



# INSTALLATION INSTRUCTIONS

## CATCH CAN KITS

MITSUBISHI LANCER EVOLUTION 8/9

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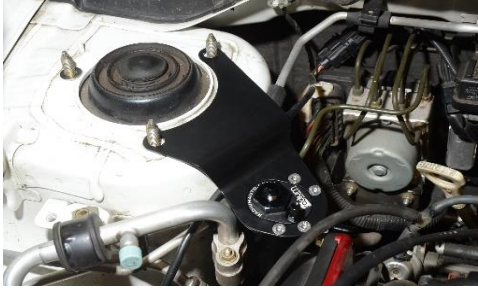
This document covers the installation procedure for the following:





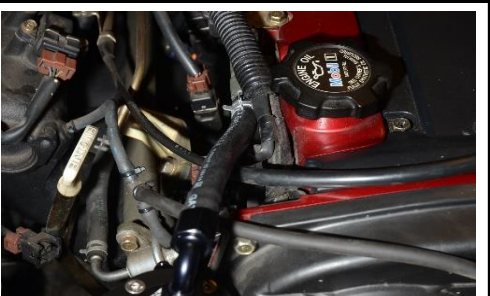
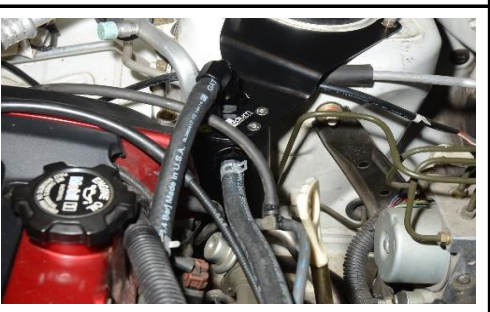
**20-0116 PCV SIDE CATCH CAN KIT, EVO 8/9**

**20-0117 CRANKCASE SIDE CATCH CAN KIT, EVO 8/9**





**20-0118 DUAL CATCH CAN KIT, EVO 8/9**

**20-0182 VENT TO ATMOSPHERE (VTA) KIT, EVO 8/9**



STEP	TOOLS NEEDED	INSTRUCTIONS	PHOTO
<b>Section 1: 20-0116 Installation</b>			
1	14mm Socket	Remove the front strut brace by uninstalling the 3 nuts on top of each strut tower and the two bolts in the center of the firewall.	
		Make sure the car is sitting on the wheels so the struts do not fall out of the strut towers.	
2	3mm Allen wrench	Assemble the PCV side catch can as shown.	
	1" Wrench	Apply a small amount of oil to the o-rings on the fittings. Screw the barbed fitting into the side port and the -6AN adapter to the top port.	
		Fasten the catch can to the bracket using the four small screws and tighten.	
3		Install the M10 washer on the outer-most strut top stud.	
4		Place the catch can bracket on to the two inner-most studs as shown. Temporary finger tighten the two strut top nuts to keep the bracket in place.	



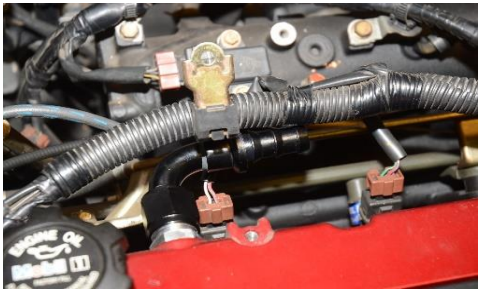



5		Radium Engineering catch can brackets purchased late 2017 have slotted mounting holes that permit adjustability for optimal positioning.	 <p style="text-align: right;"><b>ADJUSTABILITY</b></p>
6		It may be necessary to slide the A/C line within the rubber mount in the direction shown in the picture. This will create additional clearance for the catch can.	
7		On the back of the valve cover near the oil cap, locate the PCV hose that routes between the PCV valve and the intake manifold. NOTE: The standard 4G63 intake manifold barb is in a slightly different location than the 4G63 MIVEC intake manifold (shown).	
		Remove this hose, but retain the spring hose clamp on the PCV valve, this will be reused.	
8	Oil Lubrication	Locate the 90 degree hose end in the kit. Apply a liberal amount of oil to lubricate the PushLok barbs.  When installing the PushLok hose end, a large amount of force will be required. First install the fitting into a vice. In one motion, firmly push the hose down over the barbs using your body weight.  NOTE: hose clamps are NOT required for PushLok hose ends.	
	Hose Cutter		
	Vice		
9	Pliers	Test fit the assembled hose by screwing it to the catch can top fitting and routing it towards the PCV valve. Cut the hose to an appropriate length to reach the PCV valve and provide a small amount of extra slack.  Secure the hose to the PCV valve with the OEM spring clamp.  Tighten the hose end to the catch can fitting.	
	11/16" wrench		
10	Hose cutters	Use the remaining hose from the kit and attach one end to the side fitting on the catch can. Secure with the included spring clamp.  Route the other end of the hose to the port on the intake manifold where the OEM PCV hose originally connected. Cut the hose to an appropriate length and secure it to the port using the original spring clamp.  Installation of 20-0116 is complete. The strut bar may be reinstalled at this time or left off for installation of the crankcase catch can kit.	
	Pliers		




### Section 2: 20-0117 Installation

<b>11</b>	1" wrench	<p>Remove the crankcase breather hose that goes from the end of the valve cover to the turbo air inlet. Remove the strut bar (refer to Step 1 above). Assemble the crankcase side catch can as shown. Apply a small amount of oil to the o-rings on the fittings and screw the barbed fitting into the side port and the -6AN adapter to the top port.</p> <p>Fasten the catch can to the bracket using the 4 small screws and tighten.</p>	
	3mm Allen wrench		
<b>12</b>	Hose cutters	<p>Place the catch can assembly on to the LH strut tower top as shown. Install the M10 washer on to the outboard most stud of the strut top (refer to Step 3 above). Positioning of the bracket can be adjusted for best clearance with surrounding components.</p> <p>Loosely screw the 90 degree hose end onto the catch can top port. Route the hose included in the kit from the crankcase breather (located on the end of the valve cover) to the 90 degree fitting. Cut the hose to an appropriate length.</p>	
<b>13</b>	Oil Lubrication	<p>Locate the 90 degree hose end in the kit. Apply a liberal amount of oil to lubricate the PushLok barbs.</p> <p>When installing the PushLok hose end, a large amount of force will be required. First install the fitting into a vice. In one motion, firmly push the hose down over the barbs using your body weight.</p> <p>NOTE: hose clamps are NOT required for PushLok hose ends.</p>	
	Vice		
<b>14</b>	14mm Socket	<p>Secure the assembled hose back onto the catch can top port. Attach the other end of the assembled hose to the valve cover breather port and secure with the OEM hose clamp.</p> <p>Use the remaining section of hose to route from the side port of the catch can to the turbo air inlet pipe. Cut to an appropriate length. Depending on the turbo setup, the inlet may be in a different location than shown. Use a spring hose clamp at each end of this hose. Reinstall the strut bar. Double check all hose connections.</p> <p><b>Installation Complete</b></p>	
	11/16" Wrench		
	Pliers		
	Hose Cutter		

### Section 3: 20-0182 Installation

<b>15</b>	Pliers	<p>Remove the strut tower brace.</p> <p>Remove the PCV hose that goes from the PCV valve on the back of the valve cover to the intake manifold. Black-off the intake manifold barb using the included rubber cap.</p> <p>Pull out the PCV valve elbow from the valve cover as shown. This can be accomplished with pliers or other prying tools.</p>	
	14mm Socket		
<b>16</b>	5/16" screwdriver	<p>Removing the aluminum bushing from the valve cover PCV port can be accomplished several ways. Use a prying tool such as a 5/16" width flat head screwdriver or 3/8" socket extension.</p> <p>Insert the tool into the bushing and pry side to side while pulling outward. The prying motion will loosen the bushing and allow it to be pulled out.</p> <p>CAUTION: Do not damage the valve cover.</p>	

17		Inspect the hole to make sure it is clean and nothing is damaged.	
18	Mallet	Find the -10AN bung in the kit. Use a soft mallet and install the fitting into the hole on the valve cover. Do not tap on the tapered surface of the fitting. Protect the fitting by installing a -10AN cap, hose end or other fitting before tapping with a mallet.	
		The fitting will install easier if it is placed into a freezer before installation.	
19		Lightly screw on the 90 degree -10AN hose end and point it toward the LH strut tower as shown.	
20	3mm Allen wrench	Assemble the catch can as shown. Install the -10AN adapter into the top port and the hose barb fitting into the side port. Apply oil to the O-rings. Attach the catch can to the bracket using the four small Allen screws.	
	1" Wrench		
21		Drop the catch can bracket mounting holes over the studs on the LH strut tower.	
		Install the M10 washer over the remaining stud on the strut tower top.	
		Loosely screw the other 90 degree hose end onto the catch can top fitting.	
22	Hose Cutter	Mock up the 5/8" hose by routing it from the fitting on the valve cover to the fitting on the catch can. Leave some slack for engine movement. Cut the hose to length.	

23		Lightly oil the hose end barbs and push them into the hose.	
		Install the hose and tighten the hose ends to the valve cover fittings and catch can.	
24	Flat head screwdriver	Install the air filter to the catch can side port and tighten the hose clamp.	
	14mm Socket	Install the strut bar. NOTE: to check catch can contents, the dipstick may interfere with the strut bar, depending on the brand.	
25		The crankcase vent hose (shown in picture) can be addressed several different ways.	
		1. Leave as-is from the factory, connected to the turbo air inlet.	
		2. Remove the hose and cap both the valve cover barb and the turbo air inlet barb using the included rubber caps.	
		3. Route the crankcase vent hose to a catch can in either open (VTA) or closed (recirculated) configuration.	
		<b>Installation Complete</b>	