



PROTECTION . . . EVOLVED

6th Gen Bronco 2021+

Total Front Frame Reinforcement (TFFR)

Installation Guide

Rev. 1.2

Hardware included:

2 $\frac{3}{8}$ -16 x 4.25" bolts
4 $\frac{3}{8}$ -16 x 1.50" bolts
8 $\frac{3}{8}$ Flat washer
6 $\frac{3}{8}$ -16 Flange Nut
6 Thick Washer/Spacer flat
2 $\frac{1}{2}$ " OD Stainless spacer tubes

Support Plates Included:

4 Frame side plates, each are different
2 Top plates, each marked L or R

SAFETY! Use the appropriate safety devices during your installation. Wear safety glasses at all times. **SAFETY!**

***NOTE:** If you don't need instructions, at least note the few key steps with an asterisk. These will save you frustration later!

Thank you for purchasing the Metal-tech 4x4 Bronco 6G TFFR system. We have taken great pride in its development and manufacturing. We also wheel what we make and look forward to seeing you on the trail! Before you begin your installation, take a moment to read through this write-up. There are a few key things noted that will make the installation go smoothly.

Tools: Regular hand tools are all you need for this no-drilling installation.

NOTE: a 15mm boxed Gearwrench will make the installation easier in step 4. A photo of one of these wrenches is shown in step 4. (It's good to have in your kit anyway, owning a Bronco that seems to be built with all 15mm head hex bolts.)

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1. With the front bumper off your truck, locate the captured nut plate that the 3 main bumper bolts thread into. This plate is on the backside of your frame horns and is held in place by a plastic push nut. Back the nuts off, and the plate will come off the truck.



2. With the nut plate off the truck, note the two cut lines and cut the center crossbar away. Discard the crossbar as it will no longer be needed. After step 12, The nut plate can be replaced back onto the backside of the frame horn using the plastic push nuts to secure it. It will rotate a bit, but it is easy to align when you are putting your bumper back on.



3. We recommend unbolting the center intercooler plastic air guide/shutters to gain more access to the inner part of the frame.
4. Locate the top intercooler mounting plate bolt under the radiator, on top of the frame. This bolt has a 15mm hex bolt head.



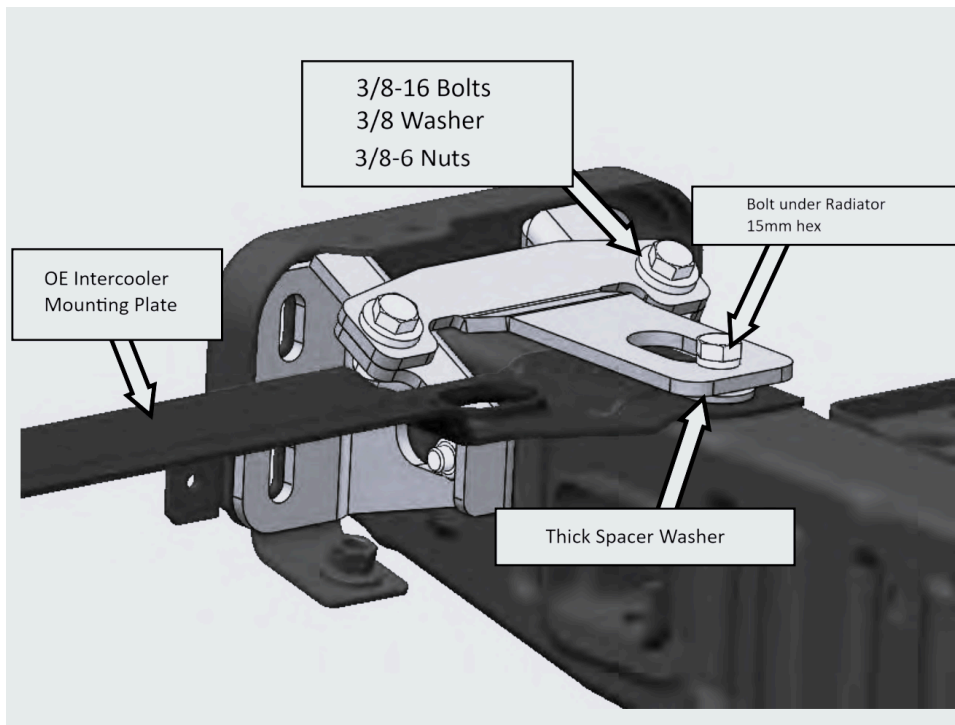
NOTE* this is where a Gear Wrench box wrench will make the job much easier.

5. Back the top intercooler mounting bolt out completely. The integrated washer will stay with the bolt and does not come off of the bolt.



This step may seem difficult, but the bolt does come out and go back in. Just take your time.

6. Place one of the thick flat washers/spacers on top of the intercooler mounting plate at the hole for the bolt you just removed.
7. Replace the bolt back into that hole and get it started, but leave it sticking up as high as possible.
8. Starting on the truck's Right side (Passenger side) locate the three plates with and R laser cut into them. The two side plates have, IR and OR. The top plate will simply have an R laser cut into it.
9. IR plate is for the Inside of the Right frame horn. OR plate is for the Outside Right of the frame horn. The top plate looks like a T, goes on top of the frame, and connects the top of the two side plates.



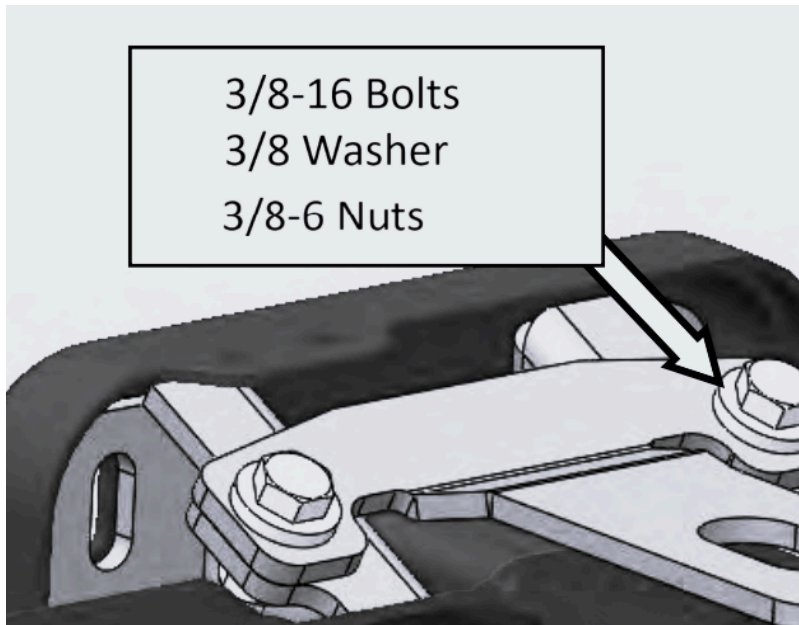
10. Slide the $\frac{3}{8}$ -16 x 4.25" long bolt from the OR plate into the frame. From the front of the frame horn, looking inside the frame, slip the $\frac{1}{2}$ " OD Stainless steel tube inside the frame.



Use a thick washer/spacer on the inside of the frame on either side of the stainless steel tube. Add the flange nut, and leave loose. DO NOT tighten yet.

11. Take the Right top plate that looks like a T, and slip it back under the radiator to the bolt sticking up from the frame from step 7. The open keyway on the top plate will drop over the bolt with the integrated washer. Pull the plate forward.

12. Using two $\frac{3}{8}$ -16 x 1.50" bolts, with a washer under the bolt head and $\frac{3}{8}$ -16 flange nuts, put a single bolt into each of the top plate holes into the two side plates. **Snug down, do not tighten yet.**



13. Place the bumper nut plates you cut back in step 2, back on the backside of the frame horn.

14. Tighten down the 15mm hex bolt from under the radiator to the frame.

15. Tighten down the $\frac{3}{8}$ " through frame bolt. 31-foot lbs

16. Tighten down the two $\frac{3}{8}$ " bolts at the top plate to the side plates.
31-foot lbs

17. Repeat for the other side; each has the same steps.

Note: The side plates may sit slightly off the back of the frame horn; when the bumper is installed and tightened down, it will pull the support plates up to the backside of the frame horns.