

# **FS Performance Engineering**

Chevy / GMC Express / Savanna Catalytic Converter Installation Instructions (2010-2020)
Professional Installation Recommended as Always - A car LIFT is HIGHLY Recommended

#### **Tools Needed:**

- Ratchet Wrench(es)
- ½" Socket
- ½" Socket & Wrench
- 3/8" Drill Bit
- 17/32" Drill Bit (for the 5/16" Rivnuts) a step drill works wonders as well
- Drill (wear safety protection when drilling)
- Rivnut (threaded rivet nut) Installation Tool (a heavy duty one is necessary) with a 5/16"-18 mandrel
- Helper
- Marker / Pencil / Pointy Tool / Sharpie
- 2 to 4 C-clamps

### What's Supplied:

#### Parts:

- (1) Left Cat Guard
- (1) Right Cat Guard
- (2) Interior Bolt-on Shields (left and right)
- (1) Right Rear L Shield
- (1) Right Rear Shield with Pipe Cut Out

## **Hardware:**

### **BAG 1**

- (8) 5/16"-18 x 1.5" SECURITY Bolts
- (14) 5/16" x 1.25" Washers
- (1) Security Bit (3/16")

#### BAG 2

- (15) 5/16"-18 x 1" Hex Head Bolts
- (15) 5/16"-18 Nyloc Nuts

### **BAG 3**

- (10) 5/16"-18 LONG Rivet Nuts (a few are extra)
- (6) 5mm Spacers
- (6) 5/16"-18 Nyloc Nuts

## BAG/ITEM 4

(1) Threadlocker

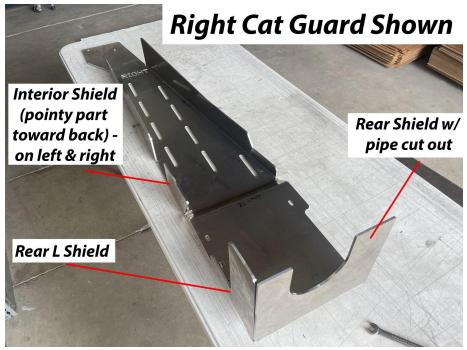


← Threaded Rivet Nut (Rivnut) Help



# **Steps:**

- 1.) Begin by raising your Chevy/GMC. Place it securely on jack stands. Or alternatively use a vehicle lift (highly recommended). The vehicle must be high enough for you to use your rivet nut installation tool (rivnut tool).
- 2.) Assemble your catalytic converter guards. Shown is the right side. All bolt-on pieces sit on top with bolts pointed upward and nuts on top. The left side only has an interior pointy shield.







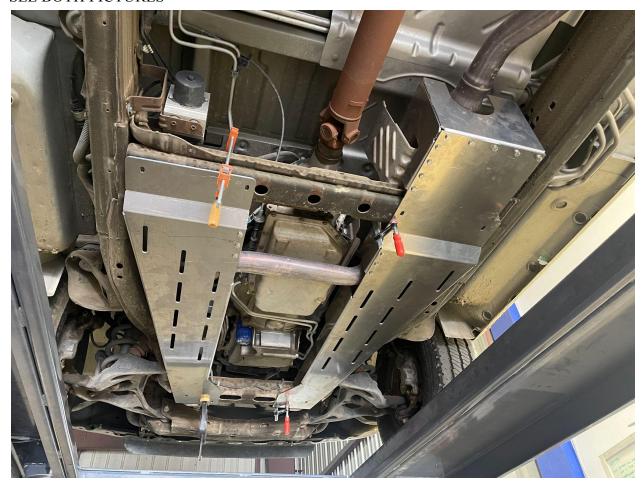
3.) Hold your guards up against the frame (left goes on the left, and vice versa).

The guard should sit on the frame at the front and on the crossmember that supports the transmission at the rear.

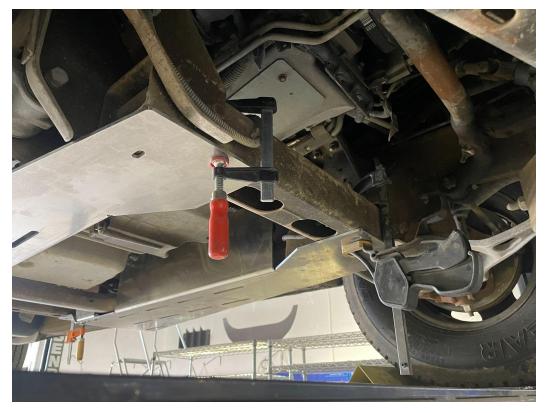
The outer edges should match with the outer edges of the frame and crossmember. Use C-clamps at the front and rear of each cat guard. Adjust the cat guards forward / backward so the mounting slots align with the frame.

Note: Check that there is no interference with the exhaust system. If the guard is positioned correctly there shouldn't be -> ON THE 4.8L the guard will be close to the exhaust - this is corrected later with spacers.

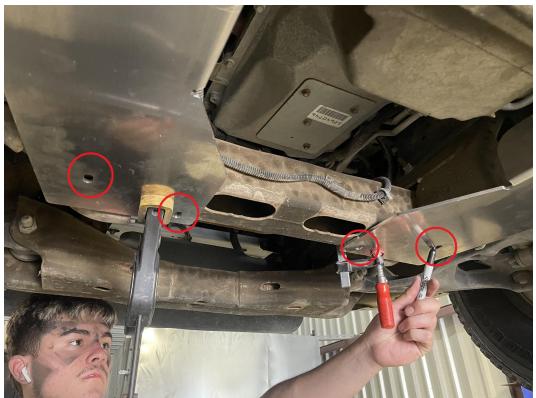
# SEE BOTH PICTURES







4.) Mark the 8 slots in the cat guard onto the frame.







5.) The cat guards can be installed in two ways. You can install the 5/16"-18 rivnuts into all of the holes for mounting, OR you can install rivnuts into the CENTER REAR TWO holes and then bolt/nut combination into the remaining six holes.

Remove the cat guards and drill 17/32" holes into the center of the slots.

- If you want to install rivnuts into all of the holes, there will be 8.
- If you want to install rivnuts and nut/bolt combo -> you can drill 17/32" holes at the rear two center holes, then 3/8" holes at the remaining 6.

When drilling holes we recommend using a step drill (looks like a Christmas tree) to build up to that size.

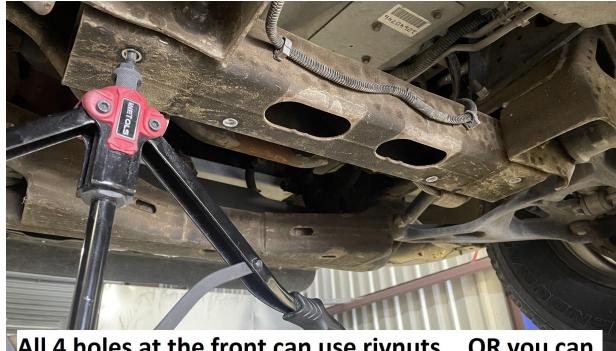
If you are unfamiliar with rivnuts please see the QR code on the first page and/or use online resources. A rivnut tool is necessary for installation.



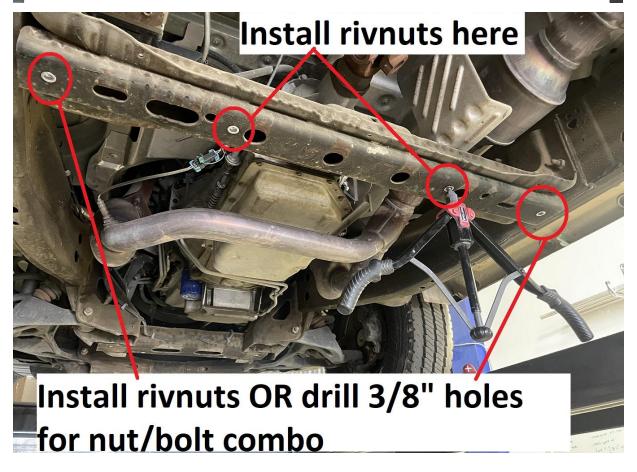








All 4 holes at the front can use rivnuts... OR you can drill 3/8" holes and install a nut/bolt combo.





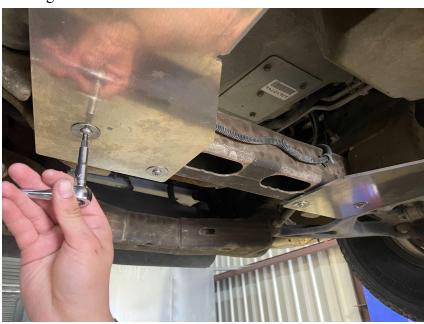
6.) Install your cat guards. Use the supplied 5/16"-18 x 1.5" Security bolts and washers. A security bit was provided that fits into a  $\frac{1}{4}$ " socket.

If you're installing into the rivnuts, **use threadlocker on the bolts** - do not tighten so hard that you strip the bolts.

If you're installing bolts/nuts, use washers on top and bottom (above the bolt head, & under the nut). Securely tighten but don't strip the bolts.

**NOTE**: The front most 4 holes use 5MM spacers between the cat guard and frame.

**NOTE 2**: On the 4.8L the exhaust hangs lower, the rear left 2 holes use 5MM spacers between the cat guard and frame.







7.) Double check all bolts are secure and you are done! Feel free to tag us online using #FSPerformanceEngineering or #FSPEinc. If you have any questions don't hesitate to contact us.



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THANK YOU:)