

# **ROTO-FAB**

***The Fastest Name in Air Intakes!***



## **2016-up Camaro Big Gulp Series Cold Air Intake Installation Instructions**

For part #

**10161074**

**10161076**

**10161077**

# 2016-up Camaro Big Gulp Series CAI Parts List

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



**IMPORTANT- The hardware for this kit assumes you have an aftermarket 4 1/4\" OD throttle body. Applications with 4\" throttle body require an adapter sleeve PN 10132004 available separately.**

1) Air box assembly	1
2) MAF sensor housing	1
3) Inlet elbow	1
4) Air filter	1
5) 5\" hump hose	1
6) 5\" - 4 1/4\" step hose	1
7) small hose clamp	1
8) 3/8\" ID hose	1
9) 1/2\" NPTx3/8\" hose 90	1
10) 1/2\" NPTx5/8\" hose 90	1
11) Flanged hood screw (ZL1 only)	1
12) M4x.7x8mm philips MAF screws	2
13) 100-120 mm hose clamp	1
14) 120-140 mm hose clamps	3
15) Cable ties	6
16) Lower bulb seal with angle cut	1
17) Hood seal	1

## Tools/items needed

7 MM socket  
8 MM socket  
10 MM socket  
1/4\" socket  
T15 torx bit  
Pliers or sidecuts  
Small screwdriver  
Philips screwdriver  
Lubricant

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

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

Air Intake Removal may vary depending on your current components. The following assumes you are removing the stock intake.

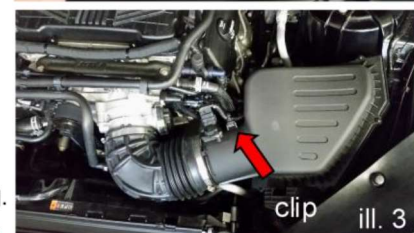
Disconnect the breather tube using your index finger. Fully depress the push release on the back side of the breather fitting, then pull the fitting outward to disengage it. See ill. 2.

Do not disconnect the MAF sensor. Use a pry tool to disengage the loom retainer clip just outboard of the MAF sensor. While gently prying upwards, use your other hand to pull upwards on the clip. See ill. 3.

Use a T20 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 an 8mm socket/driver to loosen the two hose clamps on the stock inlet elbow. Remove the inlet elbow by first disengaging the throttle body, then the air box assembly.

Use a pry tool to disengage the cable tie retainer shown in ill 5. Warning-the ear of the air box can easily break when prying against it. For better working access, use both hands to pull upwards on the air box to disengage it from it's mounting grommets. 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.



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 just before the protective sheath to secure the two lines shown in ill. 7. Do not pull tight. Leave appr. 1/8" gap between the two lines. Snip the end once secured.

**The following step is for ZL1 only.**

On the hood, use a 10mm driver to remove the bolt shown in ill. 8. Replace the bolt with the #11 M6 black buttonhead flanged bolt. Use a 4mm hex wrench to secure.

Remove the small breather fitting from the stock inlet elbow shown in ill. 9. The small clamp can be removed by using a small screwdriver to pry up on the end or tail of the clamp. Once you have access to the tail, grasp with sidecuts or pliers to pull upwards in a twisting motion while pulling fitting outwards. Set the fitting aside for re-use.

Locate the #1 air box assembly and the #16 bulb seal with angle cut. Starting from the bottom as shown in ill. 11, install it on the large radius. Push firmly to be sure it is completely seated.



ill. 6



ill. 7



ill. 8



ill. 9



ill. 10

Locate the #5 - 5" black hump hose coupler and one of the #14 120-140mm hose clamps. (largest clamp) Slide the clamp over the end of the MAF housing with the head pointing upwards as shown in ill. 11. Fully engage the hump hose coupler onto the MAF sensor housing. Align the clamp head with the sensor mounting block. Tighten. Do not overtighten. **IMPORTANT-with all coupler connections, be sure there is coupler material on both sides of the clamp band.** Take extra care to inspect the bottom side of all clamp joints to be sure of this as well. Don't clamp flush with the end of the hose as the crush within the hose aids in hose retention. To retain stock breather configuration, Locate the #9 - 90 degree fitting, #8 3/8" OD x 1 11/16" long fuel hose and the #7 5/8" hose clamp.



ill. 11

You will also need the breather adapter previously removed from the stock inlet elbow. Assemble as shown in ill. 12 making sure the fittings fully engage the hose. Note the 90 degree fitting doesn't require a hose clamp. Use a 1/4" socket to tighten the hose clamp onto the stock breather adapter. Locate the #3 inlet elbow. Install the breather assembly into the brass fitting on the elbow. Note the fitting is NPT (tapered pipe thread) and not designed to bottom out. Once hand tight, tighten one more revolution and line up with the alignment mark on the tube.



ill. 12

Locate the #3 inlet elbow. Install the breather assembly into the brass fitting on the elbow. Note the fitting is NPT (tapered pipe thread) and not designed to bottom out. Once hand tight, tighten one more revolution and line up with the alignment mark on the tube.



ill. 13

Locate a #14 120-140 mm hose clamp and slide it over the #5 hump hose with the clamp head aligned with the MAF sensor block. Insert the #3 inlet elbow into the hump hose with the 90 degree breather fitting located on the bottom and away from the hump hose. Do not tighten the hose clamp at this time.



ill. 14

**This step assumes you have an aftermarket 4 1/4" OD throttle body. For 4" TB, see "sleeve installation" instructions**

Locate the #6 - 5" to 4 1/4" step hose and the #13 100-120mm hose clamp.(smaller clamp) Slide the hose clamp over the throttle body with head facing upwards as shown in ill. 15. Fully engage the step hose onto the throttle body. Locate the hose clamp as shown and tighten. Be sure to check the bottom side to be sure the hose clamp is properly located. Do not overtighten.



ill. 15

Slide the remaining #14 hose clamp over the step hose on the throttle body. On the car, lubricate all 3 of the rubber air box mounting grommets in preparation for air box assembly installation.

At this time, the #1 air box assembly, #5 hump hose, #3 inlet elbow, and 2 hose clamps should be ready to drop into the car as one unit. Place a shop rag in the area shown to prevent scratching of the CAI components. (see ill. 16)

Refer to ill. 16 and 17 for air box assembly installation. Drop air box into place, making sure the air box tab (red arrow) clears the factory mounting support (yellow arrow).

Then push 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. 17) Use a hook tool or pocket screwdriver to work the hose onto the elbow, then press inward firmly to fully engage the step hose.

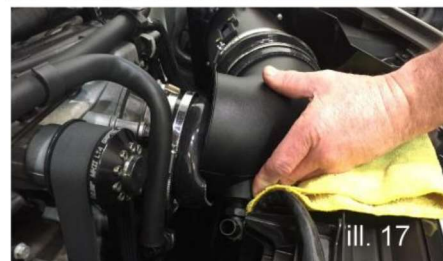
**Do not tighten hose clamps at this time.**

After elbow is fully engaged into the step hose, seat air box mounting studs into the rubber mounting grommets in this order: Upper front grommet, lower rear grommet, and lastly, the upper rear grommet. Once the air box is fully seated, 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.

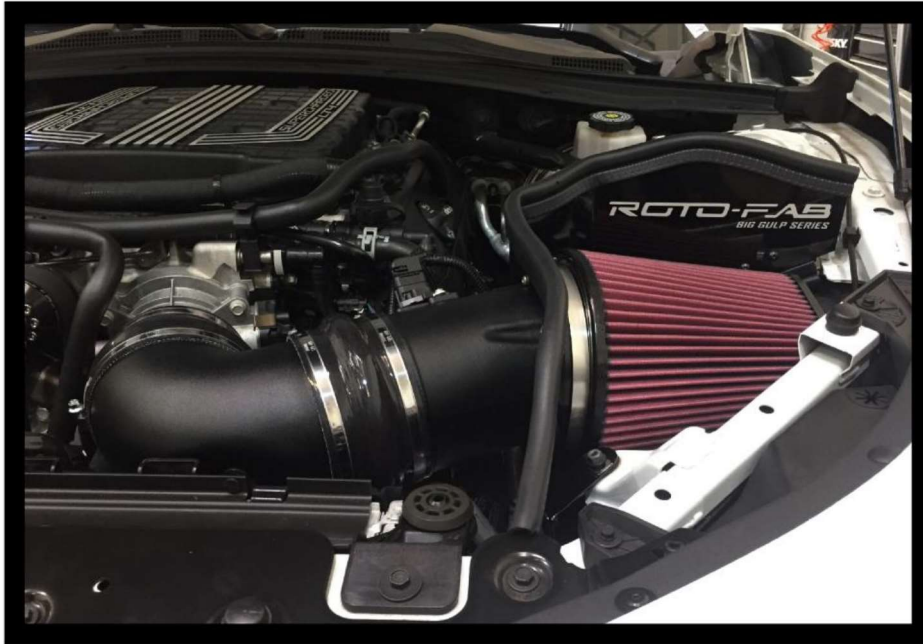
Carefully slide the MAF sensor into the mounting block. Start the top screw, then the lower screw. Insert your philips screwdriver under the breather hose to achieve proper alignment with the screw. Tighten both screws securely.



Locate the #17 hood seal. Starting from the front, engage the top edge of the air box and continue to work towards the opposite corner. Press down firmly to ensure the seal is fully seated through its entire length. Locate the #4 air filter. Orient the clamp so the screw head will be facing upwards when located as shown in ill. 18. Engage the filter onto the clamping surface until the filter flange is contacting the top air box seal. Rotate the filter as necessary to clear the chassis and ensure the filter is not placing excessive downward pressure on the inner fender. (It may be resting on the inner fender.) Use an 8mm driver to tighten the filter clamp.

Check all the way around each hose clamp to ensure proper seating of the hose clamp. Check to be sure all hose clamps are tight. Be sure the shop rag has been moved away from the engine compartment.  
Re-connect the negative terminal on the battery and install the battery access panel.

Congratulations, your Big Gulp CAI install is now complete! **Be sure the car is properly tuned before operating.** All clamps should be checked for tightness after a few drive cycles and periodically thereafter. Inspect hose clamps for tightness at each oil change. Inspect the filter approximately every third oil change-more often in dusty regions.



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