

Metal Tech 4x4 “Goblin” GX470 Front Bumper & Winch Mount Installation guide

Special thanks to Metal-tech 4x4 customer Ryan Grau who wrote these instructions.

Standard Parts:

- 1 Bumper
- 1 Winch Mount
- 1 Lower Guard
- 1 Accessory Package
 - a. Left & Right Side Support Plates
 - b. 2 Universal Spacers
 - c. License Plate Holder
- 1 Bumper Bolt Kit (BK-MT-33701)
- 1 Winch Mount Bolt Kit (BK-MT-GX470-33702)
- 1 Hoop Bolt Kit (BK-MT-33744)
- 1 Lower Guard Bolt Kit (BK-MT-33745)
- 8ft Black Edge Trim

Tools needed:

- Metric sockets 10mm, 11mm, 14mm, 17mm
- SAE Sockets 3/4, 9/16
- Body Panel Tool or Flat Head Screwdriver
- Drill with 1/2" drill bit
- Cold chisel
- Hammer
- Optional blue thread locker for all threads

Optional add on Parts:

- 1 OPOR 20W Flange Mount LEDs (stage 2 & 3)
- 1 OPOR **25"** Single Row Combo LED Light Bar (stage 3)
- 1 Grill Insert For Light Bar Pocket (Sold Separately)

- Thank you for your purchase! We have taken great pride in our product development and manufacturing. We also use what we make and look forward to the opportunity to see you on the trail! Before you begin your installation take a moment to read through this write up.
- We welcome your feedback on our products and your experience with Metal Tech 4X4. You can reach us toll free at **800-839-0684** Mon-Fri 8:30 AM to 5 PM PST. Or via e-mail at **info@metaltech4x4.com**

Safety:

Please note that this work should be done by a competent mechanic. If you feel you are not competent to do this work please have a professional mechanic do this installation. Metal-tech Cage, LLC is not responsible for any modifications you make to your vehicle. These instructions are meant to be a guide to assist a competent mechanic.

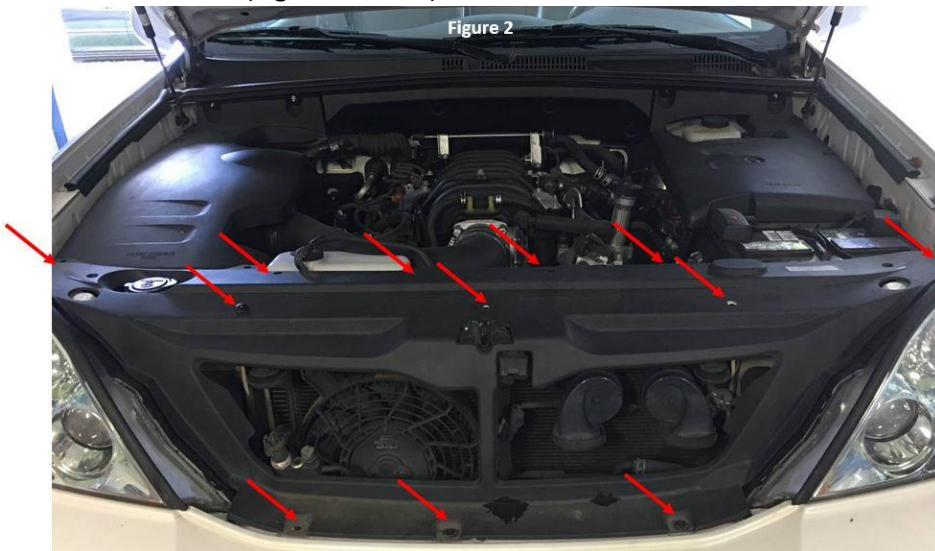
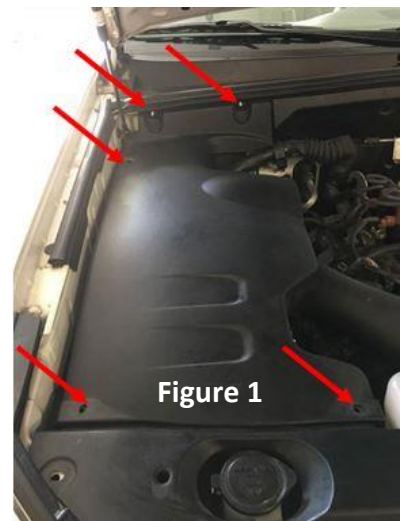
- **Always wear safety glasses.**
- **Always chalk the opposite end of wheels when working on a car, Chalk the rear when working on the front, and vice versa.**
- **Always use jack stands if the vehicle is to be off the ground. Never work on a vehicle solely suspended by a jack.**

Metal Tech 4x4 GX470 Front Bumper Installation



Factory Bumper Removal

1. Remove air filter cover. Do this by removing 3 push-in plastic rivets and 2- 10mm plastic nuts (Figure 1).
2. Remove radiator cover. Do this by removing 12 plastic pop-up rivets. I use a nylon body panel tool or flat head screwdriver (Figure 2 below).



3. Remove 2 - 10mm bolts and 1 plastic pop-up rivet from each wheel well (Figure 3).



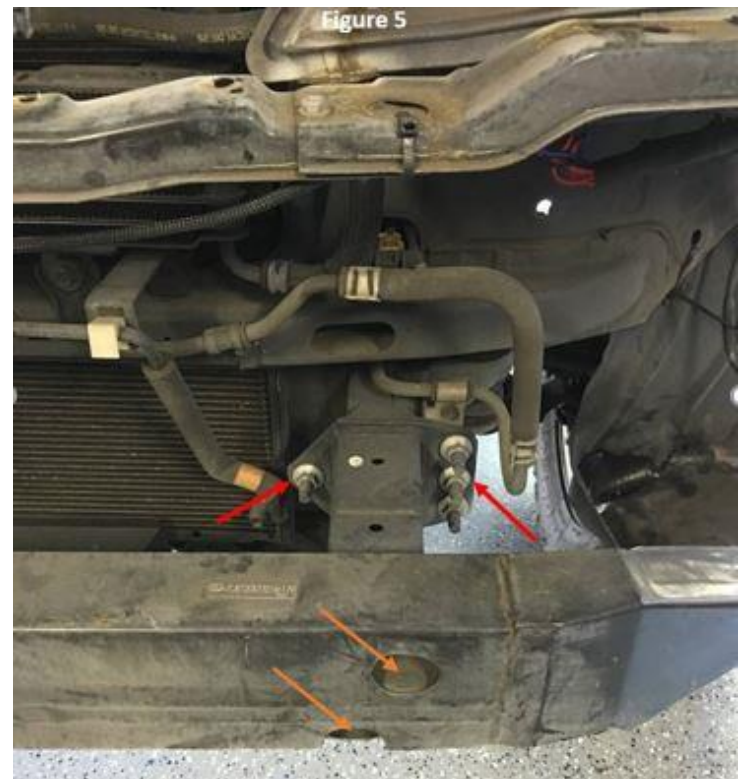
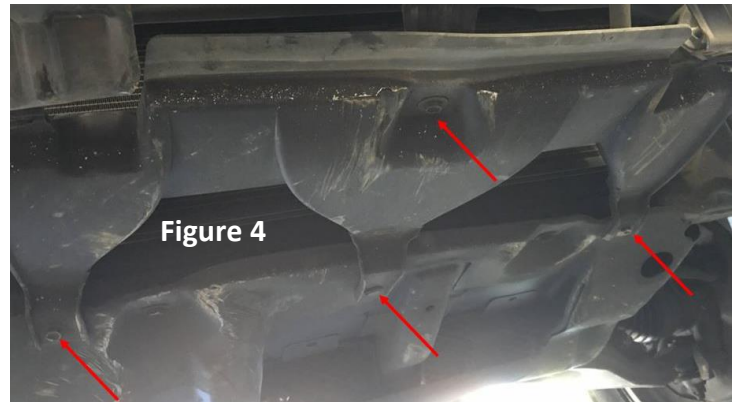
4. Remove 5 - 10mm bolts and plastic pop-up rivets holding on the bottom of the bumper to the plastic radiator skid plate (Figure 4). Remove 3- 10mm bolts and plastic 1 pop-up rivet to remove plastic radiator skid plate.

5. Remove bumper by pulling on one side and working your way around to the other. This may take some force. This is best if done with two people.

6. Remove 4 - 14mm nuts that hold the crash bar to the horns (Lower Figure 5) then remove 8 - 14mm nuts holding on crash bar. (Upper Figure 5) Both of these require a breaker bar and a deep socket (Upper Figure 5)

7. Drill out the side frame 6mm captured nut. This is the hole that a factory 10mm bolt is in. Remove hose bracket using 10mm socket. The stock bolt will not be reused. Where the bolt was removed drill the hole out to 1/2". Also drill out the hose mounting bracket hole to 1/2". (some trucks do not have this) Paint the drilled hole to protect your frame from rust.

8. You can reach through the front frame access hole and using a cold chisel to clean off any remaining debris from the hole.



9. Install winch mount reusing the factory 14mm nuts removed during step 6 (Figure 6). Keep the nuts snug but not tight for now as you will need to adjust side to side alignment and line up the Side Support Plates with the winch mounting system.
10. Install bumper Side Support Plates they will go behind the front flanges on the side of the frame. Install the top bolt into the hole you drilled out using the included 1/2" grade 8 bolt washers and lock washer by access through the hole in the front of the frame rail. Make sure you put the hose bracket onto the bolt as well. TIP: (photos below) To get the nut inside the frame, hold the nut in a box end wrench put a piece of tape across the back of the boxed, insert the wrench with the nut captured. Next install the included 12mm bolt into existing factory threaded hole using a 17mm (11/16") socket with a flat and lock washer. Then install the two 3/8 diameter bolts using a 9/16" socket with a flat washer, lock washer and nut. It is best if you loosely assemble the bracket, put all the bolts in place, then snug everything up (Figure 7 & 8).

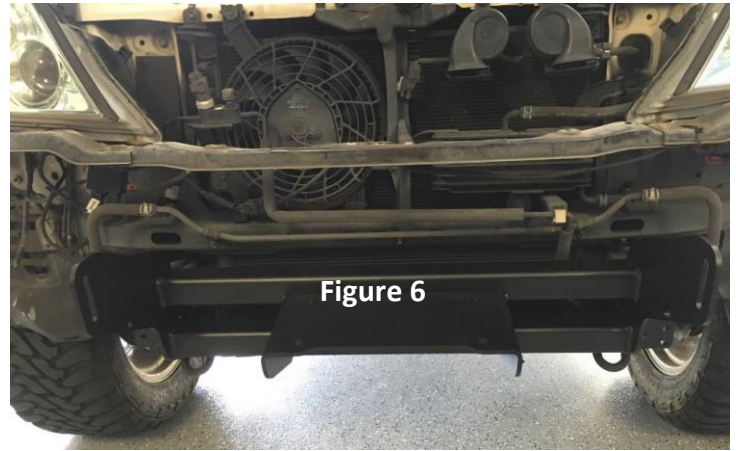


Figure 6

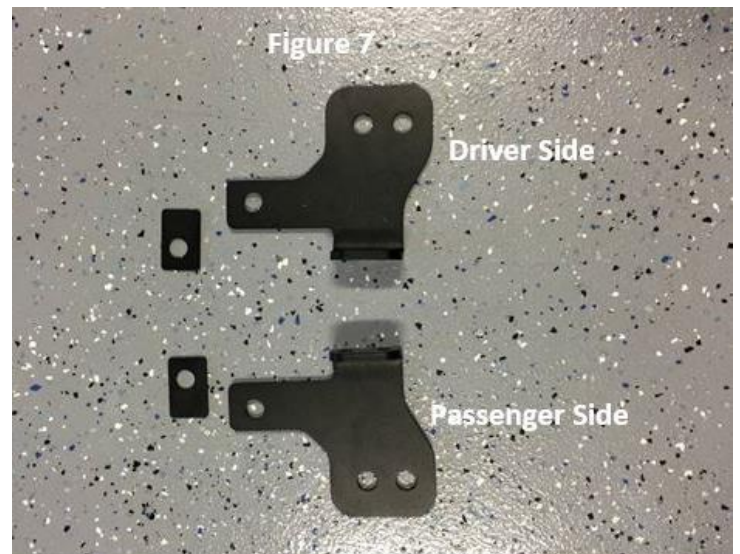


Figure 7

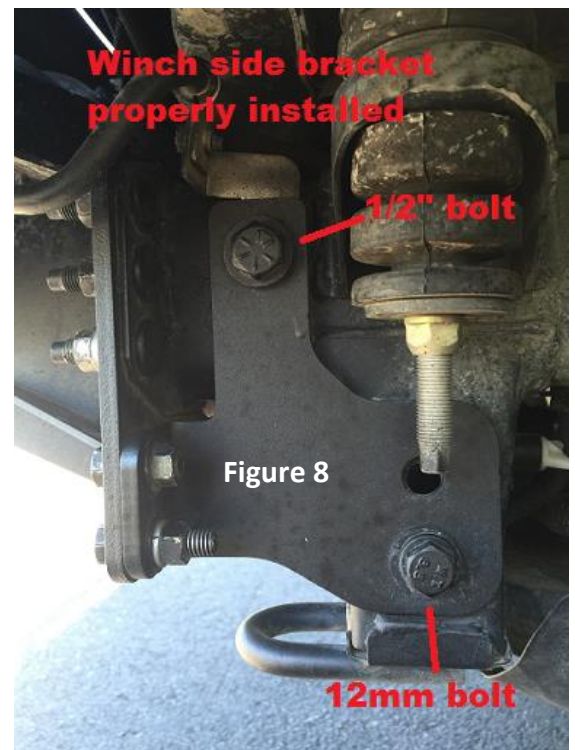
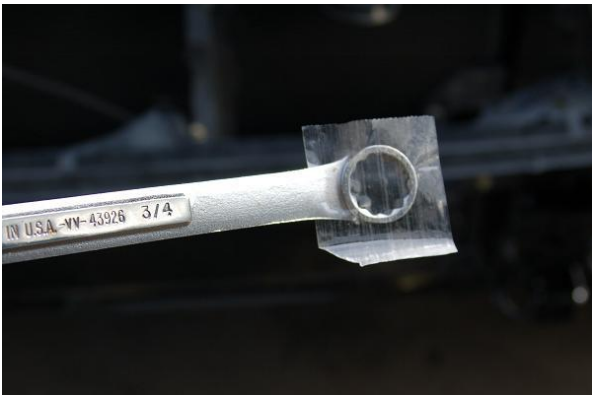
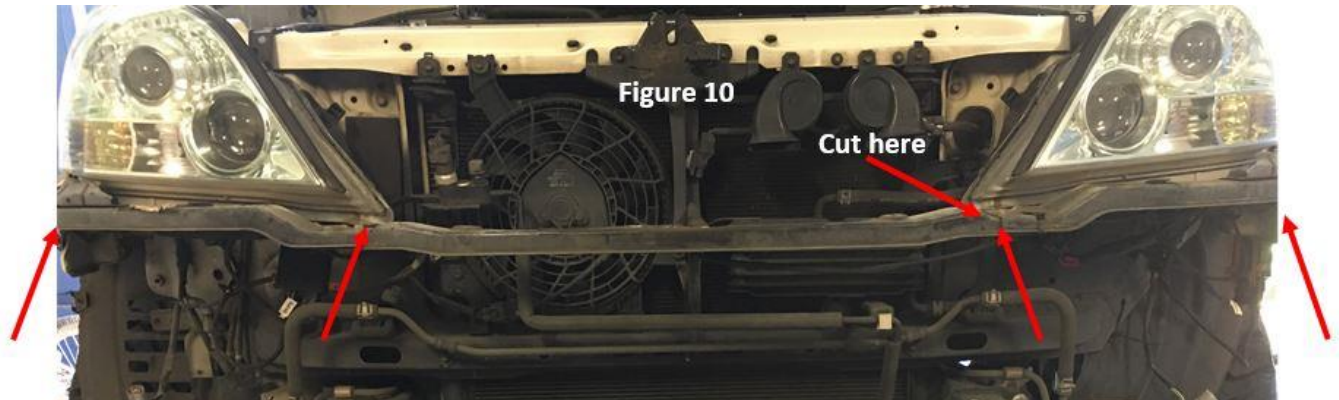
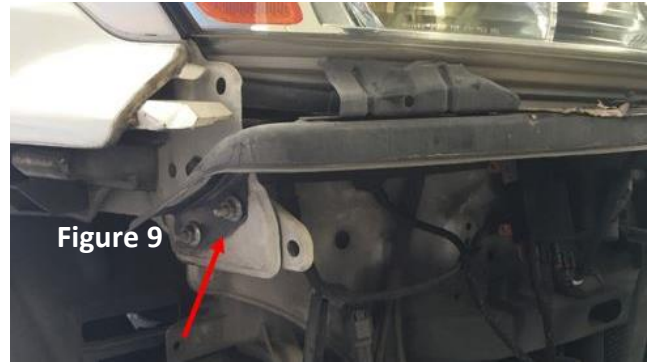


Figure 8

11. Remove bumper support bracket from under the headlights. Do this by removing 4 - 10mm nuts and 3 - 10mm bolts (Figure 9 & 10).

12. **(OPTIONAL STEP)** Install Outpost Offroad fog lights into the primary bumper shell.



13. **(OPTIONAL STEP)** Using 3 button head machine screws with a 5/32" hex bit, install the Grill Insert **OR** at this time install your Outpost Offroad 25.5" Single Row Combo light bar.

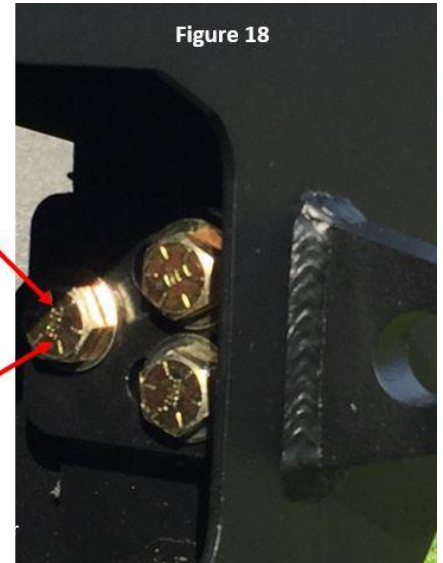


14. **Read first:** Now, test fit the bumper shell and pre-mark your 3rd lock holes to the winch mount. These holes will be marked and drilled into the winch mount. This allows you to first set the desired gap to the body and adjust the fit of the bumper shell to your truck. (very helpful for trucks that have some accident history). Once the alignment you desire is set, drill the 3rd mounting hole in the winch mount.

NOTE: You can set the gap of the bumper to the body very tight. However, the body is on large rubber mounts and flexes independently from the frame. The bumper is mounted to the frame and will not move in unison to the body. When the bumper flexes with the frame it can contact the body if the gap is set too tight. A gap of 1/4" is suggested as a minimum. 3/8" to 1/2" works very well especially if the truck is going to see allot of off road use.

15. Use two people to lift and test fit the bumper shell, be sure to point the sides of the bumper down otherwise you are going to gouge the fenders. Move the bumper into position and secure it using a 3/4" socket, four - 1/2" bolts, eight- 1/2" flat washers, four 1/2" lock washers and four- 1/2" nuts. Once you have the bumper perfectly aligned, mark the location of the set/alignment bolts. Remove bumper shell. Using a punch, mark the holes and drill a 1/2" hole.
16. **(OPTIONAL STEP)** Install your winch now **OR** skip ahead to next step for final install of your bumper.
- a. Install your winch at this point, if you purchased one. Your winch should have come with mounting hardware. There is room for most planetary style winches tucking back almost entirely under the front grill with the control solenoid remote mounted under the hood.
17. Using 8 button head bolts, with a 3/16 hex bit, four flat washers and nylon locking nuts; install the stone guard on lower part of the winch mount.
18. Reinstall bumper shell. Using a 3/4" socket and wrench, install 6 - 1/2" bolts, 12 - 1/2" flat washers, 6 - 1/2" lock washers and 6 -1/2" nuts. Install fairlead and go play.
19. After 500 miles or time on the trail, check tightness of all hardware.

Alignment Bolt in 3rd hole. Hole is in the bumper shell but not in the winch mount this is the hole you drill into the winch mount to lock your fit.



Install Metal-tech 4x4 sticker on your truck for 5.3hp gain. Enjoy a beverage and admire your GX470 with its new armored look ready for the trails.