

Volkswagen 2.0T Gen1 TSI Oil Catch Can Kit Installation Instructions









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

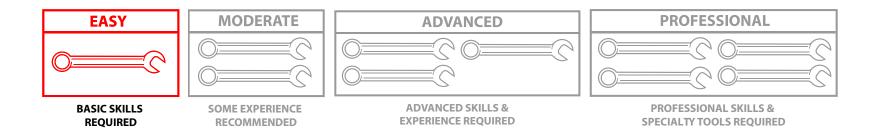
#### ECS Tuning Volkswagen 2.0T Gen1 TSI Oil Catch Can Kit ES#2959979

Our ECS Tuning 2.0T Gen1 TSI 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 Gen1 TSI equipped applications:

- MK5 & MK6 GTI
- MK5 & MK6 Jetta
- B6 Passat, CC, EOS



Excess oil coating the inside of the intake from the crank vent system on your 2.0T Gen1 TSI Volkswagen 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 2.0T Gen1 TSI Oil Catch Can Kit. We appreciate your business!

2



### TABLE OF CONTENTS

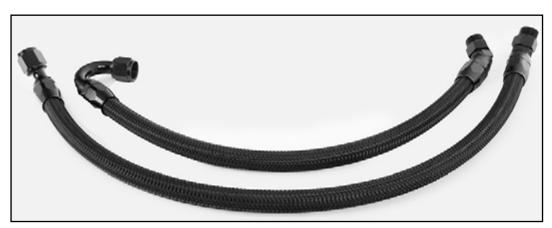
Kit Contentspg.4	
Required Tools and Equipmentpg.6	
Shop Supplies and Materialspg.7	
Installation Notespg.8	
Preparation and Safetypg.8	
Installing the Catch Can Kitpg.9	
Cleaning and Maintenancepg.26	
Schwaben Toolspg.32	



# **KIT CONTENTS**



Catch Can w/Dipstick



Preassembled Feed and Return Lines



PCV Cap Retaining Clips (2)



Intake Adapter Retaining Clip



-10 AN Spacer

ES#2959979



# **KIT CONTENTS**



Catch Can Mounting Bracket



Line Separators



Allen Wrench (for catch can cleaning)



Bracket Mounting Hardware



Intake Adapter



**PCV Valve Adapter** 



PCV Caps (2)



### **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 Gen1 TSI 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.

- 3/8" Drive Ratchet ..... ES#2765902
- 3/8" Drive Extensions
- 1/4" Drive Ratchet
- 1/4" Extensions
- 1/4" Drive Sockets: 10mm
- 1/4" Drive Torque Wrench
- Schwaben Ignition Coil Puller ......
  <u>ES#240943</u>
- File
- Crescent Wrenches
- Allen Wrenches: 3/16"
- Torx Bit Sockets: T30 ...... ES#11418
- Small Angled Pick ..... ES#2778980

### SHOP SUPPLIES AND MATERIALS

Below is a list of standard shop supplies which we like to keep on hand during all repairs and services. Shop supplies with a link are available on our website.

Hand Cleaner/Degreaser - Click Here

Aerosol Brake/Parts Cleaner - for cleaning and degreasing parts

Shop Rags - used for wiping hands, tools, and parts

Pig Mats - for protecting your garage floor and work area from spills and stains - Click Here

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

Spray detailer - for rapid cleaning of anything that comes into contact with your paint such as brake fluid - Click Here

Paint Marker - for marking installation positions or bolts during a torquing sequence

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

Plastic Wire Ties/Zip Ties - for routing and securing wiring harnesses or vacuum hoses

Anti-Seize Compound - to prevent seizing, galling, and corrosion of fasteners - Click Here

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.

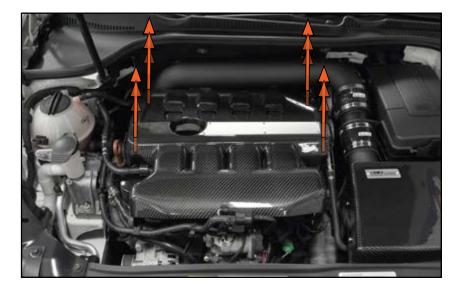
- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- ALWAYS wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- If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

Remove the engine cover by pulling up at the four corners to release it from the grommets.



#### Step 2:

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 3:

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



#### 10mm Socket, Ratchet, Extension Step 4:

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 torgue both the bolt and nut to 10 Nm (7 Ft-lbs).

#### **TECH TIP**

A magnetic socket or claw tool can be helpful in starting the nut onto the engine mount bolt stud (inset photo)

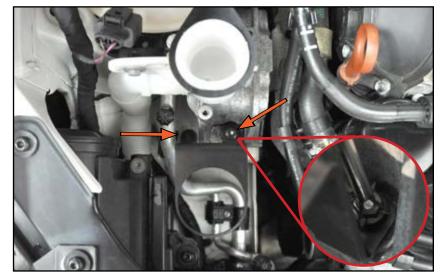


Table of Contents

Step 5:

Unthread and remove the dipstick from the catch can.



#### Step 6:

Unthread and remove the catch can reservoir from the separator.



Step 7: Small angled pick

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

#### NOTE

This seal must be removed before installing the separator into the catch can bracket or it will be damaged.



#### Step 8:

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 9:

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



#### Step 10:

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.



**Table of Contents** 

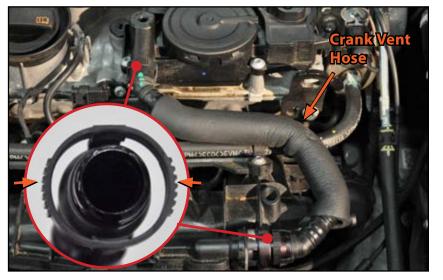
#### Step 11:

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



#### Step 12:

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



#### Step 13:

Next we are going to install the PCV caps onto the intake manifold and PCV assembly (arrows), but first inspect the end of the PCV assembly (arrow).



#### Step 14: Flat File

If the end of the PCV assembly has a lip on it as shown in the picture on the left, you will have to file the lip off in order for the PCV cap to fit. The lip will file off very easily, it is soft plastic. File the lip until it is flush as shown in the picture on the right.

Once you have filed off the lip, or if you do not have a lip on your PCV assembly, proceed with step 15.

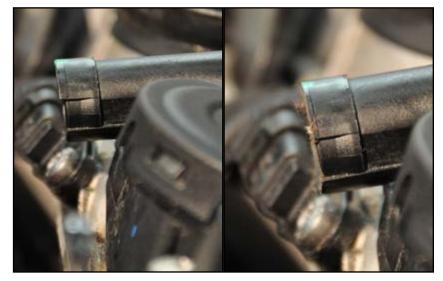
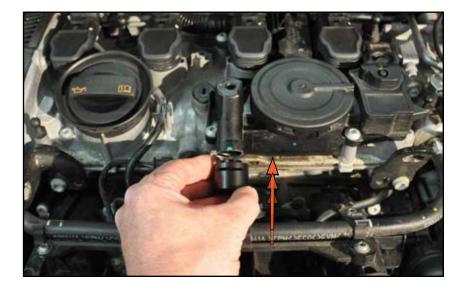


Table of Contents

ES#2959979

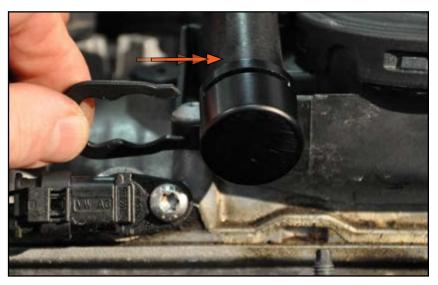
### Step 15:

Lubricate the seals with clean engine oil, then push a PCV cap onto the PCV assembly until it is fully seated.



#### Step 16:

Install one of the PCV cap retaining clips into place.



#### Step 17:

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

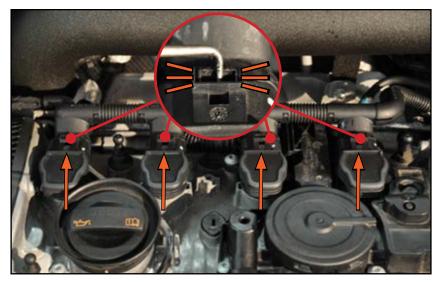
#### NOTE

If you have an ECS Tuning boost tap installed, such as we do on our car here, the PCV cap will fit over the end in the same manner as it would fit on the intake manifold.

#### Small Angled Pick Step 18:

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





Step 19: Schwaben Ignition Coil Puller

Once you've pushed the harness off of the coils, remove the #3 coil by pulling it straight up. (arrow).



#### Step 20: T30 torx, 3/8 Ratchet

Remove the securing bolt for the original PCV valve adapter.

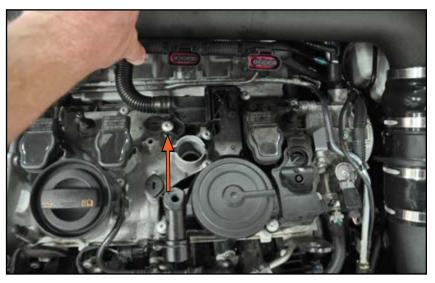


Table of Contents

#### Step 21:

Pull the original PCV valve adapter out of the PCV valve assembly.



### Step 22:

Pull the PCV hose off of the intake pipe using the same method as used in step 12. You will not be reusing this hose.



**Table of Contents** 

Step 23: T30 torx, 3/8 Ratchet

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



#### Step 24: Crescent Wrenches

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

#### ΤΕСΗ ΤΙΡ

Apply masking tape to the jaws of the wrenches to prevent damaging the finish on the AN line fittings or adapters.



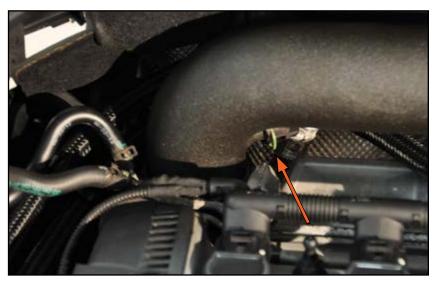
#### Step 25:

Route the catch can return line from the catch can, underneath the coolant and fuel lines and behind the intake pipe then push the intake adapter into the fitting on the rear of the intake pipe.



#### Step 26:

Push the metal intake adapter retaining clip into place.



**Table of Contents** 

Step 27:

**Crescent Wrench** 

**Crescent Wrench** 

Thread the catch can return line into the catch can and tighten it. Be sure to thread it into the return side of the separator as shown.

Thread the -10 AN spacer into the feed side of the separator and tighten it.



Step 28:

The fittings on the end of these AN lines are swivel fittings. They will rotate even when the line ends are tightened.





#### Step 29:

Route the feed line from the catch can underneath the coolant lines, fuel lines, and catch can return line, then around the back of the intake pipe to the PCV valve adapter.



#### **Crescent Wrench** Step 30:

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



Step 31: Crescent Wrench

Tighten the feed line onto the -10 AN spacer.



### Step 32:

Adjust the position of the separator so the feed and return lines are not rubbing any main components, then fully tighten the catch can reservoir, locking the entire catch can into place.



#### Step 33:

Reinstall the #3 ignition coil and connect all four coils. You will hear a faint audible "click" when the coil connectors are fully seated.



#### Step 34: 3/16 Allen Wrench

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

Reinstall the engine cover.



• Be sure and read the entire cleaning and maintenance section on the following pages before operating your vehicle with the catch can installed.

#### Your catch can kit installation is complete!



Table of Contents

#### 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



Table of Contents

#### 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:

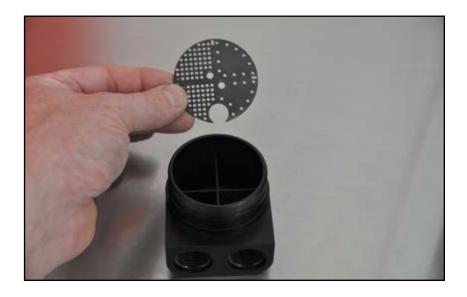
Using the 2.5mm allen wrench included with the kit, remove the two baffle plate screws.





Step 5:

Lift the baffle plate out of the separator housing.



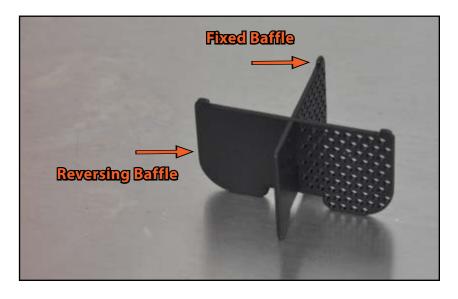
#### Step 6:

Lift the remaining baffles out of the separator housing.



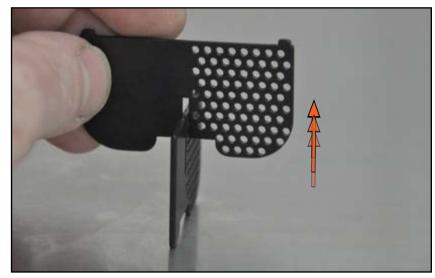
Step 7:

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.

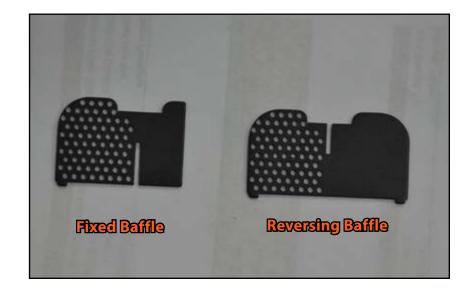
#### NOTE

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**

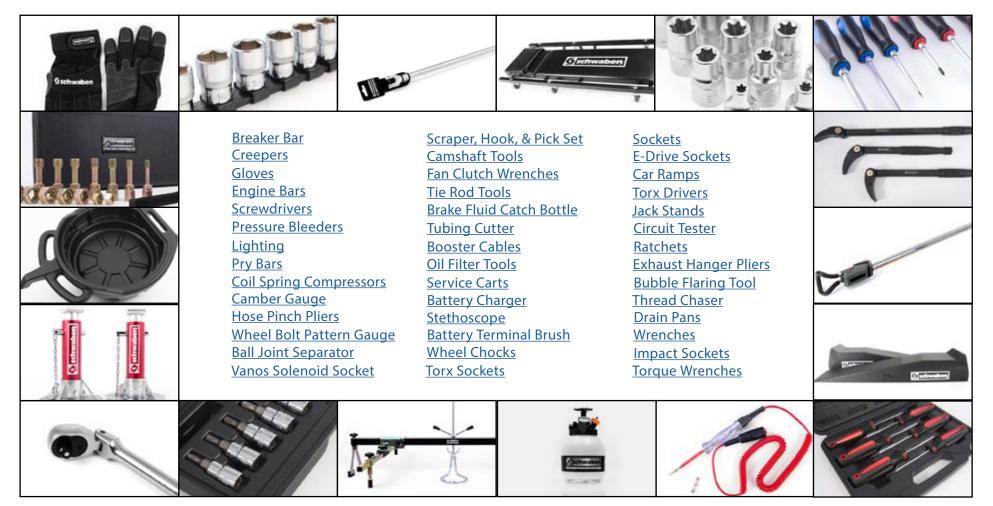
In cold temperatures, the crank vent system will generate a much greater amount of moisture which can present a risk of freezing.

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.

### 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 Gen1 TSI 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.

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