



2016-2019 Cadillac CTS-V3 Trunk Mount Dedicated Fuel System PART NUMBER: 00-12033

INSTALLATION INSTRUCTIONS

This Nitrous Outlet vehicle specific dedicated fuel 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:

- Marker
- 10mm Deep Socket
- 13mm Deep Socket
- Ratchet
- 11/16" Wrench
- 3/4" Wrench
- T-15 Torx bit
- T-40 Torx bit
- Body Tool
- Drill
- 3/8" Drill Bit
- 1-1/14" Hole Saw
- Rivet Nut Tool
- 5/16" Allen Wrench
- 9/64" Allen Wrench
- Large Hose Cutters

**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. **

Pre-Installation Tips:

- Adding a Fuel Pressure Safety Switch will prevent the nitrous system from activation in the event fuel pressure drops.
Low Pressure Part # 00-60000 High Pressure Part # 00-60001
- A Fuel Pressure Gauge is needed as a visual reference for fuel pressure.
Low Pressure Part # 00-63003 High Pressure Part # 00-63004
- A mild grade (Blue)Loctite is recommended on straight threads such as the ones on the regulator (3/8NPT).
- This fuel system is designed to work in conjunction with pump gas, E85 and most race gas. Not for use with alcohol or methanol.
- Some Fuels with a high ethanol content may cause the lid gasket to swell causing a situation to where removing the lid can be difficult.



Step 1 – Disconnect the Battery

- Open the trunk of your vehicle. Using a 10mm socket, loosen the nut and remove the negative battery terminal.



Step 2 – Vehicle Disassembly

- 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.

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- Using a T-40 Torx bit, remove the screws from the cargo hold-down loops and remove the rear trunk panel.



- Using a body tool, remove the push pins holding in the passenger side trunk panel and remove it from the vehicle.



- Open the hood of the vehicle. Using a 13mm deep socket, remove the nut and bolt on each side of the strut tower bar and remove it from the vehicle.



- Using a 13mm deep socket, remove the bolt on the passenger side strut tower crossbrace.

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- Jack up the passenger side of the car and place jack stands under the car for safety. Remove the passenger side wheels.



- Using a T-15 Torx bit, remove the passenger side fender liners.



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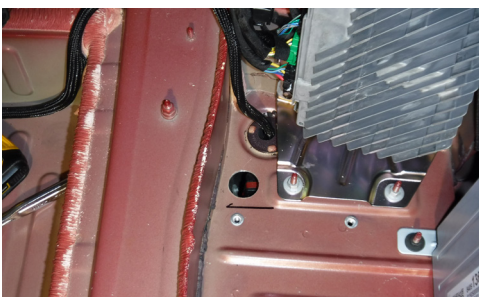


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Step 3 – Tank Installation

- Place the tank in the bottom of the cubby on the passenger side of the trunk. Align the 4 mounting holes over flat spots on the floor of the cubby. Mark the four mounting hole locations. Also, mark a line on the trunk floor along the forward edge of the tank mounting flange.
- Check under the area you are drilling to ensure it is clear of any electrical or fuel system components. If it is clear, use a 3/8" drill bit to drill the holes you marked.
- Using a rivet nut tool, install the 1/4-20 thread Rivet Nuts in the drilled holes. For more detailed instructions on how to install Rivet Nuts, see the instructions on page 14 and 15.
- Center the provided grommet in the flat area forward of the marked line and in between the frame rail and the vehicle electronics. Mark the center of the grommet.
- Using a 1-1/4" hole saw, drill a hole.



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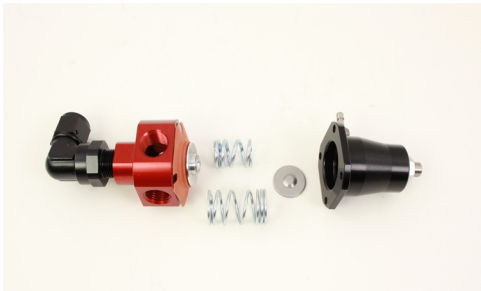


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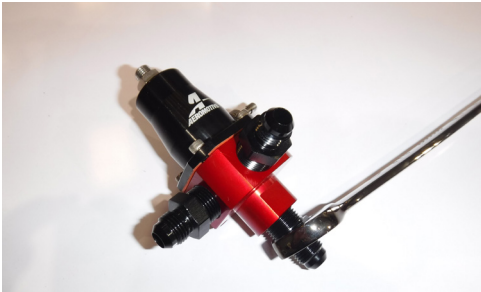


- This fuel system is capable of supporting high or low fuel pressure. The fuel regulator currently has the low pressure spring installed. It is designed to supply 3 - 20 psi. If your application requires high fuel pressure you will need to install the supplied high pressure spring. It is designed to supply 20 - 65 psi. To swap the regulator spring, use a 9/64" Allen wrench to remove the 4 cover screws.



- Remove the top cover exposing the diaphragm, spring and retainer. Swap the spring and re-assemble.

Note: Make sure the retainer has the nipple side to the spring.



- Using a 3/4" wrench, install the 3 straight 3/8"NPT-6AN fittings as shown on the fuel pressure regulator. Use blue Loc-tite on the fittings NPT threads.



- Using a 5/16" Allen wrench, install the plug in the remaining ports of the fuel pressure regulator. Use blue Loc-tite on the fittings NPT threads.



- Using a 9/64" Allen wrench, install the fuel pressure regulator on the provided mounting bracket as shown.

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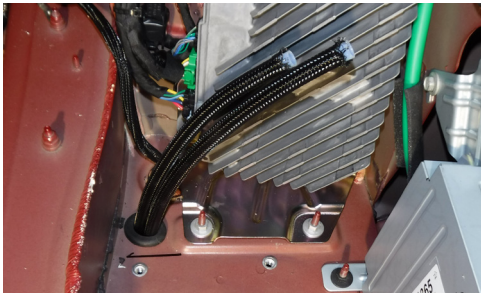


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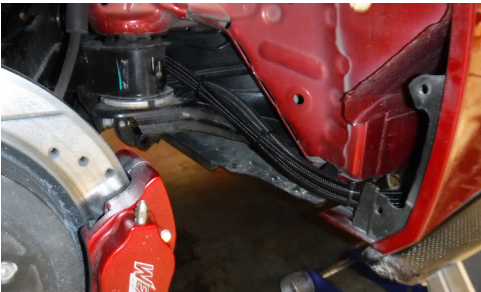
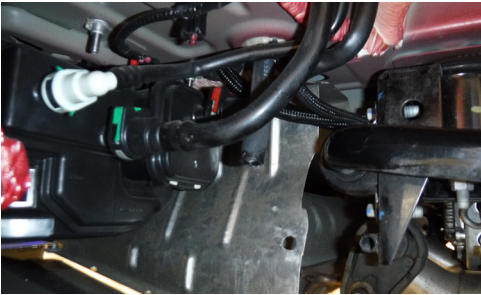
INSTALLATION INSTRUCTIONS



- Using the OEM hardware, mount the fuel regulator on the passenger side strut tower underneath the strut tower brace.



- You will need 2 hoses running between the dedicated tank and fuel pressure regulator. Tape the raw end of the provided hose. Route it through the drilled hole, around the rear fender well, underneath the car along the rocker panel, through the front fender well, and up into the engine bay behind the strut tower. Cut the hose to the necessary length. Repeat these steps for the second hose.



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- Pull the fuel lines to the Fuel Pressure Regulator in the engine bay and to the fuel tank in the trunk. Using large cutters, cut the excess length of the fuel lines. Make sure to leave a little extra. You will have to replace the line if you cut it too short. Retain a 40" length for connecting the fuel solenoid to the fuel pressure regulator.



- The dedicated tank supply and return hoses will need to have 90° hose ends installed on both ends. For more detailed instructions on how to install hose ends, see the instructions on page 13.



- Blow air through one of the dedicated tank hoses and connect it to the fitting on the regulator pointed toward the firewall.



- Connect the return line to the fitting on the bottom of the fuel pressure regulator.



- Using the 40" line from a previous step, install one 90° hose end & one straight hose end. Connect the 90° end to the fuel regulator on the fitting pointed toward the engine. Route the hose around the back of the supercharger and connect the straight end to the fuel solenoid hardline. If you purchased a Fuel Pressure Gauge, install it in place of the plug on the fuel pressure regulator opposite the supply line.

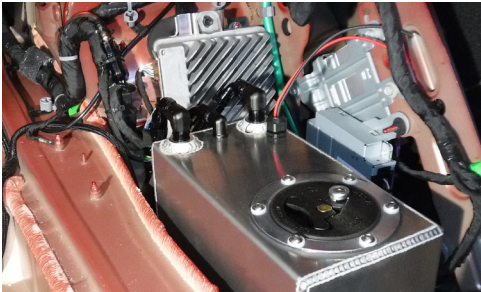
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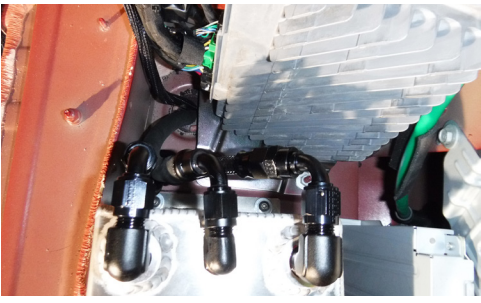
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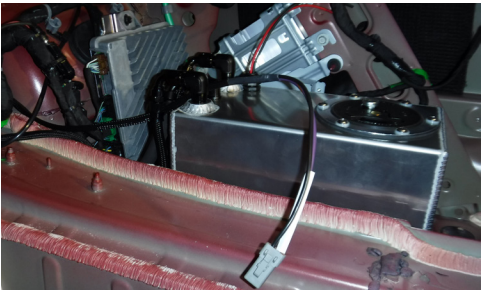
- Connect the supply hose to the fitting to the passenger side of the dedicated tank. Connect the return hose to the driver side of the tank.



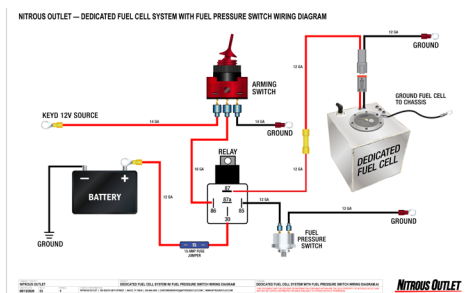
- Assemble the vent hose assembly by, pushing the supplied 36" long black Vent hose onto the barbed end of the 90° Push-Loc fitting.



- Using an 11/16" wrench, connect vent hose to the middle fitting on the tank. Run the hose through the 1-1/4" hole with the supplied grommet.



- Using the supplied Deutsch connector, connect the wiring for the fuel pump. (See page 12 for connector assembly instructions) Connect the wires for the dedicated fuel system to the dedicated fuel tank.



- Use the diagram to the left when hooking up your dedicated fuel system. Instructions for this procedure and a larger diagram can be found in the back of these instructions on page 11.

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Step 4 – Final Check Over

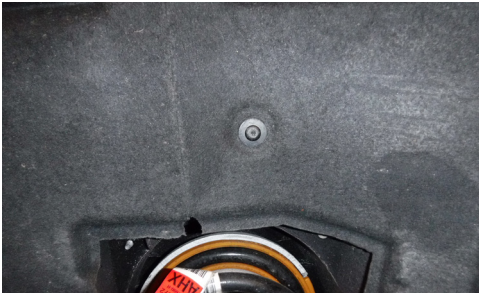
- Reconnect the battery.
- Fill the fuel tank with fuel, arm the fuel pump to verify it works and check for any leaks.

Note: Activating the fuel pump with no fuel will burn up the pump.



Step 5 – Final Assembly

- Reinstall the passenger side fender liners and wheels.



- Reinstall the strut tower brace.



- Reinstall the passenger side trunk panel. The storage bucket will no longer be able to be used.



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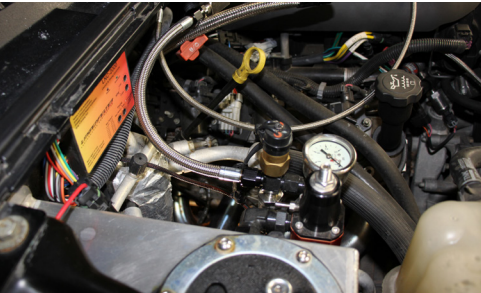
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- Reinstall the rear trunk panel and cargo hold-down loops.



- Reinstall the floor/spare tire cover.



Step 6 – Setting Fuel Pressure

- To set the regulated fuel pressure you will need to reference back to the nitrous systems jetting card. Pick the desired fuel pressure that matches the fuel jet you chose. The most accurate way to set the fuel systems fuel pressure is to set the flowing pressure. In order to do this you will need a flow tool kit. The flow tool kit uses a certified accurate gauge and places the flow restriction jet at the end of the fuel system feed hose.

(The Nitrous Outlet Certified Fuel Pressure Test Gauge kit is part # 00-63010.)



- Using a 9/16" wrench, loosen the nut at the top of the fuel pressure regulator. Using a 3/16" Allen wrench, adjust the set screw to achieve the desired fuel pressure. Turn the Allen wrench to the right to increase pressure. Turn the Allen wrench to the left to decrease pressure. Once the pressure is set, use the 9/16" wrench to tighten the nut to lock the set screw in place.

Conclusion:

- You have finished your installation.

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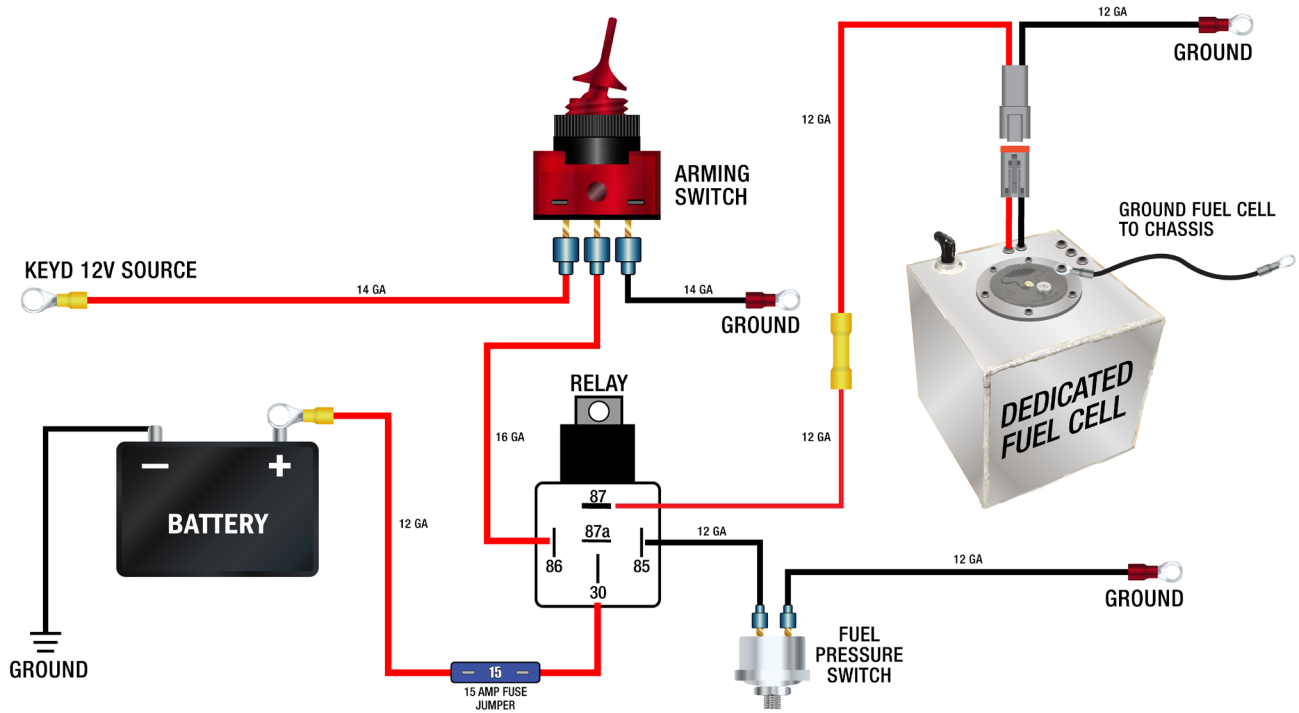


Dedicated Fuel Cell Wiring Diagram

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NITROUS OUTLET — DEDICATED FUEL CELL SYSTEM WITH FUEL PRESSURE SWITCH WIRING DIAGRAM



COMPANY LOGO: NITROUS OUTLET		PROJECT: DEDICATED FUEL CELL SYSTEM W/ FUEL PRESSURE SWITCH WIRING DIAGRAM		FILENAME: DEDICATED FUEL CELL SYSTEM WITH FUEL PRESSURE SWITCH WIRING DIAGRAM.AI	
REVISED DATE: 08/13/2020	REV #: 03	PIECES: 1	CONTRACT INFORMATION: NITROUS OUTLET 305 SOUTH 28TH STREET WACO, TX 76704 254.848.4300 CUSTOMERSERVICE@NITROUSOUTLET.COM WWW.NITROUSOUTLET.COM		
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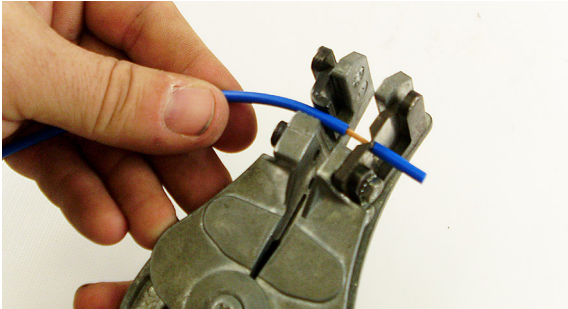


Deutsch Connector Assembly Instructions

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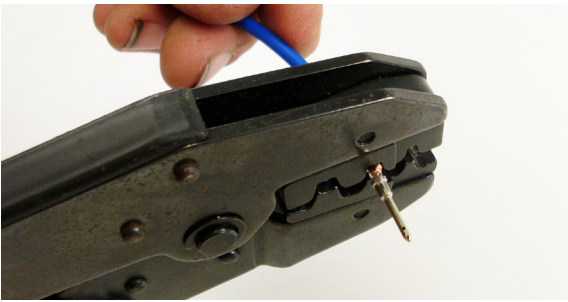
Deutsch Connector Assembly:

To assemble Deutsch terminal ends you can use a special crimper, or if done cautiously, this can be done with a pair of needle nose pliers.



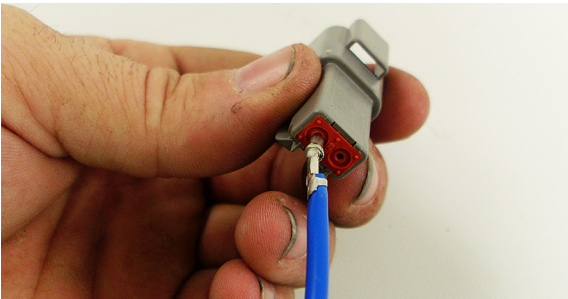
Step 1:

Strip the end of the wire you want to place the connector on about 3/8".



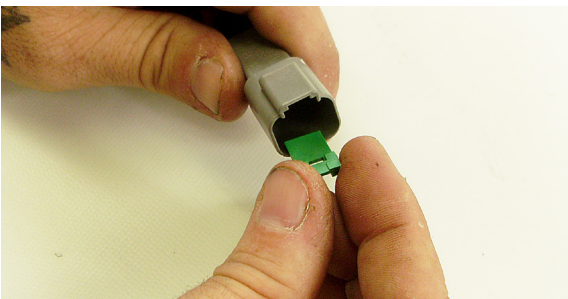
Step 2:

Using a crimp tool or needle nose pliers, crimp the connector down. First the smaller crimp and then the larger crimp, make sure the weather pack seal gets crimped with the larger side.



Step 3:

Once your sure you have a good crimp slide the pins into the connector housing being sure to match the wires correctly on each side. Push the pin in the housing until you feel a positive click and the wire cannot be pulled back out of the connector.



Step 4:

Install the provided pin retainer lock in the connector body. It simply snaps in to place.

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PTFE Hose End Installation Instructions

INSTALLATION INSTRUCTIONS

Tools Needed for Installation:

- 2 - 3/4" Wrenches
- These instructions will work with straight, 45° and 90° hose ends



- Put the female side of the hose end onto the fuel hose.



- Put the inner sleeve of the fitting on the end of the hose with the tapered end over the Teflon inner liner.



- Insert the male end into the open end of the hose.



- Using two 3/4" wrenches, thread the male and female ends together.

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Do-It-Yourself Riv-Nut Installation Instructions

INSTALLATION INSTRUCTIONS

This document is used for Do-It-Yourself Rivet Nut installation instructions. 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*:

- 1/2" Wrench
- 7/16" Wrench
- 1/4"-20 Bolt about 1 1/2" long (Does not have to be a socket head)
- 1/4"-20 Nut
- 5/16-18" Nut

*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.



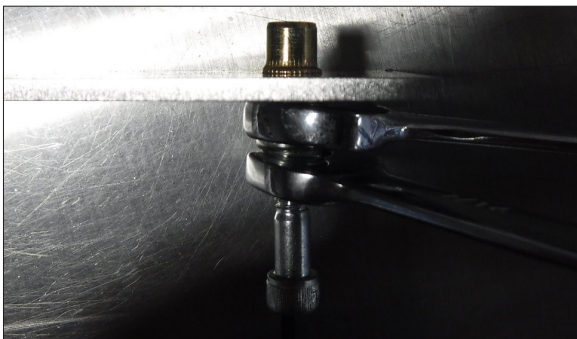
Step 1:

Thread the 1/4-20 nut all the way onto the 1/4-20 bolt. Slide the bigger nut over the 1/4-20 bolt and then thread the rivnut onto the 1/4-20 bolt.



Step 2:

Insert rivnut assembly into an 1 1/32" hole



Step 3:

Use both the 7/16" and 1/2" wrench. Hold the 1/2" wrench still and tighten the 1/4-20 nut till it stops.

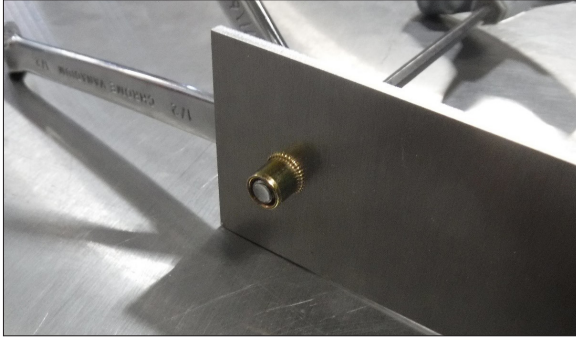
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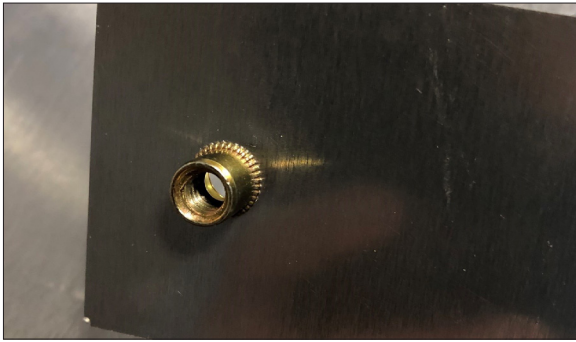
Do-It-Yourself Riv-Nut Installation Instructions

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Step 4:

Un-thread the 1/4-20 bolt with the nuts to complete the install.



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