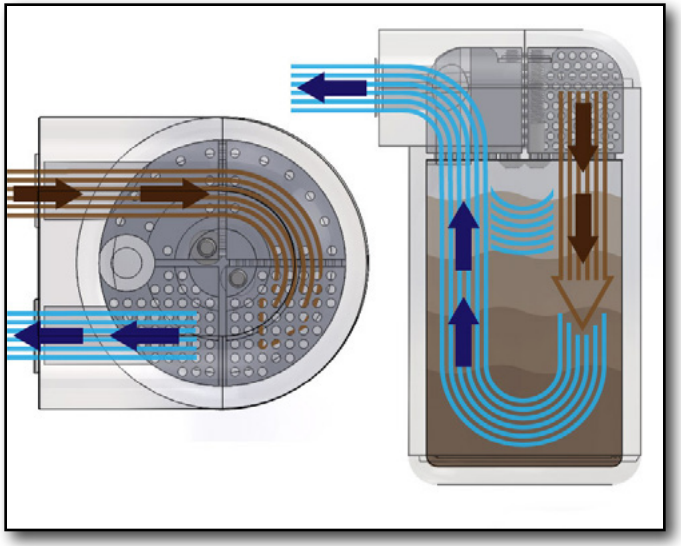
Audi B9 S4 Baffled Oil Catch Can System
Installation Instructions - ES4044357

Skill Level 1 - Easy



INTRODUCTION

The Project:

Excess oil from the crankcase vent system on your Audi will lead to excessive deposits and carbon build up on the back of the intake valves, resulting in power loss and poor driveability over time. Stop the problem from developing and prevent expensive repairs by installing our ECS Tuning baffled oil catch can system. Each system is constructed of durable and lightweight billet aluminum and features a sleek black anodized finish for corrosion resistance. This system utilizes a custom designed mounting bracket, billet aluminum fittings, silicone hoses and all the clamps to ensure a seamless install. Our catch cans are fully serviceable, including a convenient dipstick to check the fill level and a port on the bottom to allow the installation of a drain system (available HERE).

Thank you for purchasing our catch can kit, we appreciate your business!

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KIT CONTENTS

Catch Can Reservoir
(QTY 1)

Baffled Separator

B9 S4 Silicone Hose Set

B9 S4 Bracket

Long Hose Fitting

90° Fittings

Short Hose Fitting

SHOP SUPPLIES AND MATERIALS

Standard Shop Supply Recommendations: We recommend that you have a standard inventory of automotive shop supplies before beginning this or any automotive repair procedure. The following list outlines the basic shop supplies that we like to keep on hand. Shop supplies with a hyperlink are available on our website.

- Hand Cleaner/Degreaser - Click Here
- Pig Mats - for protecting your garage floor and work area from spills and stains - Click Here
- Spray detailer - for rapid cleaning of anything that comes into contact with your paint such as brake fluid - Click Here
- Micro Fiber Towels - for cleaning the paint on your car - Click Here
- Latex Gloves - for the extra oily and dirty jobs - Click Here
- Medium and High Strength Loctite Thread lock compound - to prevent bolts from backing out - Click Here
- Anti-Seize Compound - to prevent seizing, galling, and corrosion of fasteners - Click Here
- Aerosol Brake/Parts Cleaner - for cleaning and degreasing parts
- Shop Rags - used for wiping hands, tools, and parts
- Penetrating oil - for helping to free rusted or stuck bolts and nuts
- Mechanics wire - for securing components out of the way
- Silicone spray lube - for rubber components such as exhaust hangers
- Paint Marker - for marking installation positions or bolts during a torquing sequence
- Plastic Wire Ties/Zip Ties - for routing and securing wiring harnesses or vacuum hoses
- Electrical tape - for wrapping wiring harnesses or temporary securing of small components

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.

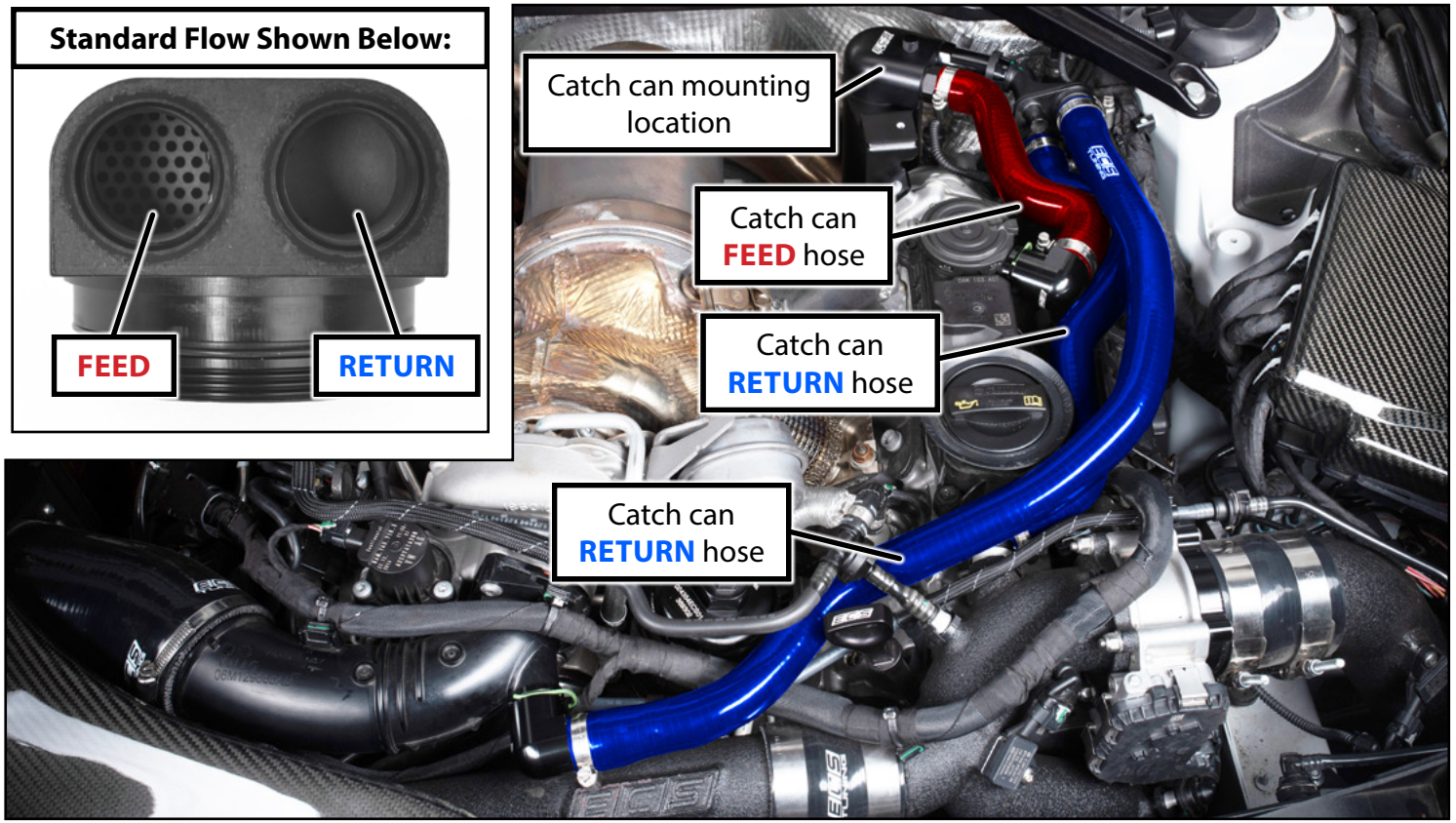
- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.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

PROJECT OVERVIEW

Here is an overview of the B9 S4 engine compartment. As you can see, the catch can will be mounted on the back side of the engine in the LH side. First, we will remove the engine cover, heat shield, and the stock crankcase vent tubes, then we will install the catch can, bracket, flanges, and new silicone hoses before clamping everything together.

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). This system features two different return hoses which connect from the factory dual check valve pipe (referred to from here on out as the "***Y-pipe***") to both the post throttle charge pipe or the intake pipe.



INSTALLING THE CATCH CAN SYSTEM

Step 1:

Lift up on the engine cover to pop it free from its mounting grommets.

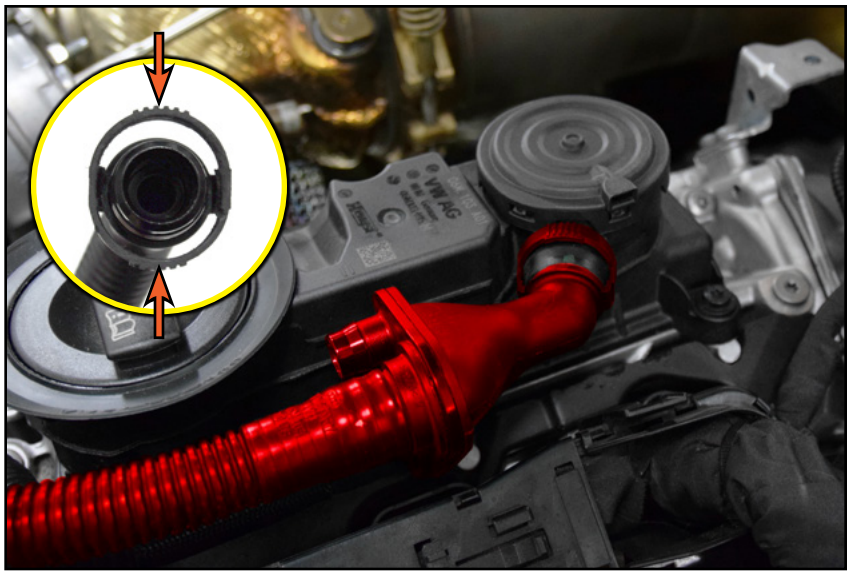
Step 2: 13mm Socket & Ratchet

Remove the four plastic ball studs (arrows) and remove the heat shield from the engine.

INSTALLING THE CATCH CAN SYSTEM

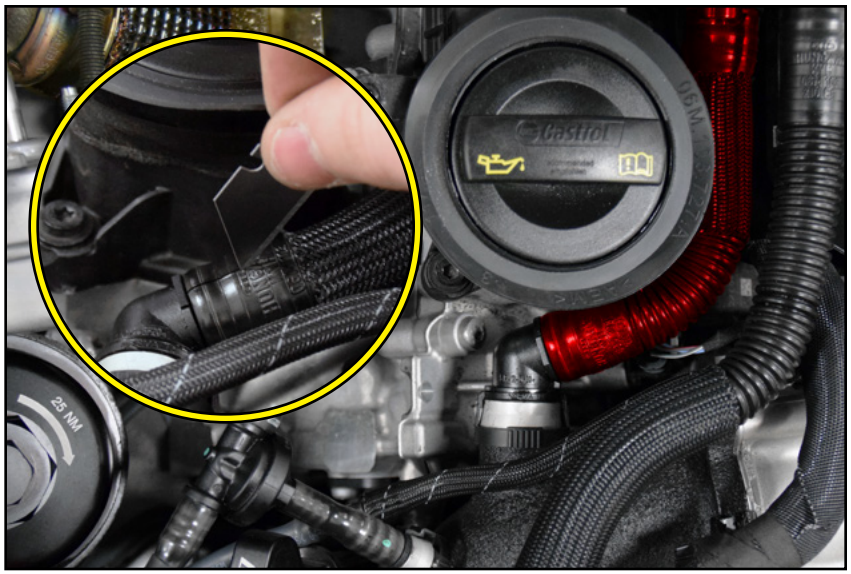
Step 3:

Depress the two locking tabs and pull the Y-pipe (highlighted in **RED**) off the oil separator flange.



Step 4: Razor Blade

Using a heat gun, heat up the separator line (highlighted in **RED**) and pull it off of the plastic flange on the charge pipe.



NOTE

If you do not have a heat gun handy, you can carefully cut the line off the flange using a razor blade, but be aware the line will not be able to be reinstalled after being cut.

INSTALLING THE CATCH CAN SYSTEM

Step 5:

Using a good bit of force, pull the oil separator line (highlighted in **RED**) off of the flange on the intake pipe.

Step 6: Razor Blade

Using a heat gun, heat up both lines (highlighted in **RED**) and pull them off of the flanges on the Y-pipe as shown in the photo on the right.

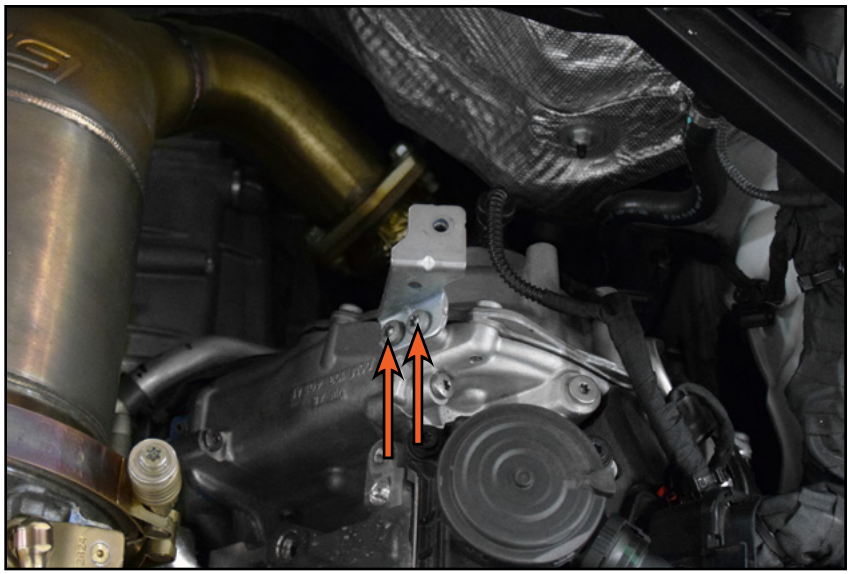
NOTE

If you do not have a heat gun handy, you can carefully cut both lines off the flanges using a razor blade, but be aware the lines will not be able to be reinstalled after being cut.

INSTALLING THE CATCH CAN SYSTEM

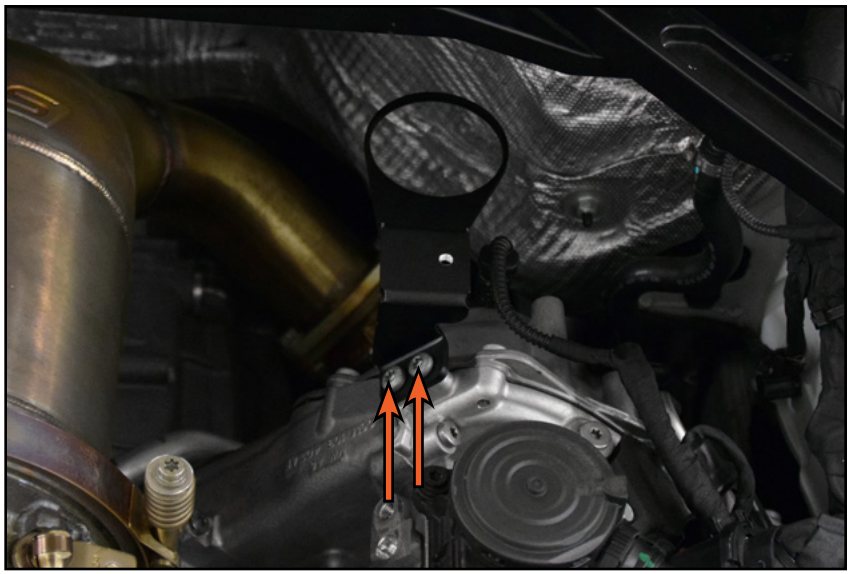
Step 7: T30 Torx

Remove the two screws (arrows) which secure the heat shield bracket to the engine.



Step 8: T30 Torx

Using the two screws we removed in the previous step (arrows), install the new catch can bracket and secure it to the engine.



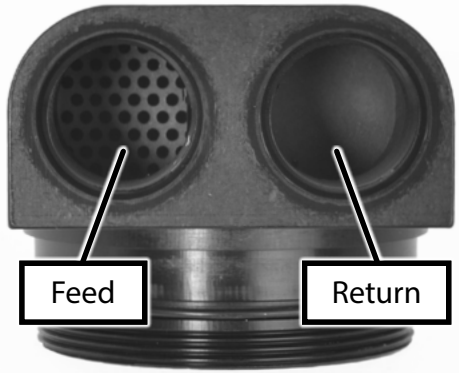
INSTALLING THE CATCH CAN SYSTEM

Step 9:

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 LH photo). Thread the hose fittings into the catch can separator (shown in the RH photo) and tighten them.

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.

Standard Flow Shown Below:



Step 10:

Install the catch can 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.
- Lubricate the O-ring with clean engine oil, then install it into the groove in the separator.
- Thread the reservoir onto the separator to lock the catch can into the bracket as shown in the photo on the right.

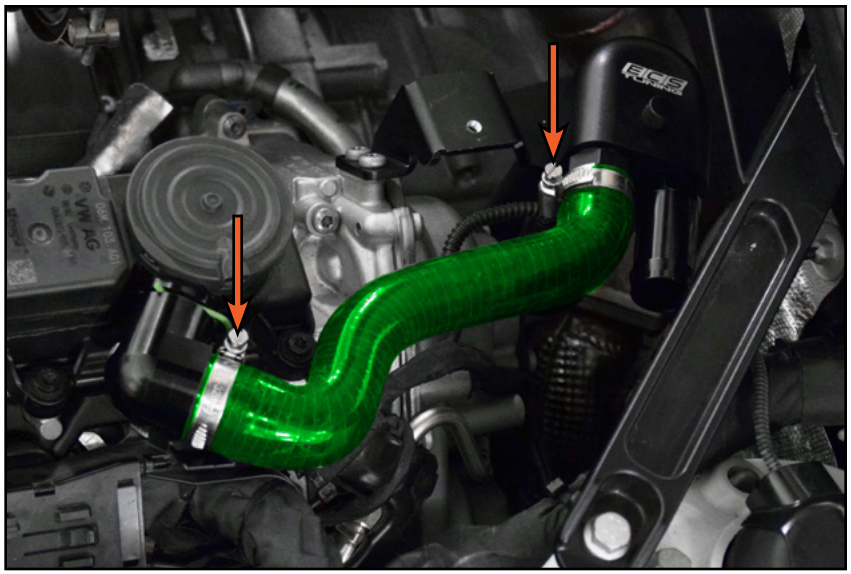
INSTALLING THE CATCH CAN SYSTEM

Step 11:

Push the provided 90° fitting onto the plastic flange on the oil separator and slide the retaining clip into place as shown.

Step 12: Flat-Head Screwdriver -OR- 8mm Socket & Ratchet

Install the shortest hose (highlighted in **GREEN**) between the 90° fitting on the oil separator and the fitting on the feed side of the catch can, then secure it in place with the provided hose clamps (arrows).



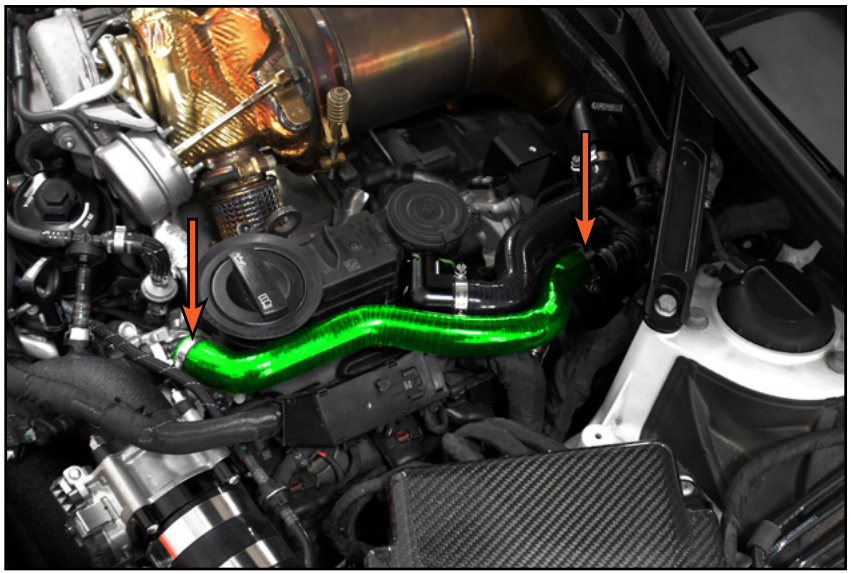
INSTALLING THE CATCH CAN SYSTEM

Step 13:

Pop the Y-pipe (highlighted in **GREEN**) onto the return fitting on the catch can as shown.

Step 14: Flat-Head Screwdriver -OR- 8mm Socket & Ratchet

Install the medium-length hose (highlighted in **GREEN**) between the charge pipe flange and the lower flange on the Y-pipe as shown, then secure it with the provided hose clamps (arrows).



INSTALLING THE CATCH CAN SYSTEM

Step 15:

Push the remaining 90° fitting onto the plastic flange on the intake pipe and slide the retaining clip into place as shown.

Step 16: Flat-Head Screwdriver -OR- 8mm Socket & Ratchet

Install the longest hose (highlighted in **GREEN**) between the 90° fitting on the intake pipe and the upper flange on the Y-pipe as shown, then secure it with the included hose clamps (arrows).

INSTALLING THE CATCH CAN SYSTEM

Step 17: 13mm Socket & Ratchet

Reinstall the heat shield and install the four ball studs (arrows) to secure it in place.

Step 18:

Reinstall the engine cover.

Congratulations, your installation is complete!

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)

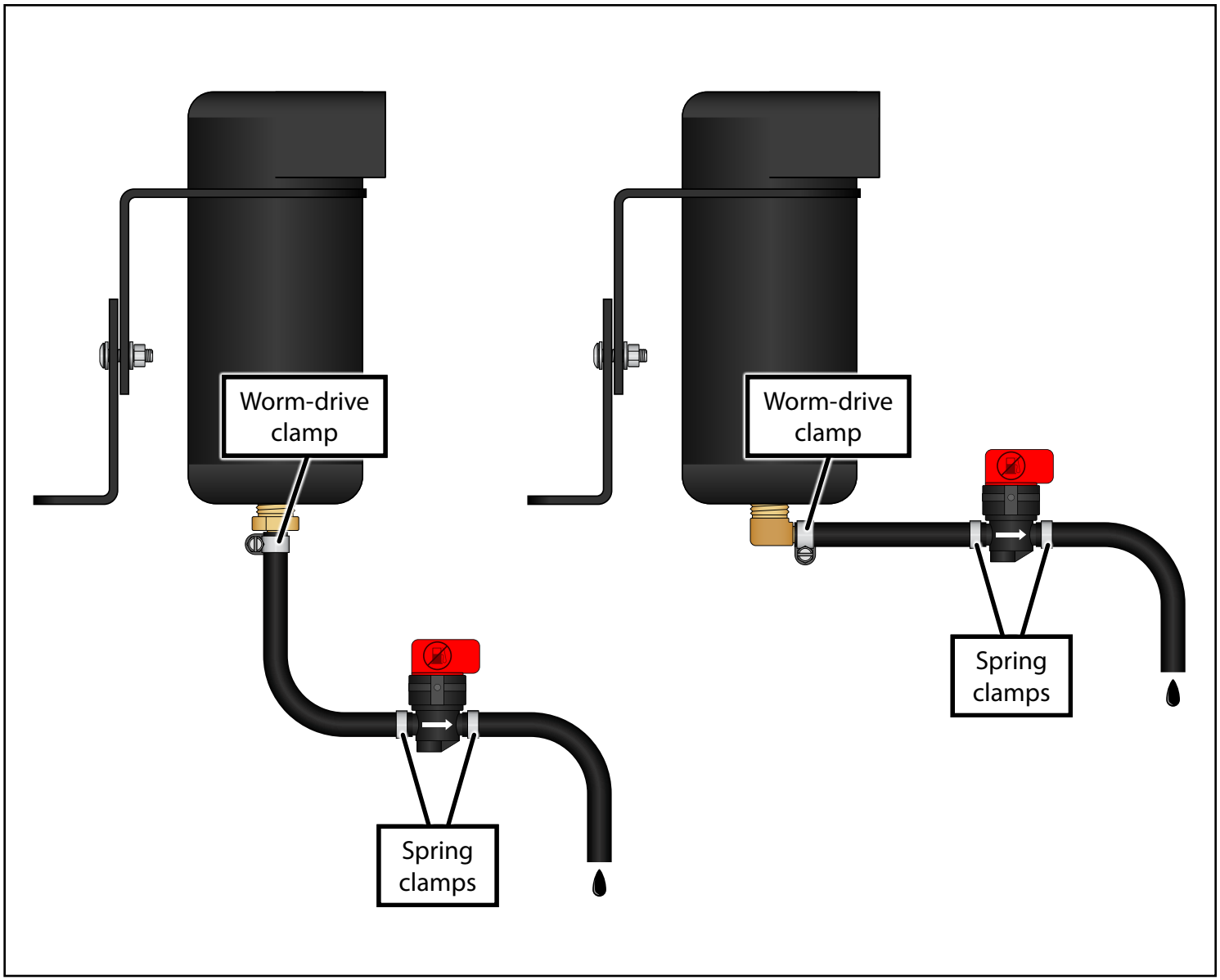
CATCH CAN DRAIN SYSTEM INSTALLATION GUIDELINES

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!

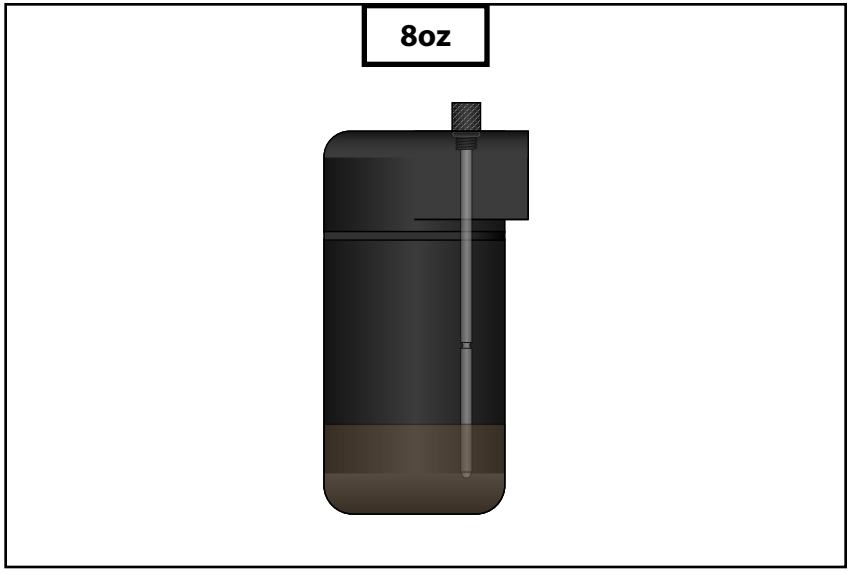
CLEANING AND MAINTENANCE

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 with our 8oz reservoir the dipstick will not reach all the way to the bottom. When you begin to see waste register on the dipstick you will already some buildup in the bottom.

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

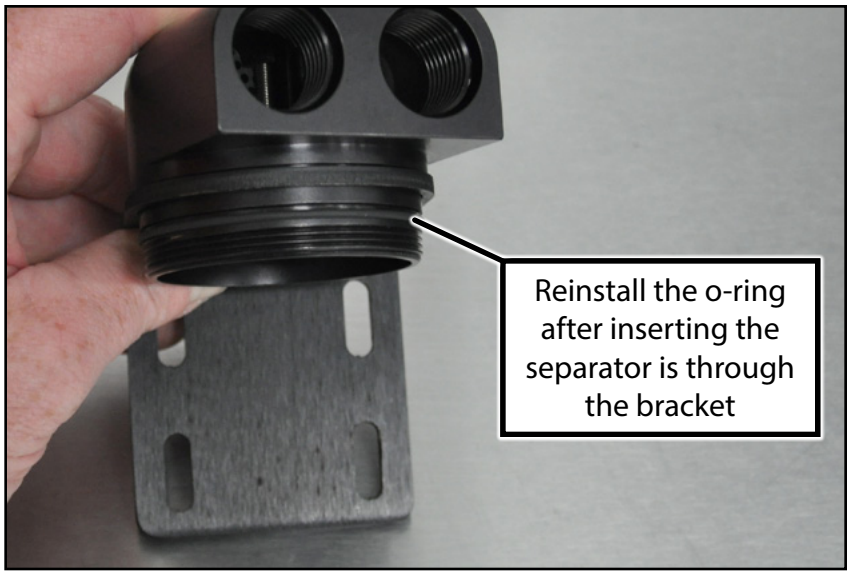


Step 2:

About twice a year, we recommend that you remove the separator for cleaning. To remove it, remove the hoses and the reservoir. Remember to remove the o-ring seal, then lift the separator out of the bracket.

NOTE

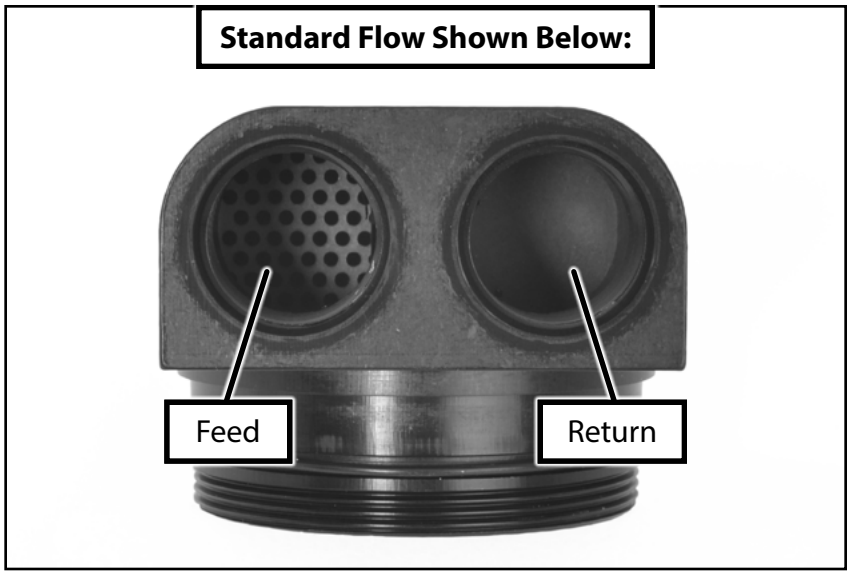
If the o-ring seal needs to be replaced, it is available as a replacement part on our website: ES#3097721.



CLEANING AND MAINTENANCE

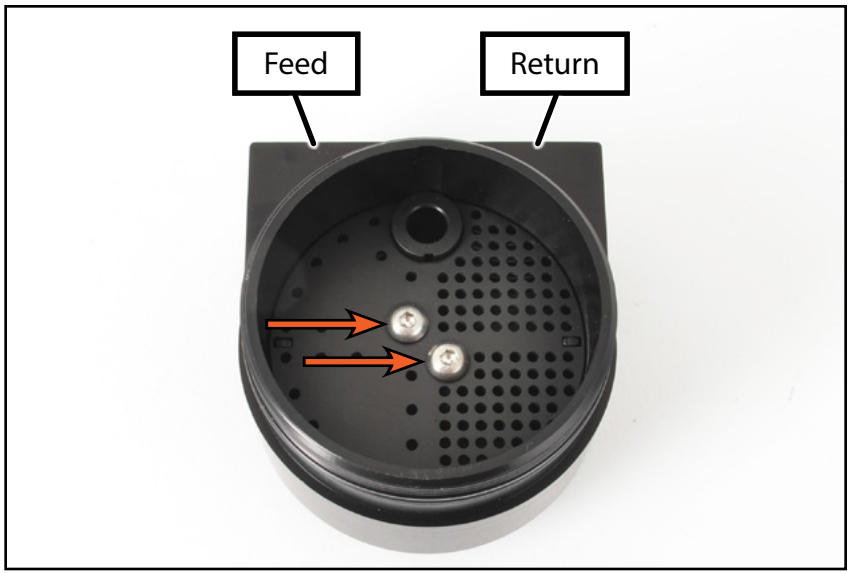
Step 3:

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.

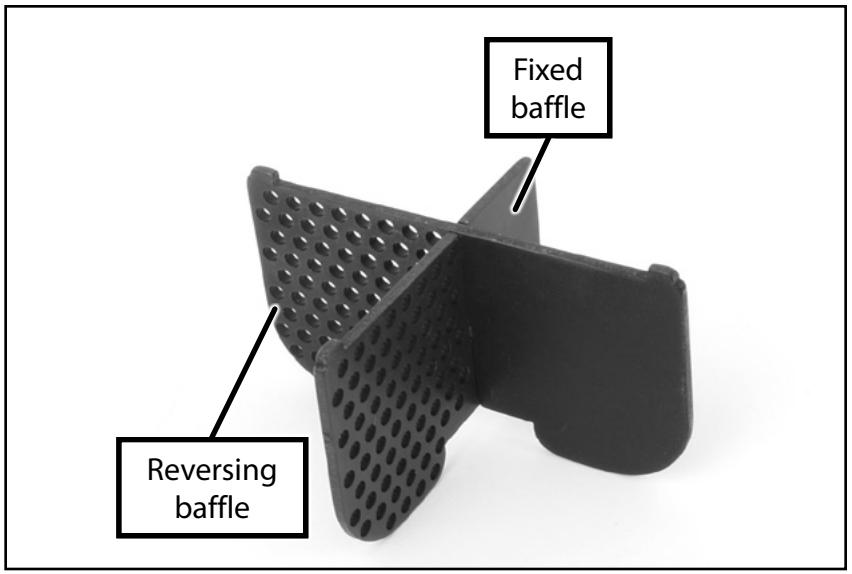
Step 6:

Lift the remaining baffles out of the separator housing.

CLEANING AND MAINTENANCE

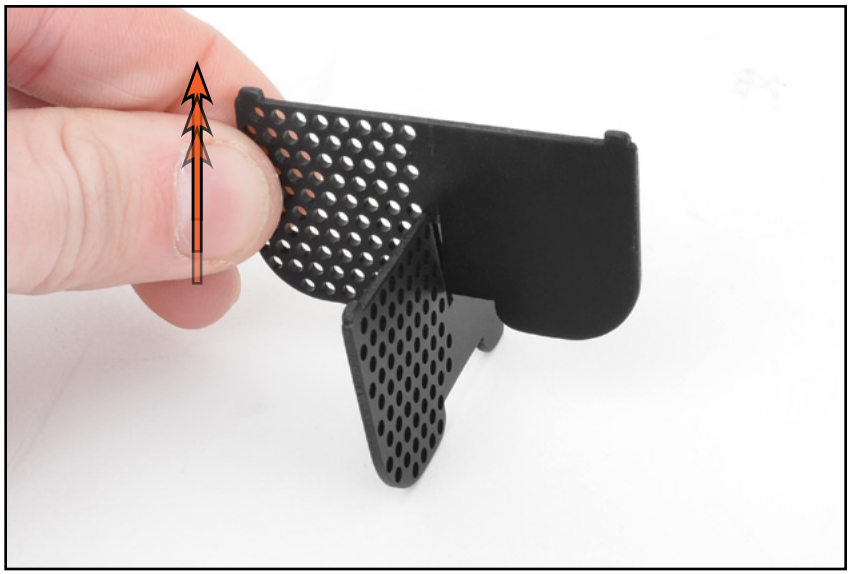
Step 7:

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



Step 8:

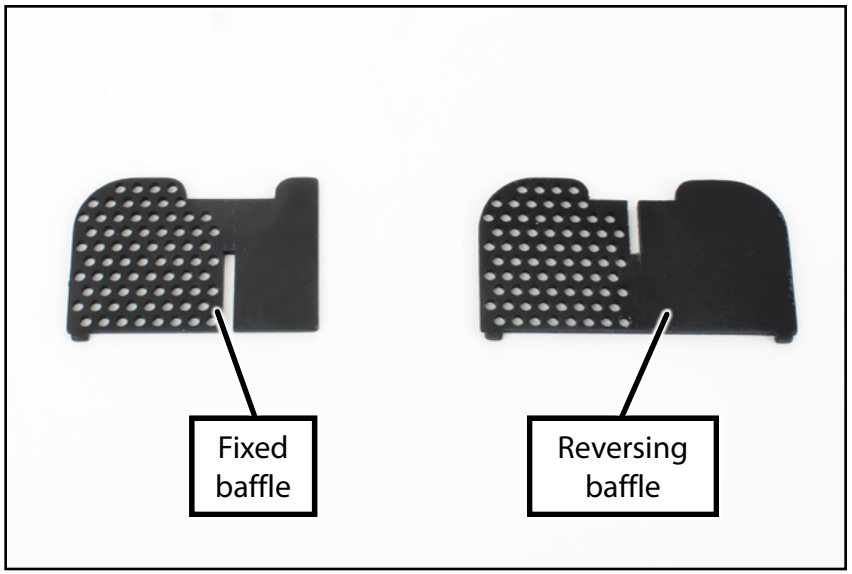
Slide the two baffles apart.



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.

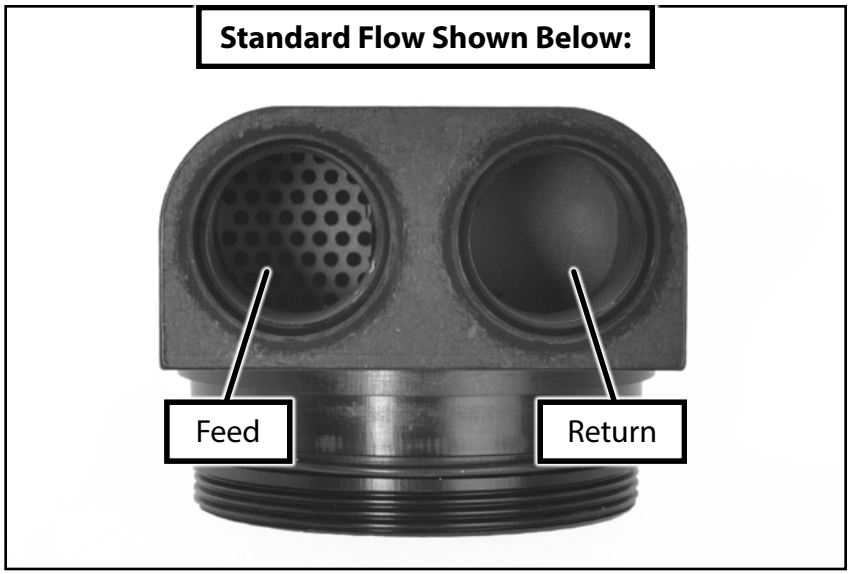


NOTE

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.

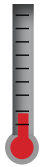
Step 10:

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.

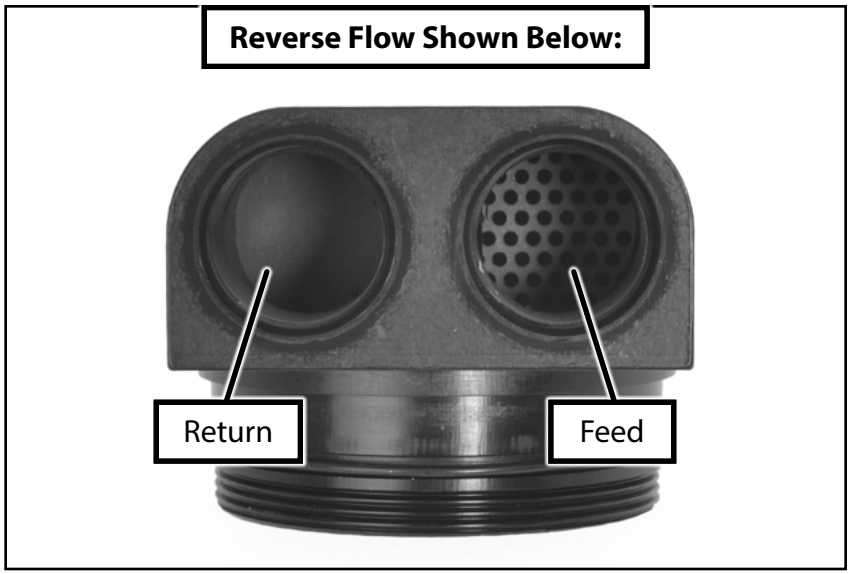
When the temperature outside approaches freezing, your catch can should be cleaned on a weekly basis to prevent freeze up of the crank vent system and damage to engine seals.

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

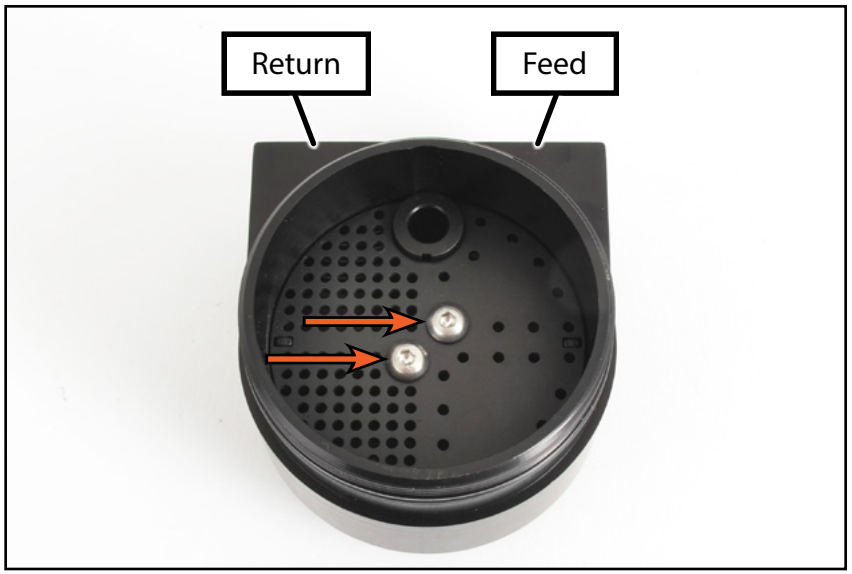
Step 1:

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.

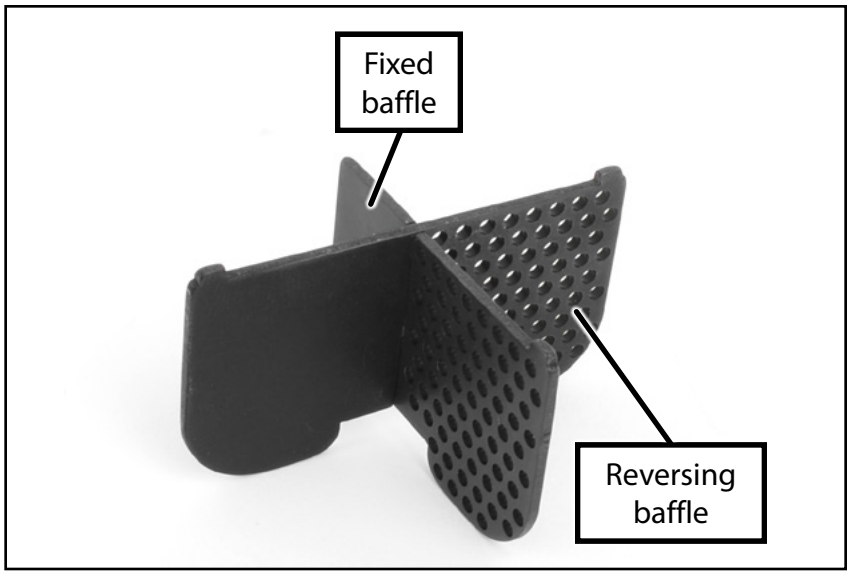
Step 4:

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

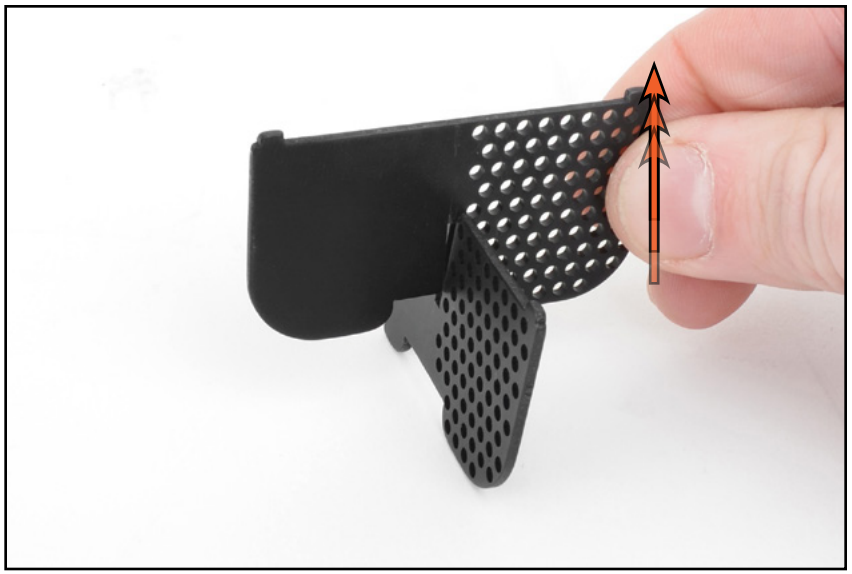
Step 5:

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



Step 6:

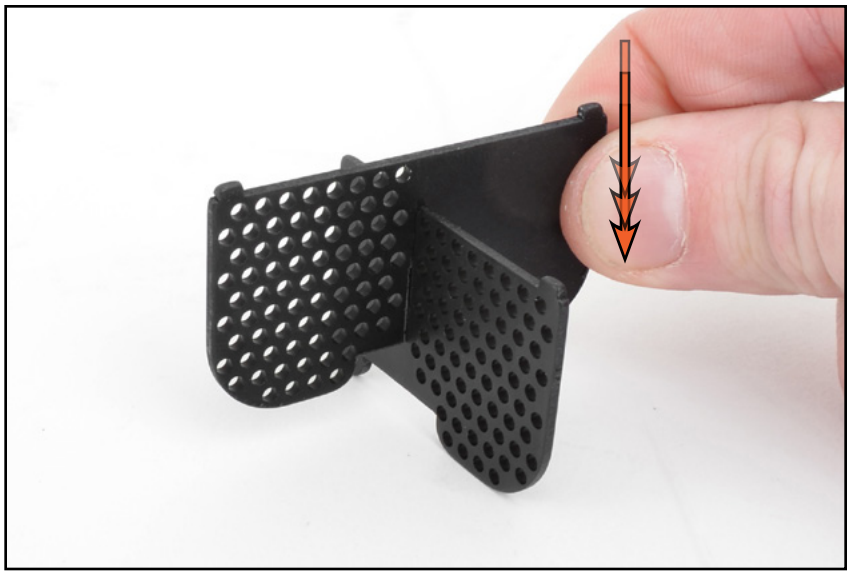
Slide the two baffles apart.



REVERSING THE FLOW OF THE CATCH CAN

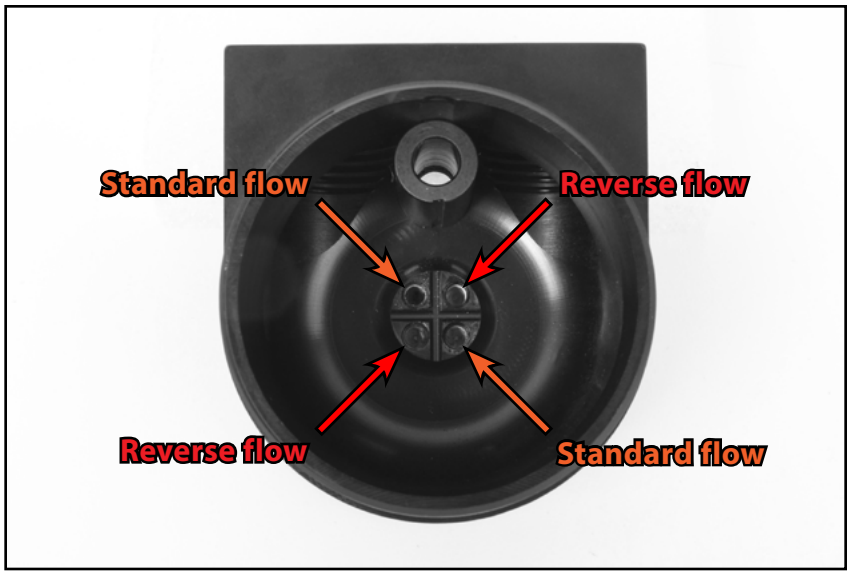
Step 7:

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.

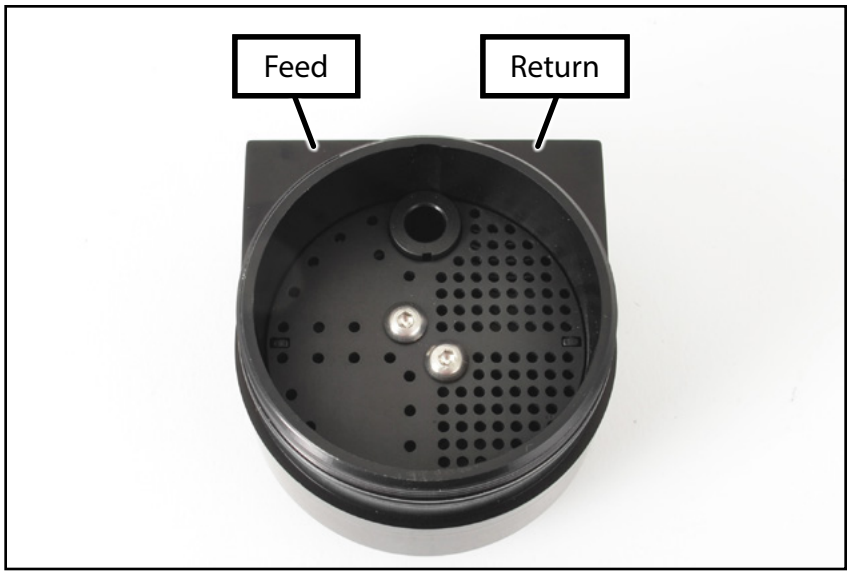
Step 10:

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

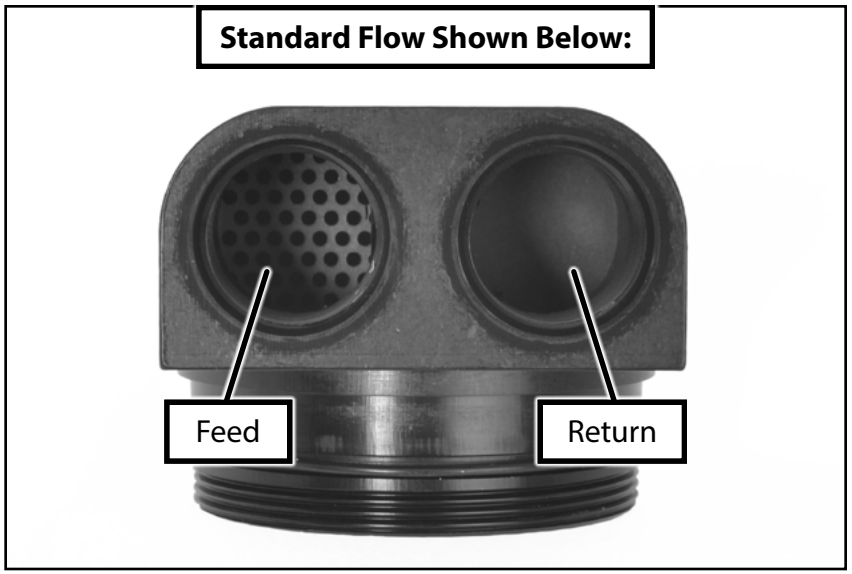
Step 11:

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.

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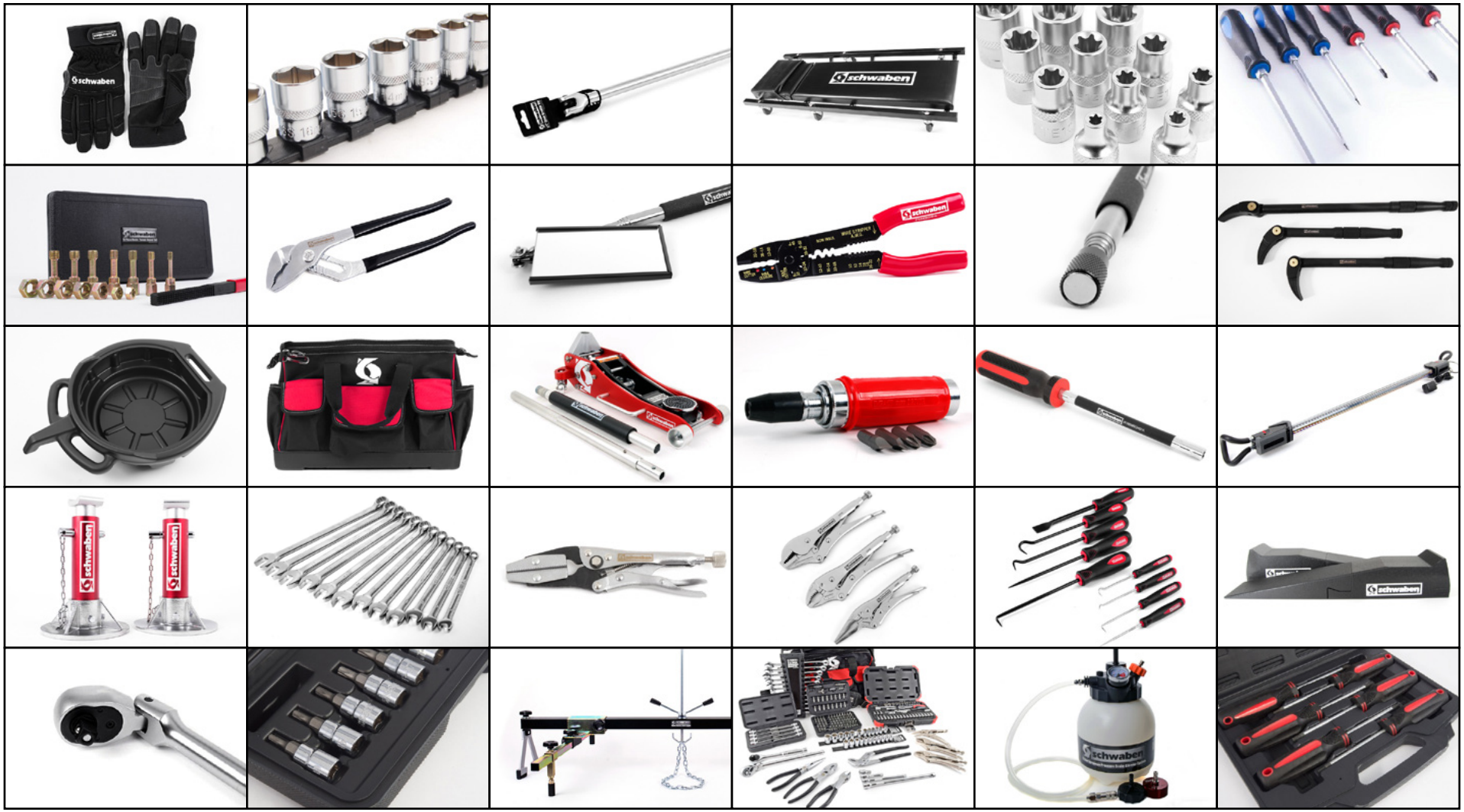

Your Catch Can System installation is complete!

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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