2009-2014 CADILLAC CTS-V

DEDICATED FUEL SYSTEM 00-12030

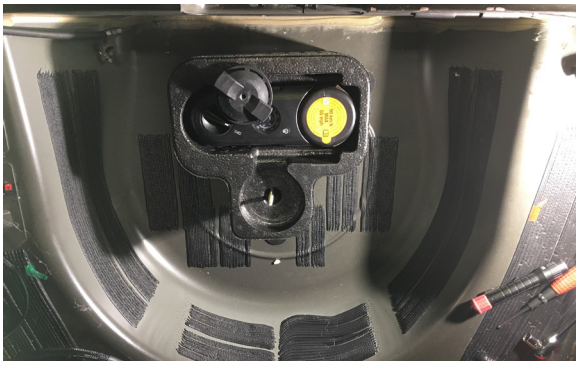
INSTALLATION INSTRUCTIONS

This Nitrous Outlet Dedicated Fuel System is designed specifically for the 2009-2014 Cadillac CTS-V. If you need any assistance during installation or if you have questions about this wiring harness, call our Tech Help Line at (254) 848-4300.

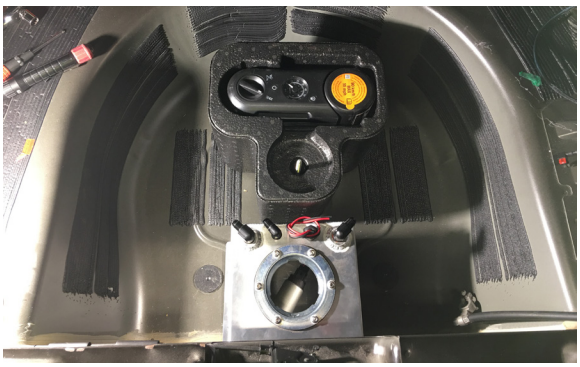
****Parts List is in the back of this Installation Guide****

Tools Needed For Installation:

- Drill
- 5/16” Drill Bit
- 1” Step Bit
- 3/16” Allen Wrench
- 1/2” Wrench
- 5/16” Hex Wrench
- 11/16” Wrench
- 10mm Wrench
- Razor Blade



Step 1:
Open the trunk of the vehicle and remove the carpeting.



Step 2:
Place the dedicated fuel system in the spare tire well of the vehicle. Make sure the fuel tank is in the back center of the spare tire well.

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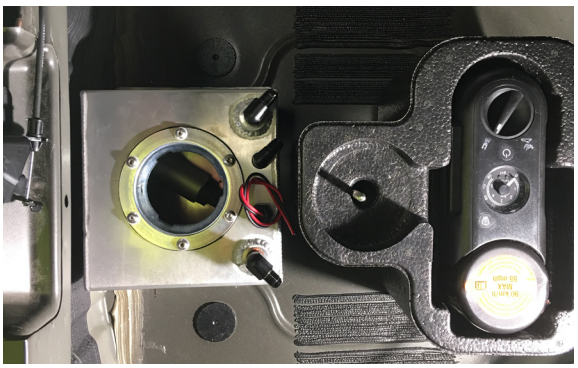
Step 3:
Use a permanent marker to mark the mounting hole locations on the dedicated fuel system.

Step 4:
Remove the dedicated fuel system from the trunk of the vehicle. Then use a drill and 5/16” bit to drill the mounting holes you marked.

Step 5:
Remove any debris from the area with a vacuum cleaner.



Step 6:
Place the dedicated fuel system back into the trunk of the vehicle, and put the mounting bolts into the holes in the base of the fuel system. Once the tank is in its final mountingh location, mark the holes for the feed, return, and vent hoses.

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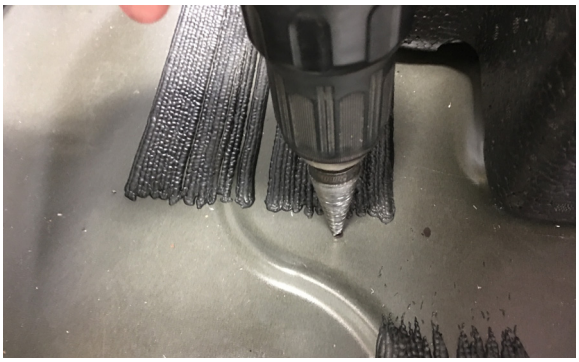
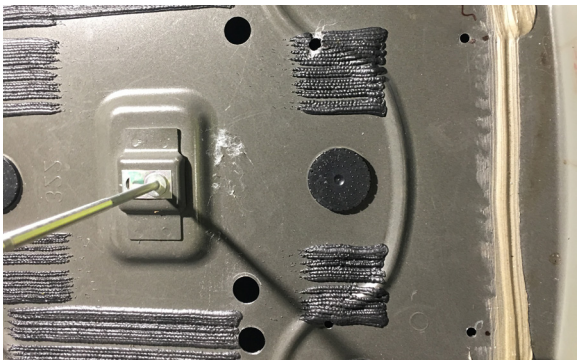


Step 7:
Remove the dedicated fuel system from the vehicle. Use a drill and 1” Step Bit to drill the holes for the feed, return, and vent hoses. The holes will need to be about 1” in diameter.



Step 8:
Use a vacuum to clean any debris from the area.

Step 9:
Place the carpeting back into the trunk.

Step 10:
Locate the holes under the carpet. It may be useful to use a sharp object such as a o-ring pick to punch through the carpet from the bottom of the vehicle. Use a razor to cut small x-shaped holes in the carpet for the bolts and hoses to pass through.

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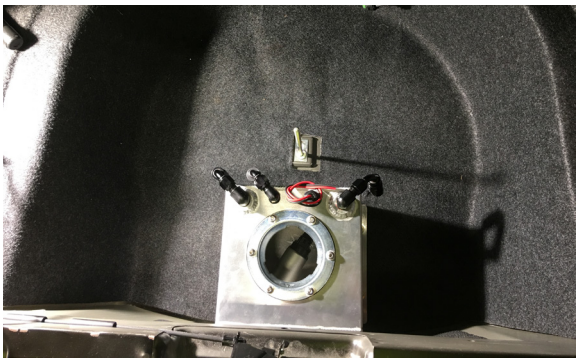
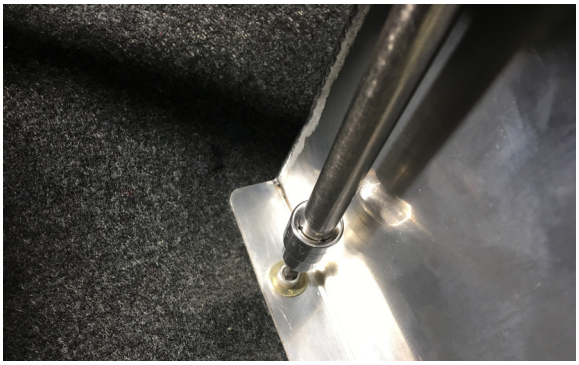
Step 11:
From under the vehicle, install the rubber grommets supplied with your dedicated fuel system into the holes for the feed, return, and vent hoses.



Step 12:
Put the dedicated fuel system back into the trunk of the vehicle.



Step 13:
Use a 3/16” Allen bit to tighten the mounting bolts for the dedicated fuel system. You may need someone to be under the vehicle holding the nut with a 1/2” wrench.

Step 14:
Wrap the end of your fuel hose in tape to keep debris out of the hose. Then starting at the trunk of the vehicle, route the hose through the hole.

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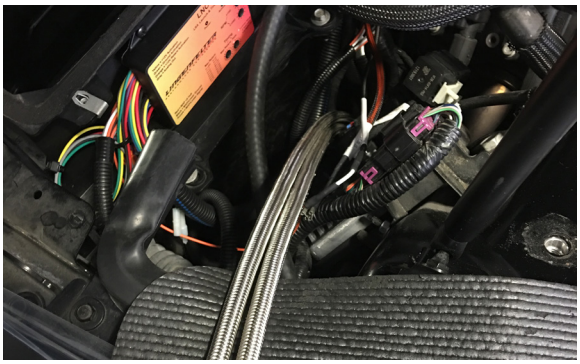
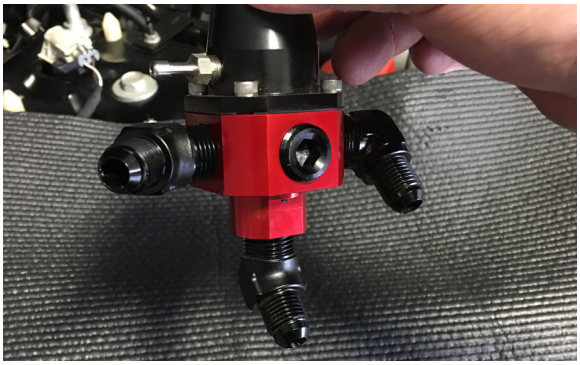
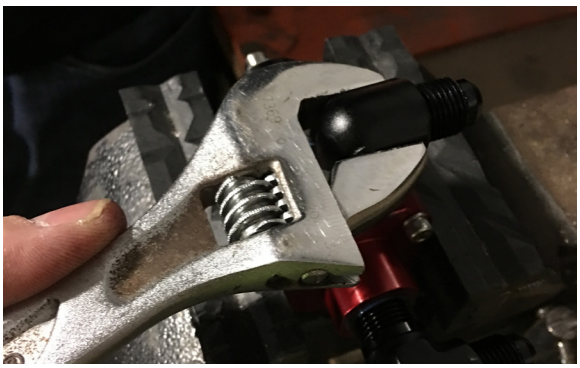
Step 15:
Route the fuel hose under the vehicle. Be sure to stay clear of any moving suspension or exhaust components.



Step 16:
Route the fuel lines along the passenger side frame rail and into the engine compartment. Pull the hose completely though until the end of the hose is near it's mounting location on the dedicated fuel systems tank. Then, cut the hose. Route the rest of the hose through the hole in the trunk and along the first fuel line. When it reaches under the hood, cut it to length. The small section of hose left over will go between the regulator and fuel solenoid.



Step 17:
Place the fittings into your fuel pressure regulator as pictured, then test fit the regulator in its mounting location near the firewall on the passenger side of the vehicle. The 90° fitting on the side of the regulator is for the feed hose to connect to, and the fitting on the bottom of the regulator is for the return hose to connect to. The remaining fitting is where the fuel solenoid will connect to the regulator.



Step 18:
If the regulator clears everything and the fittings line up with the hoses, put a drop of blue loc-tite on the fittings and tighten them down using a crescent wrench or 13/16" wrench. Be sure the fittings are turned to the correct orientation.

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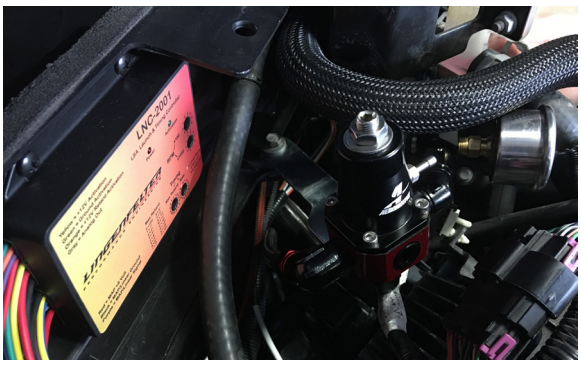
Step 19:
Place the collar on the end of your fuel line.

Step 20:
Spray lubricant on the male side of the hose end.

Step 21:
Tighten the male hose end into the female hose end with two 11/16” wrenches. Repeat steps 19-21 for all of the hose ends.



Step 22:
Flatten the mounting bracket that came with your fuel pressure regulator. The mounting location is the 2nd bolt from the passenger side on the firewall of the vehicle. Remove the bolt with a 10mm wrench. Mount the regulator using the same bolt.

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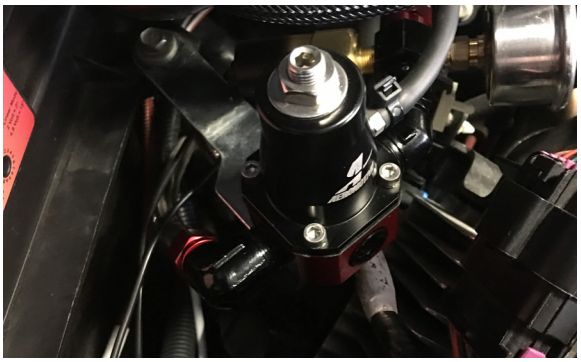

Step 23:
Tighten the feed and return hoses onto the regulator with a 11/16” wrench. Tighten the hoses onto the dedicated fuel systsem with a 11/16” wrench.

Step 24:
Tighten the fuel feed hose from the regulator to the fuel solenoid with a 11/16” wrench.

Step 25:
Your dedicated system is now installed. Use the attached diagram to complete the wiring portion of the installation. After your system is wired, check all hoses and fittings for leaks.

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Sealing Your Fittings

When sealing NPT fittings for your nitrous or fuel system, we recommend using Blue Loc-Tite. If you use Teflon Tape or a liquid Teflon sealant, you risk pieces of Teflon coming loose and entering your nitrous or fuel system. These small pieces can affect the performance of your system or cause damage to your nitrous/fuel system and engine. AN type fittings are self sealing, and do not need any type of additional sealant.

Setting Your Fuel Pressure

Nitrous Outlet jetting recommendations are based on flowing fuel pressure rather than static fuel pressure. This means that in order to set your Fuel Pressure Regulators output pressure, you'll need to set the regulator with fuel flowing through it. When setting the flowing fuel pressure you need to use a Flowing Fuel Pressure Test Gauge. If you or a shop near you doesn't have one, they can be ordered from Nitrous Outlet using part number 00-63010.

Your Aeromotive Fuel Pressure Regulator is capable of running both low pressure (3-20PSI) and high pressure (20-60PSI). Your Fuel Pressure Regulator uses springs to switch between low and high fuel pressure. When you receive the Fuel Pressure Regulator the low pressure spring is installed in it, and the high pressure spring is inside the hardware package for your Dedicated Fuel System. To change the spring inside the fuel pressure regulator, carefully disassemble the regulator using the 4 bolts that hold the top (black) and bottom (red) halves together. Once the bolts are loose, the regulator should come apart easily. Slowly pull the 2 halves apart from each other, paying close attention to how the regulator is assembled. It is imperative that once you change the springs out that you assemble the regulator back together correctly. If it's not assembled correctly, you could have problems maintaining a steady fuel pressure.

Forced Induction Applications

The vacuum fitting located on your fuel pressure regulator does not need need to be used unless you are also running a Supercharger or Turbocharger. In the event that you are using forced induction, this fitting will be for your boost reference. If your nitrous system injects before the Supercharger or Turbocharger (via Nozzle System or Throttle Body Plate System) you will not need to use the boost reference port. However; if you are injecting the nitrous on the boosted side of the Supercharger or Turbocharger (Spray Bar Systems or Direct Port Systems), you will need to use the boost reference port on the fuel pressure regulator. Connecting a vacuum line to the regulator will ensure that as your boost rises, the fuel pressure will rise accordingly. This will keep a steady fuel pressure under boost conditions.

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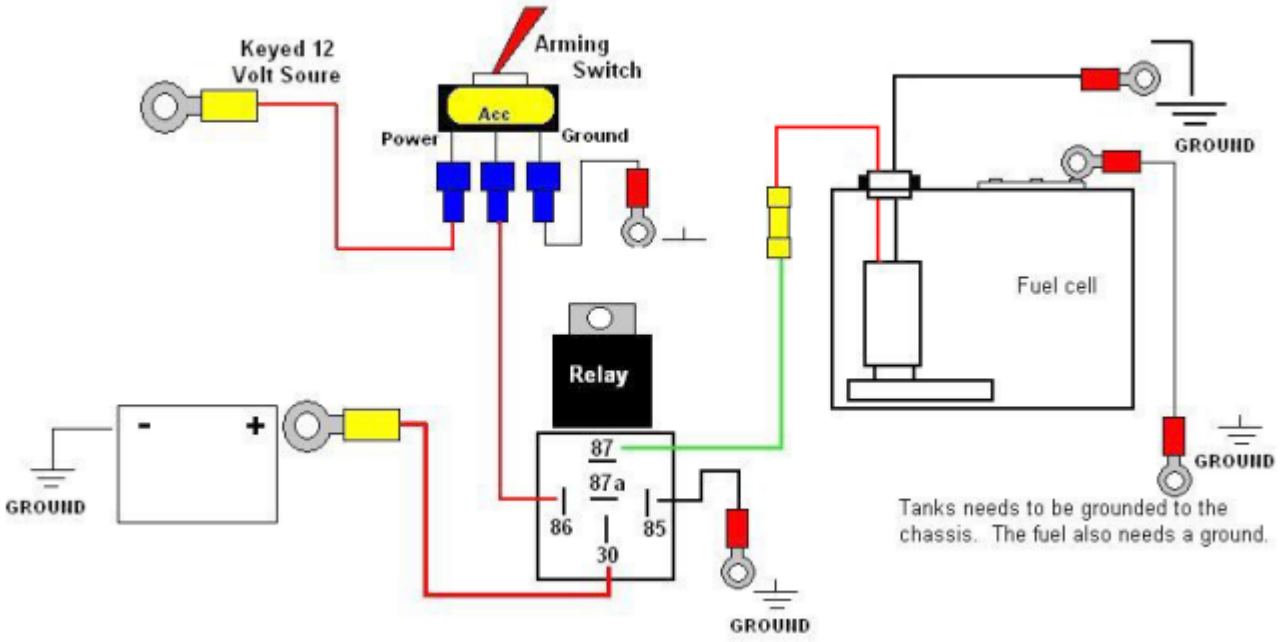
Dedicated Fuel System Wiring Diagram



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Included Parts List:

Fuel Tank w/ Pump
Fuel Pressure Regulator (Low Pressure Spring Installed, includes High Pressure Spring)
2 x 3/8” NPT x 6AN 45°
6AN 45° Hose End
2 x 3/8” NPT Pipe Plugs
1 x 3/8” x 6AN 90° Fitting
3 x 6AN Straight Hose Ends
2 x 6AN 90° Hose Ends
6AN 90° Push-Loc Fitting
1ft 6AN Push-Loc Hose
36ft 6AN Fuel Hose
Relay & Harness
2-Way Deutsch Connector

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