

# INSTALLATION INSTRUCTIONS

## OIL CATCH CAN KITS

### 2020+ TOYOTA GR SUPRA 3.0T only

Kit # 20-0749-FL, 20-0750-FL, 20-0751-FL

Document: 19-0274

Support: info@radiumauto.com

### COLOR LEGEND FOR EACH STEP

20-0749 CATCH CAN KIT, PCV, MKS SUPRA

Follow GREEN and YELLOW areas below

20-0750 CATCH CAN KIT, CCV, MKS SUPRA

Follow GREEN and ORANGE areas below







20-0751 DUAL CATCH CAN KIT, MK5 SUPRA







Follow GREEN, YELLOW, and ORANGE areas below















20-0751-FL	
Item Description	Qty
1/4 PCV/FUEL HOSE	2.5
Bracket, PCV Catch Can, A90	1
Bracket, CCV Catch Can, A90	1
Catch Can, Fluid Lock 2, Preassembled	2
3/4 PCV/FUEL HOSE	2
5/16 PCV/FUEL HOSE	3
5/8 PCV/FUEL HOSE	2
SPRING CLAMP, 1/4" HOSE	2
SPRING CLAMP, 5/16" HOSE	2
10AN ORB SWIVEL BANJO TO 8.5MM BARB	1
10AN ORB SWIVEL BANJO TO 6.5MM BARB	1
10 inch Zip Tie, Black Nylon	2
M6 Flange Nut	1
HHCS, M6 x 1.0, 16mm long	1
SPRING CLAMP, 3/4" HOSE	1
PUSHLOK HOSE END, 10AN 90DEG	1
10AN ORB BANJO SWIVEL TO 12AN MALE	1
10AN ORB SWIVEL BANJO TO 10AN MALE	1
PUSHLOK HOSE END, 12AN, 45DEG	1
QK CONNECT, 19MM MALE TO 10AN MALE	1
PUSHLOK HOSE END, 10AN 60DEG	1
CATCH CAN SERVICE INTERVAL STICKER	1







STEP	TOOLS NEEDED	INSTRUCTIONS	PHOTO
1		The terms "driver-side" and "passenger-side" will NOT be referenced. As depicted, these instructions will always reference "LH" and "RH" areas of the vehicle.	

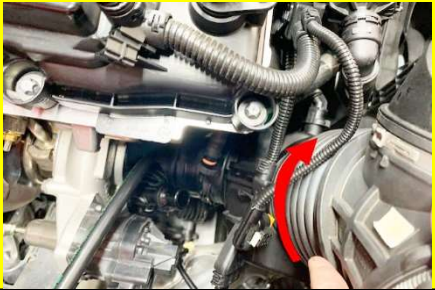





2	10mm Socket Wrench	In the trunk, disconnect the negative battery terminal.	
		CAUTION: Disconnecting the battery may cancel fault memories of some control units. Consequently, before disconnecting the battery, always cross examine any fault memories.	
3		Carefully pull up to remove the engine vanity cover.	
		NOTE: There are 4 rubber grommet mounting locations underneath that are not visible.	
4	Flat Head Screwdriver	Find the mass air flow sensor on the intake air box.	
		Carefully slide the white lock up, as shown. Next, squeeze the lock to release the connector from the mass air flow sensor.	
5	6mm Nut Driver	Loosen the intake hose clamp shown. To separate, pull the turbo inlet hose from the air intake box.	
6		Carefully rock the air intake box back and forth while pulling upwards. Once loosened, remove the air intake box from the vehicle.	
		NOTE: There are 3 rubber grommets that secure the air intake box. If any of these grommets came out with the air intake box, pry them off and reinstall to the respective unibody mounting locations.	
7		Find the large crankcase vent connection at the front of the valve cover. Carefully squeeze the connector locks and pull upwards to release, as shown.	
		WARNING: Take your time as this connection can break.	

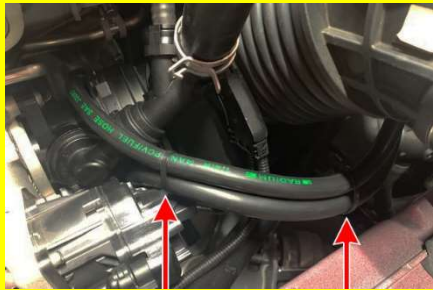





8	Pick	Find the crankcase vent connector on the turbo inlet adapter. Pry the wire C-clip down, as shown. Slide the connection off.	
		NOTE: Place the C-clip back into the slot as if it were installed. When reinserting, the C-clip will automatically slide out and in to lock in place.	
9		Carefully squeeze the crankcase vent Y-connector locks and pull to release.	
		NOTE: Take your time as this connection can break.	
10		There is one hose clip attached to the electrical wiring that holds the crankcase vent tubing in place. To disengage, simply pull away. Remove the crankcase vent tubing (shown) from the vehicle.	
		For 20-0749 PCV CATCH CAN KIT installation, continue with the following YELLOW section.	
		For 20-0750 CCV CATCH CAN KIT installation, skip the following YELLOW section.	
11		<b><u>20-0749 CATCH CAN KIT, PCV, MK5 SUPRA</u></b>	
		Pull the electrical stay from the turbo inlet hose.	
		Unplug the wastegate actuator connector (not shown). NOTE: It uses the same style lock as the mass air flow connector from earlier.	
12	Pick	Find the connection between the turbo compressor adapter and the turbo inlet hose. Pry the wire C-clip away from the hose, as shown. Slide off the turbo inlet hose.	
		NOTE: Place the C-clip back into the slot as if it were installed. When reinserting, the C-clip will automatically slide out and in to lock in place.	
13		Rotate the turbo inlet hose to expose the last connection. Carefully squeeze the ventilation connector locks and pull to release.	
		NOTE: Take your time as this connection can break.	

14	Pick	Just below the turbo inlet is the charge pipe connection to the turbo compressor outlet. Pry the wire clip down, as shown. Slide off the charge pipe. This will simply permit the required space for the following step.	
		NOTE: Place the C-clip back into the slot as if it were installed. When reinserting, the C-clip will automatically slide out and in to lock in place.	
15	T30 Torx Wrench	Unscrew the 3 bolts that secure the turbo inlet adapter to the turbocharger. Pull the 3-bolt turbo inlet adapter from the turbo to release.	
16		Find the PCV heater connector on the backside of the turbocharger inlet adapter. Carefully squeeze the lock (shown) and pull to release.	
17	T30 Torx Wrench	Find the ventilation valve on the side of the engine block. One bolt secures this valve to the engine block.  Unscrew the single bolt and gently pull to release.  <i>CAUTION: Do not apply any unnecessary side load when removing as this small plastic valve is fragile.</i>	
18		Remove the hose assembly (shown) from the engine bay.  Replacement Toyota Part Number: 12262-WAA03  NOTE: The catch can will install inline with these 2 end connections.	
19	Blade	As shown, carefully remove the end fittings and discard the OEM hard tubing.  Take note that the barbs on the valve (left) are slightly smaller than the barbs on the connector (right). NOTE: The connector will use the provided 5/16" hose and the valve will use the provided 1/4" hose.	







20	Oil Lubrication	Heavily lubricate the smaller barbs on the valve.	
21	Pliers	Insert the included 1/4" hose and secure with the smaller provided spring clamp.	
22	Pliers	Insert the included 5/16" hose and secure with the larger provided spring clamp.	
23	T30 Torx Wrench	Carefully reinstall the valve to the engine block and secure with the OEM bolt, as shown.	
24	Pick	The front RH side of the plastic fender cover will need to be removed. Pull up and remove the plastic retainers.	
25		The area shown will be accessed for installing the catch can mounting bracket.	







26	13mm Wrench	Remove the OEM M8x1.25mm hex bolt shown.		
27	13mm Wrench	Starting from the engine bay, insert and place the catch can mounting bracket in the location shown. Lineup the 2 bracket holes with the 2 holes in the OEM sheet metal.		
	10mm Wrench			
	10mm Socket Wrench	To secure, reinstall the OEM M8 x 1.25mm bolt (shown at top).		
		Next, using the provided M6x1mm flange nut and hex bolt (shown at bottom), secure the catch can mounting bracket.		
28	Oil Lubrication	Lubricate the O-rings found on the provided banjo bolt fittings.		
	4mm Allen Wrench	As shown, install the banjo fitting with the smaller barb to the catch can top port. Install the banjo fitting with the larger barb to the catch can side port.		
		NOTE: Although there are no instructions for the optional 20-0024 Petcock Drain Kit, consider planning a proper hose/fitting layout now.		
29	Thread Locker	Apply a medium-strength thread locker to the four provided M5x0.8mm bolts.		
	3mm Allen Wrench			
		Position the catch can in place and secure.		
30	T30 Torx Wrench	Screw in the OEM 3-bolt turbo inlet adapter. NOTE: Lay the new 1/4" hose on top (above) the 3-bolt turbo inlet adapter.		
		Make sure the OEM C-clip on the charge pipe is back into its "installed" state. NOTE: It will automatically flex and lock into place when reinserted. Push the charge pipe into the adapter until a "click" is heard. To confirm it has seated, give the pipe a tug.		
		Plug in the PCV heater (shown) and wastegate actuator connectors.		
31		Make sure the OEM C-clip on the turbo inlet hose is back into its "installed" state. NOTE: It will automatically flex and lock into place when reinserted.		
		Next, push the OEM connector (from the new 5/16" hose) into the turbo inlet hose port, as shown. NOTE: This is easiest to connect now.		







32		NOTE: From the turbo inlet port, the 5/16" hose will route towards the rear than underneath the turbo inlet towards the RH side.	
		To avoid interference, rotate the OEM turbo inlet hose (as shown) BEFORE reconnecting it to the 3-bolt turbo inlet adapter. Once the OEM connector from the 5/16" hose is free from obstruction, push the turbo inlet hose into the 3-bolt turbo inlet adapter until a "click" is felt. To confirm it has seated, give the hose a tug.	
33		Reattach the electrical stay to the turbo inlet hose.	
34	Hose Cutter	Route the 1/4" hose to the top catch can fitting and cut to length. The total hose length will be ~2ft (610mm).	
35	Pliers	PRO TIP: in a couple steps, the top fitting will be rotated towards the middle of the vehicle. However, attaching the hose at the fitting angle pictured makes the next step easier to access.  As shown, remove the oil dipstick. Insert the hose and secure with the provided small spring clamp.	
36	Hose Cutter	Route the 5/16" hose to the side catch can fitting and cut to length. The total hose length will be ~2.5ft (762mm).	
	Pliers	Insert the hose and secure with the provided larger spring clamp.	
37		Now rotate the top port fitting towards the center of the vehicle, as shown.	
		Reinstall the catch can oil dipstick.	





38	Diagonal Cutters	Join the 2 hoses together and install the 2 provided cable zip ties.	
		If installing the <b>20-0751 DUAL CATCH CAN KIT</b> , skip the next couple of steps and restart with the <b>20-0750 CCV CATCH CAN KIT</b> instructions below.	
39		Reinstall all left over components in reverse order; crankcase vent tubing connectors, intake air box, intake hose clamp, mass air flow sensor, engine vanity cover, etc.	
		NOTES:	
		1. Make sure the OEM C-clip on the crankcase vent connector at the turbo inlet adapter is back into its "installed" state. NOTE: It will automatically flex and lock into place when reinserted.	
		2. If the rubber grommets came out attached to the air intake box, place them back into the unibody slot locations, as shown.	
40	10mm Socket Wrench	Reconnect the battery and start the engine. Confirm there are no leaks.	
		<b>20-0749 PCV CATCH CAN KIT INSTALLATION COMPLETE</b>	
41		<b>20-0750 CCV CATCH CAN KIT INSTALLATION</b>	
		Using boiling water, warm up the crankcase vent tubing in the area shown. Quickly pull apart. The 3-way fitting will be reused. The tubing will NOT be reused.	
		NOTES:	
		1. If using a heat gun, be careful not to melt the plastic.	
		2. If ever needed, this assembly can be reheated and reattached.	
42	Oil Lubrication Pliers	Lubricate and install the provided 3/4" hose to the large barb on the 3-way fitting. Secure the connection with the included spring clamp, as shown.	
43	Oil Lubrication	Lubricate the PushLok barbs on the provided 90 degree 10AN hose end. Fully seat the included 5/8" hose, as shown.	
		NOTE: PushLok hose ends do NOT require hose clamps.	




44	Pick	The front RH side of the plastic fender cover will need to be removed. Pull up and remove the plastic retainers.	
45		The area shown requires access for installing the catch can mounting bracket.	
46	13mm Socket Wrench	Remove the two depicted M8x1.25mm hex bolts on the front core support.	
47	Oil Lubrication	Lubricate the O-ring found on the large 12AN banjo fitting.	
48	6mm Allen Wrench	Install the large 12AN banjo fitting to the catch can side port.	
49	Thread Locker	Apply a medium-strength thread locker to the four provided M5x0.8mm bolts.	
	3mm Allen Wrench	Position the catch can in place and secure.	

50	Oil Lubrication	Lubricate the O-ring found on the 10AN banjo fitting and install it to the catch can top port.  NOTE: Although there are no instructions for the optional 20-0024 Petcock Drain Kit, consider planning a proper hose/fitting layout now.	
	6mm Allen Wrench		
51		Install the 10AN (5/8") hose assembly to the catch can top port fitting. When tightening, orient and hold the hose end vertically, as shown.  NOTE: an aluminum wrench will prevent surface finish marring.	
52	Flat Head Screwdriver	Note that there is a wire harness along the front crossmember in the area where the catch can will be installed. Carefully pull the electrical wire stay out of the sheet metal, as shown.  Tuck the wire harness under the crossmember towards the front.	
53		Lower the catch can mounting assembly (shown) into place.	
54	13mm Socket Wrench	Secure the mounting bracket into place using the 2 OEM bolts.	
55		Make sure the OEM C-clip on the 3-way fitting is back into its "installed" state. NOTE: It will automatically flex and lock into place when reinserted.  As shown, reinsert the Y-connector (on top) at this time as well.	

56	Hose Cutter	Temporarily install the provided 12AN 45 degree PushLok hose end to the catch can side port fitting for mockup.	
		Loop the large 3/4" hose up and over the turbo inlet hose towards the 12AN 45 degree PushLok hose end. Cut to length. The total hose length will be ~14" (356mm).	
57	Oil Lubrication	Lubricate the barbs on the 12AN 45 degree PushLok hose end.	
58		Fully seat the 3/4" hose, as shown.  NOTE: PushLok hose ends do NOT require hose clamps.	
59	1-1/4" Wrench	Secure the hose end to the catch can side port, as shown.  NOTE: an aluminum wrench will prevent surface finish marring.	
60		First, run the 5/8" hose (from the catch can top port) underneath the turbo inlet hose. Then, when routing it upward towards the valve cover crankcase vent port, position it strategically along the engine block.  NOTE: For proper clearances and optimal fitment, the finalized connection to the valve cover will be assembled after the air intake box is reinstalled.	
61		If the rubber grommets came out attached to the intake air box, place them back into the unibody slots, as shown.  First, lineup the front air duct and the turbo inlet hose. Then, press down to seat the air intake box into the rubber grommets.	

62	6mm Nut Driver	Lineup and tighten the intake worm drive hose clamp.	
		Plug in the mass air flow connector and lock the tab.	
		Confirm the 3/4" hose properly fits. The hose length will vary depending on the modifications currently on the vehicle.	
63	Oil Lubrication	Lubricate the O-ring found on the provided crankcase vent banjo fitting.	
64		Slowly press the fitting down into the valve cover crankcase vent port. Rotate the fitting to lineup the index tab.	
65	2.5mm Allen Wrench	Slide the green lock into position. Lineup the holes of the lock with the threaded holes in the fitting.	
		Secure the lock with the provided M3 x 0.5 x 5mm screws.	
66	Hose Cutter	Temporarily screw the provided 10AN PushLok hose end to the valve cover fitting.	
		Route the 5/8" hose for best fitment and cut to length. The total hose length will be ~15" (381mm).	
67	Oil Lubrication	Lubricate the barbs on the 10AN PushLok hose end.	

68		Fully seat the 5/8" hose.	
		NOTE: PushLok hose ends do NOT require hose clamps.	
69	1-1/16" Wrench	Using 2 wrenches, tighten the hose end.	
	1" Wrench		
70	10mm Socket Wrench	Reconnect the battery and start the engine. Confirm there are no leaks. Reinstall the engine vanity cover.  <b>20-0750 CCV CATCH CAN KIT INSTALLATION COMPLETE</b>	
SERVICING	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.	Catch can contents can be monitored using the dipsticks. When collected fluid reaches a certain level, a float ball in the catch can will block the passage into the collection chamber and the catch can will not collect any additional fluid.  To empty the catch cans, unbolt the catch can bracket from the vehicle body. Lift the assembly up as high as possible. Unscrew the bottom half of the catch cans. Carefully drain contents into an oil-safe container and dispose of in the same manner as used motor oil.	