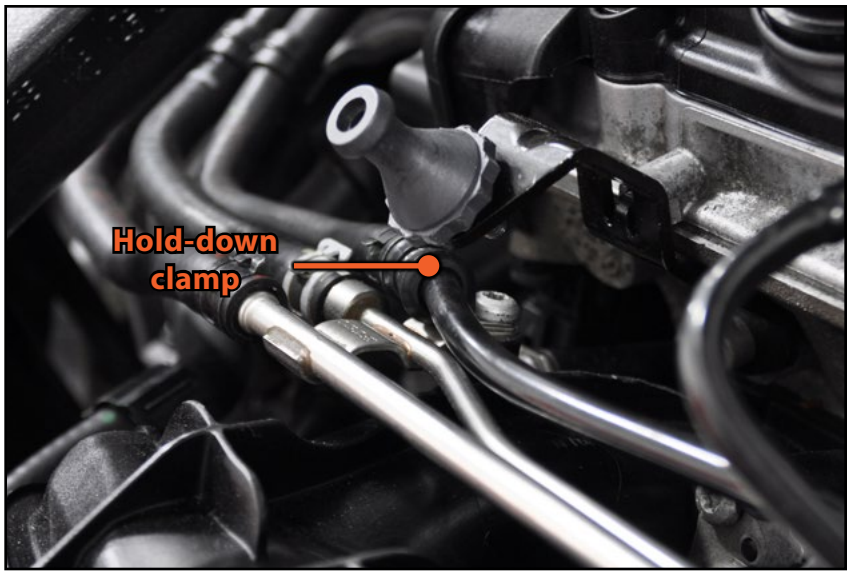
Reinstall and tighten the screw through both of the hold-down clamps for the vacuum line and the air tube, ensure that the clamps are oriented as shown in the inserted photo.



INSTALLING THE CATCH CAN SYSTEM

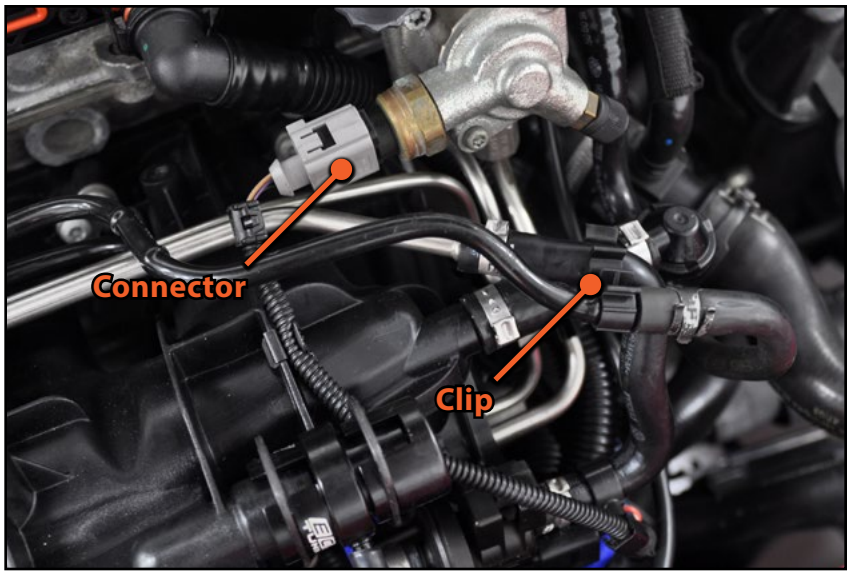
Step 17: T30 Torx

Reinstall and tighten the screw through the hold-down clamp for the vacuum line (located near the oil filler cap).



Step 18:

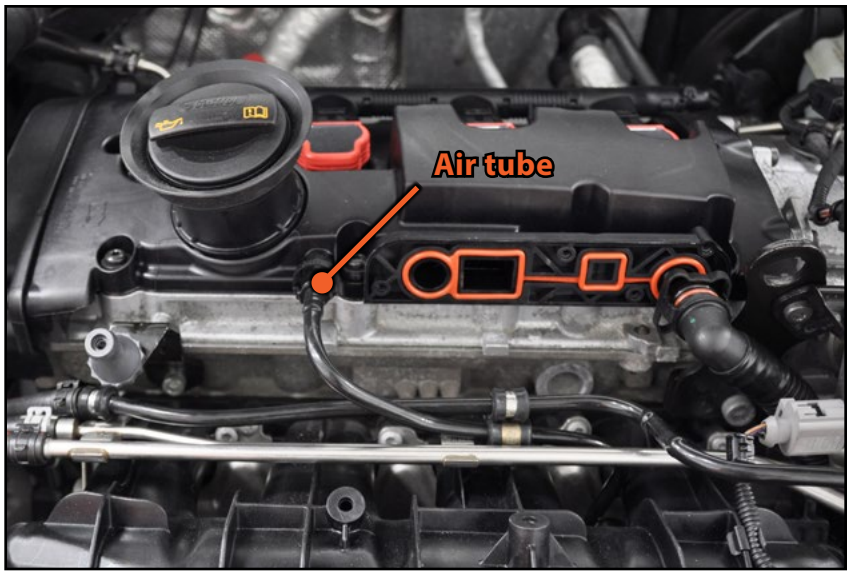
Reconnect the fuel pressure sensor connector and reinstall the plastic clip which attaches the vacuum line to the fuel line.



INSTALLING THE CATCH CAN SYSTEM

Step 19:

Reconnect the air tube to the valve cover. Notice the new path that the vacuum line follows now, this gives us the clearance we need to install the catch can hoses into place.



Click HERE to return to step 10 if you are here to reference this photo.

Step 20: AN Fitting Wrenches - or - Crescent Wrenches

Lubricate the o-ring on the 90° end of the feed line with clean engine oil, then thread that end of the feed line into the bottom of the new PCV adapter plate by hand. Tighten the fitting until it is snug, but do not over tighten it as it will strip out if over-torqued.

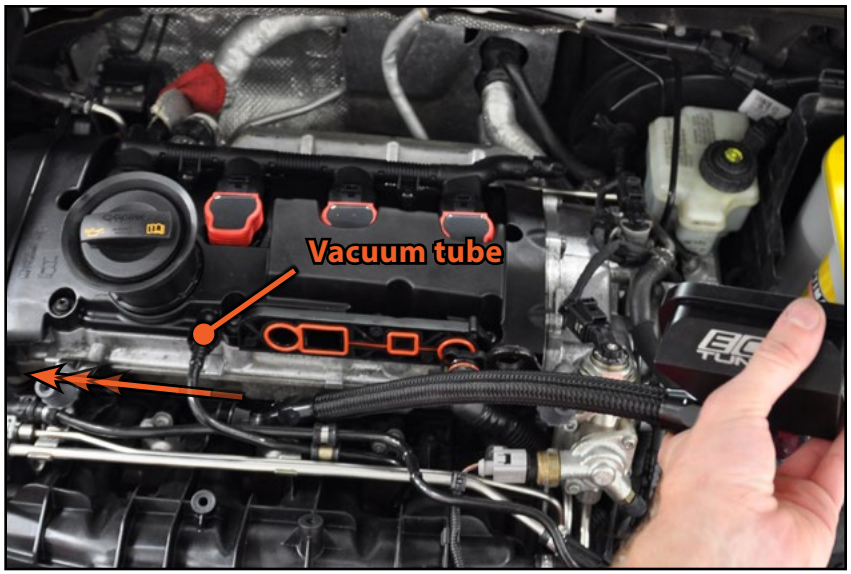
TECH TIP

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.

INSTALLING THE CATCH CAN SYSTEM

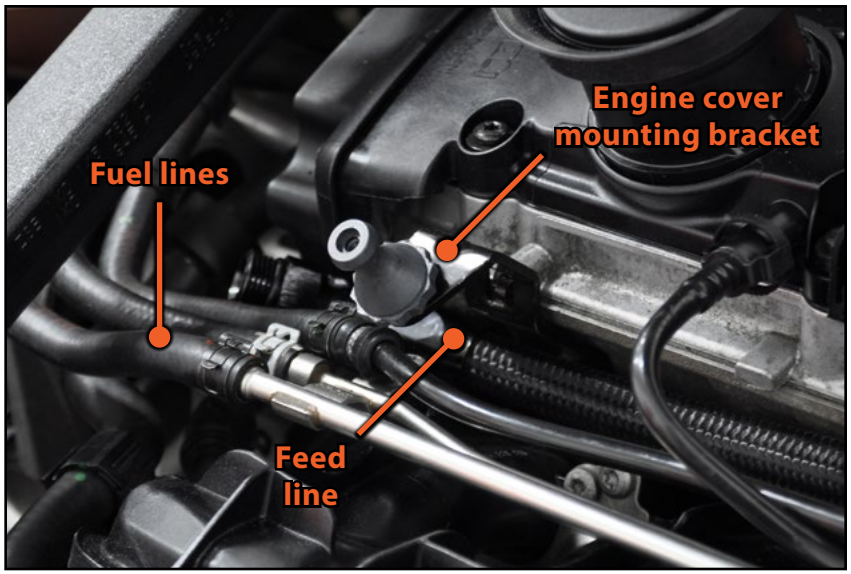
Step 21:

Guide the feed line (with the PCV adapter plate attached) ***underneath*** the vacuum tube as shown.



Step 22:

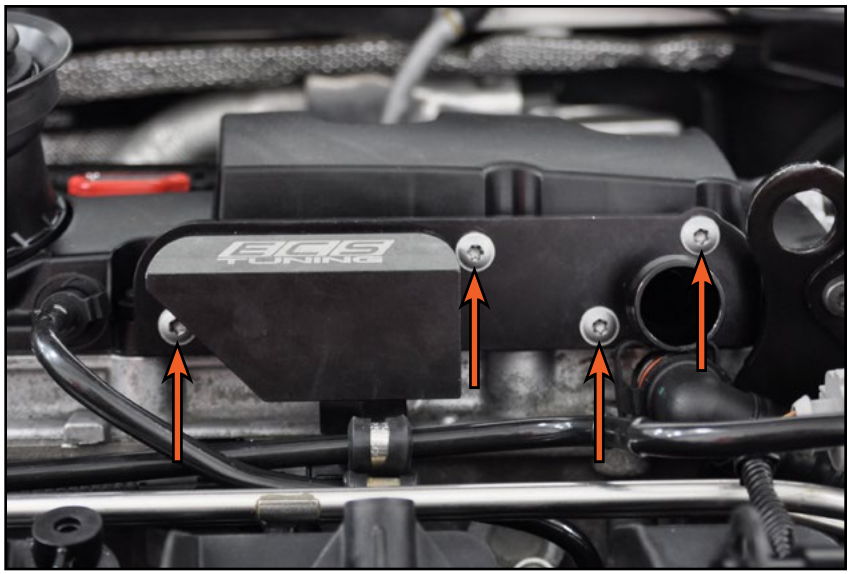
Continue to guide the feed line ***underneath*** the engine cover mounting bracket and the fuel lines as shown.



INSTALLING THE CATCH CAN SYSTEM

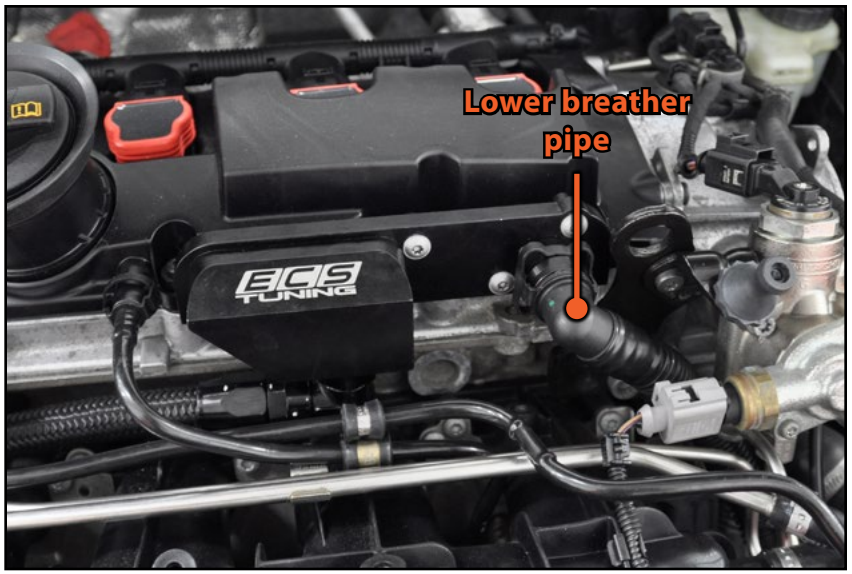
Step 23: T25 Torx Bit Socket, ¼" Drive Torque Wrench

Install the new ECS Tuning PCV adapter plate onto the engine with the OEM hardware, then torque the screws to 30 In-lbs (3.4 Nm).



Step 24:

Attach the lower breather pipe to the PCV adapter plate.



INSTALLING THE CATCH CAN SYSTEM

Step 25:

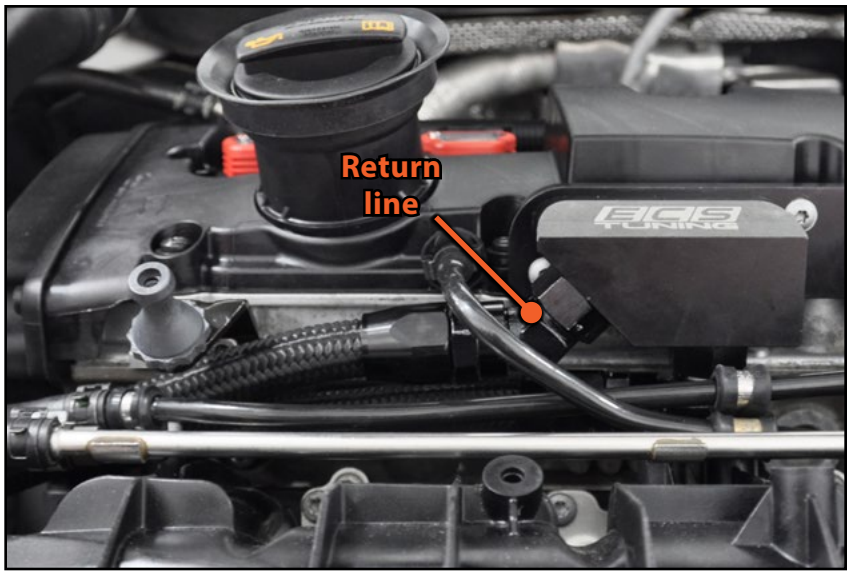
Guide the catch can return line ***underneath*** the engine cover mounting bracket and the fuel lines just as we did with the return line in steps 21-22.

Step 26: AN Fitting Wrenches - or - Crescent Wrenches

Lubricate the o-ring on the return line with clean engine oil, then thread the end into the side of the new PCV adapter plate by hand. Tighten the fitting until it is snug, but do not over tighten it as it will strip out if over-torqued.

TECH TIP

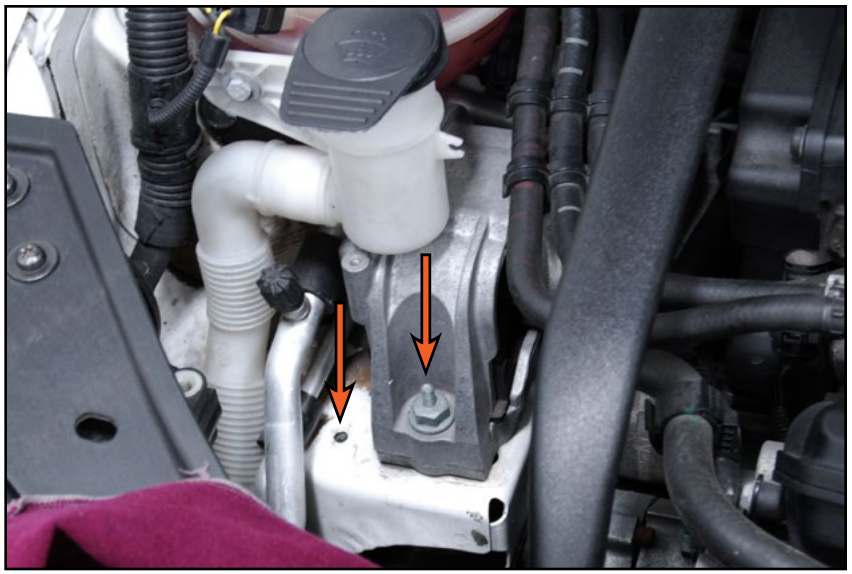
AN fitting wrenches are designed specifically to tighten these without damaging the fitting or the finish. Using them carefully, crescent type wrenches will also do the job but it's best to apply masking tape to the fitting before tightening to protect the finish.



INSTALLING THE CATCH CAN SYSTEM

Step 27:

The catch can mounting bracket will be installed utilizing the stud on the end of the engine mount bolt and the pre existing threaded hole in the body (arrows). Inspect them both and make sure they are clean and free of dirt or corrosion. If the hole in the body is dirty, clean it with a small wire brush but be careful not to remove the paint on the threads which offers a corrosion barrier.



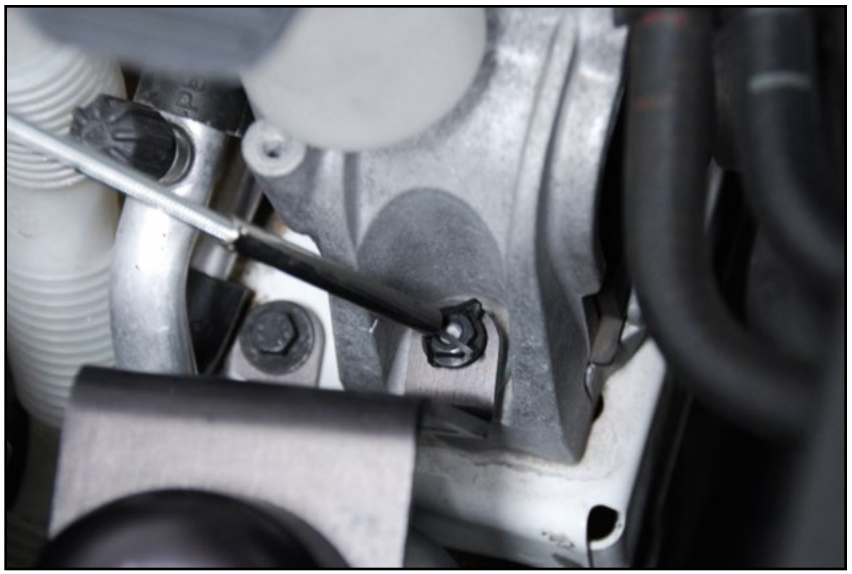
Step 28:

Insert the bracket mounting bolt into the lower foot of the catch can bracket as shown.

INSTALLING THE CATCH CAN SYSTEM

Step 29: ⅜" Drive Torque Wrench, 10mm Socket, Extension

Mount the bracket into place, guiding the bolt into the threaded hole in the body using a socket on the end of an extension. Thread the bolt in while making sure the upper foot of the bracket is positioned over the stud on the engine mount bolt. Install the nut onto the stud and then torque both the bolt and the nut to 7 Ft-lbs (10 Nm).



Step 30:

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). Thread the hose fittings into the catch can separator and tighten them.

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

Standard Flow Shown Below:

INSTALLING THE CATCH CAN SYSTEM

Step 31:

Unthread and remove the dipstick from the catch can separator (not shown). Unthread and remove the catch can reservoir from the separator.

Step 32: Angled O-Ring Pick

Carefully remove the o-ring seal from the groove in the separator.

INSTALLING THE CATCH CAN SYSTEM

Step 33:

Place the separator into the catch can bracket, lubricate the o-ring seal with clean engine oil and reinstall the seal into the groove.

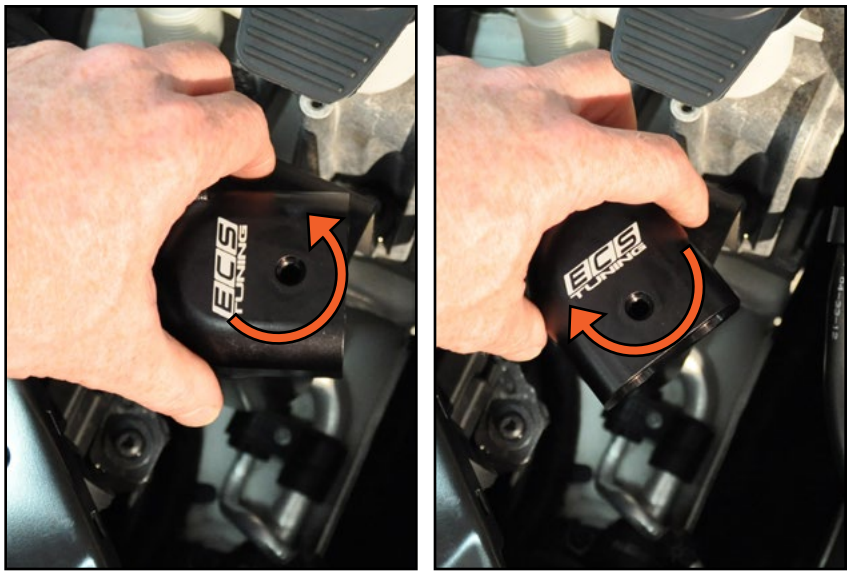
Step 34:

Thread the reservoir onto the separator but do not completely tighten it at this time.

INSTALLING THE CATCH CAN SYSTEM

Step 35:

When the reservoir is fully tightened, it will lock the catch can in place in the bracket, but it needs to remain loose at this time so the catch can will rotate back and forth in the bracket when we install the hoses in later steps.

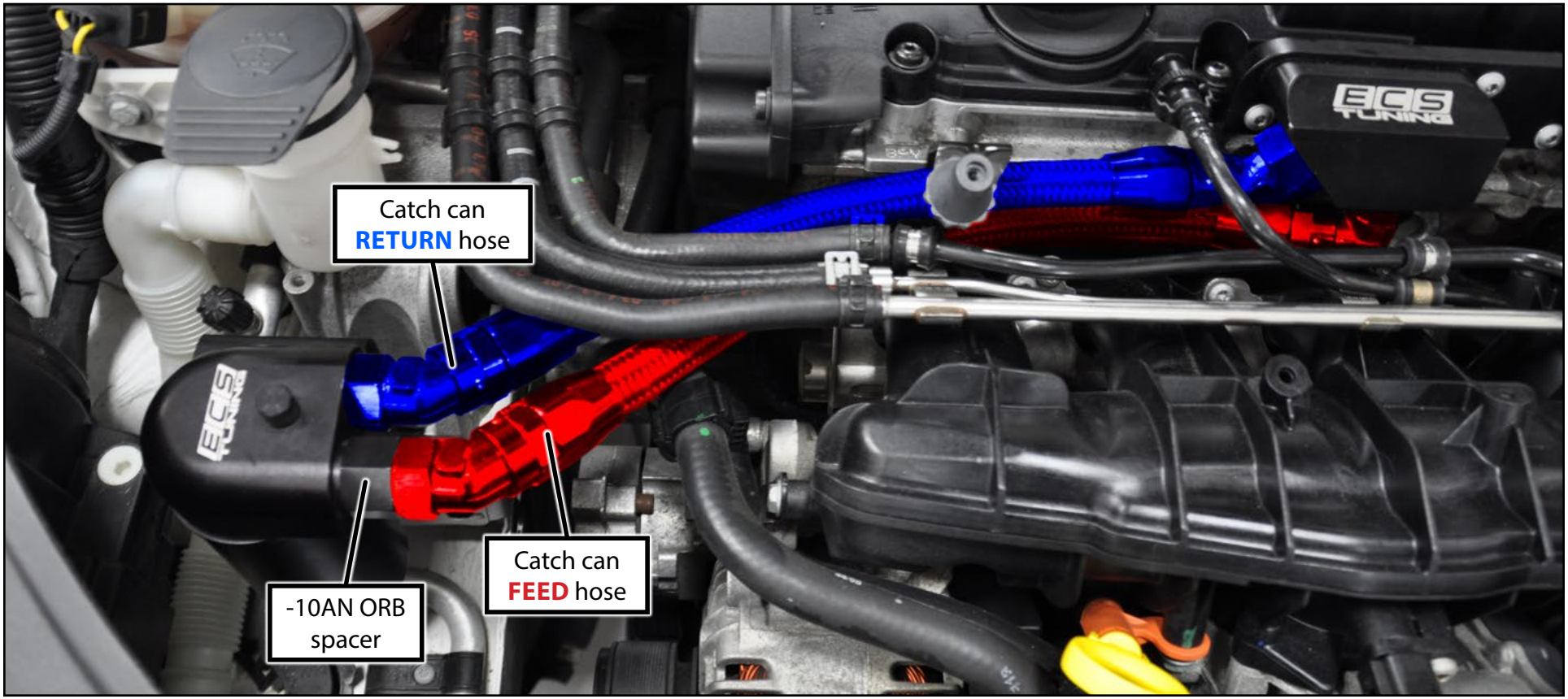


Step 36:

Lubricate the o-ring seal on the dipstick with clean engine oil and install it into the catch can.

INSTALLING THE CATCH CAN SYSTEM

Step 37: AN Fitting Wrench or Crescent Wrench



Before we connect the hoses to the catch can, please reference this photo for the proper hose routing and connection points. The **FEED** hose (highlighted in **RED**) has one 90° fitting which is connected to the bottom of the adapter plate, and one 45° fitting which connects to the -10 ORB spacer in the catch can. The **RETURN** hose (highlighted in **BLUE**) has two 45° fittings.

Lubricate the o-ring on each end of the lines (and the -10 ORB spacer) with clean engine oil, then thread them into place by hand. Once they've all been fully threaded in by hand you can tighten them until snug, but don't over tighten them as the fittings can strip out if over-torqued.

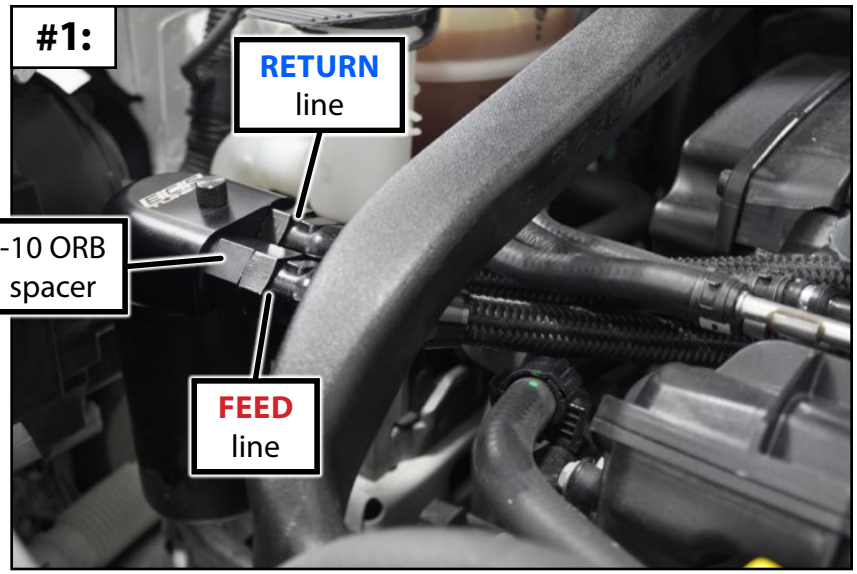
INSTALLING THE CATCH CAN SYSTEM

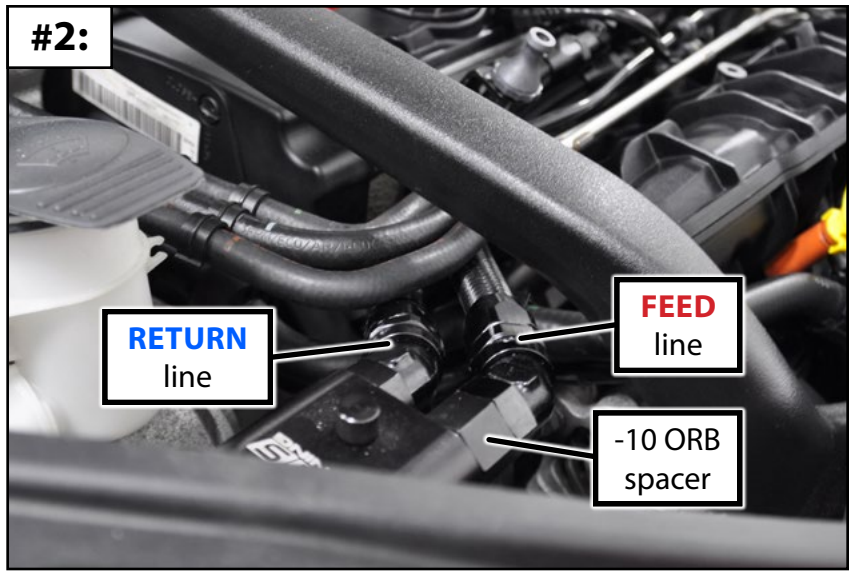
Step 38:

Take a moment and closely inspect where the feed and return lines are routed under the fuel lines (note the proper routing shown in **photo #1** & **photo #2**). Ensure that the lines are not in contact with any brackets or other objects which could cause any premature wear or damage. Loosen the lines, adjust them, and re-tighten if necessary.

Once the hose routing has been checked and the hoses have been tightened, don't forget to fully tighten the catch can reservoir to lock the catch can into place in the bracket (not shown).

Congratulations, your catch can system installation is complete!





Select one of the following:

- Continue to the next page for drain system installation.
- Click HERE for catch can cleaning & maintenance.
- Click HERE for catch can flow reversal.

CATCH CAN DRAIN SYSTEM COMPONENTS

36″ Section of ¼″ ID Hose **(QTY 1)**

¼″ Shut Off Valve **(QTY 1)**
⅜″ Clamps **(QTY 2)**

7⁄32″ to ⅝″ Clamp **(QTY 1)**

¼″ Hose x ¼″ Male NPT Brass Hose Barb
(QTY 1)

¼″ Hose x ¼″ Male NPT 90° Brass Hose Barb
(QTY 1)

¼″ Allen Key
(QTY 1)

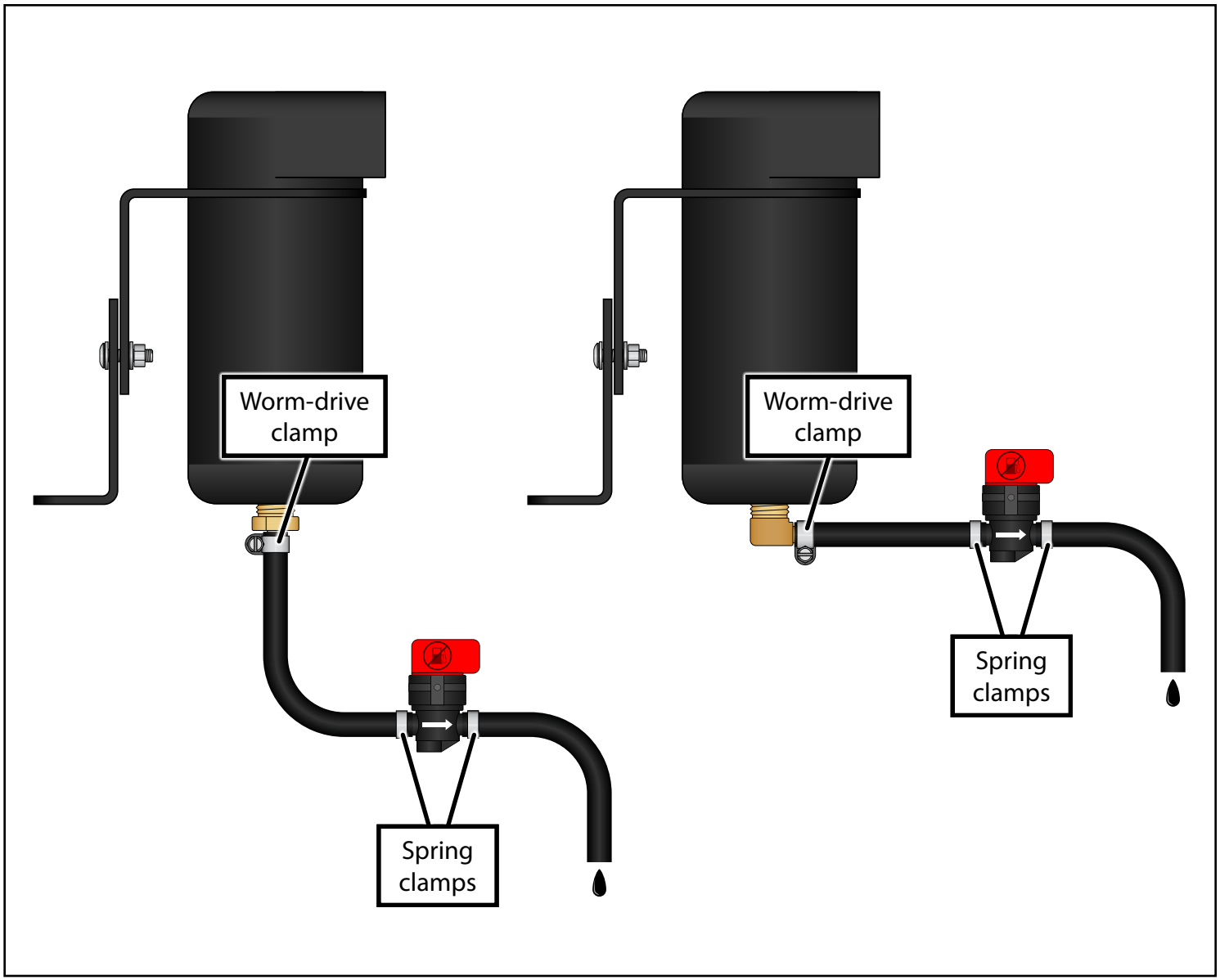
CATCH CAN DRAIN SYSTEM INSTALLATION GUIDELINES

Step 1:

Let's take a moment and look at the catch can drain system, the diagram on the right shows two different system configurations.

This system has been designed with flexibility in mind, YOU get to choose where you want the drain valve to be located in the vehicle. You want the valve mounted up high so you can drain the system from under the hood? No problem! You want to route the hose down to the bottom side near the oil pan for easy access during oil changes? You got it!

Reference the diagram on the right and familiarize yourself with the overall system layout, then proceed to the next page.



CATCH CAN DRAIN SYSTEM INSTALLATION GUIDELINES

Step 2:

Newer REV catch can reservoirs feature a ¼" NPT black zinc plated brass plug in the bottom of the reservoir. This plug can easily be removed with the ¼" allen key which is included in the drain system.

Previous REV catch can reservoirs won't have this feature, but it can be added. You will need to drill a hole in the center of the reservoir with a 7/16" drill bit, then tap the hole with an NPT pipe thread tap (¼" NPT, 18 threads per inch). Be sure to drill the hole as straight as possible.

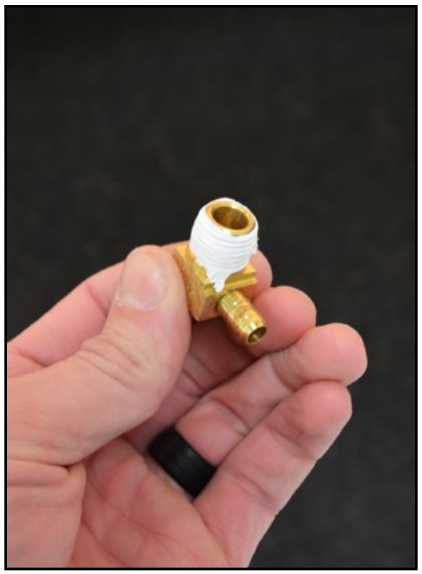
Select the fitting which allows you to route the drain hose to wherever you want to access it from in the vehicle; one is straight, while the other has a 90° bend.

Apply thread sealant to the threads on the fitting you selected, then install the new fitting in place of the plug we removed earlier.

Route the hose to your desired location, securing it along the way with zip ties, then attach the drain valve and tighten all of the clamps.

Current REV reservoirs have a drain plug pre-installed

Drain plug hole can be drilled and tapped into previous REV reservoirs



NOTE

Use an appropriately sized wrench to turn the hose barb fitting into the catch can, stop once it is snug.

Your catch can drain installation is complete!

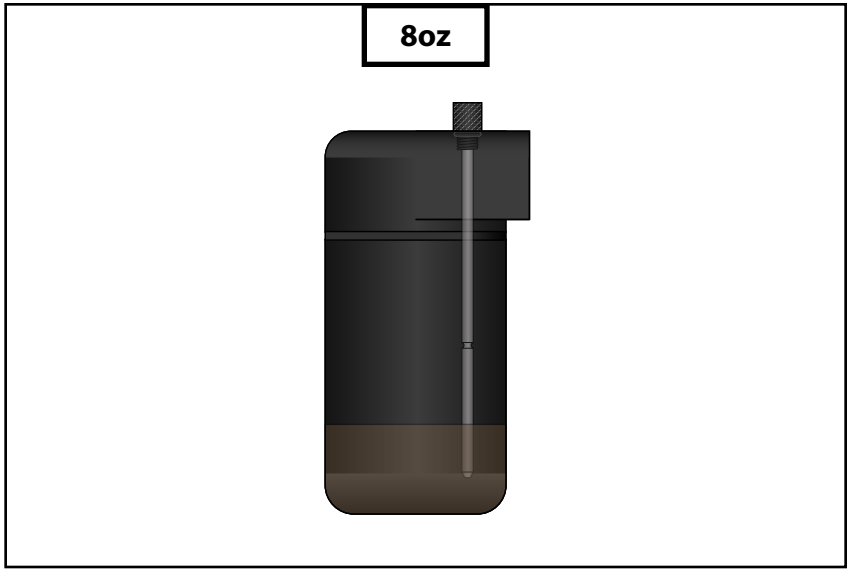
CLEANING AND MAINTENANCE

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 MK5 FSI 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.

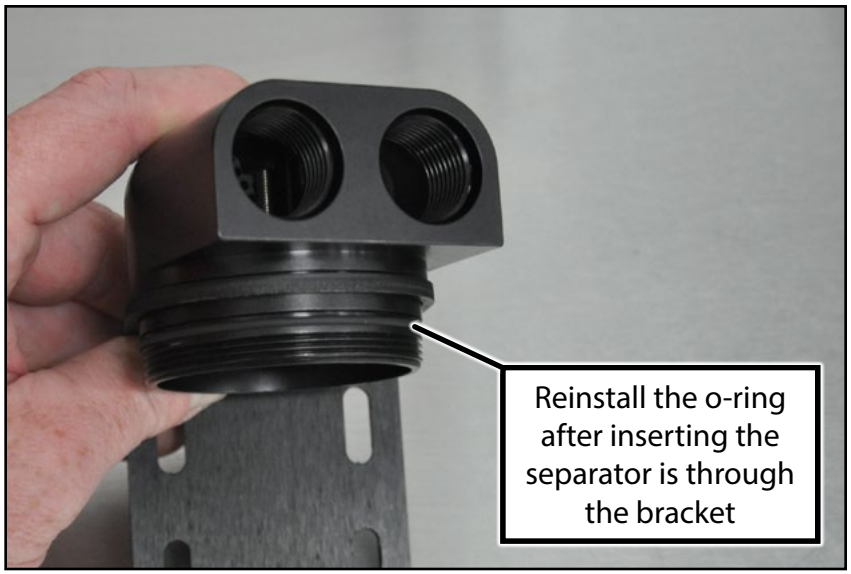


Step 2:

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.

NOTE

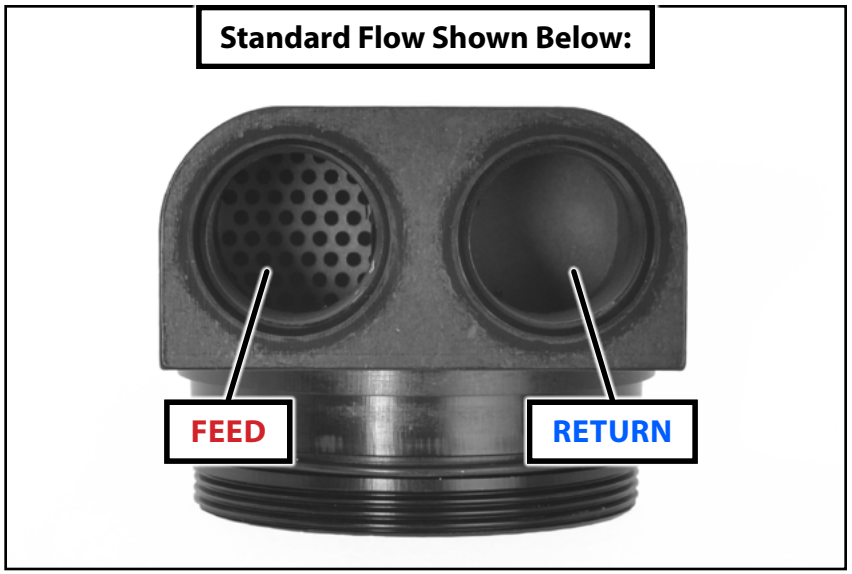
If the o-ring seal needs to be replaced, it is available as a replacement part on our website: ES#3097721.



CLEANING AND MAINTENANCE

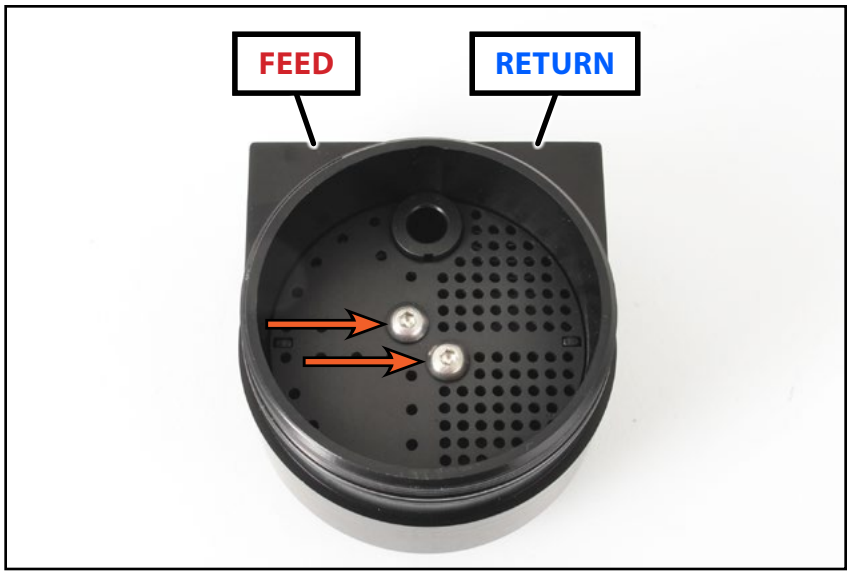
Step 3:

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.



CLEANING AND MAINTENANCE

Step 5:

Lift the baffle plate out of the separator housing.

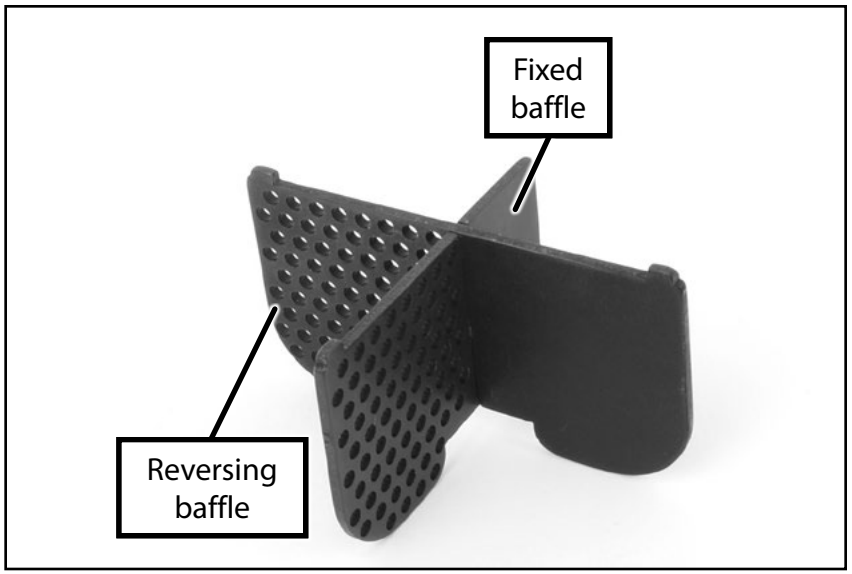
Step 6:

Lift the remaining baffles out of the separator housing.

CLEANING AND MAINTENANCE

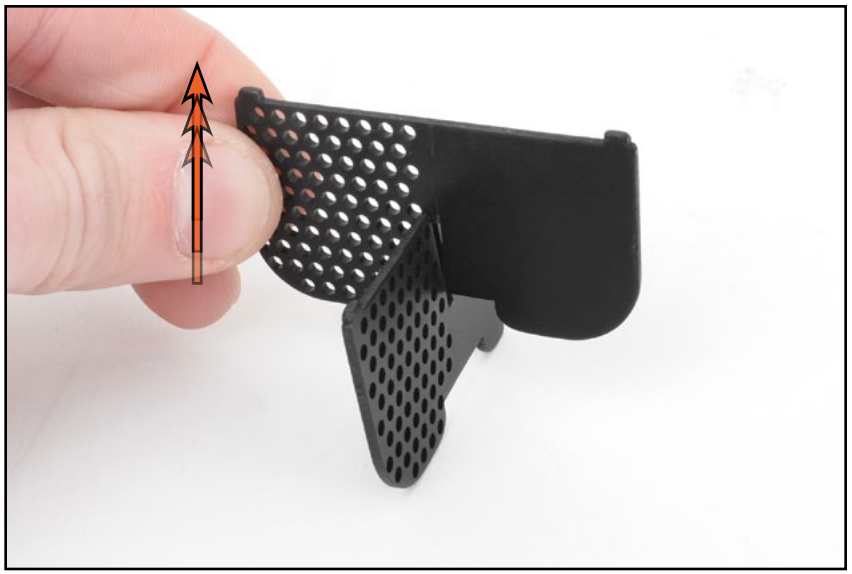
Step 7:

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



Step 8:

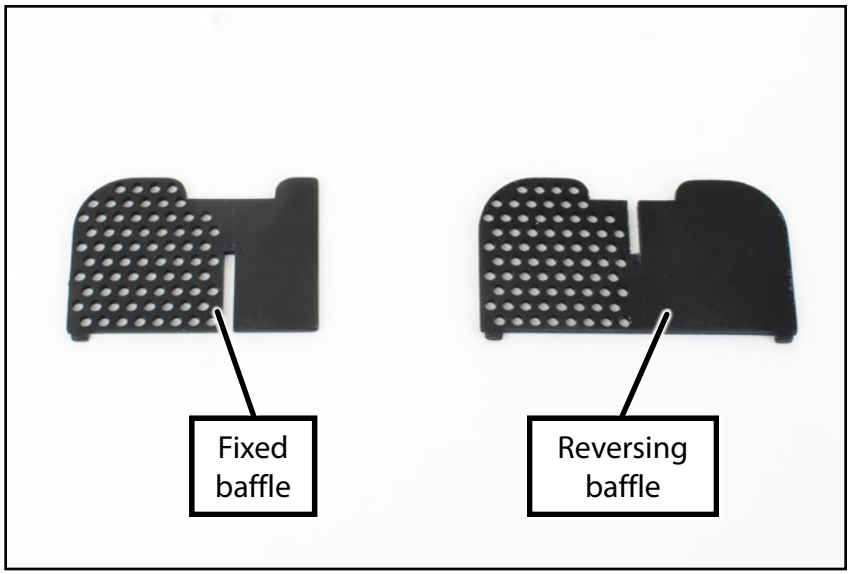
Slide the two baffles apart.



CLEANING AND MAINTENANCE

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.

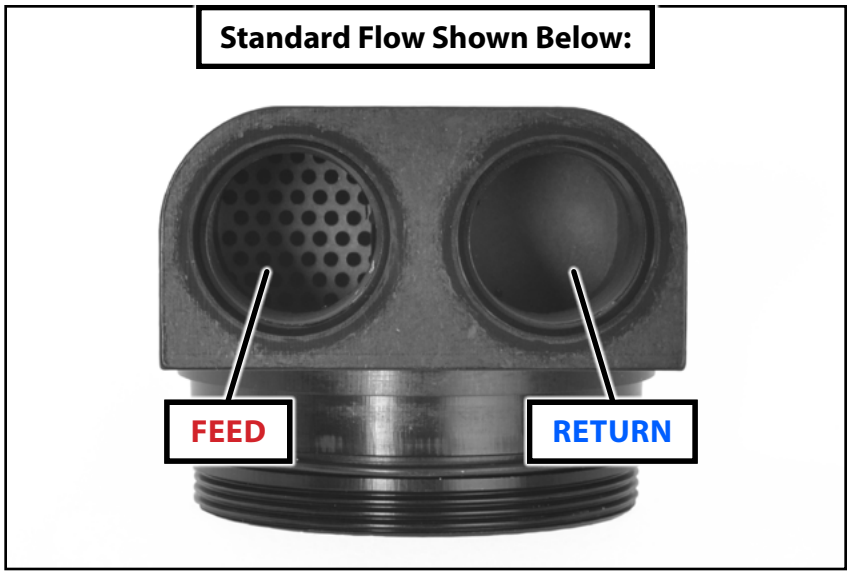


NOTE

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.

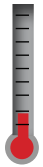
Step 10:

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.

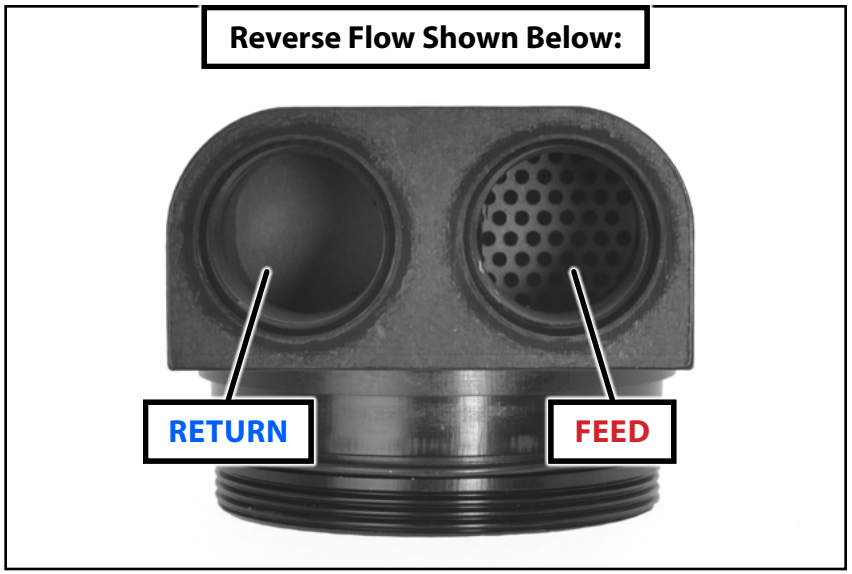
When the temperature outside approaches freezing, your catch can should be cleaned on a weekly basis to prevent freeze up of the crank vent system and damage to engine seals.

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.

REVERSING THE FLOW OF THE CATCH CAN

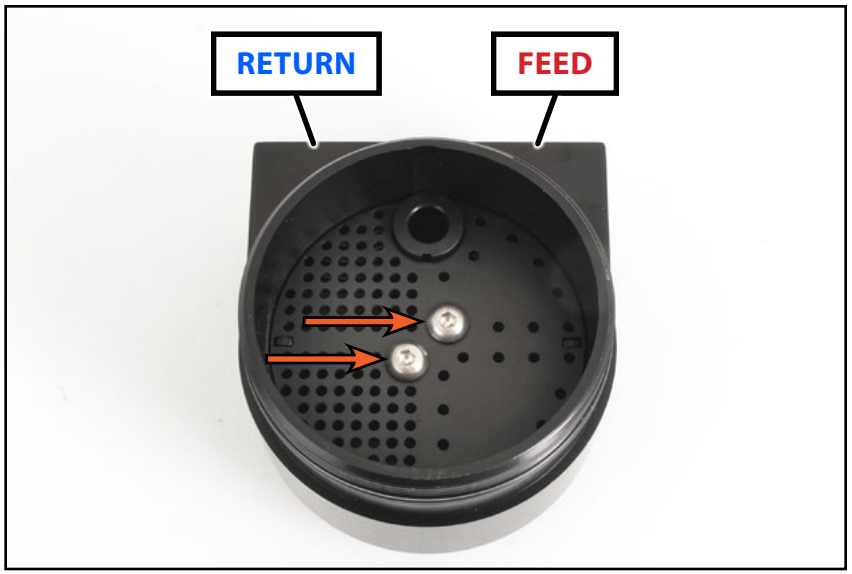
Step 1:

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).



REVERSING THE FLOW OF THE CATCH CAN

Step 3:

Lift the baffle plate out of the separator housing.

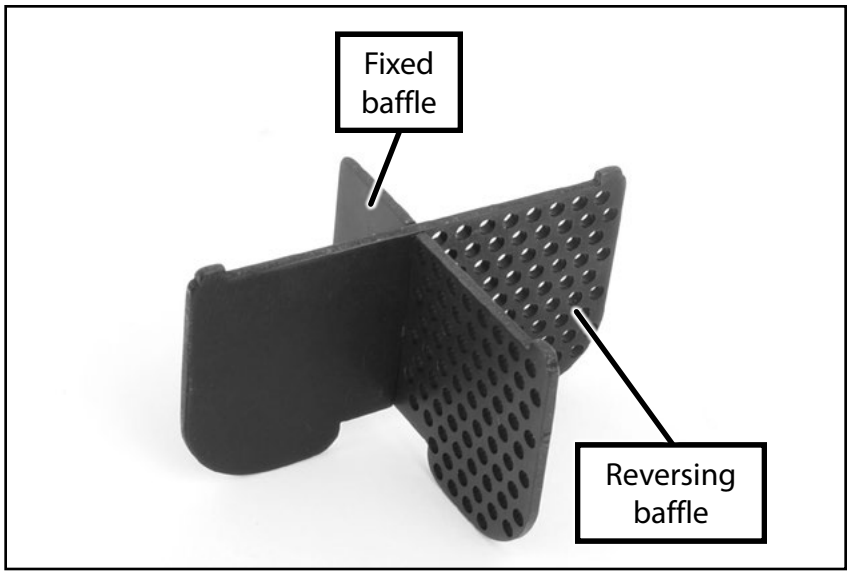
Step 4:

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

REVERSING THE FLOW OF THE CATCH CAN

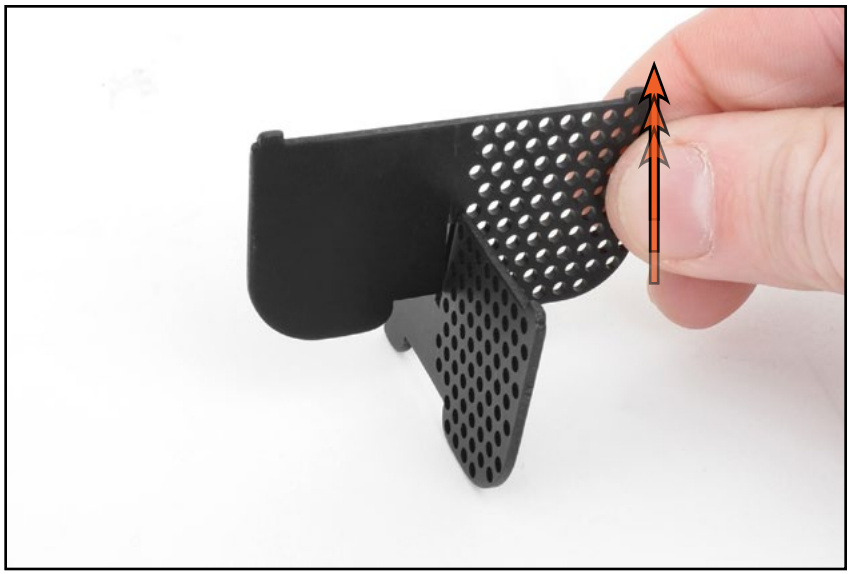
Step 5:

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



Step 6:

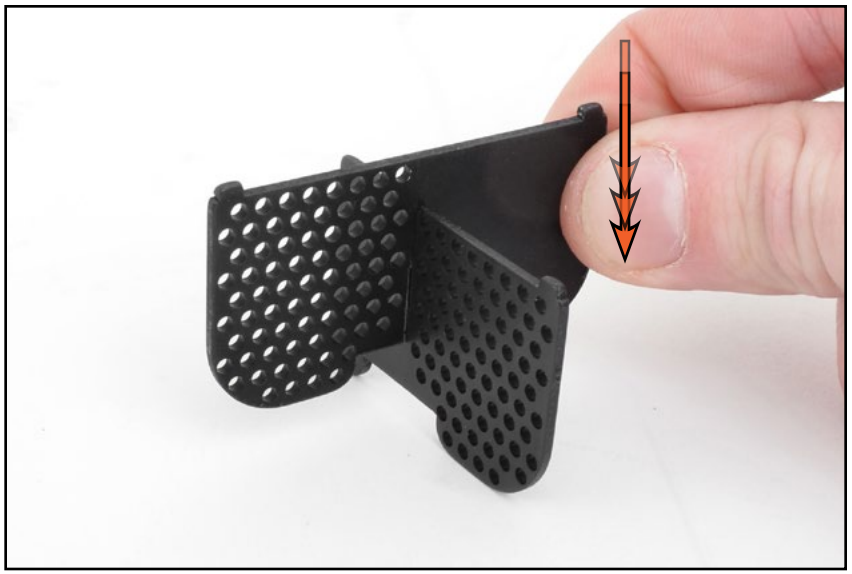
Slide the two baffles apart.



REVERSING THE FLOW OF THE CATCH CAN

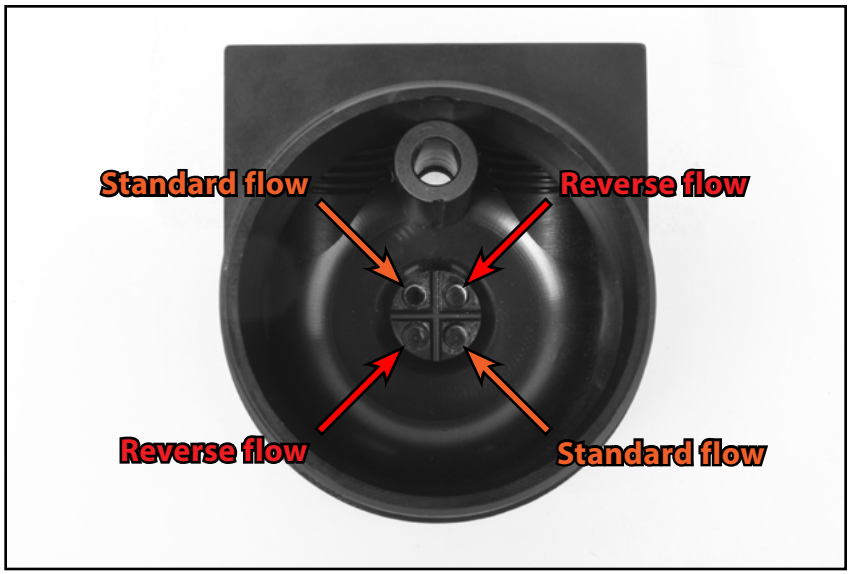
Step 7:

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.



REVERSING THE FLOW OF THE CATCH CAN

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.

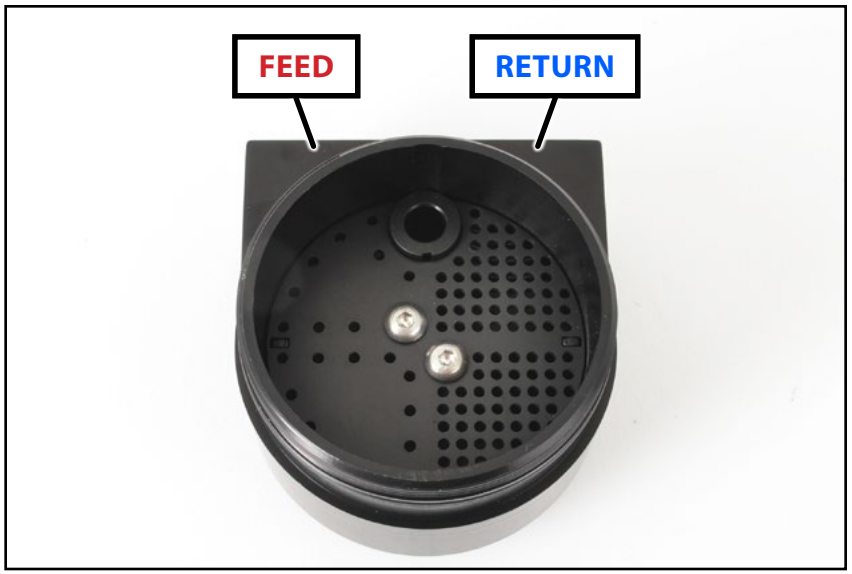
Step 10:

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

REVERSING THE FLOW OF THE CATCH CAN

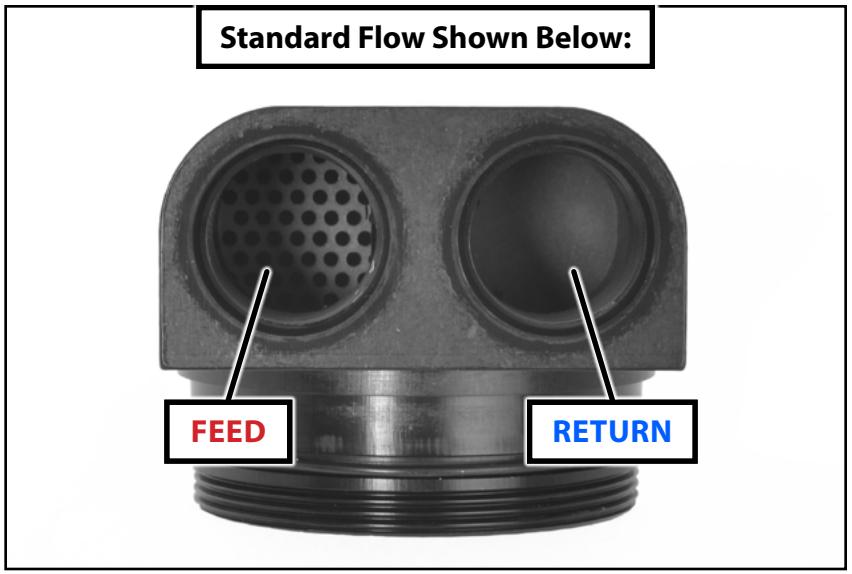
Step 11:

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.

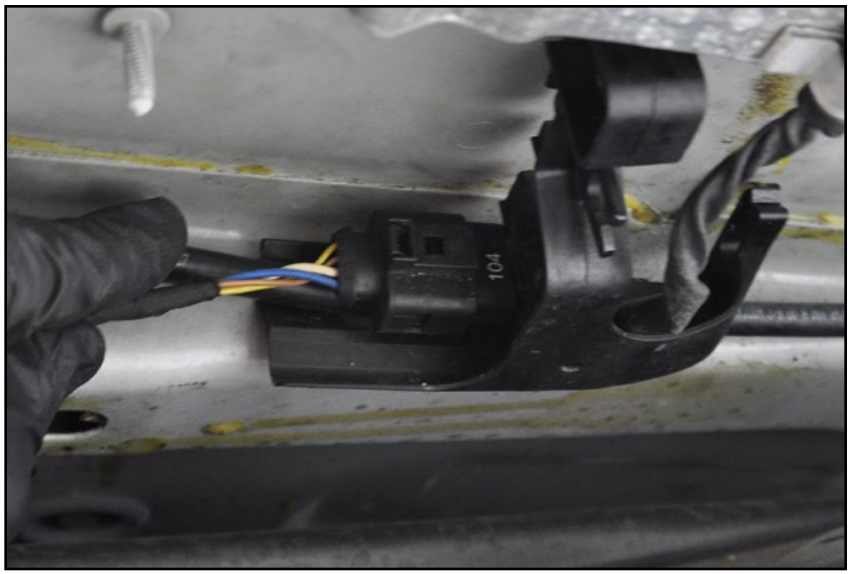


If you need to return to the installation steps please click HERE.

USING THE VAG CONNECTOR TOOL

Step 1:

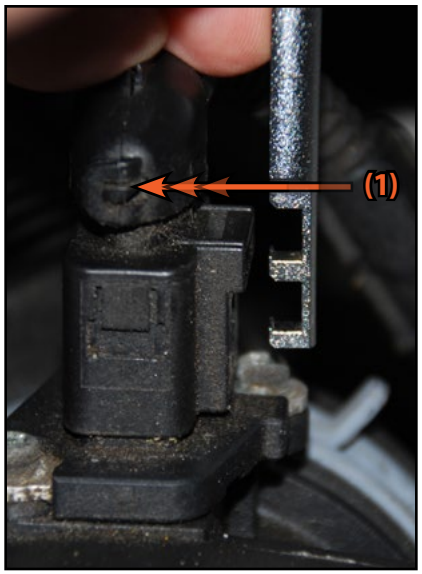
These connectors are commonly referred to as “push and pull” connectors, in reference to the method used to disconnect them.

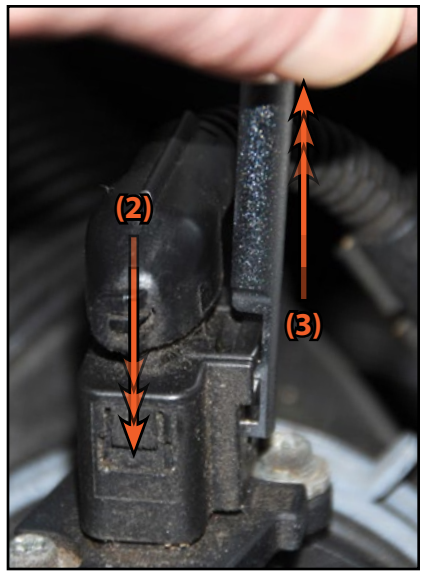


Step 2:

To disconnect one of these connectors, follow this procedure:

1. Engage the connector release tool into the connector housing.
2. Push inward gently on the connector.
3. While holding pressure inward on the connector, pull up on the handle of the release tool.
4. Pull the connector off of the component and move the harness out of the way.





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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