

April 26, 2018

## TeamRXP Catch Can Installation on 2016 Ford Edge Sport 2.7L EcoBoost

### Tools/Accessories required for purchase

- Allen Wrench Set
- Socket Set and Ratchet Set
- Pliers or Vise Grips
- Utility Knife
- Flat head screw driver
- M6-1.00 x 50 bolt (Not included in kit)
- $\frac{3}{4}$ " of washers (approximately 15) for M6 Bolt (Not included in kit)

### Preparation



Figure 1: Before Picture Overview of preparation steps (Step 1 in Yellow, Step 2 in Blue)

1. Remove Line Connecting PCV port (Red) to Intake Manifold Port (Ford Part Number GB8E 6K817 AA). Use care when disengaging the existing snap fittings. The gray release has to be pushed over to release the snap fitting. See Figure 2 Below.



Figure 2: Step 1 of Preparation. Line connecting PCV and Intake Manifold to be removed.

2. Remove Line Connecting clean side port to the port on the plastic turbo inlet (Ford Part Number F2GE 6758 CC). The clean side port is located at the front of engine to the driver side of the oil cap. This line has a flow sensor connecting the two sides of tubing. Carefully cut a slit at the connection between the tubing and the flow sensor. Take note of the direction of the flow for reinstall. Save PVC tubing for reinstall if returning to stock. Install rubber cap included with kit onto clean side port. See figure 3 below.



Figure 3: Line connecting clean side port to turbo inlet port to be removed.

3. Remove battery tie down bolt. My kit did not have the longer bolt for reinstall. I used an M6-1.00 x 50 bolt and  $\frac{3}{4}$ " worth of washers sized to match the bolt in order to install the catch can.
4. Drill out existing hole toward the front of the battery tray using step bit. After each hole size increment test the tube through the hole. We will be using this hole to loop the clear drain tubing during catch can install. See figure 4 below.



Figure 4: Battery tie down and hole to be drilled out

5. Remove the airbox lid. Unlatch the two spring clips on the passenger. Two spring clamps will need to be unscrewed from the plastic pipes attached to the airbox lid.
6. Create a pilot hole centered above the two circular outlets of the airbox. Using a stepping bit, increase the hole size. At each hole size increment test to see if the included tap will just begin to fit in and grab. It is critical to not go to large as you would need to plug the hole and find a new location on the airbox for your port or replace the lid entirely. Using the tap carefully thread the hole, I used a vise grip to turn the tap. Install the threaded plastic tubing connection into the newly threaded hole. Reattach the airbox lid. See figure 5 below.



Figure 5: Completed Clean Side Separator vacuum port at airbox

## Catch Can Installation

1. Two brackets were included with my kit. I only used the right angle bracket. Attach the clamp to the bracket using the bolts and washers included with the kit. See Figure 6 Below.



Figure 6: Assembled Clamp

2. Attach the assembled bracket to the battery tray. Thread the new bolt through the bracket,  $\frac{3}{4}$ " of washers, and existing battery hold down bracket into the factory threaded hole. This will give the clamp just enough height to clear the air box lid and allow the catch can to be secured by slipping reasonably through the clamp. Slip catch can with tubing through the clamp. During can installation it is important to make sure the hood will clear, the three ports coming off the top are orientated toward the engine for plumbing, the discharge lever is able to be accessed and operated, and the discharge tubing is fed through the hole previously drilled in step 4 of preparation. When feeding the tubing through the expanded hole, favor the driver's side so it can be accessed later. Tighten the M6 Bolt. See Figure 7 below.



Figure 7: Placement of Catch Can and Clamp

3. Once the catch can is placed, tighten the clamp.

## Plumbing

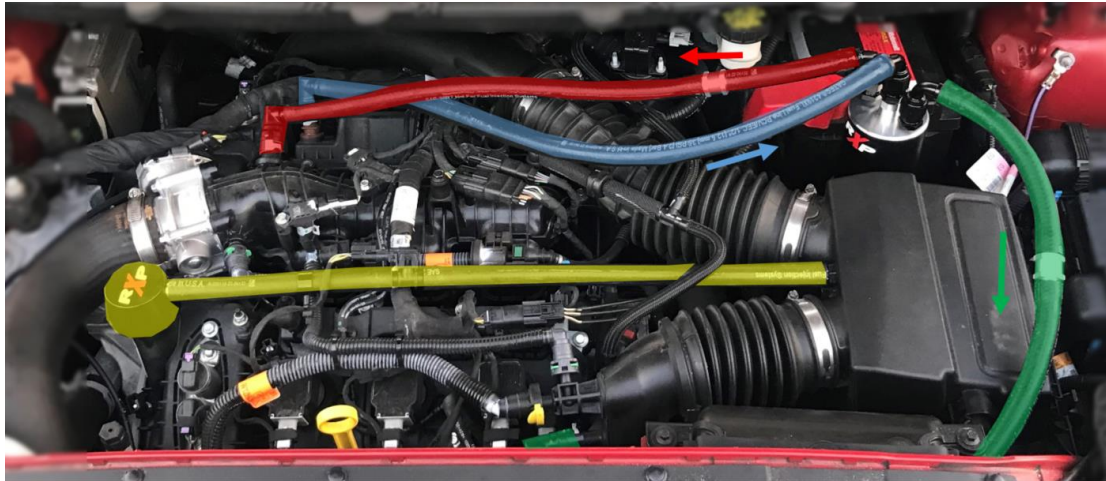


Figure 8: Plumbing Diagram Foul Side (Blue), Intake Vacuum (Red), Turbo Inlet (Green), and Clean Side (Yellow)

### Foul Side Plumbing (See Blue Line from Figure 8 Above)

1. Run the included tubing from the PCV port (Red Port from Step 1 of Preparation) to the center port off the top of the catch can. Use the included quick release port to connect the tubing to the PCV port. My kit had rubber tubing and I had to cut each section to size. See Blue Line from Figure 8 Above.

### Intake Vacuum Port Plumbing (See Red Line from Figure 8 Above)

1. Run the tubing from intake manifold to an outside port of the catch can. Use the included quick release port to connect the tubing to the intake manifold port. The tubing between the can and the intake port will need to have an aluminum check valve (included in kit) spliced in. The check valves have an arrow indicating the direction of flow. Since this is a vacuum line it will need to flow away from the can. Make sure the arrow points away from the can.

### Turbo Inlet Vacuum Port Plumbing (See Green Line from Figure 8 Above)

2. Run the tubing from the turbo inlet port to the remaining outside port of the catch can. Use the included quick release port to connect the tubing to the turbo inlet port. The tubing between the can and the turbo inlet port will need to have an aluminum check valve (included in kit) spliced in. The check valves have an arrow indicating the direction of flow. Since this is a vacuum line it will need to flow away from the can. Make sure the arrow points away from the can.

### Clean Side Plumbing (See Yellow Line from Figure 8 Above)

1. Replace the oil fill cap on the passenger side of the engine with the Clean Side Separator cap included with the kit.
2. Connect the tubing connection port created in the airbox lid during step 6 of the preparation to the flow sensor.
3. Connect the flow sensor to the port on the Clean Side Separator.



## Discharge tubing plumbing

1. Raise the front of the vehicle. I used rhino ramps.
2. Remove the driver's side shield from the underside of the car. It is approximately 5-6 Torx screws and a plastic retainer clip. I used a comparable allen key to unscrew the torx screws and a flathead screwdriver to release the retainer clip.
3. The tubing should be between the wheel well and the engine bay. Reach up and feed it through a hole existing in the wheel well. See Figure 9 Below.
4. Lower the car and turn the wheel each direction to make sure the tubing doesn't interfere with wheel operation. The tubing can be accessed by turning the wheel all the way to the left making discharges simple.
5. Reattach shield and lower vehicle.



Figure 9: Drain Hose Location