

INSTALLATION INSTRUCTIONS CATCH CAN KIT

2014-2019 FORD FIESTA ST

Kit # 20-0377-FL, 20-0378-FL, 20-0379-FL

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STEPS 1-14 COVER THE PCV SIDE CATCH CAN KIT (P/N: 20-0377)
STEPS 15-35 COVER THE CRANKCASE CATCH CAN KIT (P/N: 20-0378)







| 20-0379-FL | |
|---------------------------------------|------|
| Item Description | Qty |
| Bracket, PCV, Fiesta, ST | 1 |
| Bracket, Crankcase, Fiesta ST | 1 |
| Catch Can, Fluid Lock 2, Preassembled | 2 |
| 1/2 PCV/FUEL HOSE | 4 ft |
| 5/8 PCV/FUEL HOSE | 2 ft |
| Nylon Barbed Tube Fitting, Reducing | 2 |
| 10AN ORB TO 10AN MALE FITTING | 2 |
| PUSHLOK HOSE END, 10AN 90DEG | 2 |
| PUSHLOK HOSE END, 8AN STRAIGHT | 1 |
| PUSHLOK HOSE END, 8AN 90DEG | 1 |
| 10AN ORB TO 8AN MALE FITTING | 2 |
| SPRING CLAMP, 5/8" HOSE | 1 |
| CATCH CAN SERVICE INTERVAL STICKER | 1 |


| STEP | TOOLS NEEDED | INSTRUCTIONS | PHOTO |
|------|----------------------|---|-------|
| 1 | 10mm Socket | <p><u>P/N: 20-0377 PCV SIDE CATCH CAN KIT INSTALLATION</u></p> <p>Prop the hood and disconnect the battery's negative terminal.</p> <p>To remove the engine cover, feel underneath for the 4 rubber grommets. These are simply press fit into 4 mounting pegs. Carefully pull upwards to pop out each point until released. Set the cover aside.</p> <p>Pop the PCV hose tree clip off the engine, as shown.</p> | |
| | Flathead Screwdriver | | |
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| 2 | | Squeeze the knurled tabs and pull to release the PCV tube fitting from the intake manifold port in the front of the engine bay. |  |
| | | NOTE: If experiencing difficulty, do not use a screwdriver for prying as there is a risk of breaking the plastic. Instead, channel-lock pliers can be used to squeeze the fitting's tabs. | |
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| 3 | | Squeeze the knurled tabs and pull to release the PCV tube fitting from the valve cover port in RH rear of the engine bay. If experiencing difficulty, do not use a screwdriver for prying as there is a risk of breaking the plastic. Instead, channel-lock pliers can be used to squeeze the fitting's tabs. |  |
| | | NOTE: the one-way PCV valve is found in this valve cover port. It prevents positive pressure (boost) from entering the crankcase. | |
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| 4 | Knife | Place the OEM PCV hose on a workbench. |  |
| | | Carefully cut a slit into the OEM plastic tubing on both ends. Next, pull both fittings out of the tube. The fittings will be reused. The tubing and O-rings will not be reused. | |
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| 5 | Breaker Bar | Loosen the two lock nuts from the front RH aluminum engine mount. |  |
| | 18mm Socket Wrench | | |
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| 6 | 18mm Wrench | The actual studs will likely come out with the lock nuts, as shown. |  |
| | 8mm Socket Wrench | Use a 18mm wrench and a 8mm socket wrench to detach the nuts from the studs. | |
| | | Screw the studs back into the engine and tighten using a 8mm socket wrench. | |
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| 7 | 18mm Socket Wrench | Place the Radium Engineering mounting bracket down on the motor mount and secure using the two OEM lock nuts. |  |
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| 8 | Oil Lubrication | Find the catch can and 10AN fittings in the kit. Use lubrication on the -10AN fitting O-rings and install to the catch can ports. |  |
| | 1" Wrench | | |
| | | NOTE: An aluminum wrench will prevent anodizing surface marring. | |
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| 9 | 3mm Allen Wrench | Find the four M5 Allen flat head screws in the kit. |  |
| | Thread Locker | Apply a medium strength threadlocker and install the catch can. | |
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| 10 | Hose Cutter | Grab the 5/8" PCV hose and the 90 degree PushLok hose ends provided in the kit. |  |
| | Oil Lubrication | | |
| | | Lubricate the PushLok barbs. Firmly push and fully seat the hose ends to both sides of the PCV hose. NOTE: PushLok hose ends do not require clamps. | |
| | | Cut this PCV hose in half. | |
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| 11 | 1" Wrench | Screw each 90 degree hose end into the catch can port fittings, however, do not tighten yet. |  |
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| 12 | Hose Cutter | Route the catch can side port hose towards the intake manifold port. Line up the hose and cut to length. This PCV hose should end up roughly 11" (+/-1") long. |  |
| | Oil Lubrication | | |
| | 1" Wrench | Lubricate the OEM fitting barbs. Firmly push and fully seat the OEM fitting to the PCV hose. The OEM fitting does not require a clamp. Lubricate the OEM fitting O-ring and fully insert to the intake manifold port until a "click" is felt. | |
| | | Tighten the 90 degree hose end to the catch can. | |
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| 13 | | Route the catch can top port hose towards the valve cover port. |  |
| | | For added hose routing clearance, there is a clip (blue arrow) that can be rotated to effectively move the coolant hose slightly out of the way. Simply dettach the coolant hose from the clip, rotate the clip 180 degrees, and reattach the coolant hose to the clip. | |
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| 14 | Hose Cutter | Line up the hose to the valve cover port and cut to length. This PCV hose should end up roughly 10" (+/-1") long. |  | |
| | Oil Lubrication | | | |
| | 1" Wrench | | | Lubricate the OEM fitting barbs. Firmly push and fully seat the OEM fitting to the hose. The OEM fitting does not require a clamp. Lubricate the OEM fitting O-ring and fully insert to the valve cover port until a "click" is felt. |
| | | | | Tighten the 90 degree hose end to the catch can. |
| | | | | Reinstall all components in reverse order. Installation Complete |
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| 15 | | <u>P/N: 20-0378 CRANKCASE CATCH CAN KIT INSTALLATION</u> |  | |
| | | Prop the hood and disconnect the battery's negative terminal. To remove the engine cover, feel underneath for the 4 rubber grommets. These are simply press fit into 4 mounting pegs. Carefully pull upwards to pop out each point until released. Set the cover aside. Remove the intake pipe/hose. | | |
| | | For LHD vehicles, pop up and remove the fastener clip near the battery. Pull the plastic cover away and pull up and out, as shown. | | |
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| 16 | | For RHD vehicles, this same ECU cover (near the battery) is metal, as shown. Removal will be slightly different than the LHD variation. |  | |
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| 17 | 10mm Socket Wrench | Remove the 2 upper engine control unit (ECU) mounting nuts shown. |  | |
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| 18 | 10mm Socket Wrench | Install the included catch can mounting bracket reusing the ECU mounting nuts. |  | |
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| 19 | Oil Lubrication | Find the catch can and 8AN fittings in the kit. Use lubrication on the -8AN fitting O-rings and install to the catch can ports. NOTE: An aluminum wrench will prevent anodizing surface marring. |  | |
| | 1" Wrench | | | |
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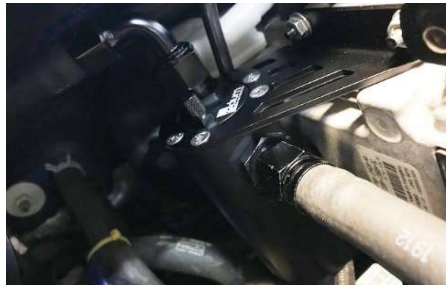


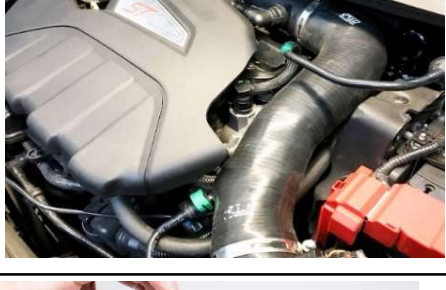

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| 20 | 3mm Allen Wrench | Find the four M5 Allen flat head screws in the kit. |  |
| | Thread Locker | Apply a medium strength threadlocker and install the catch can. | |
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| 21 | Pliers | Squeeze the knurled tabs and pull to release the crankcase vent tube fitting from the intake pipe near the center rear of the engine bay above the valve cover (not shown). If experiencing difficulty, do not use a screwdriver for prying as there is a risk of breaking the plastic. Instead, channel-lock pliers can be used to squeeze the fitting's tabs. |  |
| | | Next, follow the crankcase vent tube down to the crankcase vent port on the valve cover. Loosen the OEM spring clamp and remove the crankcase vent rubber hose from the valve cover port, as shown. | |
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| 22 | | NOTE: The crankcase vent tubes differ between Fiesta engines. Most late model (2016+) Fiesta ST models have an integrated inline crankcase pressure sensor, as shown to the right. Most early model (2014-2015) Fiesta ST models do NOT have a crankcase pressure sensor. |  |
| | | Remove the crankcase vent tube and place on a workbench. For 2016+ Fiesta ST, first unplug the crankcase pressure sensor. | |
| | | For 2014-2015 Ford Fiesta ST, follow steps 23-25, 27-29, 31-36 | |
| | | For 2016+ Ford Fiesta ST, follow steps 26-36 | |
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| 23 | | <u>2014-2015 Ford Fiesta ST Only</u> |  |
| | | To remove the non-serviceable pinch clamp from the OEM rubber hose, it will need to be destroyed, as shown. | |
| | | Pull the short rubber hose off the tube. | |
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| 24 | Pliers | <u>2014-2015 Ford Fiesta ST Only</u> |  |
| | | As shown, place the short rubber hose back onto the valve cover port and secure with the OEM spring clamp. | |
| | | Find one of the barb-to-barb reducers provided in the kit. Insert the large barb side into the short OEM crankcase vent hose. Secure with the provided clamp. | |
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| 25 | Hose Cutter | <u>2014-2015 Ford Fiesta ST Only</u> |  |
| | | Cut the OEM crankcase vent tube, as shown. Leave just enough plastic tubing to fit one of the barb-to-barb reducers found in the kit. | |
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| 26 | Hose Cutter | 2016+ Ford Fiesta ST Only |  <p>CUT HERE</p> |
| | | The center section of this OEM crankcase vent tube will be cut out and discarded. The two ends will be reused. | |
| | | First, pull the nylon braid back to expose the hard plastic tubing. | |
| | | Next, as depicted, cut the OEM crankcase vent tube right before the 45 degree bend (near the intake side connector) of the crankcase tube. | |
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| 27 | Heat Gun | Ford Fiesta ST (all model years) |  |
| | | Using a heat gun, carefully warm up the black tube (near the intake side connector) just enough to soften the material. | |
| | | CAUTION: Do not melt the plastic and do not burn yourself. | |
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| 28 | | Ford Fiesta ST (all model years) |  |
| | | While still hot from the heat gun, immediately push the large side of the barb-to-barb reducer into the soft plastic tubing, as shown. | |
| | | Allow to cool. Naturally the plastic will form-fit to the barb-to-barb reducer. No clamp is necessary for the connection point. | |
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| 29 | Lubrication Oil | Ford Fiesta ST (all model years) |  |
| | | Lubricate the OEM connector's O-ring and reinstall into the intake tube. However, rotate the outlet 180 degrees from the stock orientation so the barb is pointing towards the RH side of the engine bay, as shown. | |
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| 30 | Hose Cutter | 2016+ Ford Fiesta ST Only |  <p>CUT HERE</p> <p>← 2" (50mm) →</p> |
| | Heat Gun | Cut the OEM crankcase vent tube a second time in the location shown. Discard the center section of the OEM crankcase vent tube. | |
| | | Using a heat gun, carefully warm up the end up of the black tube (near the sensor) just enough to soften the material. | |
| | | CAUTION: Pointing the heat gun at the sensor should be avoided. Do not melt the plastic and do not burn yourself. | |
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| 31 | Pliers | 2016+ Ford Fiesta ST Only |  |
| | | While still hot from the heat gun, immediately push the large side of the barb-to-barb reducer into the soft plastic tubing, as shown. Allow to cool. Naturally the plastic will form-fit to the barb-to-barb reducer. No clamp is necessary for the connection point. | |
| | | Ford Fiesta ST (all model years) | |
| | | After cooling, reinstall the short OEM rubber hose to the valve cover barb. | |
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| 32 | Hose Cutter | Ford Fiesta ST (all model years) |  |
| | Oil Lubrication | Grab the PushLok hose ends and the 1/2" hose provided in the kit. | |
| | | Lubricate the PushLok barb. Firmly push and fully seat the hose ends to both sides of the PCV hose. NOTE: PushLok hose ends do not require clamps. | |
| | | Cut the 1/2" hose in half. | |
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| 33 | 7/8" Wrench | Ford Fiesta ST (all model years) |  |
| | | Screw the straight hose end into the catch can side port. | |
| | | Screw the 90 degree hose end into the catch can top port. | |
| | | Do not tighten the hose ends to the catch can yet. | |
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| 34 | Hose Cutter | Ford Fiesta ST (all model years) |  |
| | Oil Lubrication | Route the hose from the catch can side port forward to the barb to barb connection from earlier steps. Line up the hose and cut to length. | |
| | Pliers | For 14-15 Fiesta ST (shown), this hose will be roughly 21" (+/-1") long and should route under the OEM wire harness for engine cover clearance. For 2016+ Fiesta ST, this hose will take a more direct route. | |
| | 7/8" Wrench | Lubricate the small barb and firmly push into the hose to fully seat. This connection does not require a clamp. Tighten the 8AN straight hose end. | |
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| 35 | Hose Cutter | Ford Fiesta ST (all model years) |  |
| | Oil Lubrication | Route the catch can top port hose towards the RH side of the engine bay and loop it 180 degrees pointing it to the intake tube's barb. Line up the hose and cut to length. This hose should end up roughly 21" (+/-1") long. | |
| | Pliers | Temporarily remove the OEM connector from the intake tube and lubricate the barb. Next, firmly push and fully seat it into the 1/2" hose. This junction does not require a clamp. Reconnect to the intake tube. Tighten the 90 degree hose end to the catch can. | |
| | 7/8" Wrench | | |
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| 36 | | Ford Fiesta ST (all model years) |  |
| | | Reinstall all components in reverse order. NOTES: On the 2016+ Ford Fiesta ST only, reconnect the inline crankcase pressure sensor. For RHD vehicles, modification to the metal ECU cover is necessary. | |
| | | Confirm there is adequate clearance between the new hoses and the OEM engine cover. | |
| | | Installation Complete | |
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| SERVICING | <p>It is recommended to check catch can fluid level every 5,000 miles (8,000km). It may be necessary to check more frequently in cases of extreme use.</p> <p>Catch can contents can be monitored using the dipstick.</p> <p>The contents can be emptied by one of three ways:</p> <ol style="list-style-type: none"> 1. Unscrewing the bottom half of the catch can and dumping out the collected fluid. 2. Extracted through the dipstick hole using a hand vacuum pump and straw. 3. A remote drain hose can be installed on the bottom of the catch can (P/N 20-0024) <p>Carefully drain contents into an oil-safe container and dispose in the same manner as used motor oil.</p> | |  |