

## FS Performance Engineering

Sierra/Silverado 1500 GEN 2/3 (2007-2018) Cat Guard Installation Instructions

Professional Installation Recommended as Always - A car LIFT is HIGHLY Recommended

### Tools Needed:

- Ratchet Wrench(es)
- ¼” Socket (to hold Security Bits)
- 15mm Socket/Wrench
- 7/16” Socket/Wrench
- 17/32” Drill Bit (for the 5/16” Rivnuts)
- Drill
- Rivnut Installation Tool (a heavy duty one is necessary) w/ a 5/16”-18 mandrel
- Helper
- Marker
- Dremel Tool with Cutting/Burr Tool

### What’s Supplied:

#### Parts:

- (1) Gen 2/3 Cat Guard
- (1) Oil Drain Cover
- (1) Rearward Muffler Cover

#### **2014-2018 Hardware:**

- (9) 5/16”-18 **SHORT** Rivnuts (2 are extra)
- (7) 5/16” ID, 1.25” OD Washers
- (6) 5/16”-18 x 2” Security Bolts
- (1) 5/16”-18 x 1” Security Bolt
- (1) Security Bit (3/16”)
- (5) 20MM Spacers
- (1) 30MM Spacer
- (2) M10-1.5 x 25mm Security Bolts
- (2) M10 Washers
- (1) Security Bit (7/32”)
- (7) ¼” lock washers
- (7) ¼”-20 x 1” hex head bolts
- (1) Blue Thread Locker

#### **2007-2013 Hardware:**

- (11) 5/16”-18 **SHORT** Rivnuts (2 are extra)
- (9) 5/16” ID, 1.25” OD Washers
- (6) 5/16”-18 x 2” Security Bolts
- (2) 5/16”-18 x 1.5” Security Bolts
- (1) 5/16”-18 x 1” Security Bolt
- (1) Security Bit (3/16”)
- (6) 20MM Spacers
- (7) ¼”-20 x 1” hex head bolts
- (7) ¼” lock washers
- (1) Blue Thread Locker

**To Start:**

Need help understanding a rivnut installation tool? Scan the QR Below!

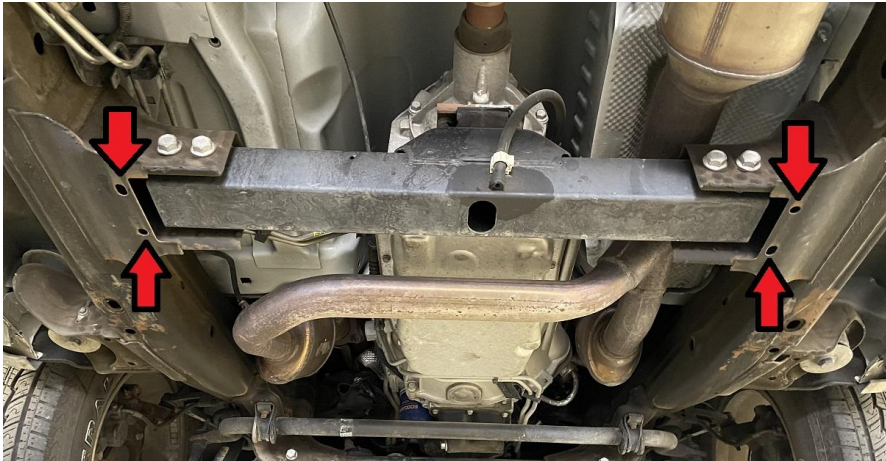


**Steps:**

- 1.) Begin by raising your Chevy/GMC. Place it securely on jack stands. Or alternatively use a vehicle lift. The vehicle must be high enough for you to use your rivnut installation tool.
- 2.) Use your ratchet wrench and 15mm socket to remove the two bolts mounted on the forward subframe that are used to support the OEM shield. Earlier models 2007-2013 may not have these bolts.



3.) Move to the rearward/mid subframe and identify the 4 holes/slots on the left and right.



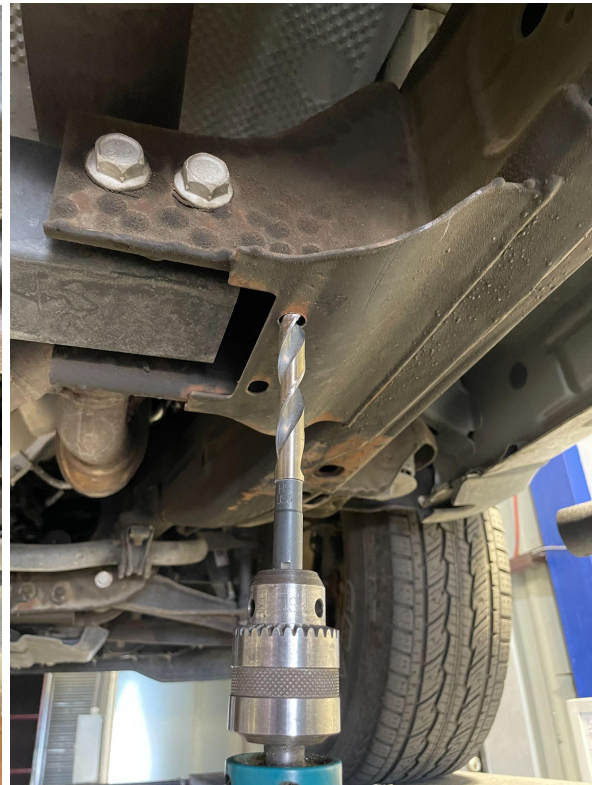
4.) On the left there is a hole in front, and slot in the rear.

On the right there is a slot in front, and hole in the rear.

- Drill out the HOLES to 17/32".
- Use a dremel tool to bore out the SLOTS to 17/32". Don't bore out the entire slot, just lightly bore the center of the slot just enough so a rivnut can be pushed through.

Then install rivnuts in the holes and slots. Use your rivnut installation tool.

**HOLES:**

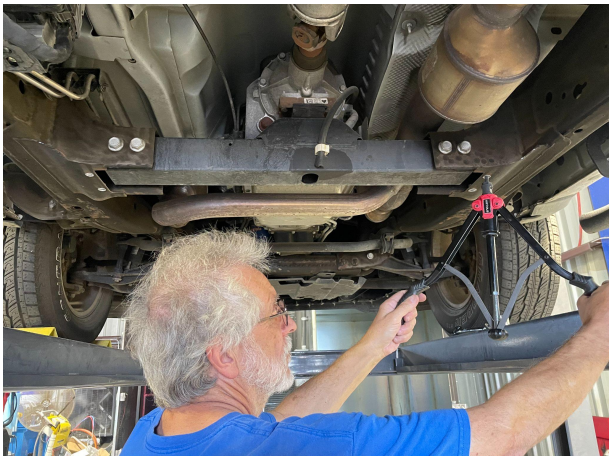




**SLOTS:**

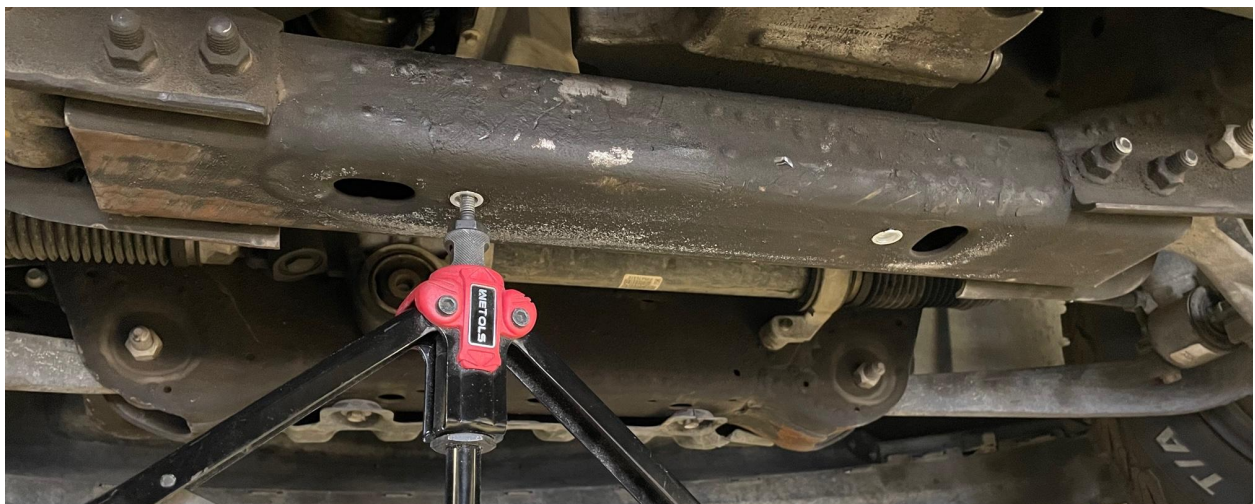
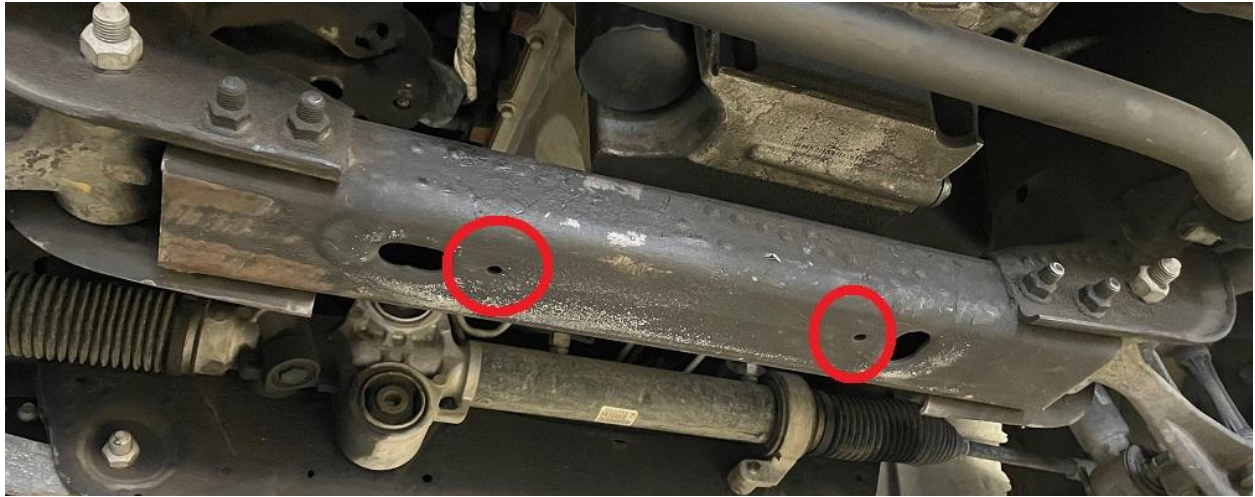


**RIVNUT INSTALLATION:**





5.) If you have a **2007-2013** truck, drill out the two holes in the front crossmember shown with a 17/32" drill. Then install 5/16" rivnuts.

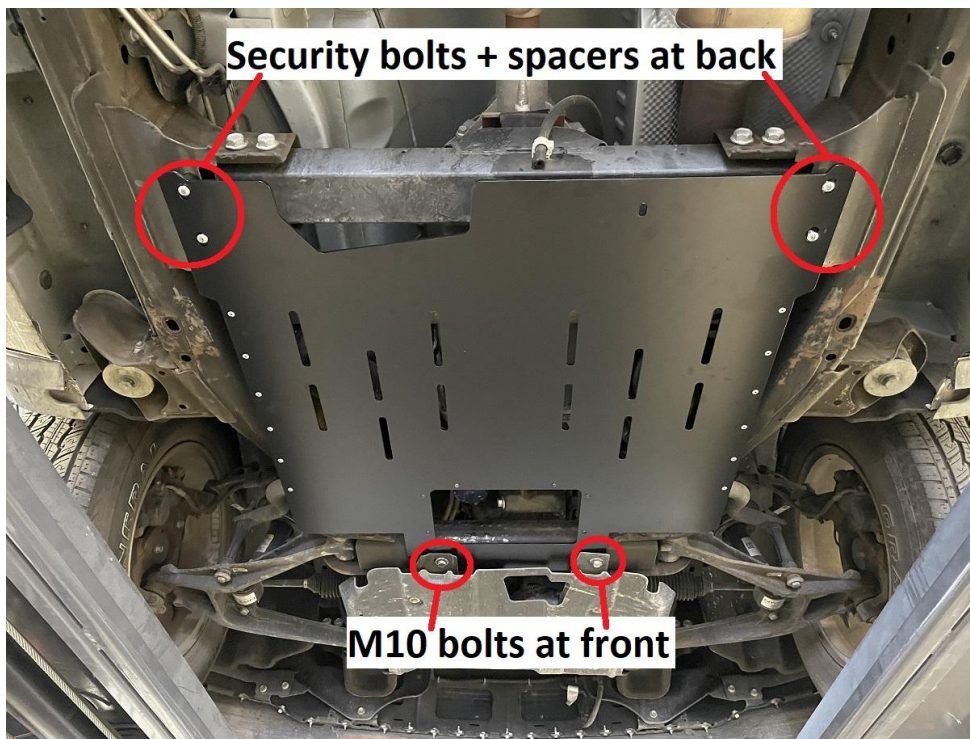


**2007-2013:**

6.) Install your main cat guard hand tight using two 5/16-18 x 1.5" long security bolts up front in the leftmost hole, and center hole. Install four security bolts (5/16"-18 x 2" long) hand tight at the rear. Use 20mm spacers between the frame & cat guard at the 4 rear bolts. Security bolts will require the security bit to be inserted into a 1/4" socket.

**2014-2018:**

6.) Install your main cat guard hand tight using the two bolts up front (feel free to use the OEM 15mm bolts): the guard sits above the 2 metal pieces. Install four security bolts (5/16"-18 x 2" long) hand tight at the rear. Use 20mm spacers between the frame & cat guard at the 4 rear bolts. Security bolts will require the security bit to be inserted into a 1/4" socket.







6.) Mark the rearward middle slot on the frame. It needs to be marked so you can know where to drill a hole and install a rivnut.





7.) While you're under there, use your 17/32" drill bit to drill out the two holes shown in the rearward frame just behind the mid-converter in the exhaust. You're opening them up. Then install rivnuts at those 2 locations. These holes are present on all years 2007-2018.





8.) Remove your cat guard. Drill a 17/32" hole in the middle of the slot you marked from step 6. Then install a rivnut at that location.

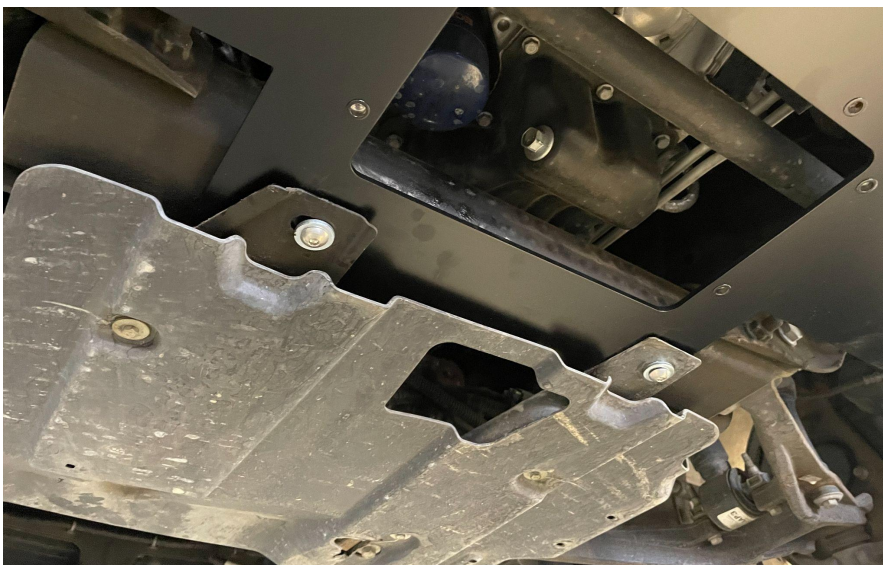


**2007-2013:**

9.) Install your cat guard. Do not tighten your bolts so much that you strip the heads. Use the 5/16"-18 x 1.5" security bolts and 1.25" OD washers up front. Use only TWO of the 5/16"-18 x 2" security bolts, 1.25" OD washers, & 20mm spacers at the left side of the truck at the rear. Hold up the right side. (pics show 2014-2018 but it's the same concept)

**2014-2018:**

9.) Install your cat guard. Do not tighten your bolts so much that you strip the heads. Use the M10 security bolts / M10 washers at the front. Use only TWO of the 5/16"-18 x 2" security bolts, 5/16" ID 1.25" OD washers, & 20mm spacers at the left side of the truck at the rear. Hold up the right side.





10.) Simultaneously install your third “unmonitored” catalytic converter cover. The guard overlaps underneath the cat guard using 3 common holes with 5/16”-18 x 2” bolts / washers

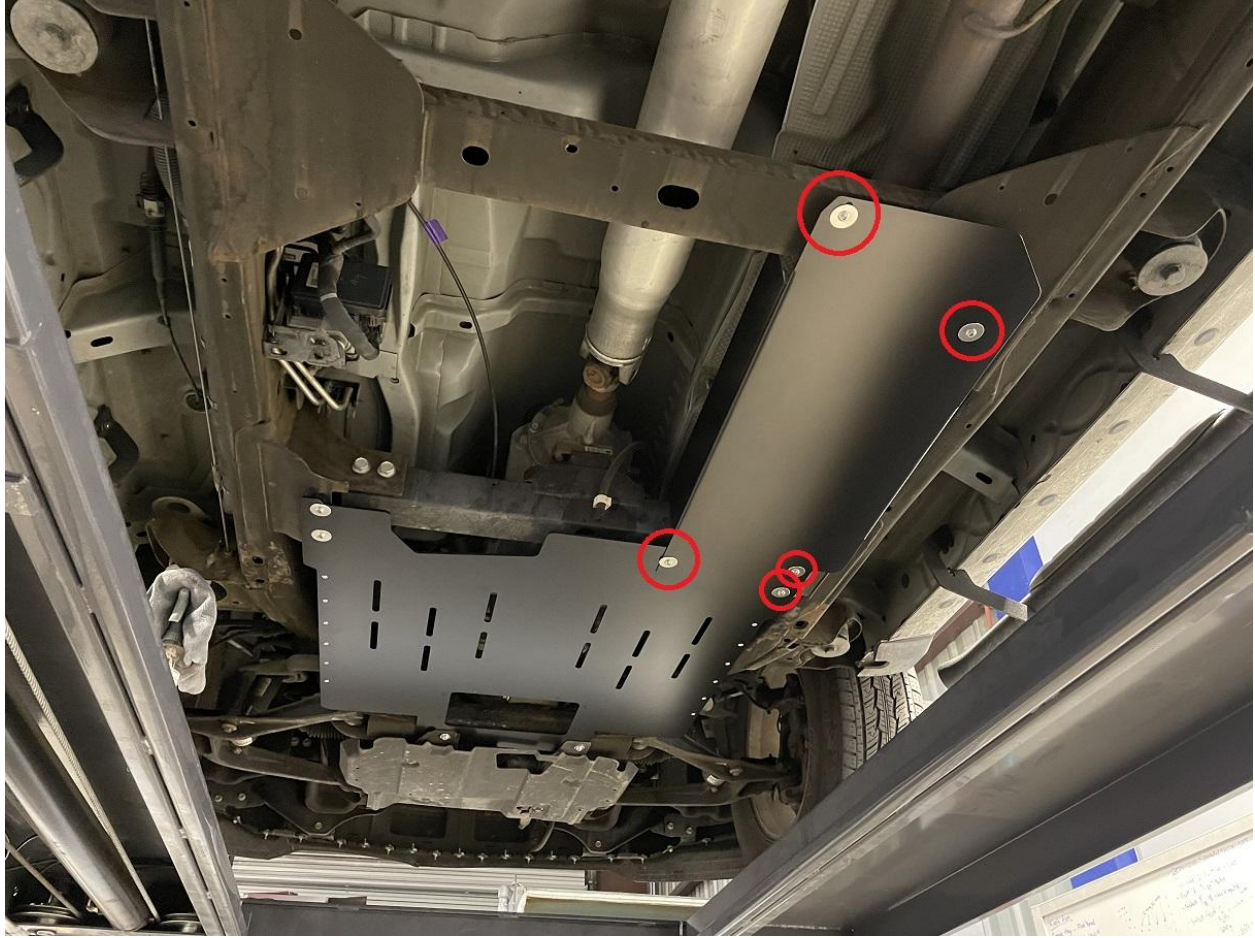
- **2007-2013:** The center hole and the outer two on the right use 20mm spacers.
- **2014-2018:** The center hole uses the 30mm spacer, and the outer two on the right use 20mm spacers.

The right outer rear hole uses a 20mm spacer, 5/16”-18 x 2” security bolt and washer.

The most rearward hole uses a 5/16”-18 x 1” security bolt.

**THE REAR MUFFLER GUARD WILL ANGLE UPWARD.** This is on purpose to provide tension on the bolts.





11.) Revisit each bolt and place blue threadlocker on the bolts. Remove one bolt at a time, place threadlocker, then reinstall securely.

12.) Install your oil drain cover with your 7/16" socket. Use the seven 1/4"-20 x 1" bolts with lock washers under the bolt heads. If your cover has an air duct built in please install it so the opening is on top with the upward angle pointed toward the back of the vehicle. This will direct cool air upward into the warm area between the frame and cat guard (our picture on the vehicle is of our old cover, yours is better!!).



**Top Side -  
air duct is upward**

**Front of  
vehicle**



**Back of vehicle**





13.) Double check all bolts are secure and you are done! Enjoy your new cat guard ! Feel free to tag us online using #FSPerformanceEngineering. If you have any questions don't hesitate to contact us.



PHONE: 661-809-0954

EMAIL: [costas@fspeinc.com](mailto:costas@fspeinc.com)

THANK YOU :)