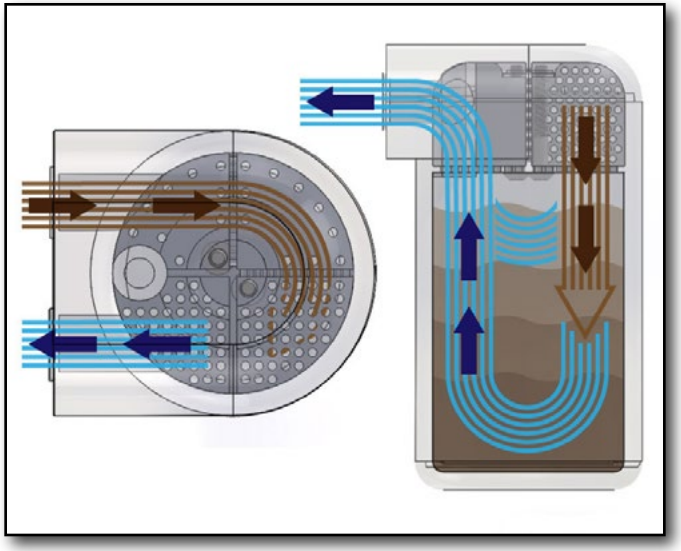
BMW F8x S55
Catch Can & Drain System
Installation Guide



INTRODUCTION

Turner Motorsport BMW F8x S55 Catch Can System

Our Catch Can System offers the following features:

- Constructed of strong and lightweight 6061-T6 billet aluminum
- Black anodized for corrosion resistance
- In-house designed and engineered
- Easy installation thanks to a chassis specific mounting bracket
- All mounting hardware included
- Vehicle specific silicone feed and return hoses
- Includes a dipstick to check content level
- Included drain system makes for easy evacuation of collected oil from below the vehicle
- Fully serviceable and completely reversible (with the replacement of OE vent hose T#206316)

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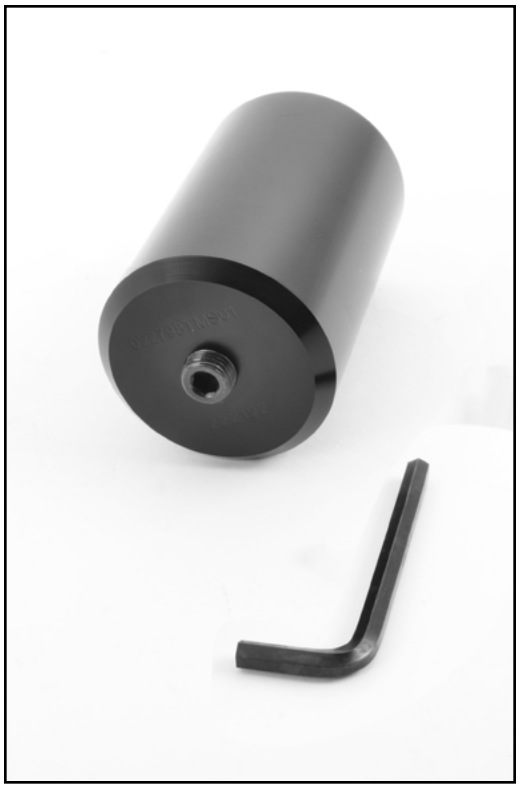


6oz Catch Can Reservoir **(QTY 1)**
(Includes a ¼" Allen Key for drain installation)

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

F8x S55 Silicone Hose Set
(QTY 1)

F8x S55 Mounting Bracket
(QTY 1)

17-32mm Hose Clamp
(QTY 4)

-10AN ORB X ¾" Hose Fitting
(QTY 2)

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

Turner Motorsport 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.

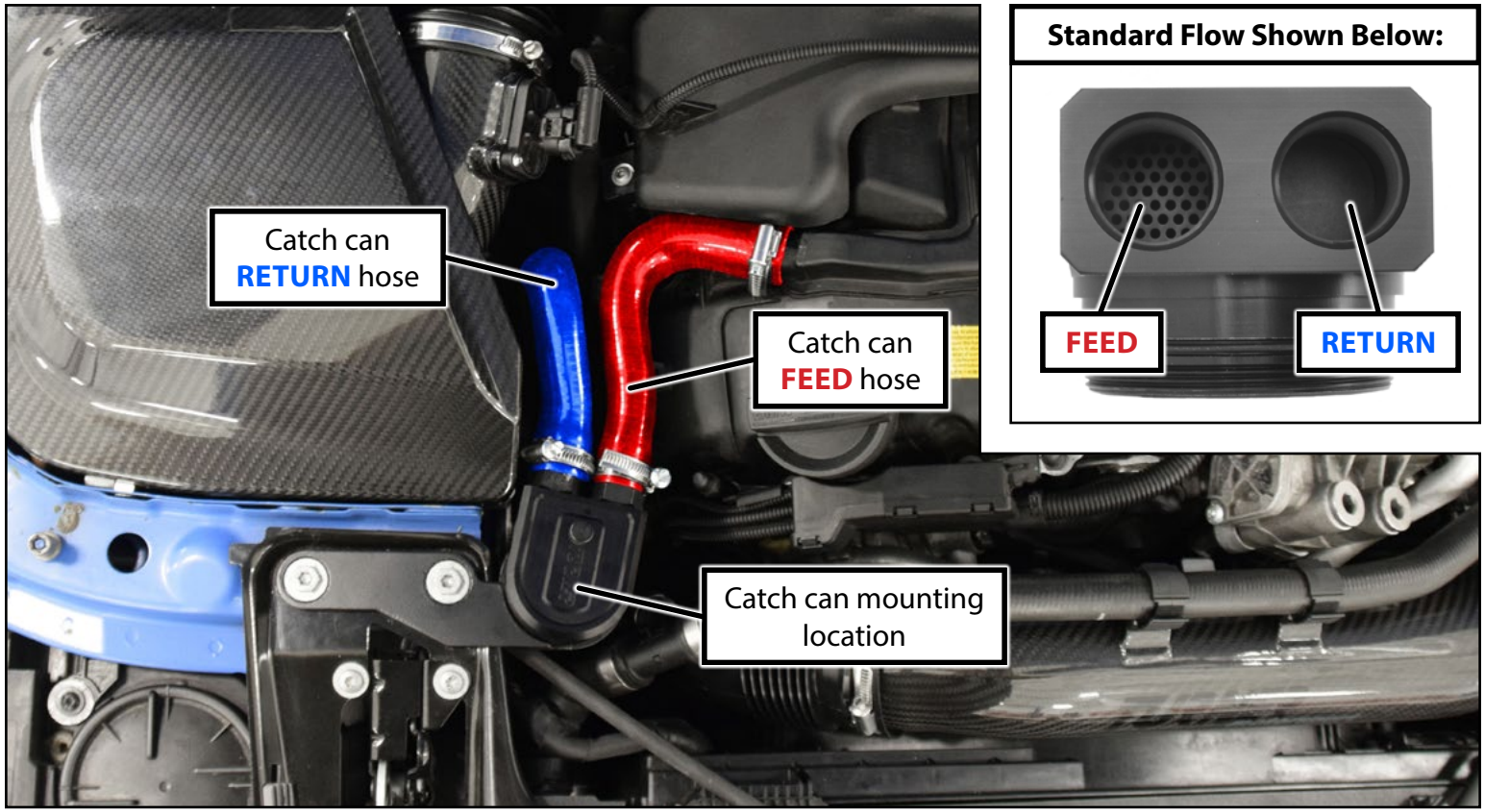
- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- 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 the S55 engine compartment. As you can see, the catch can will be mounted on the RH (passenger's) side. The only things that need to be removed are the plastic rain tray covers, the engine cover and the carbon strut. Once these components are out of the way we simply need to uninstall the stock crankcase vent tube, install the new silicone hoses, install the catch can and bracket and clamp 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).



INSTALLING THE CATCH CAN SYSTEM

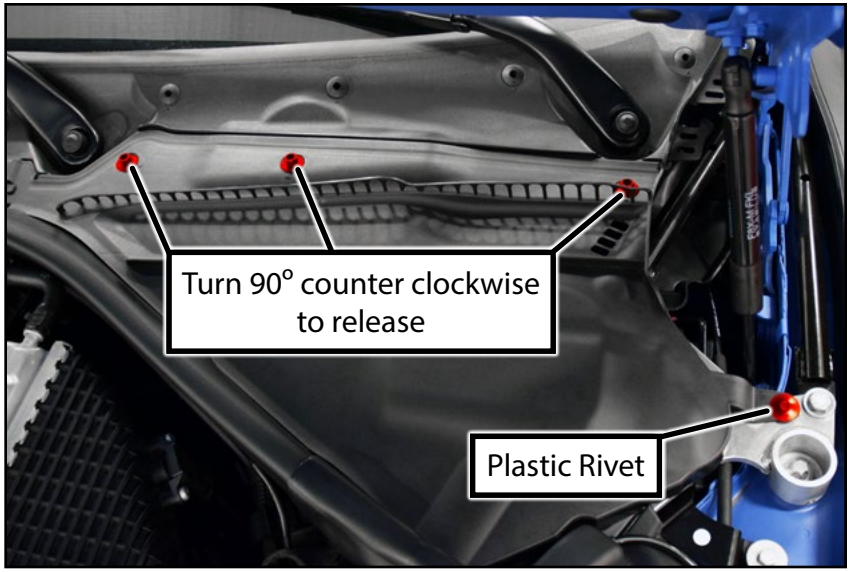
Step 1:

Grasp the engine cover and pull it upwards to release it from its mounting grommets.

Step 2: 10mm Socket & Ratchet

In order to remove the plastic rain tray covers from the vehicle we must do the following:

- Turn the three 10mm plastic nuts 90° counter clockwise to release them.
- Pull the core upwards out of the plastic expanding rivet to release it.
- Lift the rain tray cover out of the vehicle and set it aside.
- Repeat this process to remove the rain tray cover on the other side.

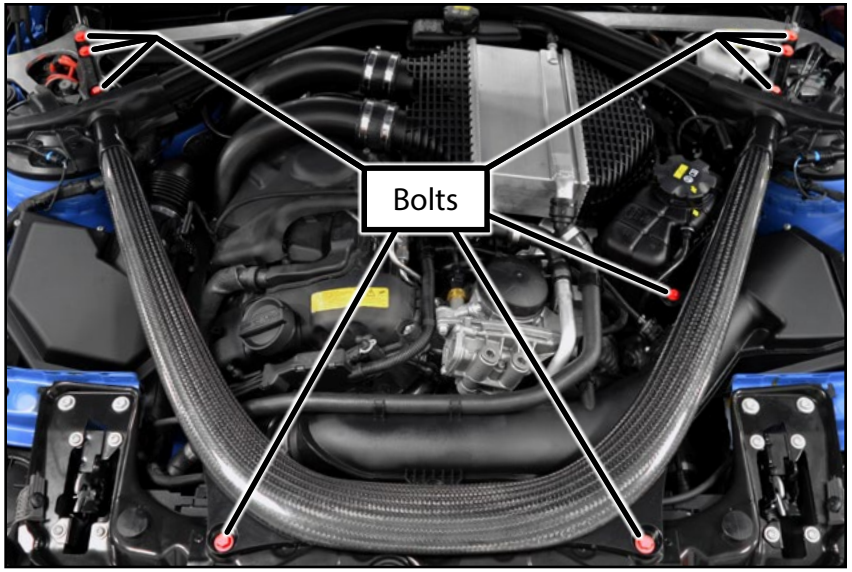


INSTALLING THE CATCH CAN SYSTEM

Step 3: 10mm Socket, 13mm Socket & Ratchet

Next we must remove the carbon strut from the engine compartment by doing the following:

- Remove all of the bolts securing the carbon strut to the vehicle (highlighted in **RED**).
- Carefully slide the carbon strut out from the rubber weather strip and out from the vehicle.
- Set the strut aside where it cannot be damaged.



Step 4: Pick -or- Flat Head Screwdriver

Gently pry back the four tabs on the crankcase vent tube and pull it off of the flange on the valve cover (highlighted in **RED**).

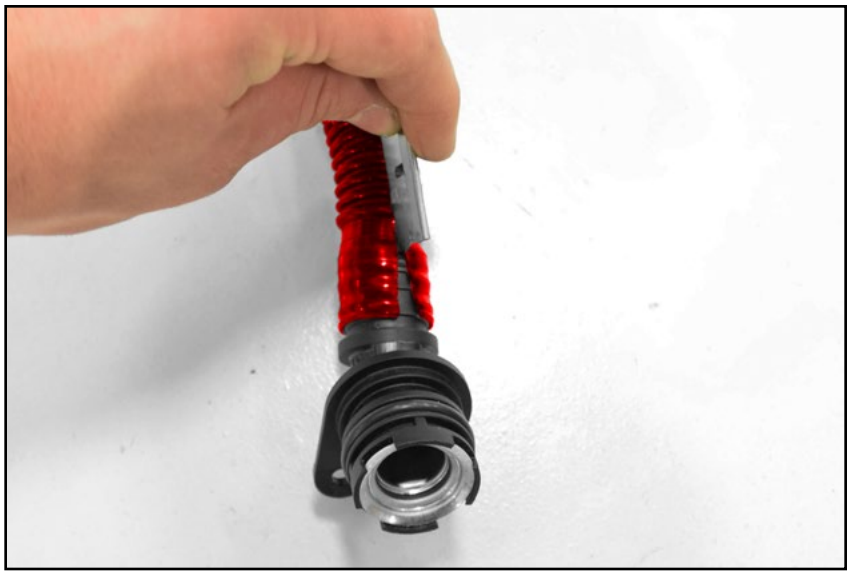
NOTE

Certain engine applications feature an enclosed vent tube connector design (inset photo). On these applications you need to firmly pull the tube back until the retaining tabs break loose, allowing it to be pulled off the flange.

INSTALLING THE CATCH CAN SYSTEM

Step 5: Razor Blade

Follow the crankcase vent tube down to the other end where it connects to the flange on the intake tube. Carefully cut the corrugated tube off of the flange.

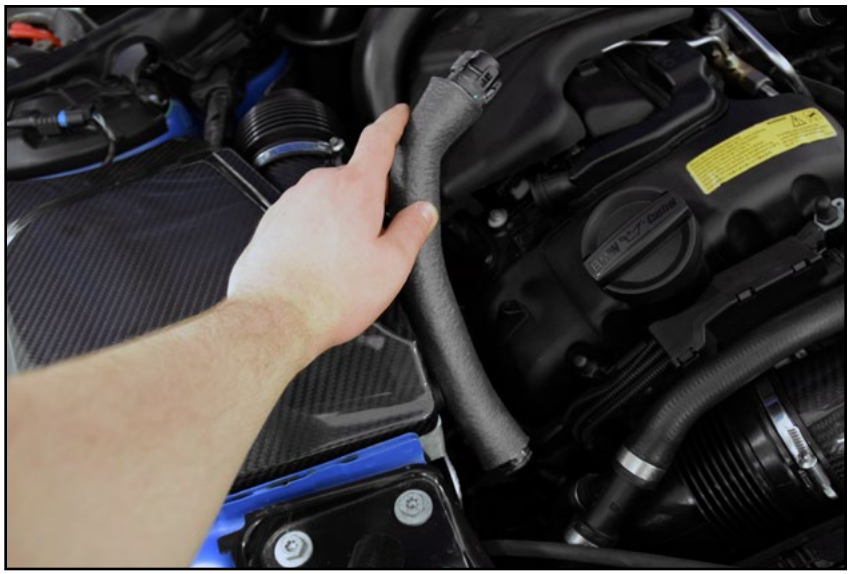


NOTE

We show this step being done with the vent hose off of the vehicle for better clarity, this step should be done with the flange still in installed in the vehicle.

Step 6:

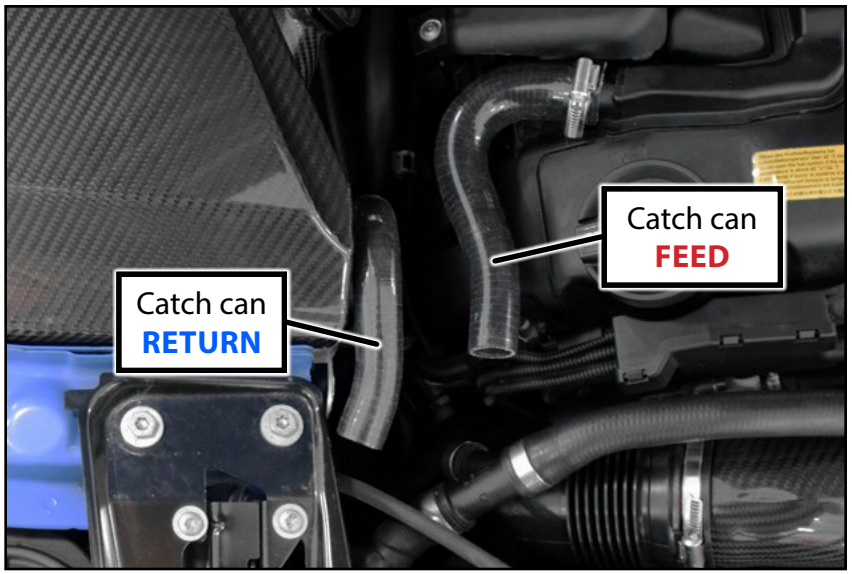
Pull the crankcase vent tube out from the vehicle.



INSTALLING THE CATCH CAN SYSTEM

Step 7: Flat Head Screwdriver

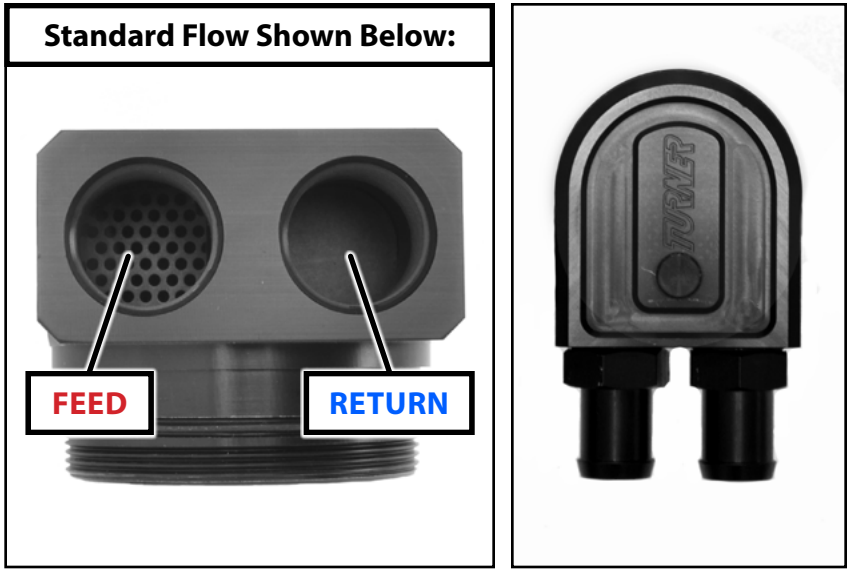
Install the new silicone catch can hoses onto each of the two flanges with the provided clamps but leave them loose enough to allow for adjustment. The shorter hose connects to the flange on the valve cover, and the longer hose connects to the flange on the intake pipe.



Step 8: 25mm Wrench

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 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.

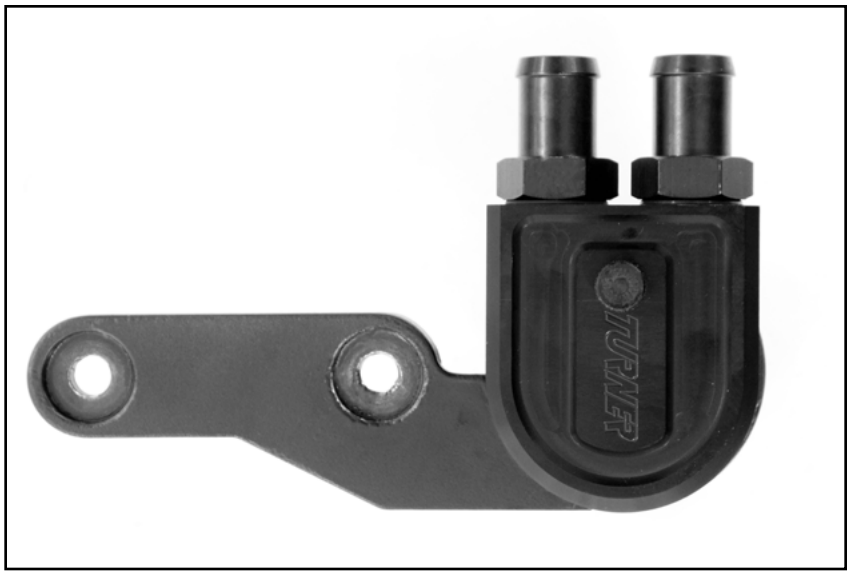


INSTALLING THE CATCH CAN SYSTEM

Step 9: 13mm Socket & Ratchet

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.



NOTE

If you purchased a catch can drain system, now is the time to install the drain hose into the bottom of the catch can. Once the can is installed it will be very difficult to reach.

Step 10: Flat Head Screwdriver, 13mm Socket & Torque Wrench

Install the catch can and the bracket into the vehicle by doing the following:

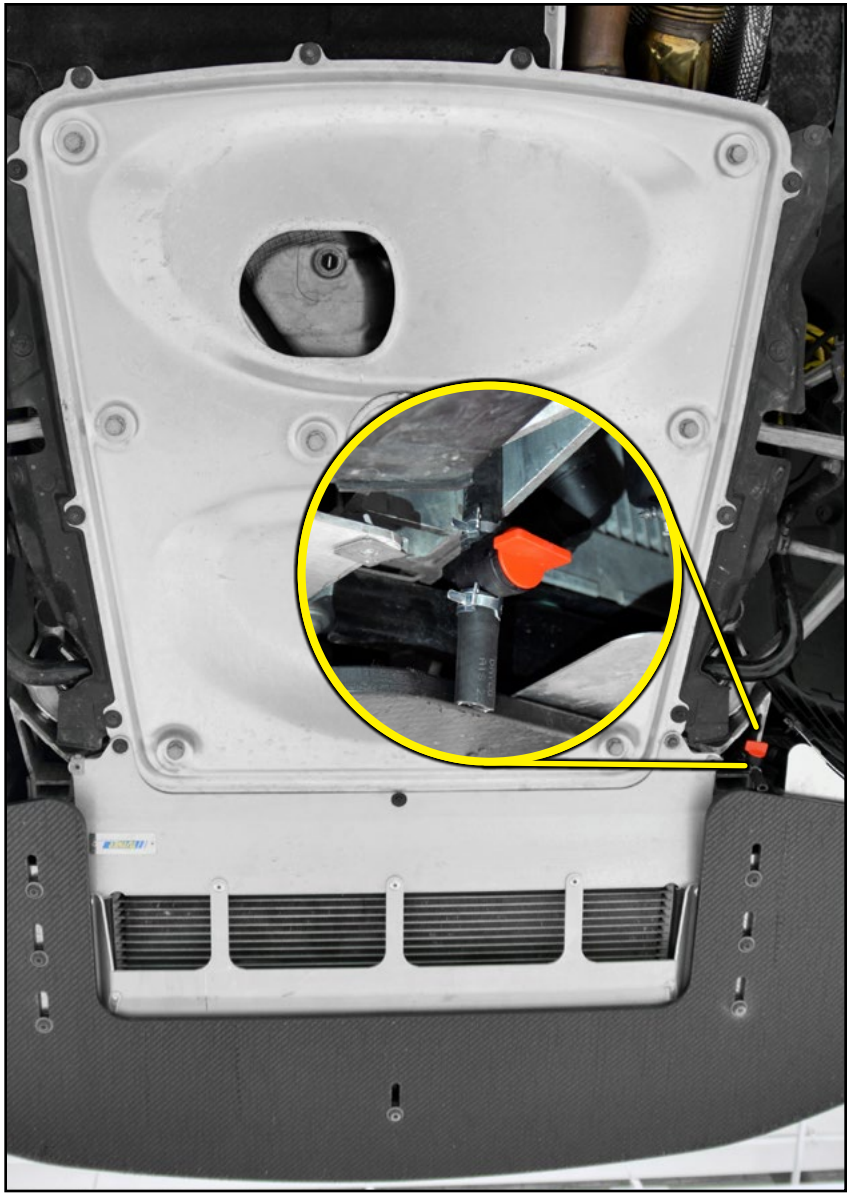
- Remove the two bolts (circled in **RED**) and use them to secure the bracket into place.
- Slide the two remaining hose clamps onto the silicone hoses, then slide the hoses onto the fittings in the catch can separator.
- Adjust the orientation of the catch can and hoses as needed, then tighten down all of the hose clamps.

INSTALLING THE CATCH CAN SYSTEM

Step 11:

On this particular application we ***highly*** recommend installing a Turner Catch Can Drain System (T#397516) as the dipstick and reservoir are difficult to access from under the carbon brace. You can install an easily accessible drain valve by doing the following:

- Install the hose barb fitting into the bottom of the reservoir (this should be performed during step 9).
- Clamp the hose onto the fitting and route it down to the bottom of the vehicle, avoiding any hot or moving components.
- Install the shut off drain valve in an accessible location.
- Secure the hose to nearby components so it will be held safely out of the way.



If you purchased a Turner Motorsport Catch Can Kit ***without*** the optional drain system:

- Proceed to the next page for final reassembly.
- Reference the Cleaning and Maintenance section which starts on Page 16.

If you purchased a Turner Motorsport Catch Can Kit ***with*** the optional drain system:

- Proceed to Page 13 for drain system installation.
- Reference the Cleaning and Maintenance section which starts on Page 16.

INSTALLING THE CATCH CAN SYSTEM

Step 12: 10mm, 13mm Socket & Torque Wrench

Final installation steps:

- ☐ Reinstall the engine cover
- ☐ Reinstall the carbon brace and torque the eight mounting bolts to 28 Nm (21 Ft-lbs).
- ☐ Reinstall the smaller expansion tank bolt and torque it to 10Nm (7 Ft-lbs).
- ☐ Reinstall the plastic rain tray covers and secure with the plastic rivet and 10mm nuts.
- ☐ Start the engine and check for any leaks.

Your S55 catch can 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)

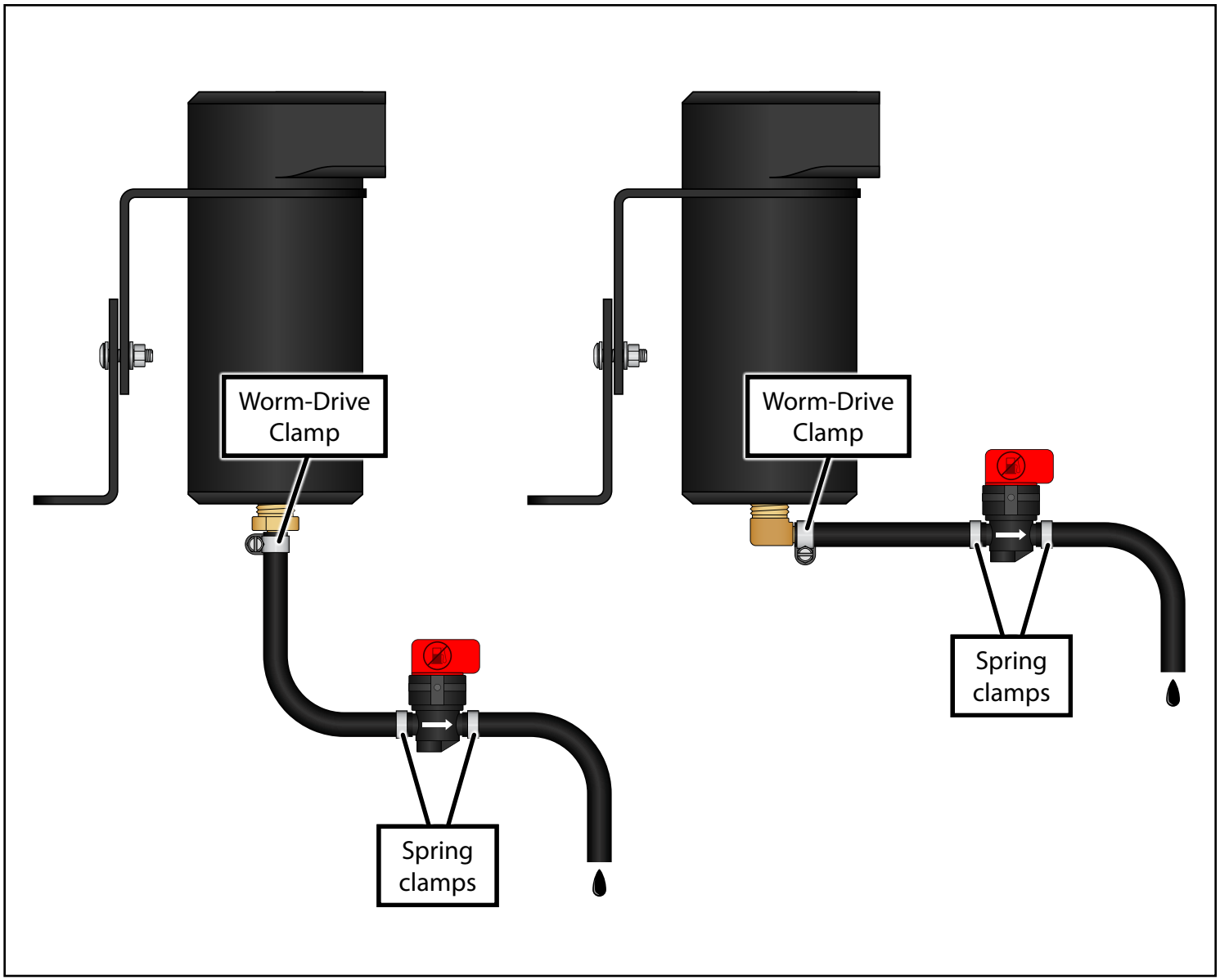
CATCH CAN DRAIN SYSTEM INSTALLATION GUIDELINES

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

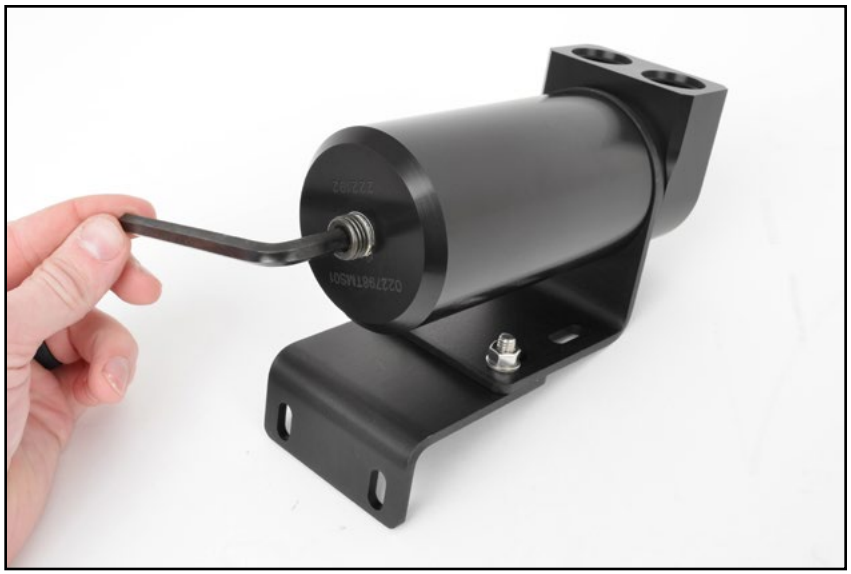
Step 2:

All of our catch cans feature a ¼" NPT black zinc plated brass plug in the bottom of the can, you can easily remove this plug with the included ¼" hex (Allen) key.

You will need to select one of the two ¼" NPT to ¼" brass hose barb fittings; one is straight, while the other has a 90° bend. Select the fitting which allows you to route the drain hose to wherever you want to access it from in the vehicle.

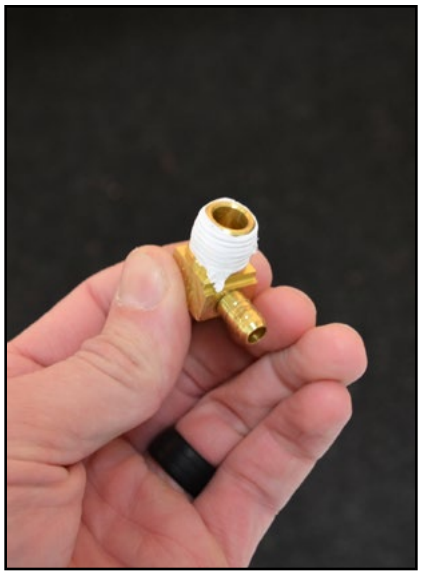
Apply thread sealant to the threads on one of the two ¼" NPT to ¼" brass hose barb fittings, then install the new fitting in place of the plug we removed earlier.

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



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!

Click HERE to return to the instructions for final reassembly.

CLEANING AND MAINTENANCE

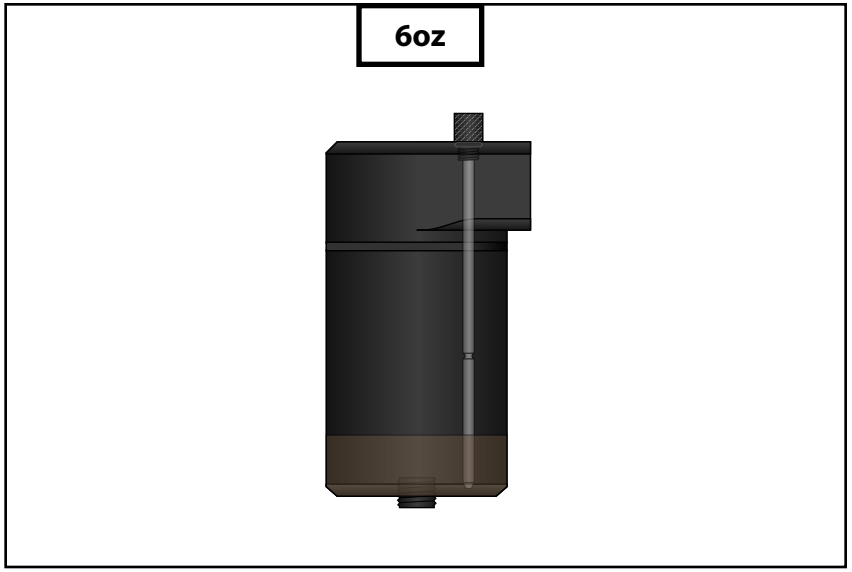
Step 1:

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.

Due to limited space around the catch can mounting area in the F8x chassis, only a 6oz can will fit.

The dipstick reaches the bottom on the 6oz reservoir, waste will register on the dipstick as soon as it begins to collect.

It's a good idea to empty the reservoir when the waste registers approximately 2" up on the dipstick.

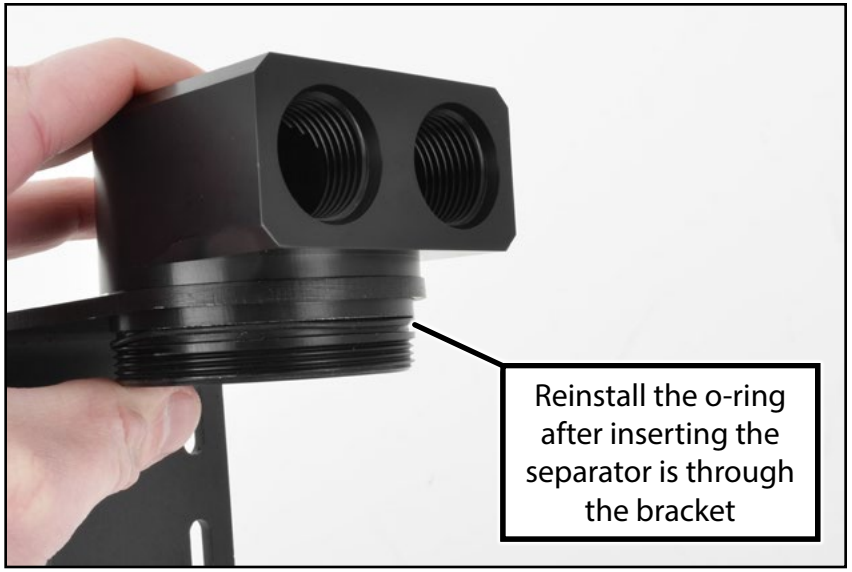


Step 2:

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

NOTE

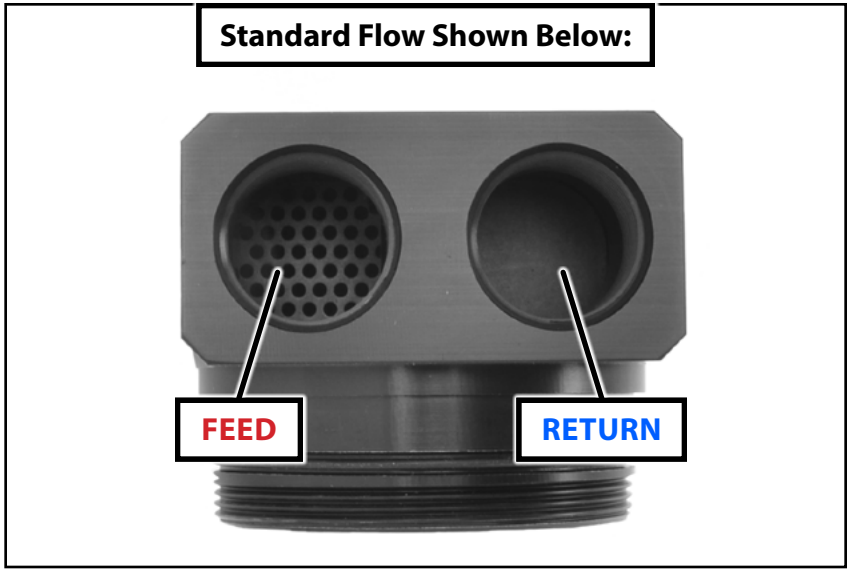
If the o-ring seal needs to be replaced, it is available as a replacement part on our website: T#402946



CLEANING AND MAINTENANCE

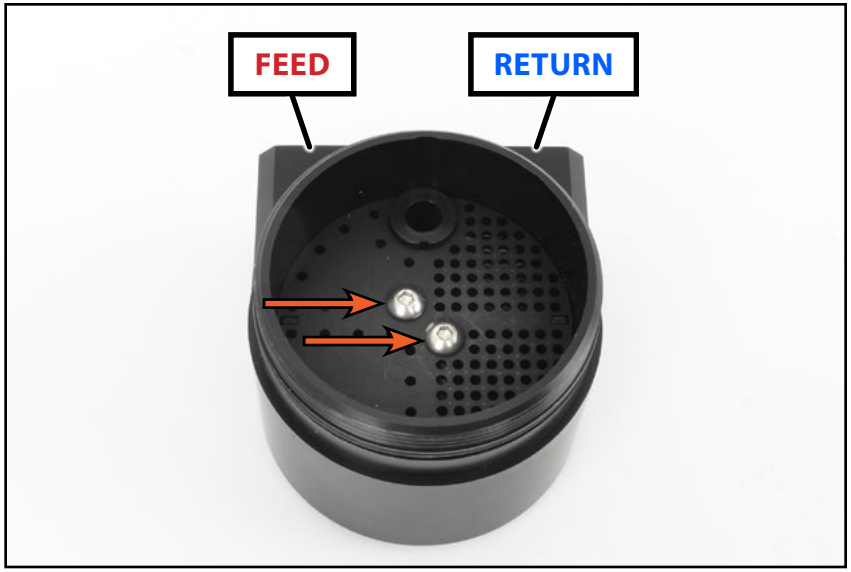
Step 3:

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 hex (Allen) key included with the kit, remove the two baffle plate screws.



CLEANING AND MAINTENANCE

Step 5:

Lift the baffle plate out of the separator housing.

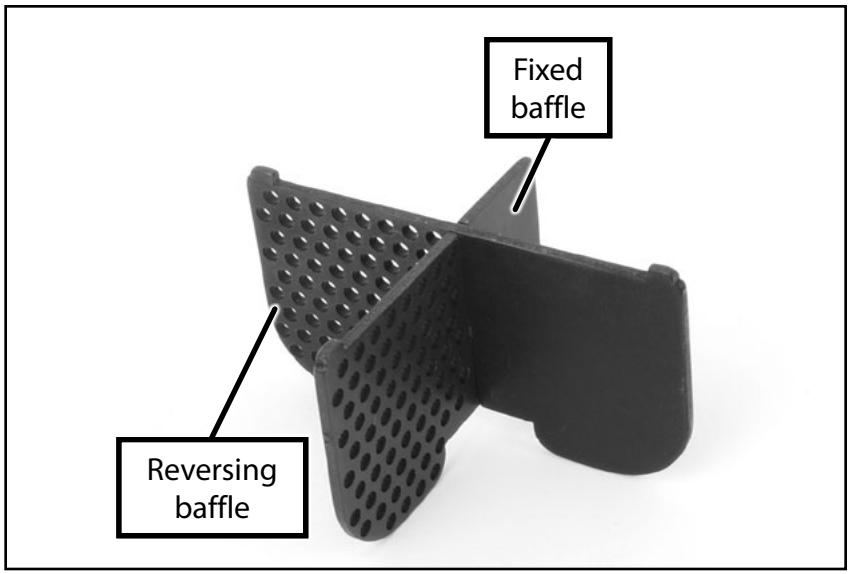
Step 6:

Lift the remaining baffles out of the separator housing.

CLEANING AND MAINTENANCE

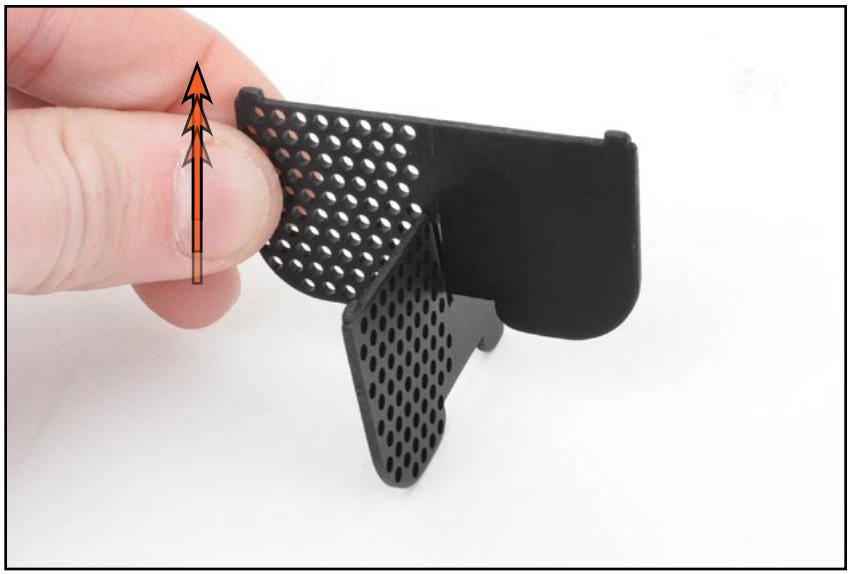
Step 7:

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



Step 8:

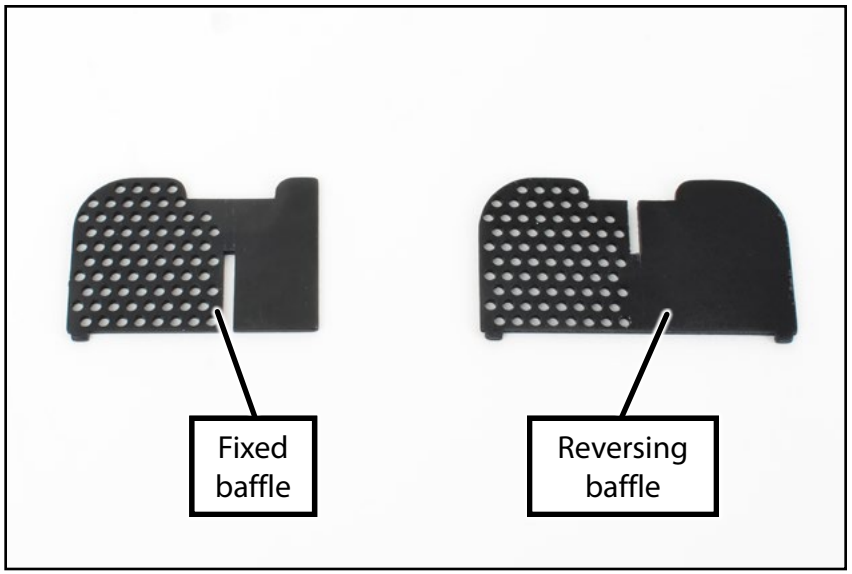
Slide the two baffles apart.



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.

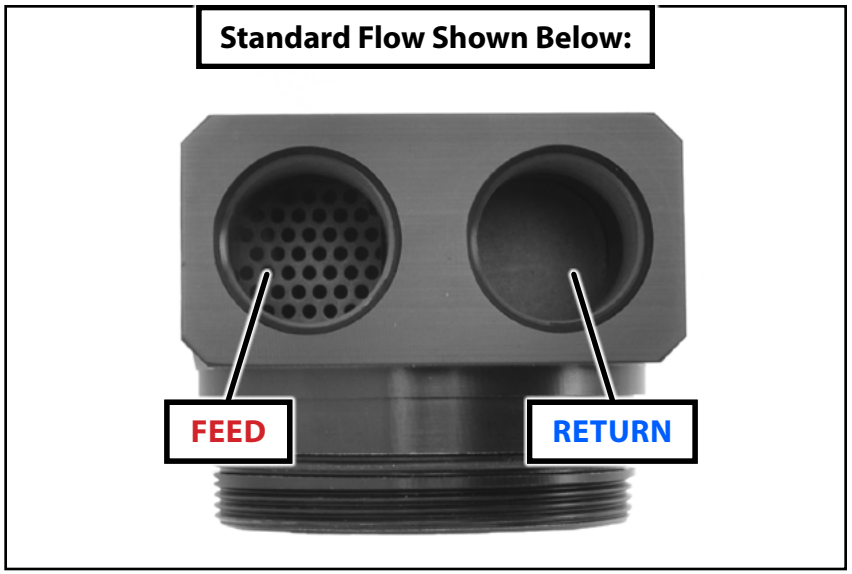


NOTE

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.

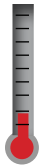
Step 10:

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.

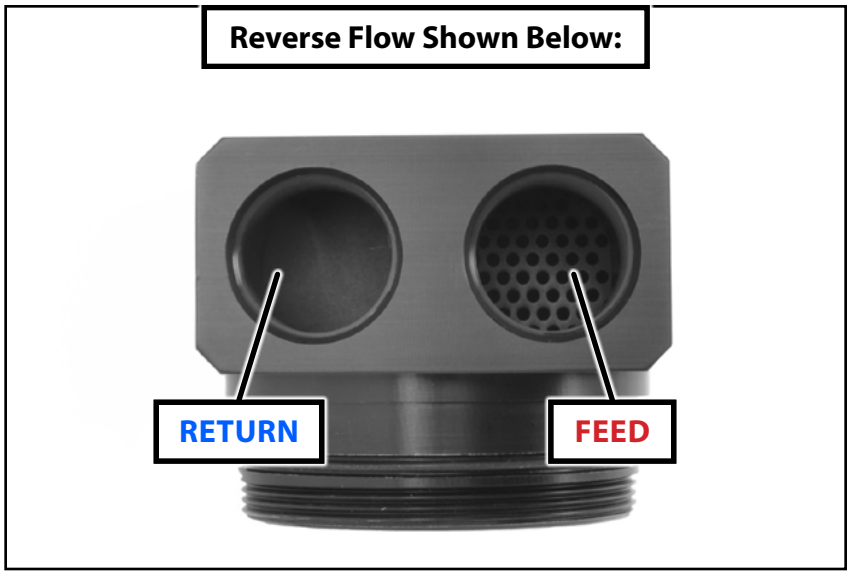
When the temperature outside approaches freezing, your catch can should be cleaned on a weekly basis to prevent freeze up of the crank vent system and damage to engine seals.

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

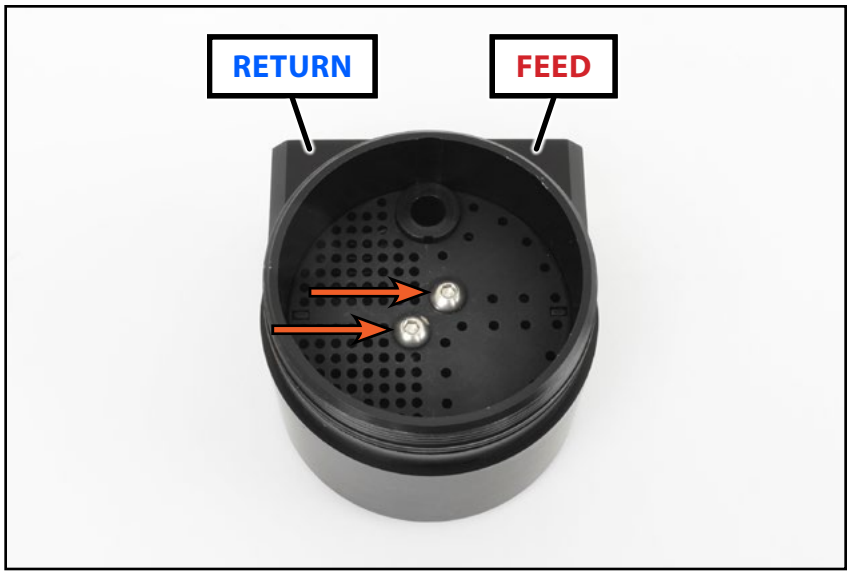
Step 1:

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 hex (Allen) key 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.

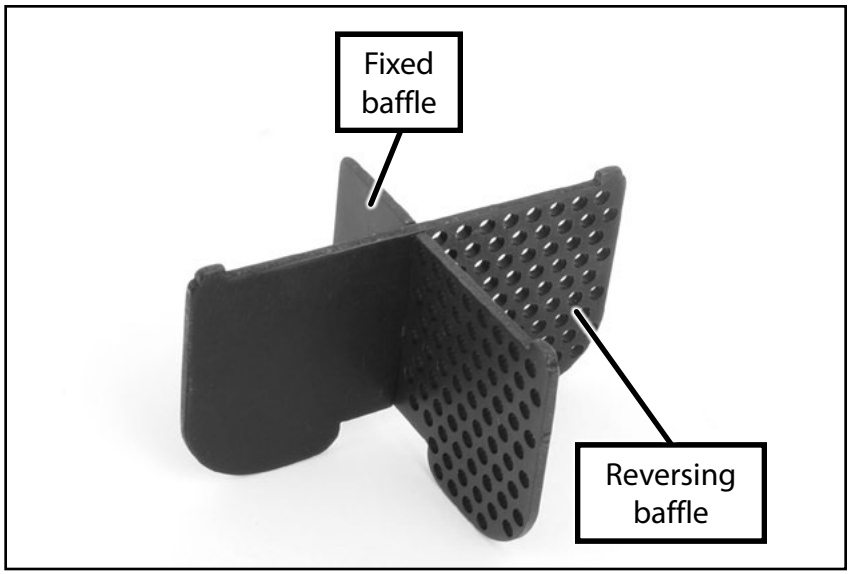
Step 4:

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

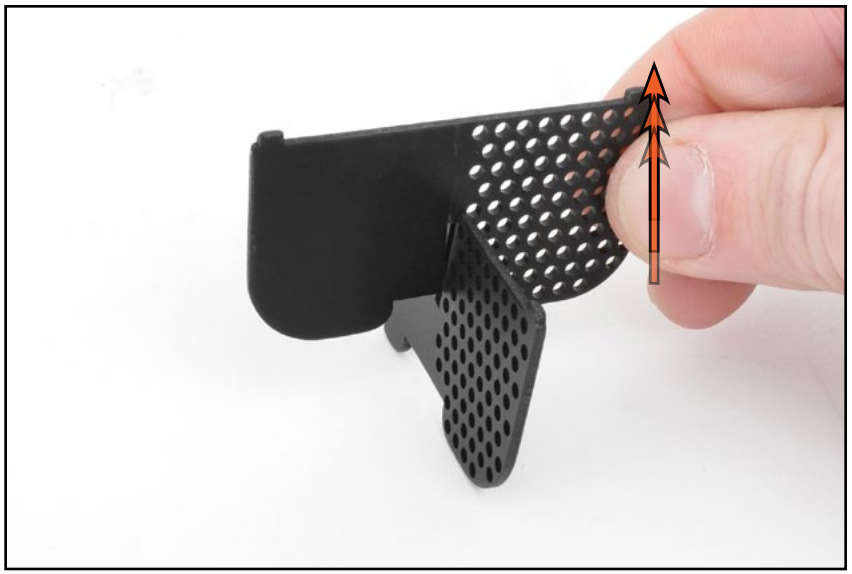
Step 5:

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



Step 6:

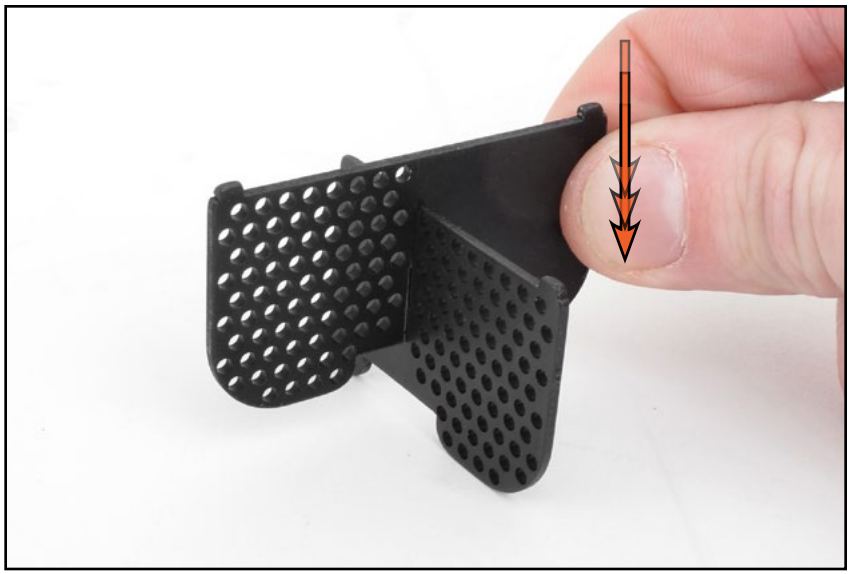
Slide the two baffles apart.



REVERSING THE FLOW OF THE CATCH CAN

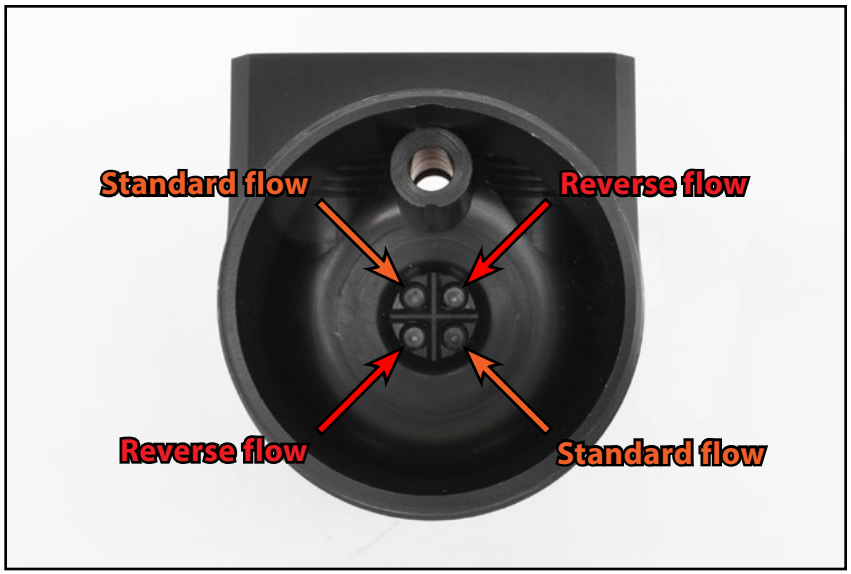
Step 7:

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.

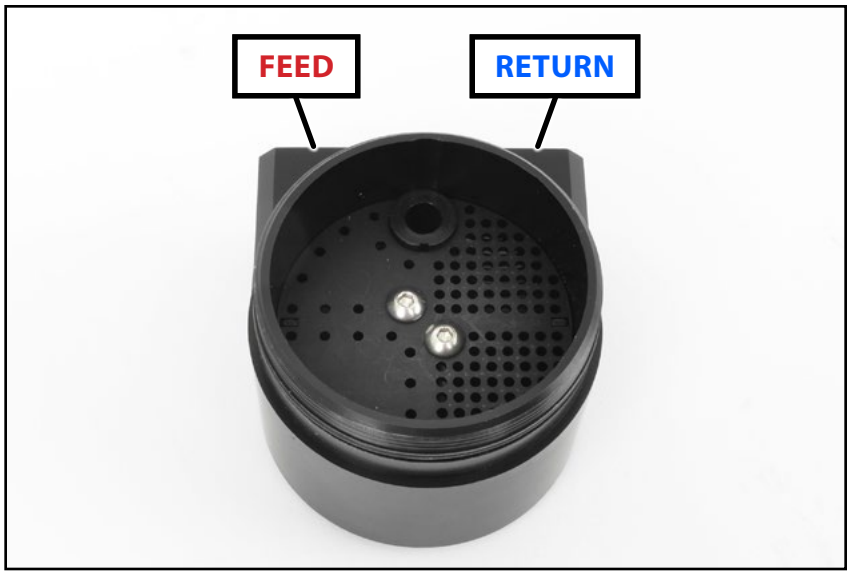
Step 10:

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

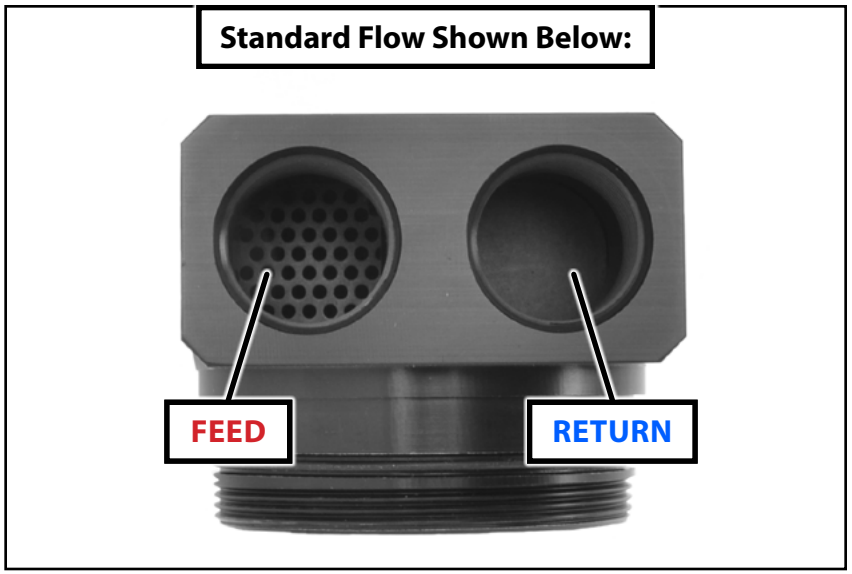
Step 11:

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.

Your Catch Can System installation is complete!

These instructions are provided as a courtesy by Turner Motorsport

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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