

# INSTALLATION INSTRUCTIONS

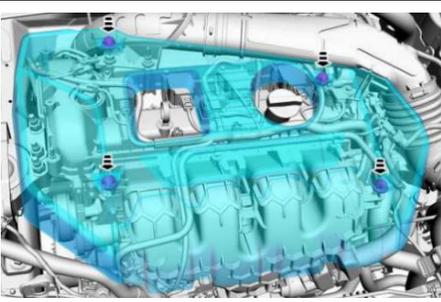
## CATCH CAN KIT

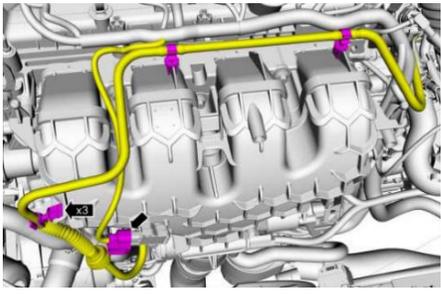
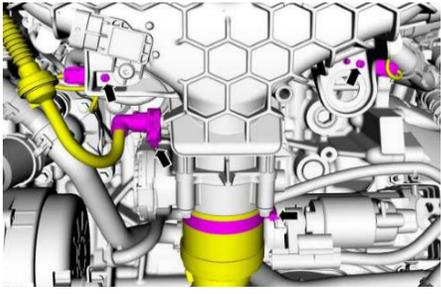
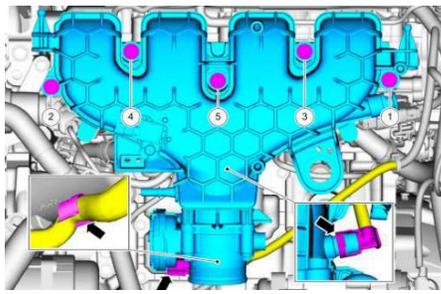
FORD FOCUS

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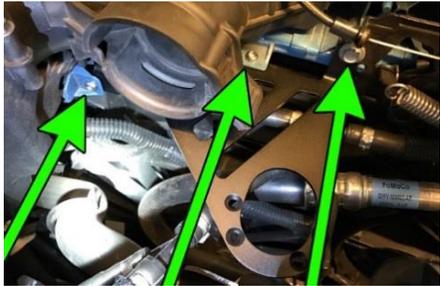
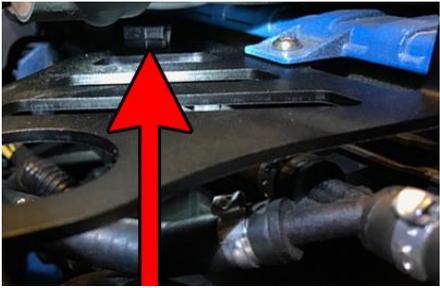
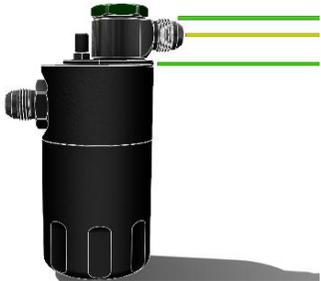
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STEPS 1-22 COVER THE PCV SIDE CATCH CAN KIT (P/N: 20-0315)  
 STEPS 23-32 COVER THE CRANKCASE CATCH CAN KIT (P/N: 20-0316 & 20-0357)  
 FOLLOW ALL STEPS BELOW FOR DUAL CATCH CAN KITS (P/N: 20-0328 & 20-0358)

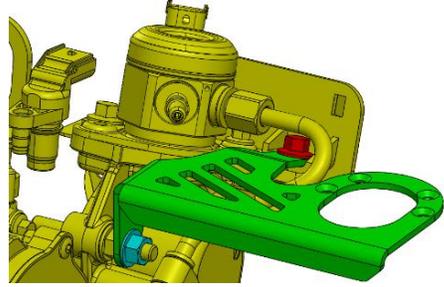
STEP	TOOLS NEEDED	INSTRUCTIONS	PHOTO
1		<u>P/N: 20-0315 PCV SIDE CATCH CAN KIT INSTALLATION</u>	
		Prop the hood and disconnect the battery's negative terminal.	
		Remove the engine cover by carefully pulling upwards until released. Pay close attention to where the 4 pegs from the cover interface with the rubber grommets. Set the cover aside.	
2		Pull and release the coolant hose clip from the front left bulkhead, as shown. This clip will be reused.	
3	10mm Socket	Using a 10mm wrench, remove the hood latch screw shown. This screw will be reused.	
4		Pop up the rubber air duct coupler. Rotate and pull the plastic intake tube out of the air box, as shown.	

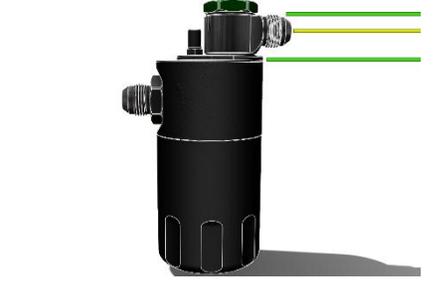
5		Remove the intake manifold by following the steps below:	
		First, disconnect the MAP sensor on the front of the plenum, as shown.	
		In 3 locations, pop off the EVAP purge tube from the intake runners.	
6	Socket Wrench	To remove the EVAP purge connector fitting, simply press the tab inwards and pull away from the intake manifold.	
		Unlatch the grey connector housing from the back left side of the intake manifold. It does not need to be disconnected.	
		Loosen the compressor coupler clamp on the throttle body. This will generally be unique to the vehicle. OEM clamps require a 7mm wrench. Aftermarket clamps typically require a 7/16" wrench.	
7	10mm Socket	Remove the five M8 bolts that secure the manifold to the cylinder head using a 10mm socket wrench.	
		When pulling the intake manifold away there will be a few more connections (described below).	
		Attached to the backside of the intake manifold are the 2 knock sensor connectors. Simply pull the connectors off the intake manifold mounting tabs.	
8		To disconnect the electrical plug from the throttle body, first pull the red locking tab back. Next, press the thumb tab in and pull away to release.	
9		To disconnect the PCV tube from the intake manifold simply squeeze each side of the connector fitting and pull away.	
		Remove the intake manifold from the vehicle.	
10	8mm Socket	Using a 8mm socket wrench, remove the eight PCV plate M6 bolts. Carefully pull the PCV plate off the engine and place on a bench.	

11	Heat Gun	Using a heat gun, carefully warm up the black tube just enough to release it from the PCV valve. Do not melt the plastic.	
12	Heat Gun	Using a heat gun, carefully warm up the black tube just enough to release it from the intake manifold connector. Do not melt the plastic.	
13	Hose Cutter	Find the 3/8" PCV hose in the kit and cut it in half (two 12" sections are ideal).	
	Pliers		
	8mm Socket	Install one of the halves to the PCV valve and secure using one of the included spring clamps, as shown.	
		Clean the mating surface on the block and reinstall the PCV plate onto the engine. Tighten all bolts in an alternating pattern using Ford torque specifications.	
14	Pliers	Install the remaining 3/8" PCV hose to the intake manifold connector fitting.	
		To secure, use the other included spring clamp, as shown.	
15		<b>**FORD FOCUS ST MODELS ONLY**</b> Some models have a fan controller module mounted on the radiator fan shroud that will need to be relocated for catch can fitment.	
		The controller does not need to be unplugged. There are 3 mounting points. First, push the lower tab downwards with your thumb. From the bottom, rotate the controller outwards to release.	
		Pull and release the 2 large gauge wires from the 2 lower hold downs. This will free up the required wire slack.	
16	Diagonal Cutters	<b>**FORD FOCUS ST MODELS ONLY**</b> For clearance purposes, cut the inward upper tab. Not much needs to be removed, as shown.	

17	Diagonal Cutters	<b>**FORD FOCUS ST MODELS ONLY**</b> Reposition the controller to the LH side of the fan shroud. Using zip ties, secure the controller to the fan shroud brace, as shown.	
	4mm Allen Wrench	Find the included Radium mounting bracket and the two M6 button head bolts in the kit.	
	10mm Socket	INSTALL THE BRACKET UNDER THE OEM TAB, shown in the center.	
		Reuse the 10mm hex head screw from earlier. Hand tighten all 3 bolts first, then tighten.	
18		Rotate the OEM coolant hose clip from earlier steps and line it up to the Radium mounting bracket. Push the clip upwards until it locks into place.	
19			
20	Oil Lubrication	Use lubrication on the O-ring and install the provided fitting to the side port.	
	1" Wrench	<i>For kits manufactured prior to Dec 2020, a green fitting will be included. First, be sure the black banjo is oriented so the AN male portion is at the highest point as shown. Next, insert a crush washer onto each side of the banjo. Thread in and orientate the 6AN male at 90 deg (as shown in following picture). Hold the catch can and torque the banjo fitting.</i>	
	1-1/8" Wrench		
	4mm Allen Wrench	<i>For kits manufactured after Nov 2020, a silver banjo fitting will be included (not shown). Lubricate the O-ring then tighten to the catch can top port. Orientate the 6AN male portion of the fitting in the direction shown in following picture.</i>	
21	3mm Allen Wrench	Find the four M5 Allen flat head screws in the kit. Apply a medium strength threadlocker and install the catch can, as shown.	
	Hose Cutter	Grab the two loose 3/8" PCV hoses. The hose connected to the PCV valve will route to the catch can top port. The catch can side port will route back to the intake manifold. Using the included 90 degree hose ends, measure the hoses and cut to length (if necessary).	
	Oil Lubrication	Lubricate the hose end barbs. Firmly push and fully seat the hoses on the ends. NOTE: Pushlok hose ends do not require clamps.	
22	11/16" Wrench	Using a 11/16" wrench, secure the hose ends to the catch can, as shown. Reinstall all OEM components in reverse order. NOTE: Ford Focus RS models do not require the 2 provided cable zip ties.	
		<b>**FORD FOCUS ST MODELS ONLY**</b> The OEM sound symposer box must be removed. It will interfere with the catch can when reinstalling the manifold. Please go to <a href="http://www.radiumauto.com">www.radiumauto.com</a> and purchase P/N: 20-0356 Sound Symposer Delete Kit, Focus ST.	
		<b>INSTALLATION COMPLETE</b>	

23	7mm Wrench	<p><b><u>P/N: 20-0316 &amp; 20-0357 CCV CATCH CAN KIT INSTALLATION</u></b></p> <p>To remove the intake pipe section near the battery, remove the mounting bolt and loosen the 2 hose clamps.</p>	
	8mm Wrench		
24	13mm Wrench	<p>To remove the OEM crankcase vent tube, squeeze each tube end connector and pull away.</p> <p>Next, squeeze the thumb tab and unplug the pressure sensor connector.</p>	
	10mm Wrench		
25	Heat Gun	<p>Using a heat gun, carefully warm up the black tube just enough to release it from the pressure sensor barb. Do not melt the plastic.</p> <p>Do NOT heat off the opposing side of the inline pressure sensor. Keep the inline pressure sensor connected to the intake pipe fitting, as shown.</p>	
26	Heat Gun	<p>Using a heat gun, carefully warm up the black tube just enough to release it from the valve cover fitting. Do not melt the plastic.</p>	
27	Light Oil	<p>Find the 1/2" PCV hose in the kit and cut it in half (two 15" sections are ideal).</p> <p>Install one hose to the OEM pressure sensor barb. Lubrication will be required, as this will be a tight fit. Because these aggressive barbs are PushLok style, a clamp is not necessary.</p>	
28	Light Oil	<p>Install the remaining 1/2" PCV hose to the valve cover connector fitting.</p> <p>Lubrication will be required, as this will be a tight fit. Because the crankcase operates at low pressure, clamps are not required for this kit.</p>	

29		Reinstall each individual hose to the appropriate fitting.	
		Intake Tube (shown left)	
		Valve Cover (shown right)	
		Route the hoses to LH side of the vehicle.	
		The Radium crankcase catch can bracket will mount near the high pressure fuel pump using factory mounting points, described below.	
30		<b>**FORD FOCUS ST MODELS ONLY (20-0357)**</b>	
		Lift and temporarily remove the insulation on the OEM high pressure fuel pump, as shown.	
31	10mm Socket Wrench	<b>**FORD FOCUS ST MODELS ONLY (20-0357)**</b>	
		Temporarily remove the OEM M8 bolt shown.	
32	10mm Socket Wrench	<b>**FORD FOCUS ST MODELS ONLY (20-0357)**</b>	
	13mm Wrench	Slide the Radium crankcase catch can bracket (shown in GREEN) in place. The upper rear hole should line up with the threads from the bolt that was previously removed. The bracket's lower front hole should fit over the OEM M8 stud. Do NOT remove the OEM M8 nut on the OEM M8 stud.	
		To secure the bracket in place, reinstall the OEM M8 bolt (shown in RED) and install the included M8 nut (shown in BLUE) to the stud. Be careful not to drop the nut.	
33		<b>**FORD FOCUS RS MODELS ONLY (20-0316)**</b>	
		Shown in yellow, dislodge the grey wiring clip from the OEM mount.	
		Shown in blue, remove the M8 nut using a 13mm wrench.	
		Shown in green, remove the M8 bolt using a 10mm wrench.	
34	Pliers	<b>**FORD FOCUS RS MODELS ONLY (20-0316)**</b>	
		Near the high pressure fuel pump, rotate the coolant hose's OEM spring clamp towards the center of the vehicle, as shown. This will permit extra clearance for the catch can mounting bracket.	

35		<b>**FORD FOCUS RS MODELS ONLY (20-0316)**</b>		
		Sandwich the aforementioned wiring harness from Step 30 between the high pressure fuel pump and the Radium mounting bracket. This will hold the wiring harness in place. Hand tighten the OEM bolts back into place.		
		Insert the included M6 button head through the extra mounting bracket hole.		
36	Tape	<b>**FORD FOCUS RS MODELS ONLY (20-0316)**</b>		
	4mm Allen wrench	Use tape (not provided) and stick the included M6 nut to an open-ended 10mm wrench, as shown.		
	10mm wrench			
	13mm wrench	Use a 4mm Allen wrench, carefully tighten the inserted M6 button head bolt (from the previous step) to this M6 nut.		
		Tighten the 10mm hex bolt and 13mm hex nut.		
37	1" Wrench	<b>**FORD FOCUS RS MODELS ONLY (20-0316)**</b>		
	Oil Lubrication			Install the included adapter fitting into the catch can side port. Use a drop of oil lubrication on the O-ring.
38	3mm Allen Wrench	<b>**FORD FOCUS RS MODELS ONLY (20-0316)**</b> Apply a medium strength threadlocker to the four M5 Allen flat head screws and install the catch can. Radium 20-0316 (Focus RS) is shown. Radium 20-0357 (Focus ST) is very similar.		
	Hose Cutter			
	7/8" Wrench			Locate the 1/2" PCV hose from the valve cover port. Measure and cut to length (if necessary). Lubricate the barbs on one of the included hose ends. Firmly push and fully seat the hose on the end. NOTE: Pushlok hose ends do not require clamps.
				Using a 7/8" wrench, install the hose end into the catch can side port. <i>This is not a typo. Dirty air will enter the side port of this catch can. Radium catch cans are equally effective with flow in either direction.</i>
39	Oil Lubrication	<b>**FORD FOCUS RS MODELS ONLY (20-0316)**</b> For kits manufactured prior to December 2020, a green banjo fitting will be included. First, be sure the black banjo is oriented so the AN male portion is at the highest point as depicted. Next, insert a crush washer onto each side of the banjo. Hand tighten the banjo fitting to the catch can top port.  For kits manufactured after November 2020, a silver banjo fitting will be included (not shown). Lubricate the O-ring then tighten to the catch can top port.		
	4mm Allen Wrench			
40	1-1/8" Wrench	<b>**FORD FOCUS RS MODELS ONLY (20-0316)**</b> Rotate the banjo just enough that it will not interfere with the dipstick. Grab the 1/2" PCV hose from the turbo inlet pipe. Measure and cut to length. Lubricate the barbs on the other included hose end. Firmly push and fully seat the hose on the end. NOTE: Pushlok hose ends do not require clamps.  For kits manufactured prior to December 2020, torque the banjo fitting now using a 28mm or 1-1/8" socket wrench.  Using a 7/8" wrench, install the hose end onto the banjo fitting. Reinstall all OEM components. Reconnect pressure sensor plug.  <b>INSTALLATION COMPLETE</b>		
	Hose Cutter			
	7/8" Wrench			