

# VW 2.0T FSI Baffled Oil Catch Can Kit Installation











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.



# **INTRODUCTION**

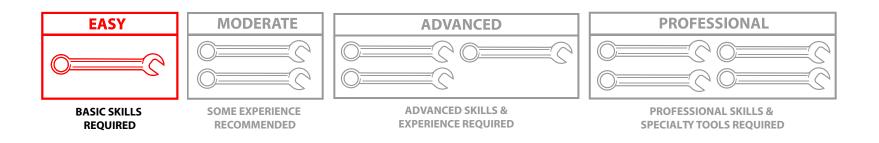
### ECS Tuning Volkswagen 2.0T FSI Oil Catch Can Kit ES#2954131

Our ECS Tuning Volkswagen 2.0T FSI Oil Catch Can Kit 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 Kit fits the following 2.0T FSI equipped applications:

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



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. Thank you for purchasing our ECS Tuning Volkswagen 2.0T FSI Oil Catch Can Kit. We appreciate your business!



# TABLE OF CONTENTS

Kit Contentspg.4	Ŀ
Required Tools and Equipmentpg.5	<u>)</u>
Installation Notespg.6	<u>;</u>
Preparation and Safetypg.6	<u>;</u>
Installating the Catch Can Kitpg.7	-
Cleaning and Maintenancepg.2	28
Using The VAG Connector Toolpg.3	<u>34</u>
Schwaben Toolspg.3	<u>55</u>



The ECS Tuning 2.0T FSI Oil Catch Can Kit has been designed to fit: Audi 8P A3, VW MK5 Golf & Jetta, MK5 & MK6 Golf R, & B6 Passat vehicles equipped with an FSI 2.0T engine. The photos in this PDF may not represent your exact application, but they can be used as a general guide to assist in your installation.



# **KIT CONTENTS**



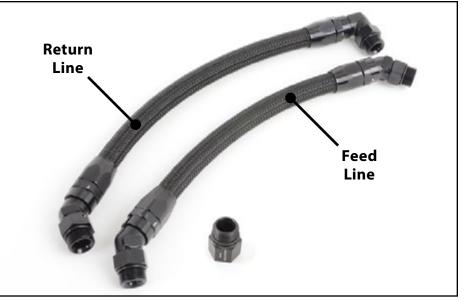
Catch Can w/Dipstick and Allen Wrench (for disassembly and cleaning)



PCV Cap and Clip



Catch Can Mounting Bracket



Preassembled Feed and Return Lines and Catch Can Line Spacer



**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.

Below is a list of the tools we used to install our ECS Tuning 2.0T FSI Catch Can kit. Additional tools may be required for any issues that arise during installation such as rust, corrosion, or broken and stripped fasteners. Tools with a part number listed are available on our website - click on their ES# link to view them.

• 1/4" Drive Ratchet	<u>ES#2093757</u>
• 1/4″ Torque Wrench	
1/4" Drive Extensions	
• 3/8" Drive Ratchet	<u>ES#2765902</u>
• 3/8" Drive Torque Wrench	<u>ES#2221245</u>
• 3/8" Drive Socket: 10mm	<u>ES#2763772</u>
<ul> <li>3/8" Drive Extensions and Adapters</li> </ul>	
Torx Bit Socket: T25	<u>ES#11418</u>
• Torx Drivers: T25, T30	<u>ES#11417</u>
<ul> <li>AN Fitting Wrench or Crescent Wrench</li> </ul>	
Small Angled O-Ring Pick	<u>ES#2778980</u>
• VAG Connector Tool	<u>ES#2628676</u>
Locking Hose Clamp Pliers	<u>ES#2702616</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.
- If using an automotive lift, be sure and utilize the factory specified lift points. Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- When lifting a vehicle using a jack, always 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. Always make sure that the vehicle is securely supported on jack stands.

Step 1:1/4" Drive Ratchet, T25 Torx Bit Socket, 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.

## ΝΟΤΕ

The photos in this PDF may not represent your exact application, but they can be used as a general guide to assist in your installation.

## 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 34 for detailed photos and procedures.





### 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. The photo to the right is for reference, it shows the location of the rubber mounting grommets with the cover removed and flipped over.

# CAUTION

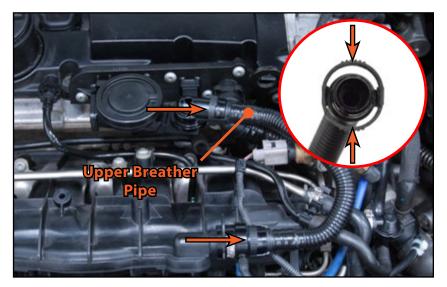
Be sure to grab the engine cover as close to each grommet as possible during removal to keep from cracking the housing. We have found it is best to start by pulling up on the driver's side front grommet, then the driver's side rear, then the passenger's side rear, and finally the passenger's side front.

#### 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.

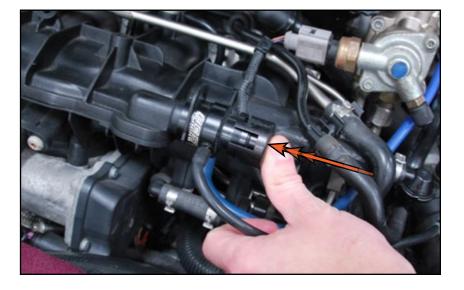
The inset photo shows a view of the end of the pipe. Squeeze the retainers where indicated by the arrows to release the locking tabs for removal.





### 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.



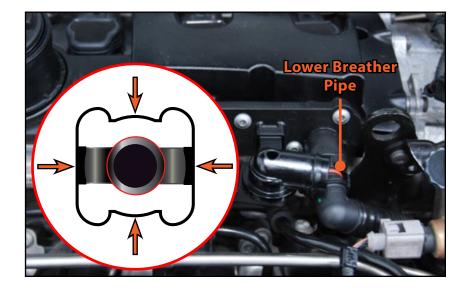
# Step 6:

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



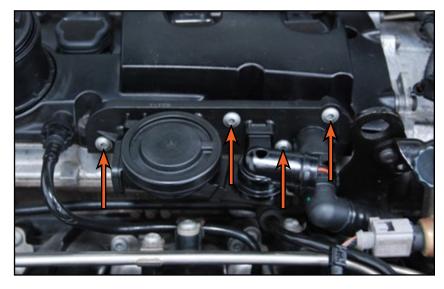
### Step 7:

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: 1/4" Drive Ratchet, T25 Torx Bit Socket

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.



### Step 9:

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

#### T30 Torx Driver - Or - 3/8" Drive Ratchet, T30 Torx Bit Socket Step 10:

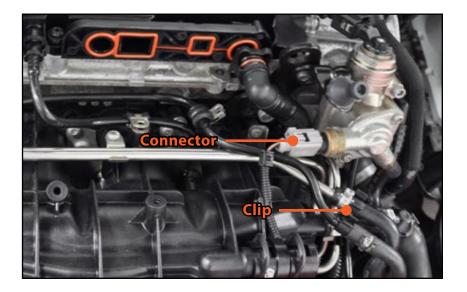
Locate the vacuum line which has been highlighted in YELLOW, and the vacuum tube which is highlighted in RED in the photo, we need to relocate these lines so that they follow the path shown in step 19. Begin by removing the three screws which secure the hold down clamps on the vacuum line and on the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





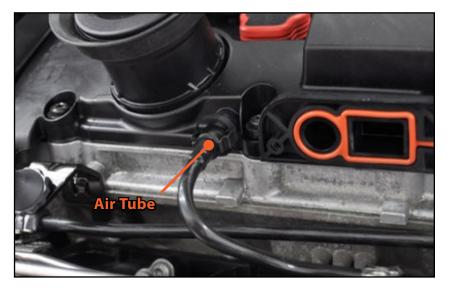
VAG Connector Tool Step 11:

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



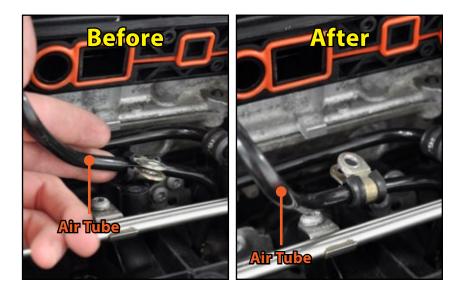
### Step 12:

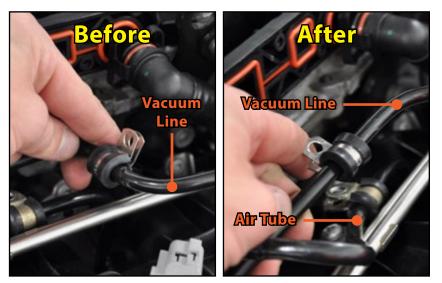
Disconnect the air tube from the valve cover by squeezing the tube ends together and pulling it off (the same method used for the PCV tube in <u>step 4</u>).



## 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).

#### NOTE

This step will require you to pull the vacuum line slightly towards the front of the vehicle. .....

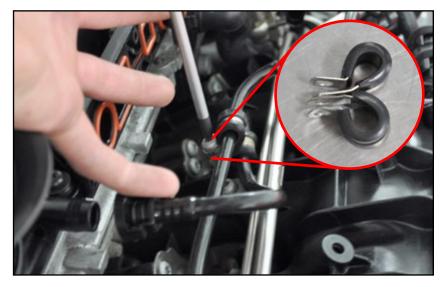
### Step 15:

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).

#### T30 Torx Driver - Or - 3/8" Drive Ratchet, T30 Torx Bit Socket Step 16:

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.





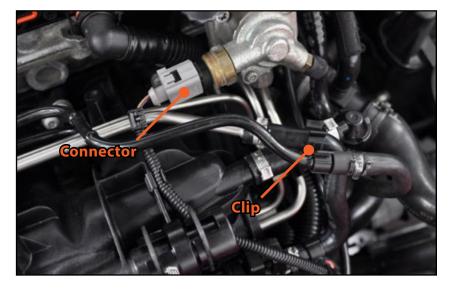
Step 17: T30 Torx Driver - Or - 3/8" Drive Ratchet, T30 Torx Bit Socket

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.



# 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 <u>HERE</u> to return to step 10 if you are referencing this photo.



### Step 20:

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

### **TECH TIP**

If you want to protect the finish on the AN fittings, try covering the jaws of the wrench with masking or electrical tape.



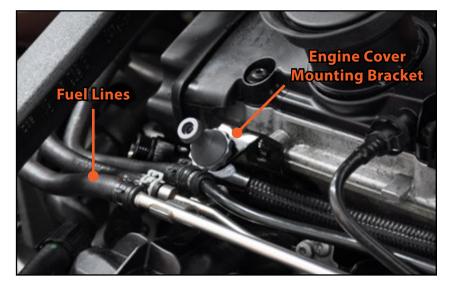
# Step 21:

Guide the return line (with the PCV adapter plate attached) UNDERNEATH the vacuum tube as shown.



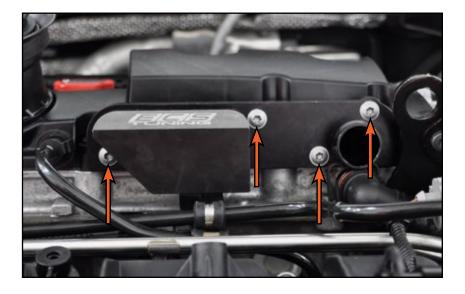
## Step 22:

Continue to guide the return line UNDERNEATH the engine cover mounting bracket and the fuel lines as shown.



Step 23:1/4" Drive Torque Wrench, T25 Torx Bit Socket

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



### Step 24:

Attach the lower breather pipe to the PCV adapter plate.



### Step 25:

Guide the catch can feed 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:

Lubricate the o-ring on the feed 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 overtighten it as it will strip out if over torqued.

### **TECH TIP**

If you want to protect the finish on the AN fittings, try covering the jaws of the wrench with masking or electrical tape. .....



### 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.

# Step 29: 3/8" 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 10 Nm (7 Ft-lbs).

#### **TECH TIP**

A mechanical pick up tool or a magnet can be used to make the installation of hardware easier as there is limited room to work in.

### Step 30:

Unthread and remove the dipstick from the catch can.





# Step 31:

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.



# 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.



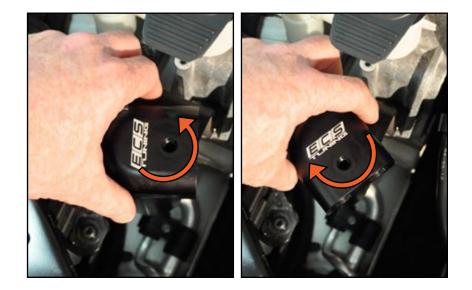
# Step 34:

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



### 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.

## Step 37: AN Fitting Wrench or Crescent Wrench

Lubricate the o-ring on the end of the return line with clean engine oil, then thread the line into the side of the catch can by hand. Once the line is fully threaded in by hand, tighten it until it is snug, but do not overtighten the fitting as it can strip out if over torqued. Please note the correct side for the line on the catch can as shown in the photo.

### ТЕСН ТІР

If you want to protect the finish on the AN fittings, try covering the jaws of the wrench with masking or electrical tape.

## Step 38: AN Fitting Wrench or Crescent Wrench

Lubricate the o-ring on the end of the catch can line spacer with clean engine oil, then thread the spacer into the catch can by hand. Once the line is fully threaded in by hand, tighten it until it is snug, but do not overtighten the fitting as it can strip out if over torqued. Please note the correct side for the line spacer as shown in the photo.

### **TECH TIP**

If you want to protect the finish on the AN fittings, try covering the jaws of the wrench with masking or electrical tape.





# ECS-TUNING<sup>®</sup> | VOLKSWAGEN 2.0T FSI OIL CATCH CAN KIT INSTALLATION

# INSTALLING THE CATCH CAN KIT

# Step 39: AN Fitting Wrench or Crescent Wrench

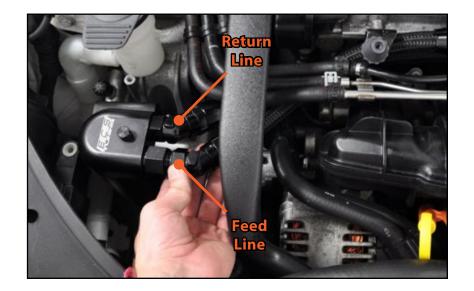
Lubricate the o-ring on the end of the feed line with clean engine oil, then thread the line into the catch can line spacer by hand. Once the line is fully threaded in by hand, tighten it until it is snug, but do not overtighten the fitting as it can strip out if over torqued. Please note the correct side for the line on the catch can as shown in the photo.

### ТЕСН ТІР

If you want to protect the finish on the AN fittings, try covering the jaws of the wrench with masking or electrical tape.

### Step 40:

Take a moment and closely inspect where the feed and return lines are routed under the fuel lines, note the proper routing shown in the photo. Ensure that the lines are not in contact with any brackets or other objects which could cause any premature wear or damage. Loosen and adjust the lines if necessary.





### Step 41:

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.



### Step 42:

Reinstall the engine cover and the air inlet hose (if applicable).

Check for clearance between catch can hoses and the engine cover.

Reconnect the MAF sensor (if removed).

Your FSI Oil Catch Can Kit 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 the dipstick does not go all the way to the bottom of the reservoir. When you begin to see waste register on the dipstick, you already have about an inch of buildup in the bottom. 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, remove the lines 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#2960397.



### Step 3:

Once you have removed the separator, note the position of the baffle inside. The feed side of the separator has a number of small holes in it. Through the return side you will only be able to see a flat plate.

### NOTE

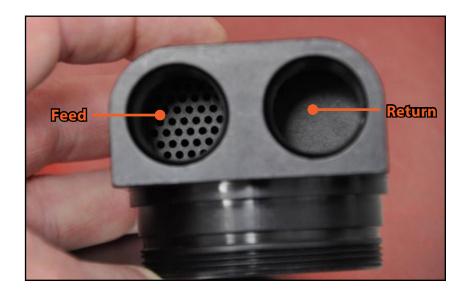
The baffle can be reversed for custom applications, it is important to note the position now so the separator is reassembled in the correct order.

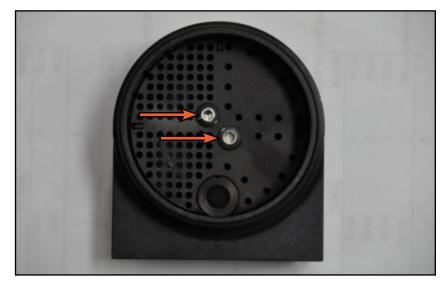
### Step 4:

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

# NOTE

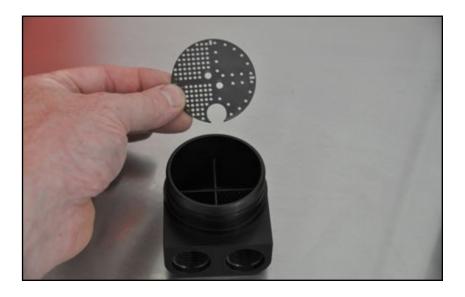
Any mild cleanser or solvent can be used to clean the catch can, however we recommend that you test all cleansers on an inconspicuous area inside the reservoir to check for discoloration before you clean the outside surfaces.





Step 5:

Lift the baffle plate out of the separator housing.



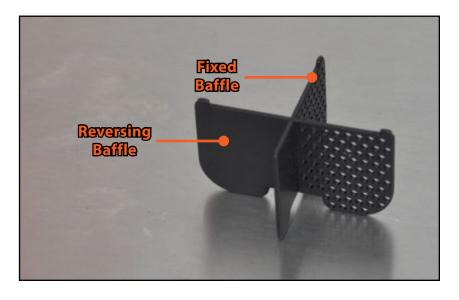
### Step 6:

Lift the remaining baffles out of the separator housing.



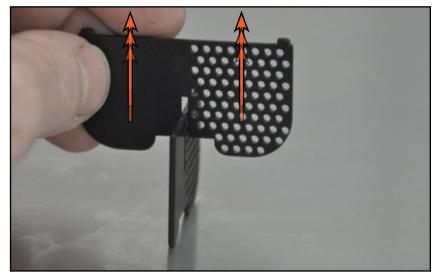
Step 7:

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.

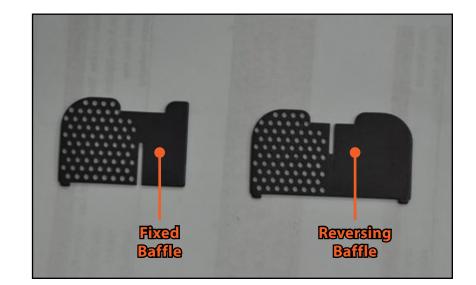
### NOTE

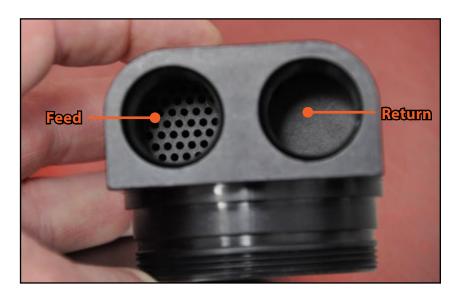
Any mild cleanser or solvent can be used to clean the catch can, however we recommend that you test all cleansers on an inconspicuous area inside the reservoir to check for discoloration before you clean the outside surfaces.

### 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.

Reinstall the catch can into your car. Be sure and lubricate all o-rings with clean engine oil.





# 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.

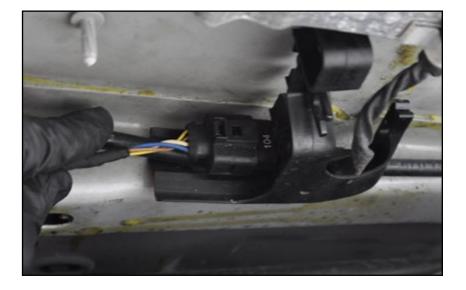
When the temperature outside approaches freezing, your catch can should be cleaned on a weekly basis to prevent freeze up of the crank vent system and damage to engine seals.

When the temperature reaches freezing and below, we recommend disconnecting the feed and return lines and installing the original PCV hose between the intake pipe and PCV valve assembly.

# 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.



#### VAG Connector Tool Step 2:

To disconnect one of these connectors, follow this procedure:

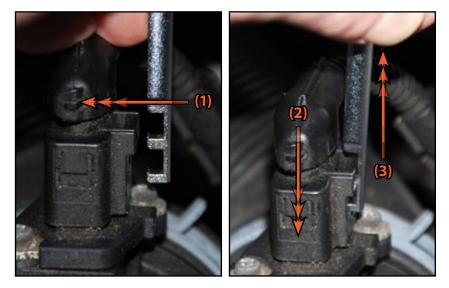
- 1. Engage the connector release tool into the connector housing.
- 2. Push inward gently on the connector.

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.



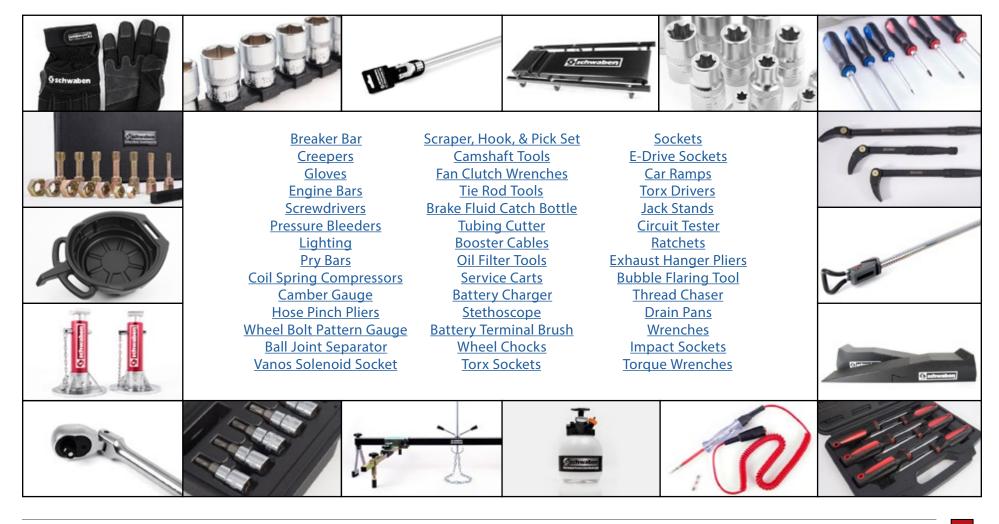
To return to the Catch Can removal instructions, simply click HERE.





# SCHWABEN - BUILD THE ULTIMATE TOOL COLLECTION

At ECS Tuning, we carry a line of high quality Schwaben Tools and Equipment to help you build your ultimate tool collection. Never before has affordability and quality been so closely related. Our entire Schwaben line is subjected to strict in house testing for strength and durability. See what we have to offer and equip your garage without breaking the bank.



# Your Volkswagen 2.0T FSI Oil Catch Can 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.

Although this material has been prepared with the intent to provide reliable information, no warranty (express or implied) is made as to its accuracy or completeness. Neither is any liability assumed for loss or damage resulting from reliance on this material. SPECIFICALLY, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY IS MADE OR TO BE IMPLIED WITH RESPECT TO THIS MATERIAL. In no event will ECS Tuning, Incorporated or its affiliates be liable for any damages, direct or indirect, consequential or compensatory, arising out of the use of this material.