



# INSTALLATION INSTRUCTIONS





## CATCH CAN KIT







2015+ Ford F150 and Raptor  
EcoBoost V6







Document: 19-0199

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**20-0481 PCV Catch Can Installation: Follow Steps 1-18**  
**20-0482 CCV Catch Can Installation: Follow Steps 19-35**  
**20-0483 Dual Catch Can Installation: Follow Steps 1-35**







| STEP | TOOLS NEEDED       | INSTRUCTIONS  | PHOTO   |
|------|--------------------|---|---|
| 1    | 10mm socket        | <b>INSTALLATION: 20-0481 CATCH CAN KIT, PCV, FORD F150</b>  |   |
|      |                    | Open the hood and disconnect the battery.   |   |
|      |                    | Unscrew the two M6 engine cover nuts. Pull the engine cover forward and up (as shown). Remove the engine cover from the vehicle.  |   |
|      |                    |   |   |
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|      |                    |   |   |
| 2    |                    | To disconnect the ground strap stay connection from the firewall, pull side to side to release the plastic locking tabs from the threaded stud. The clip will NOT be reinstalled on the stud. |  |
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| 3    | 15mm Socket        | Unscrew the ground strap nut from the firewall mounted M10 stud.  |  |
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| 4    | 10mm Socket Wrench | Place the grounding ring terminal back onto the ground lug.   |  |
|      |                    | For installing the 20-0481 PCV Catch Can Kit only, install the provided M6 nut to the firewall stud, as shown.  |   |
|      |                    | NOTE: If installing the 20-0483 Dual Catch Can Kit, install the included M6 washer (not shown) underneath this nut. Refer to step 21 for more details.  |   |
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| 5  |                    | Find the PCV tubing (shown) that connects from the PCV valve on the RH bank (your left) to the intake manifold. To release the tube, slide and hold the rotating locks to the side and pull each fitting away from the connections one by one.  |    |
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| 6  | Blade              | The plastic SAE quick connects on each side of the tube will be reused. Carefully cut the black tube just enough to slice into the hard plastic tubing.<br>Remove the SAE quick connectors and discard the hard black tube.<br><br><u>Note:</u> If the catch can kit needs to be removed for any reason the system can be reverted back to stock by re-using these hose ends and using a short piece of the 5/8 catch can hose between them. This hose will perform the same function as the discarded plastic tube did.  |    |
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| 7  | Oil Lubrication    | Lubricate the O-ring found on the provided 10AN ORB to 10AN male fitting.   |   |
|    | 1" Wrench          | Tighten the fitting to the side catch can port, as shown. Finger tighten until the O-ring starts to compress, then use a wrench until the fitting stops rotating.<br><br>A non-marring aluminum wrench is recommended to prevent scratching of the components.  |   |
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| 8  | 15mm Socket Wrench | Lineup the 2 mounting holes found on the PCV catch can bracket to the firewall studs. Make sure the grounding ring terminal is underneath the mounting bracket.<br><br>Tighten the large OEM 15mm hex acorn nut.<br><br>Place the included M6 washer and M6 nut over the M6 firewall stud and tighten, as shown.  |  |
|    | 10mm Socket Wrench |   |   |
|    |                    |   |   |
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|    |                    |   |   |
| 9  | 3mm Allen Wrench   | Find the catch can and the four M5 countersink screws provided in the kit. Apply a medium-strength thread locker to the threads. Install the catch can to the mounting bracket, as shown.   |  |
|    | Threadlocker       |   |   |
|    |                    |   |   |
|    |                    |   |   |
|    |                    |   |   |
|    |                    |   |   |
| 10 |                    | Install banjo fitting to the catch can top port.<br><br>NOTES:<br>1. For kits manufactured prior to August 2020, a green banjo fitting is included (as shown). Be sure the black banjo fitting is oriented so the AN male portion is at the highest point. The hose end will not clear the catch can if the banjo fitting is installed upside down. Hand tighten.<br>2. For kits manufactured after August 2020, a stainless steel banjo fitting is included (not shown). Because this fitting is free to swivel after being installed, tighten now using a 6mm Allen wrench. |  |
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| 11 | Hose Cutter     | Cut the provided 5/8 PCV hose into <u>two 4ft sections</u> .   |    |
|    | Oil Lubrication | Lubricate the included 90 degree PushLok hose end barbs. Fully insert the hose ends into one side of each hose.  |   |
|    |                 |  |   |
|    |                 | *If installing a dual catch can kit, there will be extra hose after cutting the two 4ft sections. This extra hose will be used for the other (crankcase side) catch can.   |   |
|    |                 |  |   |
|    |                 |  |   |
| 12 |                 | Hand tighten each hose end to the top and side catch can ports.  |    |
|    |                 | NOTE: Be careful not to cross thread the fittings as the large -10AN hose will be slightly difficult to work with. Applying a small amount of lubrication to the -AN fitting threads can help.   |   |
|    |                 |  |   |
|    |                 | Orientate the hose ends, as shown.   |   |
|    |                 |  |   |
|    |                 |  |   |
| 13 | Hose Cutter     | Route the hose that comes from the catch can side port around the backside of the engine along the firewall. Run the hose towards the intake manifold SAE quick connect port while keeping it low down and under nearby engine components. This will permit the OEM engine cover to be reattached. |   |
|    | Pliers          |  |   |
|    |                 |  |   |
|    |                 | If needed, cut the hose to length. Slide the provided spring clamp over the hose and attach the OEM 45 degree SAE quick connect.   |   |
|    |                 |  |   |
|    |                 | Push the fitting into the intake manifold port until a "click" is felt.  |   |
| 14 | Hose Cutter     | Route the hose that comes from the catch can top port around the backside of the engine along the firewall. Run the hose towards the PCV valve SAE quick connect port.   |  |
|    | Pliers          |  |   |
|    |                 |  |   |
|    |                 | If needed, cut the hose to length. Slide the provided spring clamp over the hose and attach the OEM 90 degree SAE quick connect.   |   |
|    |                 |  |   |
|    |                 | Push the fitting into the intake manifold port until a "click" is felt.  |   |
| 15 | Diagonal Cutter | Use some of the provided cable zip ties to secure the 2 hoses together, as shown. Snip the cable zip-tie tails off.  |  |
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| 16 | Diagonal Cutter | As shown, cut off the plastic stay from the ground strap.  |  |
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| 17 | Diagonal Cutter    | Using one of the provided cable zip ties, secure the ground strap to the catch can mounting bracket's slotted hole, as shown.   |    |
|    |                    |   |   |
|    |                    | Snip the cable zip-tie tail off.  |   |
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| 18 | 1.125" Socket      | For older kits, torque the green banjo bolt while holding the can.  |    |
|    | 1" Wrench          | Tighten both hose ends. Reinstall all OEM components in reverse order.  |   |
|    | Torque Wrench      | <b>PCV CATCH CAN INSTALLATION COMPLETE</b>  |   |
|    |                    |   |   |
|    |                    | <i>Servicing: Check dipstick regularly. All vehicles are unique and will accumulate oil at different rates. Unscrew bottom portion of catch can and properly dispose of contents as needed. Do NOT return contents back into the engine. If needed, stainless steel condensing media can be cleaned with a degreaser.</i> |   |
|    |                    |   |   |
| 19 | 10mm Socket Wrench | <b>INSTALLATION: 20-0482 CATCH CAN KIT, CCV, FORD F150</b>  |   |
|    |                    | Open the hood and disconnect the battery.   |   |
|    |                    |   |   |
|    |                    | Unscrew the two M6 engine cover nuts. Pull the engine cover forward and up (as shown). Remove the engine cover from the vehicle.  |   |
|    |                    |   |   |
|    |                    |   |   |
| 20 | 15mm Socket Wrench | Unscrew the ground strap nut from the firewall mounted M10 stud.  |  |
|    |                    |   |   |
|    |                    | NOTE: The plastic ground strap stay (shown) does NOT need to be removed unless the 20-0483 Dual Catch Can Kit is also installed.  |   |
|    |                    |   |   |
|    |                    |   |   |
|    |                    |   |   |
| 21 | 10mm Socket Wrench | Place the grounding ring terminal back onto the ground lug.   |  |
|    |                    | NOTES:  |   |
|    |                    | 1. If only installing the 20-0482 CCV Catch Can Kit, reattach the plastic grounding cable stay (not shown).   |   |
|    |                    | 2. If installing the 20-0483 Dual Catch Can Kit, install the included M6 nut and M6 washer to the M6 firewall stud, as shown. This will shim the PCV mount for proper fitment when both catch can brackets are used in conjunction.   |   |
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| 22 | 10mm Socket Wrench | Remove the firewall M6 bolt shown.  |  |
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| 23 |  | Find the CCV tubing (shown) that connects from the turbo inlet pipe to the crankcase vent on the LH bank (your right).   |    |
|    |  |  |   |
|    |  | First, unlatch the sensor lock and then unplug the sensor connector.   |   |
|    |  |  |   |
|    |  | To release the CCV tube, slide and hold the rotating locks to the side and pull each fitting away from the connections one by one.   |   |
|    |  |  |   |
| 24 | Blade                                    | The plastic SAE quick connects on each side of the tube will be reused.  |    |
|    |  | Carefully cut the black tube just enough to slice into the hard plastic tubing. Leave the sensor attached to the 90 degree SAE quick connect, as shown.  |   |
|    |  |  |   |
|    |  | Remove the SAE quick connectors and sensor and discard the hard black tube.  |   |
|    |  |  |   |
|    |  |  |   |
| 25 | Oil Lubrication<br>1" Wrench             | Lubricate the O-ring found on the provided 10AN ORB to 10AN male fitting.  |   |
|    |  |  |   |
|    |  | Tighten the fitting to the side catch can port, as shown. Finger tighten until the O-ring starts to compress, then use a wrench until the fitting stops rotating.  |   |
|    |  |  |   |
|    |  | A non-marring aluminum wrench is recommended to prevent scratching of the components.  |   |
|    |  |  |   |
| 26 | 15mm Socket Wrench<br>10mm Socket Wrench | If only installing 20-0482 CCV Catch Can Kit, lineup the 2 holes found on the CCV catch can mounting bracket to the large firewall stud and the threaded hole. Make sure the grounding ring terminal is underneath the mounting bracket. |  |
|    |  |  |   |
|    |  | Tighten the large OEM 15mm hex acorn nut and the OEM M6 bolt, as shown.  |   |
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|    |  |  |   |
|    |  |  |   |
| 27 | 15mm Socket Wrench<br>10mm Socket Wrench | If installing 20-0483 Dual Catch Can Kit, make sure the PCV catch can is temporarily removed from the firewall.  |  |
|    |  |  |   |
|    |  | First, lineup the 2 holes found on the CCV catch can mounting bracket to the large firewall stud and the threaded hole. Make sure the grounding ring terminal is underneath the mounting bracket. Reinstall the OEM M6 bolt and tighten. |   |
|    |  |  |   |
|    |  | Next, place the PCV catch can assembly over the top of the CCV bracket. Tighten the large OEM acorn nut and M6 nut with washer, as shown.  |   |
|    |  |  |   |
| 28 | 3mm Allen Wrench<br>Threadlocker         | Find the catch can and the four M5 countersink screws provided in the kit. Apply a medium-strength thread locker to the threads. Install the catch can to the mounting bracket, as shown.  |  |
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| 29 |                 | Install banjo fitting to the catch can top port.  |    |
|    |                 | NOTES:  |   |
|    |                 | 1. For kits manufactured prior to August 2020, a green banjo fitting is included (as shown). Be sure the black banjo fitting is oriented so the AN male portion is at the highest point. The hose end will not clear the catch can if the banjo fitting is installed upside down. Hand tighten. |   |
|    |                 | 2. For kits manufactured after August 2020, a stainless steel banjo fitting is included (not shown). Because this fitting is free to swivel after being installed, tighten now using a 6mm Allen wrench.  |   |
|    |                 |   |   |
|    |                 |   |   |
|    |                 |   |   |
| 30 | Hose Cutter     | Cut the provided hose in two sections of 8" and 15" in length. If there is extra length of hose supplied, it can be cut to length in later steps.   |    |
|    | Oil Lubrication | Lubricate the included PushLok hose end barbs. Fully insert the hose ends into one side of each hose.   |   |
|    |                 |   |   |
|    |                 |   |   |
|    |                 |   |   |
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|    |                 |   |   |
| 31 |                 | Hand tighten each hose end to the catch can ports. Put the long hose on the top port and short hose on the side port.   |   |
|    |                 | NOTE: Be careful not to cross thread the fittings as the large -10AN hose will be slightly difficult to work with. Applying a small amount of lubrication to the threads may help.  |   |
|    |                 | Orientate the hose ends, as shown.  |   |
|    |                 |   |   |
|    |                 |   |   |
|    |                 |   |   |
|    |                 |   |   |
| 32 | Hose Cutter     | Route the long hose that comes from the catch can top port down and towards the crankcase vent SAE quick connect port.  |  |
|    | Pliers          | If needed, cut the hose to length. Allow enough slack to permit engine vibration. Slide the provided spring clamp over the hose and attach the OEM 90 degree SAE quick connect.   |   |
|    |                 | Push the fitting into the crankcase vent port until a "click" is felt.  |   |
|    |                 | Plug in the sensor connector.   |   |
|    |                 |   |   |
|    |                 |   |   |
|    |                 |   |   |
| 33 | Hose Cutter     | Route the short hose that comes from the catch can side port down towards the turbo inlet SAE quick connect port.   |  |
|    | Pliers          | If needed, cut the hose to length. Allow enough slack to permit engine vibration. Slide the provided spring clamp over the hose and attach the OEM 45 degree SAE quick connect.   |   |
|    |                 | Push the fitting into the intake manifold port until a "click" is felt.   |   |
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|    |                 |   |   |
|    |                 |   |   |
|    |                 |   |   |
| 34 | 1.125" Socket   | For older kits, torque the green banjo bolt while holding the can.  |  |
|    | 1" Wrench       | Tighten both hose ends.   |   |
|    | Torque Wrench   |   |   |
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|--------------------|
| 10mm Socket Wrench |
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Reinstall all OEM components in reverse order.

**CCV CATCH CAN INSTALLATION COMPLETE**

*Servicing: Check dipstick regularly. All vehicles are unique and will accumulate oil at different rates. Unscrew bottom portion of catch can and properly dispose of contents as needed. Do NOT return contents back into the engine. If needed, stainless steel condensing media can be cleaned with a degreaser.*



**TROUBLESHOOTING**

The Ford PCV system is very sensitive to changes. Any small issues with the installation may trigger a check engine light (CEL) and a code related to the crankcase ventilation system. If you experience a CEL related to the installation, double check the items below:

1. Make sure the system is completely sealed and all fittings are tight. This can be done with an automotive diagnostic smoke machine.
2. Make sure the plugs are installed in the bottom of the catch can(s).
3. Double check to make sure all hoses are routed to the correct ports on the catch can(s). It is easy to make this mistake on this kit.
4. Carefully inspect the electrical connector for the crankcase pressure sensor and make sure no pins are damaged.
5. Inspect the O-rings inside the plastic Ford quick-connectors to make sure they are present and not damaged. These should be lubricated during assembly.
6. If none of the above reveal an issue, pressure test the catch can(s). Use low-pressure air and spray soapy solution while checking for air bubbles.