ROTO-FAB

2016-up Camaro SS Cold Air Intake System Installation Instructions

For part #

10161048
10161049
10161050
10161051

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2016-up Camaro SS Cold Air Intake System Parts List

IMPORTANT- The air straightener is precisely located in the MAF housing and is not servicable. Never tamper with the four buttonhead screws retaining it. Tampering will result in poor performance and void the warranty.

Component	qty
1) Air box assembly	1
2) MAF sensor housing	1
3) Inlet elbow	1
4) Air filter	1
5) Air box flange	1
6) 10-32 SS philips screws	5
7) M4 SS philips MAF sensor screws	2
8) 4 1/2" hump hose coupler	1
9) 4" to 4 1/4" step hose coupler	1
10) 4 1/4" 100-120mm hose clamps	2
11) 4 1/2" 110-130mm hose clamps	2
12) 1/2" NPT x 5/8" hose barb fitting	1
13) 5/8" ID hose, 2 1/4" long	1
14) Hood seal 44 3/8" long	1
15) 1/16" allen wrench (not pictured)	1

Tools/items needed

7 MM socket
8 MM socket
10 MM socket
T20 torx bit
Pliers
Small screwdriver
Philips screwdriver
Lubricant (Windex)

This product is not CARB compliant

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)

Using pliers or channel locks, squeeze the two ears together on the clamp retaining the sound enhancer hose.
While squeezing the clamp, rotate the hose back and forth to help disengage it from the fitting. (see ill. 2)

Disconnect the PCV breather line connected to the top of the PCV reservoir by fully depressing the gray release mechanism as shown. (see ill. 3) Pull straight upward while the release mechanism is fully engaged.

Disconnecting the MAF sensor harness from the sensor is accomplished by disengaging the release mechanisms on the bottom side of the connector. Ill. 4 shows the bottom side of the connector. Disengage by first pulling outward on the red retainer. You should feel the retainer slide rearward away from the sensor approximately 1/4". Next fully depress the center retaining mechanism and pull reward to disconnect.

On the rear of the stock air box a few inches below the oil fill cap, pull the release tab on the tube retainer to free the sound tube from the air box.

Using an 8 mm socket, loosen the hose clamp retaining the inlet elbow to the throttle body. Remove the entire air intake assembly by grasping the air box as shown in ill 5 and pulling upwards. 3 studs and grommets retain the air box. Free the rear outboard stud first where the right hand is grasping the box. Upon removal, one or more rubber grommets may come out with the air box studs. All three of the grommets are used with the Roto-fab system, so re-install them in their respective mounting holes on the chassis.

On a work bench, use a T20 torx bit to remove the two screws retaining the MAF air flow sensor. Place the sensor in a clean, safe place until it is re-installed. IMPORTANT-start the screws back into their original holes for safe storage as they will NOT be re-used. (see ill 6)

ill 6

Remove both the 90 degree fitting for the sound tube and the PCV reservoir from the stock intake system. (see ill 7)
Do so by using a small screwdriver to pry the tail of the clamps upwards. The clamps will not be re-used. (see ill. 8)

ill 7

Roto-fab intake pre-assembly

Locate the #3 inlet elbow, the #12 1/2" NPT x 5/8" hose barb 90 degree fitting and the #13 hose, 5/8" ID x 2 1/4" long. Install the fitting into the bottom of the inlet elbow. Tighten until snug, then tighten one more revolution until the barb straight section is aligned with the scribe mark on the fitting boss. The fitting has tapered threads and is not designed to be bottomed out (see ill. 9)

ill 8

Locate the PCV reservoir previously removed from the stock intake. Fully engage the #13 hose onto the horizontal barbed nipple on the reservoir. With the open nipple pointing straight upwards, fully engage the other end of the #13 hose onto the barbed end of the #12 fitting on the inlet elbow. (see ill. 9)

ill 9

Locate the 90 degree sound tube fitting previously removed from the stock intake system. IMPORTANT Place a small amount of lubricant on the *short* end of the fitting. Install the short end into the grommet on top of the inlet elbow as shown. Rotate the sound tube elbow back and forth while pushing downward to ensure it is fully engaged into the grommet. (see ill 10)

ill 10

Locate the #1 air box, the #2 MAF sensor housing, the #5 air box flange and the (5) #6 philips 10-32 screws. Note the air box flange has a "T" stamped on it. During assembly, the "T" will be located to the top and against the air box surface.
Place the MAF sensor housing in the air box and insert it through the large hole with the MAF sensor block inserting through the relief cut area. With the "T" to the top and facing *towards* the air box, Install the air box flange over the end of the MAF sensor housing and rotate it so the "T" is to the top and against the air box. Rotate the MAF sensor housing so it is in the position shown. The MAF block itself is in about the 10 o'clock position as viewed from the small end of the MAF housing. (see ill. 11) Start one of the five screws through the flange and air box and into the top insert in the MAF sensor housing. Start a second screw in the bottom hole. Start the remaining 3 screws. Once all five are started, snug all five, then tighten. Do not overtighten.

Locate the #8 4 1/2" ID hump hose and one of the #11 hose clamps. This is one of the larger clamps stamped 110-130mm. Orient the clamp as shown and slide it onto the end of the MAF sensor housing. Fully engage the hump hose onto the end of the MAF sensor housing so it is butting up to the raised hose retainer. Orient the clamp so the screw portion aligns with the MAF sensor block and with the screw head facing upwards. Tighten the clamp. Do not overtighten. The clamps are non-perforated and can strip if over tighened.

Locate the (2) #7 M4 MAF sensor screws. DO NOT ATTEMPT TO RE-USE THE STOCK MAF SENSOR SCREWS. Carefully install the MAF sensor into the housing as shown noting the threaded holes will align in only one direction. Start both screws, then tighten both securely.

ill 11

Locate the #9 4"- 4 1/4" step hose coupler and one of the smaller #10 hose clamps with 100-120MM stamped on it. Orient the clamp as shown. Fully engage the small end of the coupler onto the throttle body. Be sure the coupler is engaged on the bottom side of the throttle body. Tighten the clamp while positioned as shown with the 7mm head facing upwards. (see ill 12)

ill 12

The air box installation must be done in this sequence to ensure proper fit. Start by fully engaging the front stud only. (see ill 13) Once the front stud is fully engaged, reach inside the air box inlet and push the factory rubber inlet up over the top lip of the air box entry. Next, allow your hand to slide upwards about 2" where you will feel a horizontal surface on the air box. Lift upwards on the horizontal surface to allow the bottom of the air box entry to engage the factory rubber inlet. The air box inlet actually enlarges the factory rubber inlet, so be sure the rubber is properly seated around the air box inlet. Next, visually align the lower air box stud on the motor side and engage it into the lower grommet. Looking from over the fender, align the upper outboard stud with it's grommet. Once aligned, push downward to engage the grommet.

ill 13

Locate the air filter and filter clamp. Orient the clamp head as shown with the head facing upwards. Install the filter by tilting as shown and engaging the top of the mounting flange. With the top fully engaged, push the filter down and in to fully engage the filter mounting flange. Tighten the clamp. Do not overtighten. (see ill. 14 & 15)

ill 14

ill 15

Locate the two remaining hose clamps. Slide the smaller one over the step hose on the throttle body with the clamp oriented the same as the existing clamp. Slide the larger clamp over the end of the 4 1/2" hump hose. At this point we recommend placing a towel or shop rag over the fan shroud to prevent scratching the inlet elbow during installation. Apply a small amount of lubricant around the lip of the inlet elbow ends. Start installation of the elbow by engaging the top of the hump hose first. Next, push down and in to fully engage the hump hose. (see ill. 16) Engage the step hose with the top first. Fully engage the step hose making sure the bottom engages completely. Adjust the engagement of the inlet elbow to the hump hose to achieve optimum alignment.

ill 16

Align the remaining two loose hose clamps and tighten being careful not to overtighten. Be sure all of the clamps have hose coupler material on each side of the band. Do not locate a hose clamp flush with the end of a coupler as it is subject to slip off of the coupler during driving.
With your right hand, reach under the MAF housing to support the PCV reservoir. With your left hand, engage the PCV line onto the reservoir. You should feel it snap on. Check to be sure it is fully engaged.
Re-connect the MAF sensor harness connector. You should feel it snap as it engages. Push the red retainer inwards to the locked position.
Using your pliers, re-connect the sound tube hose to the small elbow. Be sure it is fully engaged. Reconnect battery and install battery access panel.

Congratulations, your installation is now complete! All clamps should be checked after a few drive cycles and periodically thereafter. Tighten as necessary. Your air filter will last for the life of your vehicle with periodic service. The service technique will depend on whether you have a dry or oil filter.

Red badge option-a red "Roto-fab" vinyl graphic is included in case you prefer the red "Roto-fab" logo on your air box. Also included is a 1/16" allen wrench which fits the buttonhead screws retaining the badge logo. Remove the badge noting the location of the washers. Follow the included vinyl graphic installation instructions to affix the graphic to the bare side of the badge. Tighten the lock nuts only enough to secure the badge. Do not overtighten as they will sink into the air box wall or break.