

ROTO-FAB®

The Fastest Name in Air Intakes®



2016-19 Cadillac CTS-V Big Gulp Series® Cold Air Intake System Installation Instructions

For part #
10161082

2016-19 Cadillac CTS-V Cold Air Intake System Parts List

IMPORTANT - Due to increased air flow, this system requires a tune specific to your vehicle. Do not attempt to operate vehicle without proper tuning.



Component	Qty.	Tools/items needed
1) Air box assembly	1	
2) Hood Seal	1	
3) Inlet elbow	1	
4) Air filter	1	7 MM socket
5) 5" hump hose	1	8 MM socket
6) 5" - 4 1/4" step hose	1	10 MM socket
7) 1/2" NPTx5/8" hose 90	1	1/4" socket
8) 1/2" NPTx3/8" hose 90	1	T15 torx bit
9) Small hose clamps	2	Pliers or sidecuts
10) 3/8" ID hose	1	Small screwdriver
11) Breather adapter fitting	1	Philips screwdriver
12) M4x.7x8mm philips MAF screws	2	Lubricant
13) 120-140 mm hose clamps	3	
14) 100-120 mm hose clamps	1	
15) Cable ties	6	

*Some components will be pre-assembled
This product has not been CARB tested*

In the trunk, remove the battery access panel on the driver side vertical wall. Using a 10 mm wrench, disconnect the negative terminal block. See ill. 1.

Remove the engine cover by lifting the front to disengage both front mounts, then lift one side at a time in the rear to disengage the two rear mounts. See ill. 2

Disconnect the breather tube using your index finger. Fully depress the push release on the back side of the breather fitting, then pull the fitting outward to disengage it. If it doesn't disengage, keep the release fully depressed and try pushing the fitting fully inward then pull out. See ill 3. Use an 8mm socket/driver to loosen the two hose clamps pointed out in ill. 3. Remove the inlet elbow by first disengaging the throttle body, then the air box assembly.

The following steps must be followed carefully.

Do not unplug the MAF sensor. It will be necessary to disengage the three air box mounts to access the MAF mounting screws and the loom holder connected to the lower portion of the air box. Use both hands to pull the air box straight upwards to disengage the air box mounting grommets. Use a T15 torx driver to remove the two screws retaining the MAF sensor to the stock intake housing. Note these screws will **not** be re-used with the Roto-fab system. Carefully pull the sensor straight out of the housing. Do not allow anything to come in contact with the small openings on the sensor. Place the sensor as shown in ill. 4 for safe temporary storage until re-installation.

Use a pry tool to disengage the cable tie retainer connected to the lower portion of the air box. Warning- the ear of the air box can easily break when prying against it. Once the cable tie is disengaged, remove the air box assembly from the car. One or more of the three mounting grommets may disengage when removing the air box. The front grommet may still be attached to the front mounting stud on the air box. Be sure all three air box mounting grommets are back in their respective mounting holes and fully seated.



ill. 1



ill. 2



ill. 3



ill. 4

Position a supplied #15 cable tie just above the existing retainer going around the two hoses and the A/C line as shown in ill. 6. DO NOT PULL THE TIE TIGHTLY! The cable tie should tighten enough to secure the lines away from the pulley while retaining a gap between the hoses as shown. These hoses must be able to move for motor rock. If overtightened, carefully cut the tie and use another.



Use a #15 cable tie in the barbed area to secure the two lines together as shown in ill. 7. tighten the cable tie while being sure to seat it in the low area of barbs so it doesn't walk forward. Snip the end once secured.



Use a pry tool to disengage the hood latch cable retainer exposed on the vertical portion of the inner fender during stock air box removal. See ill. 8



Locate the #4 filter with clamp. Orient the clamp so the hex head is upward and located as shown in ill. 9. Install the filter onto the 6" end of the MAF housing as shown and tighten the clamp just enough to keep the filter in location.



In the engine bay, apply a small amount of dish soap or similar lubricant to each of the three air box mounting grommets.

To install the air box assembly in the car, position the air box exactly as shown in ill. 10. The back wall of the air box should be horizontal with the MAF housing outlet pointing downward and towards the center of the car as shown. As a reference, your right thumb should be on or near the “Roto-fab” logo.

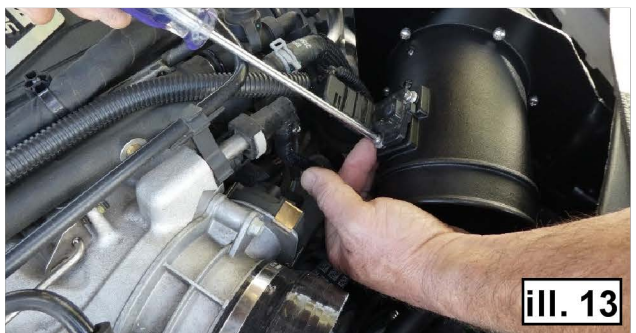
Rotate the assembly down and in as shown in ill. 11.

Once rotated into position as shown in ill. 12, align each of the three studs with their respective mounting grommets before engaging any of them. With all three studs properly aligned, press down on the top of the air box to seat the studs in the grommets.

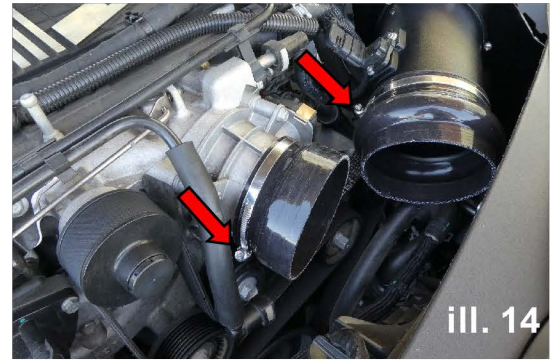
Carefully slide the MAF sensor into the MAF block. Locate the two #12 M4x.7x8mm philips MAF screws.

DO NOT ATTEMPT TO USE THE STOCK SCREWS TO MOUNT THE MAF SENSOR. ATTEMPTING TO DO SO WILL DESTROY THE BRASS BUSHINGS IN THE MAF SENSOR HOUSING.

Using a finger to hold the screw inline with the threaded insert as shown in ill. 13, start one screw then the other. Once both are started, tighten both securely.



Locate one of the #13 100-120mm (smaller) hose clamps and the #6 silicone step coupler. Orient the clamp head as shown in ill. 14. With the clamp over the small end of the hump hose, fully engage the hump hose onto the throttle body. Locate the clamp within the clamping surface of the throttle body making sure some coupler material is still revealed outside the hose clamp band as shown. Be sure the clamp is located in this manner on the bottom as well. Tighten the clamp securely. Do not overtighten.



Locate the #5 silicone hump hose coupler and one of the #13 120-140mm (larger) hose clamps. With the clamp head oriented as shown in ill. 14, slide the clamp and coupler over the end of the MAF housing. Locate the clamp as shown in ill. 14 and tighten in position. Again, be sure some hose material is exposed beyond the clamp all of the way around. Do not overtighten.

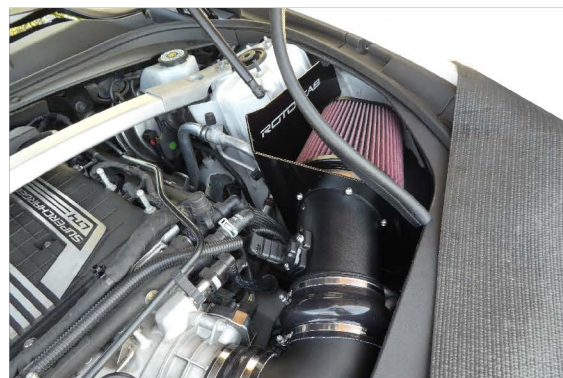


Locate the remaining #14 (smaller) clamp. Slide it over the end of the step hose on the throttle body with the hex head oriented the same as the existing clamp. Locate the remaining #13 clamp and slide it over the end of the hump hose coupler. Locate the #3 inlet elbow assembly. Engage inlet elbow into hump hose on MAF housing. Next, engage the other end of the inlet elbow into the step hose by pushing the inlet elbow straight down onto the throttle body step hose, folding the top of the hose down and engaging the bottom of the hose. See ill. 15.) Use a hook tool or pocket screwdriver to work the hose onto the elbow, then press inward firmly to fully engage the step hose. **Do not tighten hose clamps at this time.**

After elbow is fully engaged into the step hose, check for proper alignment of the inlet elbow. Specifically, check the clearance of the breather boss on the elbow from the fan shroud protrusion. If less than 1/2", roll the elbow downward slightly to increase the clearance to 1/2". **You must have 1/2" clearance in this area.** Tighten the remaining 2 hose clamps following the same clamping instructions as the first 2 clamps. For the Magnuson elbow, be sure the clamp fully engages on the round portion of the tube, not the flat. Inspect the bottom of all 4 hose clamps to ensure proper engagement all the way around.

Re-connect the breather fitting by engaging and pushing inward until you feel it "click" into position. Pull outward to ensure it is locked into place. Remove the shop rag at this time.

Locate the #2 hood seal. **Important-the hood seal must fully seat on the air box. If the hood seal contacts the filter flange during installation, loosen the filter and slide it back just enough to allow the hood seal to seat properly. Be sure to re-tighten the filter clamp.** Starting at the front edge and butting up to the radiator shroud, install the seal onto the top edge of the air box. Push downward firmly to seat the seal as you go. Once installed, double check the entire hood seal to be sure it is fully seated.



Check all the way around each hose clamp to ensure proper seating and be sure the clamps are tightened properly. Double check the breather connection. Re-connect the negative terminal on the battery and re-install the battery access panel. Re-install the engine cover by aligning the studs, then pushing downward to seat all mounts. Congratulations. Your installation is now complete! All clamps should be checked for tightness after a few drive cycles and periodically thereafter. Inspect all clamps for tightness at each oil change. Inspect the filter approximately every third oil change-more often in dusty climates.



Customer feedback and reviews have always been our greatest marketing asset. Please share your experience with us.

**On instagram @rotofab
Find us online @ www.facebook.com/rotofab
Visit our website at www.roto-fab.com**