



2016-2019 Cadillac CTS-V3 103mm Plate System

PART NUMBER: 00-10167-CTSV

INSTALLATION INSTRUCTIONS

This Nitrous Outlet vehicle specific plate system is designed specifically for the 2016-2019 Cadillac CTS-V3. If you need any assistance during installation or if you have questions about this plate system, call our Tech Help Line at (254) 848-4300.

Tools Needed for Installation:

- 10mm Deep Socket
- 8mm Socket
- 6" Extension
- Ratchet
- 10mm wrench
- 3/8" Wrench
- 7/16" Wrench
- 9/16" Wrench
- 5/8" Wrench
- 11/16" Wrench
- 13/16" Wrench
- T30 Torx bit
- T45 Torx bit
- T50 Torx bit
- Ratchet
- Body Tool
- Drill
- 3/8" Drill Bit
- Rivet Nut Tool
- Razorblade
- 1-1/16" Hole Saw
- Flat Head Screwdriver
- 5/16" Fuel Disconnect Tool
- 5mm Allen Wrench

*These are the tools required for installation of this kit on a stock vehicle. If your vehicle has aftermarket parts, other tools may be required. *



Step 1 – Vehicle Disassembly and Battery Disconnection

- Slide the passenger side front seat forward.



- Remove two T50 Torx bolts at the rear of the seat tracks.



- Recline the passenger side front seat and slide the seat back before disconnecting the battery.

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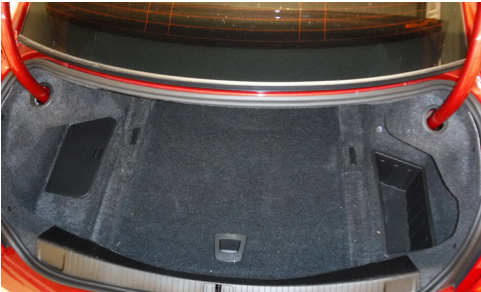
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- Open the trunk of your vehicle.



- Remove the floor/spare tire cover.



- Using a body tool, remove the plastic screw covers located in the center of each cargo D-ring, mounted to the plastic panel at the rear of the trunk.



- Using T45 Torx bit, remove the 2 panel bolts holding the plastic panel at the rear of the trunk.



- Pull the bottom of the panel forward then pull up to remove it from the vehicle.

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- Using a body tool, remove the push pins holding in the driver side trunk panel.



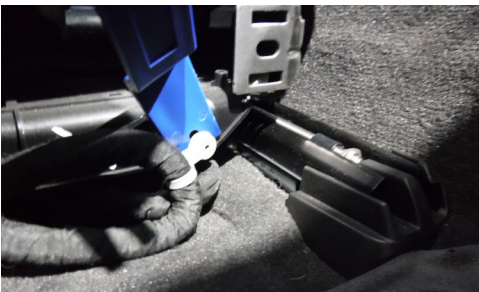
- Remove the panel from the vehicle.



- Using a 10mm socket, loosen the nut and remove the negative battery terminal.



- From the back seat, lift the reclined front seat back and slide the front passenger seat assembly back to remove it from the vehicle. If your vehicle has a power passenger seat, remove the front cover on the front of the seat and disconnect the large yellow plug on the floorboard.



- Using a body tool, remove the plug harness clips from the seat frame.

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- To get the seat belt unbolted lean the seat towards the console and you will see the T50 Torx to loosen. Unclip the spring-loaded connector protector to show the seatbelt sensor. Pull up on the orange safety clip and the connector will come unplugged.



- Slide the seatbelt out and remove the seat from the vehicle.



- Remove the rear seat bottom by lifting up on both sides of the front of the seat. Removing the seat requires considerable force.



- Remove the front door sill trim by pulling it from the retaining clips.



- Remove the rear door sill trim by pulling it from the retaining clips.

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- Roll back the front passenger side carpet in the footwell.



- Using a 10mm socket, remove the hardware holding the electronics panel and remove the panel from the vehicle.



- Drill a 1-1/16" hole, 3.00 inches to the right of the body plug.



- And 5.5 inches down from the electronics panel mounting stud. Install the provided rubber grommet.



- Open the hood and remove the plastic cover on the supercharger by pulling upward and releasing it from the mounting studs. After the nitrous system installation, this cover will no longer fit in the vehicle.

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- Remove the weather stripping on the radiator cover panel by sliding it off the retaining clips.



- Using a flathead screwdriver, remove the radiator cover panel by releasing the pins on each side, then pulling it from the retaining clips.



- Disconnect the PCV hose.



- Disconnect the IAT sensor.

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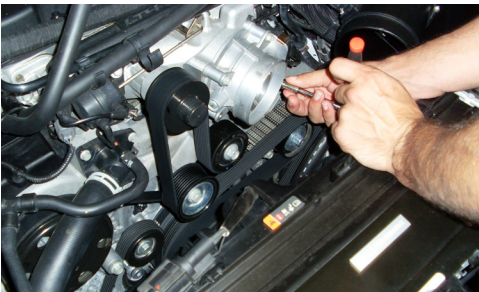
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- Using an 8mm socket, loosen the hose clamps on the intake tube then remove the tube from the vehicle.



- Disconnect the TPS connector.



- Using a 10mm socket, remove the 4 bolts holding the throttle body and remove it from the vehicle.



- Using a 10mm wrench, remove the forward most engine cover mounting stud. After the nitrous system installation, this stud will no longer fit in the vehicle.



Step 2 – Fuel Adapter Installation

- Using a T-30 Torx, loosen the 2 screws securing the driver side plastic valve cover. The screws will not release from the cover.

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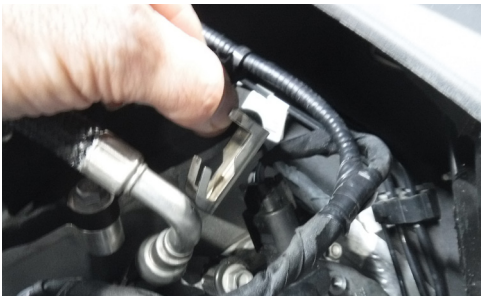
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- On the driver side valve cover, remove the oil cap.



- Remove plastic cover from the vehicle. Replace oil cap to prevent contaminants from getting in the oil system.



- Remove the retainer clip on the fuel supply line.



- Disconnect the fuel supply line by sliding a 5/16" fuel disconnect tool into the base of the connector, push the fuel supply line down allowing the disconnect tool to slide over the fuel line flange, spreading the connector tabs out. Then pull up on hose and tool together and the connection should come loose.

****Note:** The fuel system is under pressure. You will need to absorb the fuel leaking from the pressure with a rag. It is important to make sure the engine and exhaust is free of heat.



- Apply red loc-tite on the NPT threads of the 1/8 NPT Hex Plug then with the fuel adapter positioned as shown, install the plug using a 3/16" Allen wrench.

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- Install the supplied 90° fitting in the fuel adapter by applying red Loctite on the pipe thread end of the 90° fitting and screw it into the side of the adapter body. Tighten using a 3/8" wrench.

****Note:** The 90° fitting should tighten in to place perpendicular to the fuel adapter.



- Install the fuel adapter to the fuel supply line by sliding the female end over the fuel line until it to rest against the fuel line flange. Then slide the fuel adapter nut over the fuel line and thread into the body of the fuel adapter. Using a 13/16" wrench tighten the adapter nut firmly into the adapter body pinching the fuel line flange between.



- Reinstall the vehicles fuel hose by sliding the fuel connector over the male end of the fuel adapter and firmly pushing until the connector locks into place over the adapter flange.



Step 3 – Nitrous Plate Installation

- Make sure that the intake manifold and nitrous plate O-rings are intact and properly seated in place.



- Using a 5mm Allen wrench, install the nitrous plate between the throttle body and intake manifold with the provided 6mm bolts.

****Note:** You should be able to properly read the engraved Nitrous Outlet logo while standing at the front of the vehicle.

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Step 4 – Solenoid Assembly Installation

- Remove the B-nut and ferrule from the straight fitting on the bottom of each solenoid.
- Remove the wiring harness clips on the front of the supercharger.
- Using a 10mm deep socket, remove the studs where the wiring harness was clipped.
- Place the provided 1/8" thick spacer over the stud hole on the front of the supercharger.
- Using a 10mm wrench, install the nitrous and fuel solenoid assemblies by bolting down the bracket with the provided 6mm bolts. The nitrous solenoid will mount on the passenger side of the engine and the fuel solenoid on the driver side.



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Step 5 – Jet Installation

- Install the nitrous and fuel jet into the nitrous plate. The plate is engraved N2O for nitrous jet location and engraved FUEL for fuel jet location.

****Note:** Use the jet card that came with the nitrous system to choose the correct jetting recommendation for your desired horsepower.



Step 6 – Hardline Installation

- Using the hardline with the red b-nut, slide the compression nut and ferrule on the opposite end of the b-nut.

****Note:** The nut slides on first and then the ferrule.



- Holding the nut and ferrule in place slide the hardline into the fuel solenoids exit fitting.



- Finger tighten the compression nut onto the solenoid exit fitting.



- Finger tighten the red b-nut onto the fuel jet holder fitting.

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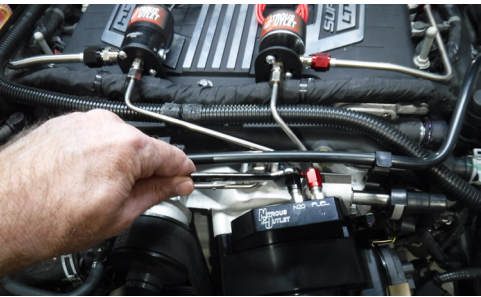
- Using a 3/8" wrench to hold the jet holder fitting and a 7/16" wrench to tighten the fuel hardline b-nut.

****Note:** Do not over tighten the b-nut, it only needs to be snugged.



- Using a 7/16" wrench tighten the compression nuts at the solenoids.

****Note:** Tighten enough for the ferrule to compress.



- Repeat the same steps to install the nitrous hardline.



Step 7 – Fuel Feed Line Installation

- Using the supplied 4AN male union fitting you will need a 7/16" and 9/16" wrench to connect the 7.5" steel braided fuel hose (Red B-Nuts) to the 90° hardline (Red B-Nuts)



- Blow out the fuel line assembly with compressed air and finger tighten the b-nut at one end on the fuel solenoid inlet fitting and the other end of the hose onto the fitting at the fuel adapter.

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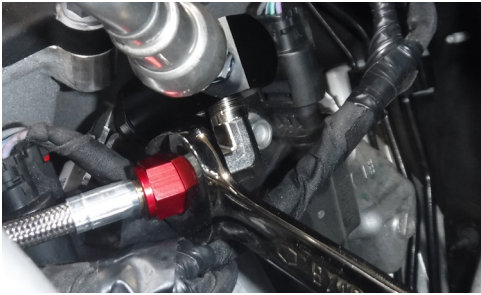
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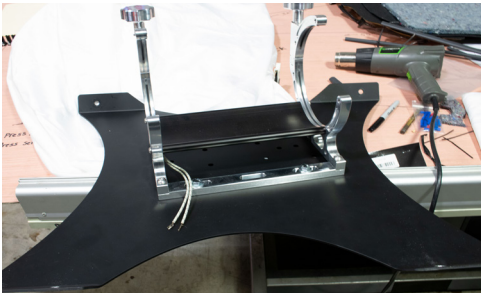
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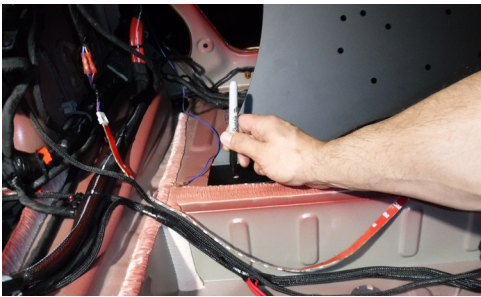
- Using a 9/16" wrench tighten both ends of the fuel line into place.



Step 8 – Bottle Mount Installation

- Due to clearance restrictions this application requires the Nitrous Outlet X Brace Bottle Mount in order to safely mount a nitrous bottle in the trunk area. Part number 00-33009
- Mount the bottle bracket on the bottle mount in the desired location and tighten the bolts with a 7/16" wrench. Be sure and use washers on both the bolt and the nut.

Shown with optional Heated Bracket P/N 00-32018-6



- With the floor/ spare tire cover out of the vehicle, place bottle mount in trunk, centered, with the top of the mount against the rear seat brace and mark the six holes. Remove the bottle mount.



- Check under the area you are drilling to ensure it is clear of any electrical or fuel systems components. If it is clear, use a 3/8" drill bit to drill the holes you marked. Make sure to only drill deep enough to break through the floor of the trunk. Drilling too deep could cause damage to components mounted under the floor.



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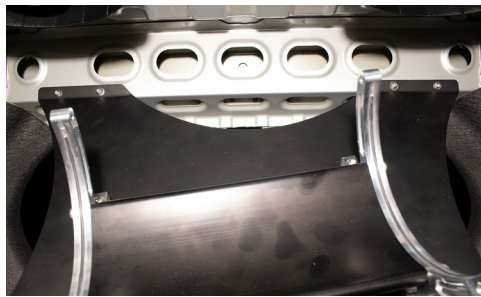
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- Install the 1/4-20 thread Rivet Nuts in the drilled holes.



- Reinstall the floor/ spare tire cover then install the bottle mount using the top 4 bolts only.



- Mark the carpet for slots that the bottle mount will slide through and slide the carpet out from under the bottle mount.



- Using a razorblade, cut a slot between the marks in the carpet.

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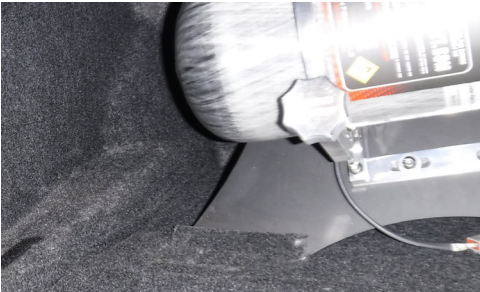
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- Reinstall the floor/ spare tire cover by sliding it under the bottle mount making sure that the bottom tabs of the mount insert into the slots in the carpet.



- Lift the spare tire cover to access the mount tabs under the carpet to install the final two bolts in the Rivet Nuts in the floor of the trunk.



Step 9 – Nitrous Feed Line Installation

- Using tape cover both ends of the 6AN feed line to keep debris from getting in.



- Starting in the trunk of the car, route the hose to the passenger side of the car and under the rear seat back brace.



- Pull the feed line under the rear seat area on the passenger side of the car.

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- Route the feed line along the passenger door sill and under the carpet.



- Then, direct the line through the rubber grommet in the passenger floorboard.



- Route up the firewall, under the engine bay crossbar and up to the nitrous hardline fitting.



- Using the supplied 6AN union fitting and two 11/16" wrenches, connect the 240" steel braided nitrous feed hose (Black B-Nuts) to the 90° hardline (Black B-Nuts).



- Remove the tape from both ends of the feed line and blow the hose out with compressed air.

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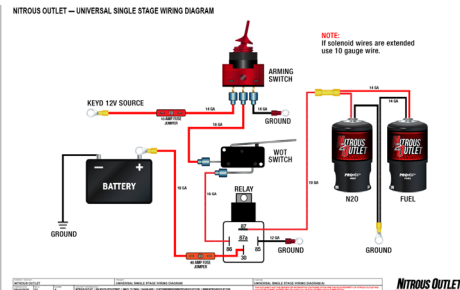
- Using an 11/16" Wrench tighten the main feed line onto the nitrous hardline fitting.



- Using an 11/16" wrench tighten the nitrous hardline onto the nitrous solenoid fitting.



- Mount the bottle and tighten the feed line onto it with an 11/16" wrench.
See attached notes for information regarding bottle mounting.



Step 10 – Wiring

- This step will cross over into the installation of other components you are installing in conjunction with the nitrous system, such as nitrous controller, bottle heater, purge etc. Using the diagrams that came with those components route the wiring.

****Note:** The diagram to the left is a basic system diagram with a WOT Switch. To view a larger diagram, turn to the last page of these instructions, however you should be using a nitrous controller that incorporates a window safety switch with TPS activation



Step 11 – Final Check Over

- Replace the driver side valve cover. Make sure to reconnect the valve cover vent tube.

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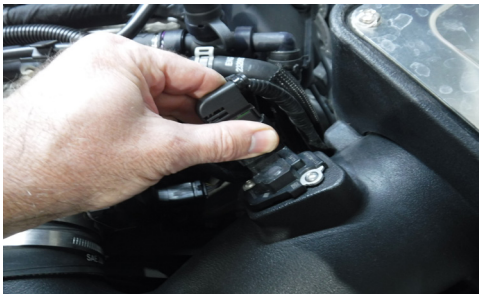
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- Reconnect the TPS connector.



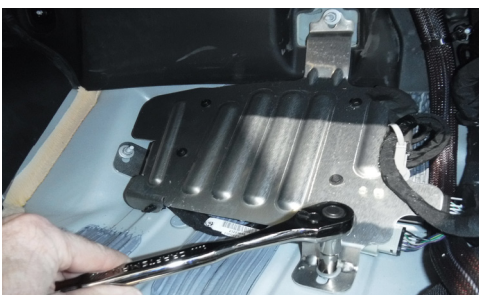
- Reconnect the air intake tube.



- Reconnect the IAT sensor.



- Reconnect the PCV connector.



- Reinstall the electrical panel in the passenger footwell.

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- Reconnect the battery.
- Key car on and let the system prime. Check all fuel system components for fuel leaks.
- With the nitrous bottle still closed check the system functions to ensure proper wiring and proper settings of any electronic controllers.
- With the nitrous system deactivated open the nitrous bottle and check for any nitrous leaks.



Step 12 – Final Assembly

- Replace the radiator cover and weatherstripping.



- Place the carpet back in place.



- Reinstall the front door sill trim.



- Reinstall the rear door sill trim.

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- Reinstall the passenger seat.



- Make sure to reconnect the seatbelt and large yellow electrical connector.



- Reinstall the rear seat bottom.



- Reinstall the driver side trunk panel and battery cover.



- Reinstall the rear trunk panel and cargo hold-down loops.

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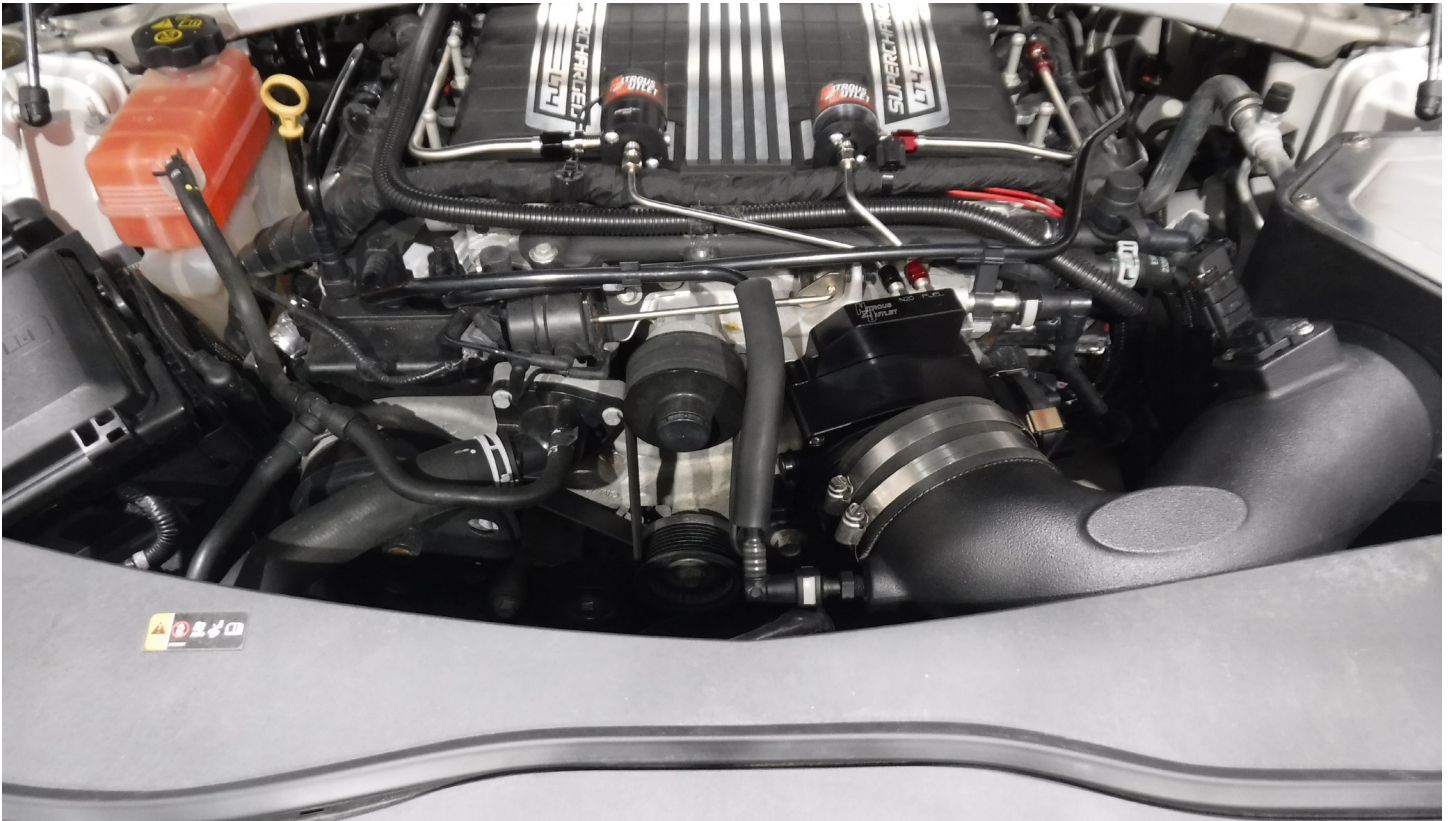
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CONCLUSION

You have finished your installation.



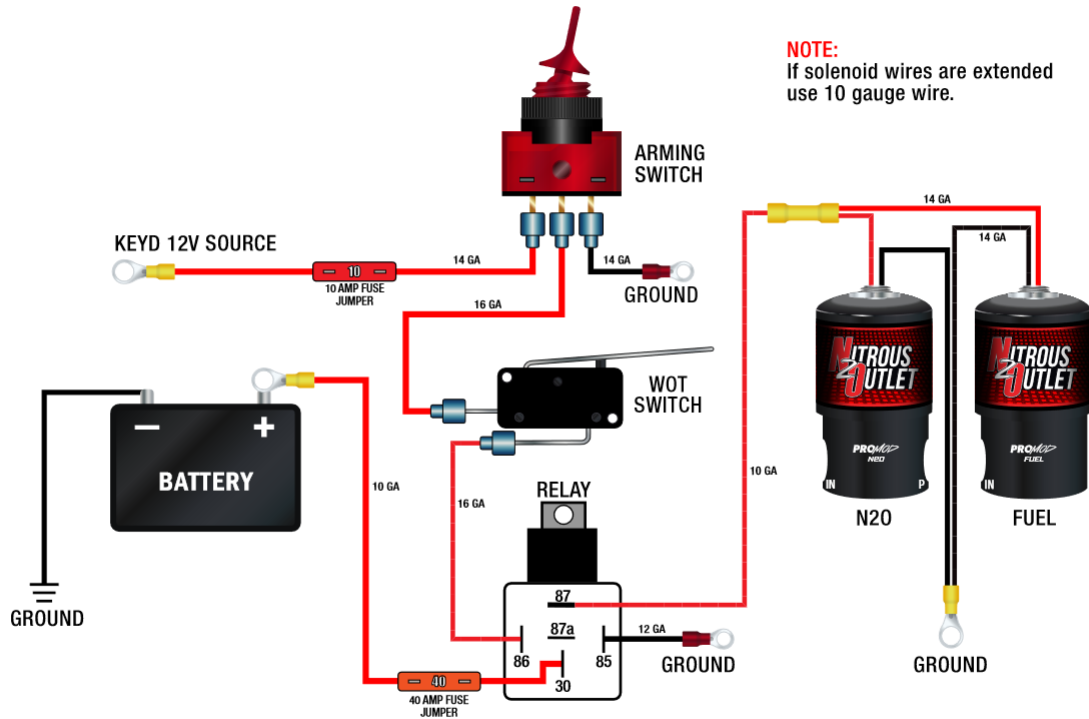
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System Wiring Diagram

NITROUS OUTLET — UNIVERSAL SINGLE STAGE WIRING DIAGRAM



NOTE:
If solenoid wires are extended use 10 gauge wire.

<small>OWNER CONTACT</small> NITROUS OUTLET <small>PHONE: 254-848-4300 FAX: 254-848-4301 08/10/2020 02</small>		<small>PROJECT</small> UNIVERSAL SINGLE STAGE WIRING DIAGRAM <small>CONTROL INFORMATION: NITROUS OUTLET 305 SOUTH 28TH STREET WACO, TX 76710 254-848-4300 CUSTOMERSERVICE@NITROUSOUTLET.COM WWW.NITROUSOUTLET.COM</small>		<small>FILENAME</small> UNIVERSAL SINGLE STAGE WIRING DIAGRAM AI <small>THIS DOCUMENT AND THE DESIGN OR INFORMATION CONTAINED WITHIN ARE THE SOLE PROPERTY OF NITROUS OUTLET AND MAY NOT BE COPIED, DISTRIBUTED OR MADE AVAILABLE TO OTHERS WITHOUT PERMISSION.</small>	
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