

Instructions For NPP-In-A-Box Install For 5th Gen Camaro LS3 To Use With ZL1 Or NPP Dual Mode Exhaust.

Before we begin we must understand there are a couple of main points to the installation.

- ☐ Find vacuum source
- ☐ Install power and ground wires to NPP-In-A-Box
- ☐ Run vacuum line and NPP-In-A-Box to rear of vehicle
- ☐ Run vacuum line from NPP-In-A-Box to actuators on mufflers

First, we will need to establish your engine type, naturally aspirated or forced induction. If you are naturally aspirated or using turbo you can get your vacuum from the back of the intake manifold and if you are supercharged you can get your vacuum from the supercharger boost hose.

Naturally Aspirated

If you're getting your vacuum source from the back of the intake manifold follow the below steps in order to do so.

Remove the oil filler cap and then the engine cover (pops right off) .

Locate the vacuum ports on the rear of the intake manifold (see picture) it's tight and small hands are a plus. The large port towards the driver side is for the brake booster. Towards the passenger side there is a smaller port with a plastic T shaped cap, this cap must be removed.

The best way to do this is with a twisting motion, so just twist it off as you would a soda cap. You can also use a hacksaw blade or hobby knife to cut it off (see red Line).



Next you want to hook the vacuum hose up to the back of the intake manifold. If you're looking at the firewall on the driver's side there is a hole right above the positive battery cable (where it runs out the firewall) where there is a grommet. You remove the grommet and this gives you access to getting inside the vehicle. You can choose to do this two different ways. You can either hook the vacuum hose up to the nipple that you've removed the tab from and route the hose across the firewall to the driver's side firewall grommet and run the extra 20+ feet of hose through that hole, or you can put the hose through the grommet from the interior cabin side to the engine side and then route to the nipple that you've removed the tab from. With the naturally aspirated version there will be no reason to splice the hose as you can run it from the back of the intake manifold all the way to the back of the vehicle in one piece.

Supercharged

If you're supercharged you more than likely have a boost hose inside the vehicle already. Since there are many different ways to install the boost hose or run your boost hose, we are going to start the installation with the hose ran inside the vehicle already and ran to the driver's inside kick panel, below the driver's side of the dash. In my particular application I ran the boost hose from the Magnuson supercharger through the firewall and down to the driver's side kick panel. I then installed a vacuum tee or actually a vacuum "Y" in this case. The hose coming from the supercharger connected to one end. On the other end I have the boost hose installed and on the last end I have the NPP-In-A-Box vacuum connected. Running the NPP-In-A-Box vacuum hose to the rear starts here for the supercharged applications.

Both Naturally Aspirated & Supercharged Continue Here

On both types of installations we're going to start or continue the installation from the driver's side kick panel, directly below the driver's side of the dash. See photo below.



We will need to remove the driver's side sill trim plate in order to start. Simply pull up easily on each side of the sill trim plate to pop the retainers loose and remove the trim panel. See photo below.



Now the sill trim plate is removed. See photo below.



We now need to remove the driver's side kick panel. For this step you may want to remove the floor mat. When removing the kick panel the floor mat can get in the way. The sill trim plate had to be removed to remove the kick panel. In order to remove the kick panel you simply pull on each side to release the retainers and remove the panel out of

the way. See photo below.

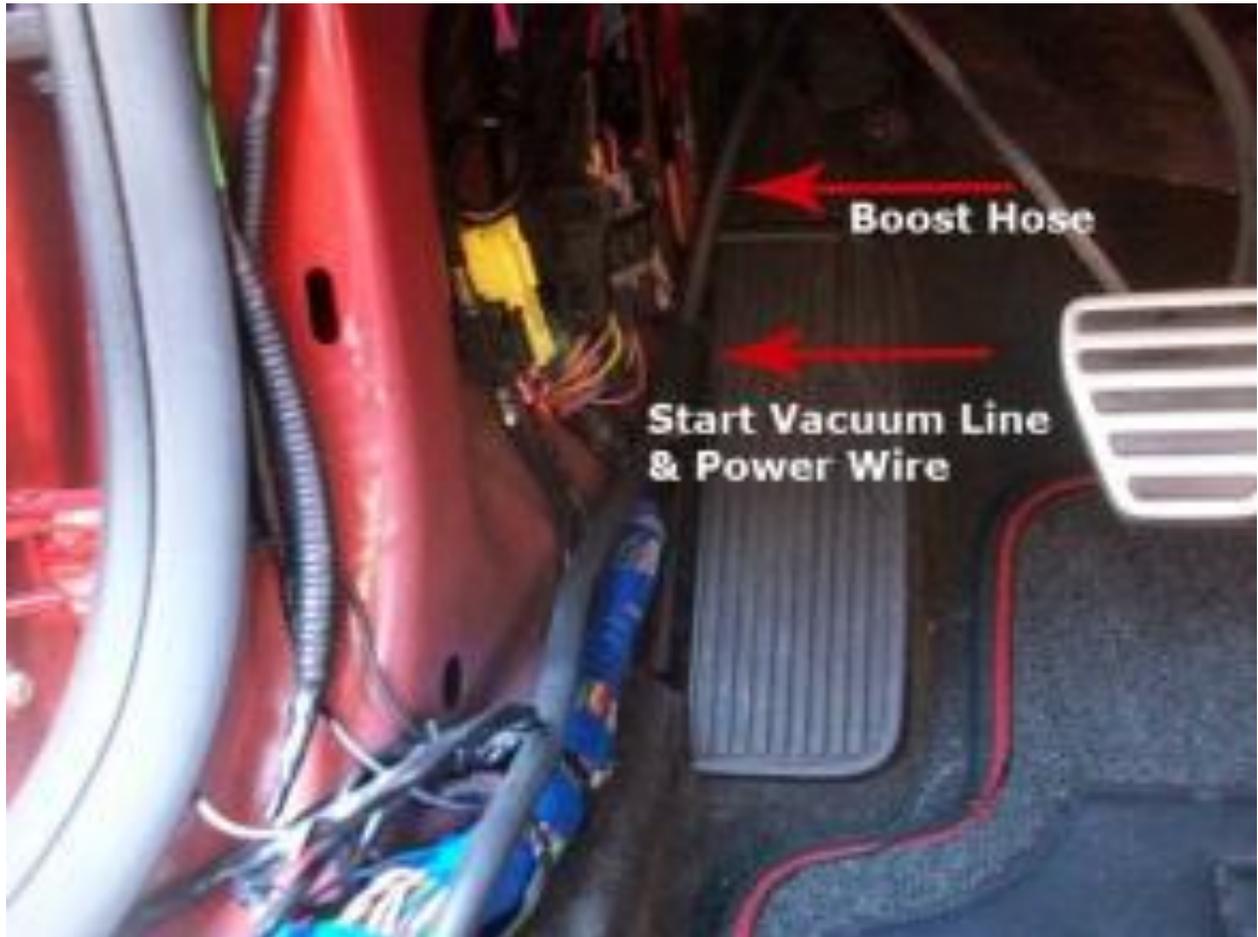


Start Installing Power Wire & Vacuum Line

In this step we will start running the power wire and vacuum line together. Above the driver's side kick panel is the driver's side fuse box. We will be using a switched fuse in the driver's side fuse box to power the NPP-In-A-Box. The NPP-In-A-Box must be hooked up to a switched fuse or it will drain the battery in about a week's time. The rear fuse block located in the trunk in the passenger's side cannot be used for power since none of the fuses are switched. We will not be running a ground wire at this time as we can get ground from the rear fuse block area.

To start, leave a little extra power wire and vacuum hose behind. You want to make sure you have enough vacuum line for the tee and routing and you want to make sure the power wire can reach the fuse

box on the driver's side of the dash with a little extra room. See photo below.



As you'll see in the photo I am doing the supercharged version as I have a boost hose coming from the Magnuson supercharger in the engine compartment. In the photo above you do not see the power wire, as in original testing we were trying the rear fuse block for power, so again, **start the vacuum hose & power wire in this step.**

As you start running the hose and wire you'll see underneath the driver's sill trim plate we removed GM has a runway for the wiring next to the seat to run through. Pop open the tab(s) along the runway and neatly tuck in the vacuum hose and power wire until you reach the end of the runway. Leave the vacuum hose and wire alone at the end of the runway until you remove the rear seat cushion cover. See photo below.



Remove the lower portion, or seat cushion of the rear back seat for the next step. In order to remove the seat there is a tab on each side of the front of the seat in the middle. Pop the tab and this will

release the front of the seat cushion. In about the same place, in the middle of the seat on each side in the rear, there is a hook and wire keeping the seat cushion on in the back. If you pull the seat cushion cover forward a little in the back, you'll see that you have to push the back of the seat cushion down and forward (towards the front of the vehicle) to remove it. Once you remove the seat cushion from the hook and wire you can remove the entire seat cushion cover from the vehicle. See photo below.



Once you reach the end of the runway, continue to run the hose and wire underneath the “B Pillar” or panel behind the driver’s head and door. See photo below.



Once you come out the other side of the “B Pillar” you’ll be in the rear seat back cushion area. Once outside of the runway channel for the wiring GM put in, I started 1/4 wire loom on the power wire. This will keep the wire from getting damaged and causing a short, etc. **In the kit we are providing shielded wire, which means the wire is already protected.** You can choose to just run the shielded wire bare or use wire loom as well. I did not feel loom was necessary for the thick vacuum hose. I also wanted to keep the wire low profile, so you may choose to use larger loom to accommodate both the vacuum hose and wire, but I did not feel this was necessary or would keep a low profile. See photo below for loom and wire photo.



Once the loom is installed over enough wire you can start to run the vacuum hose and power wire across the rear seat cushion area all the way over to the passenger side. I used wire tires to tie the vacuum line and power wire to existing wires. See photos below.







Once you get to the passenger side once you make the turn with the vacuum hose and power wire you'll be able to route and wire tie them to existing wires going around the turn and up over the seat back area. See photos below.





Once you're finished with the above steps it should be routed and look like the photo below. See photo below.



During the next steps, you'll be routing the vacuum hose and wires behind the back seat rear seat back and through the right passenger's side of the vehicle. I do have a custom sound system installed so I will have to photo and describe the next steps for a stock vehicle as best as possible.

Once you have the vacuum hose and wire run all the way across the back seat, under the cushion area, as shown in the photo, you can pull the strap to drop down the seat back portion of the rear seat. With the seat back now dropped, you'll now want to remove the retainer for the rear trim in the trunk on the passenger's side to route the vacuum hose and power wire. See photos below.



Remove Retainer



Once the retainer is removed you'll have access to behind the passenger's side carpeted trim panel in the trunk. For now, let the vacuum hose and power wire in that area. We'll come back to it in a step or two.

Now you'll need to go into the trunk and remove the trim panel that is against the rear panel of the trunk. See photo below.



In order to remove the trim panel all you need to do is remove all six retainers. You would remove them by unscrewing them by hand. These would be the retainers used if you have a cargo net and if you don't that's where the cargo net would go.

At this point you can go ahead and remove the spare tire cover and carpet to help remove the passenger side carpet panel. Next you'll need to remove or just pull back the passenger side carpet panel in the trunk. If you don't have any custom sound system or anything else in this area, it may be easier just to remove it. See photo below.



With the passenger's side trunk carpet panel removed or pulled back, you'll gain access to your vacuum hose and power wire for the NPP-In-A-Box. You'll also be able to see the rear fuse block. See photo below.



We are going to ground the NPP-In-A-Box to the bolt near the rear fuse block. At this point attach your ring terminal to the ground wire of the NPP-In-A-Box and unscrew the bolt near the rear fuse block and install the ground. See photos below.





Since I had a custom sound application I custom mounted the NPP-In-A-Box in a hidden compartment behind an amp in my system. For stock applications I suggest using 3M tape or Velcro to adhere the NPP-In-A-Box to the area behind the passenger trunk carpet or doing some other type of configuration. Photo of mine mounted is below.



Once you have it mounted you can attach the power wire to the NPP-In-A-Box using a butt-connector, solder, etc. **The other end of your power wire will still not be connected to power and laying loose in the driver's side kick panel area.**

So at this point you have your ground wire attached, power wire ran and attached at the box and the large vacuum line ran and attached at the box. If you're a naturally aspirated or turbo application your vacuum connection started at the intake manifold, so all of your larger vacuum connections (engine to NPP-In-A-Box) are complete. For supercharged applications I mentioned how to hook up the vacuum in the beginning with a "tee" or "Y" connector so your larger vacuum connections (engine to NPP-In-A-Box) are complete. You will now need to run the small vacuum line to control the actuators on the mufflers. This is the smaller vacuum line from the NPP-In-A-Box to the actuators

on the mufflers. In my configuration, I had already drilled a hole in the rear pan of my trunk and used a grommet and ran wires

out to my rear bumper for a back-up camera. I ran the small vacuum line out this hole and connected it to the actuators on the mufflers. From reading on the forums and reading how other people installed other items, I suggest you now run the small vacuum line out the grommet for the tail lamps and down to the actuators on the mufflers. See photo below for the grommet location. This will be located behind the passenger side carpeted trim panel you removed in the previous steps.



Since there are different types of rear bumpers, body kits and diffusers, you will need to custom route your small vacuum hose once you get

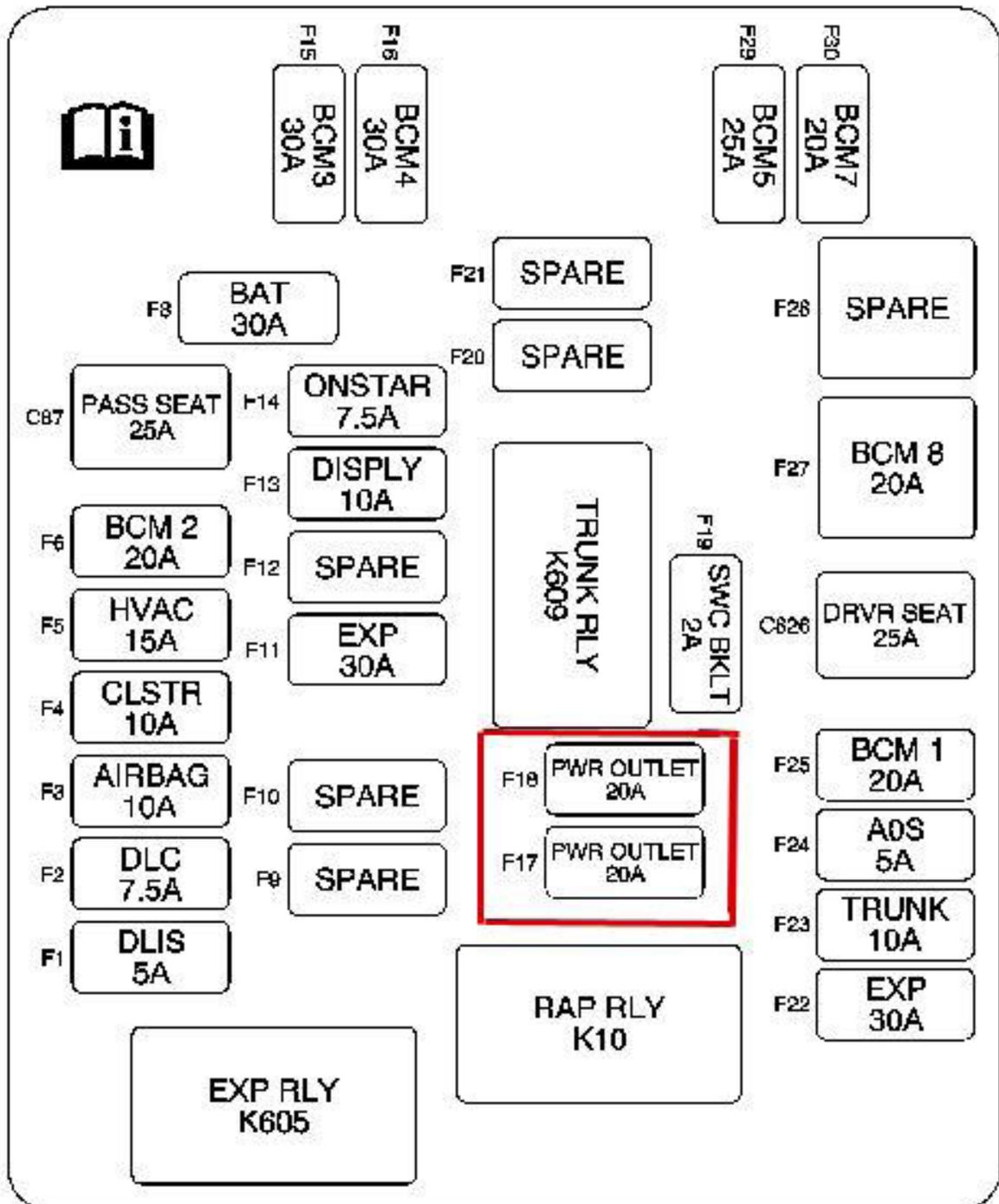
outside the grommet for the rear tail lamps. Since I went out the middle of the rear pan in my configuration, I just installed one tee in the middle and from that tee I ran a hose to each actuator on each muffler. I have the ZL1 rear bumper and all installed so I wire tied the vacuum hoses to the rear diffuser and absorber.

Once you get the small vacuum hose to the actuators on the mufflers, all that's left is hooking up the power wire and in the front near the driver's side dash. At this point I did not re-install any panels in case the system does not work and you have to double check connections or routing. I would not re-install any of the panels until the system works and is fully functional.

Don't forget, before you close up and hide the NPP-IN-A-Box, make sure you have it set to how you want the system to start up. I had to swap the wires so that my exhaust was open when I started the car. The default of the NPP-In-A-Box is to start with the actuators in the closed position. Instructions on how to change the start-up mode are included in the kit.

The last step, for both naturally aspirated and supercharged applications, is hooking up the power wire to the vehicle. You should have the power wire started near the driver's side kick panel. Remove the panel on the driver's side of the instrument panel (dash) to gain access to the fuse block. Once the cover is off the fuse block you can pull the wire from the driver's side kick panel into the driver's side fuse block. The last step is to connect the provided fuse tap to the power wire (crimp and or solder and tape)

and put into one of the switched fuses, #17 or #18. See photo below for fuse location inside the driver's side fuse block on the dash.



Once the power is connected start up the vehicle and check your system to see if it is working. Try to change from open actuators to closed actuators and vice-versa. If the system is working you can now make sure all of your wires are tucked in, organized and wire tied and then re-install your panels and enjoy the system. For supercharged

applications, under boosting, although there is no vacuum, pressure instead, the system does have a check valve installed and the actuators on the mufflers will remain open and closed.