

Metal Tech 4x4 "Lancer" 2010-Current GX460 Rear Swing Out Bumper Install Guide

Your Rear Bumper Package Should Contain:

- 1 Main Bumper
- 1 Swing Arm with Tire Holder & High Lift Mount
- 1 Accessory Pack with the following
 - 1 MT Stinger (Tire Holder)
 - 1 MT Latch Plate 17-102
 - 2 MT Black HDPE Bump Stops
 - 1 Bearing Kit
 - 1 MT Stainless Steel Slide Plate
 - 2 MT Upper 1/4" Spacers
 - 2 MT Lower Universal Spacers
 - 1 Stainless Steel Latch
 - 1 Rear Bumper Bolt Kit (BK-MT-34800)
 - 1 OPOR LED Bolt Kit (BK-OPOR-LED-5JG-ULB12-A-4D)
 - 8ft of Black Edge Trim
 - 1 Gas Strut
 - 1 "Poplock" Auto Locking Pin
 - 1 MT License Plate Holder (stage 1 & 2)
 - 1 Trim Spacer Bolt Kit (FAS-BS-PL-1x2)
 - 90° Brackets with Bolt Kit (BK-MT-1/4)



Optional add on Parts:

- (All Available at www.metaltech4x4.com)
- OPOR 20W Flange Mount LEDs (incl. stage 2 & 3)
 - MT Utility Mount (incl. Stage 3)
 - MT Fuel/Water Can Holder (2 incl. Stage 3)
 - MT 3rd Fuel Can Holder Kit
 - MT Small Utility Basket
 - MT Large Utility Basket
 - License Plate Lights

- 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.

All modifications are done at the owners risk, check local laws for compatibility.

1. Remove old parts and prep for the new:

- 1.1 Remove stock bumper – IF installed on truck.
- 1.2 To remove the bumper there are a series of bolts, screws and clips throughout the fender well, underneath, and the top under the rear door.
- 1.3 **Unclip all of the wiring to the stock bumper before you pull!**
- 1.4 Once all hardware is removed grasp the outer corner on the wheel well portion and pull it back away from its snap fit mounts. It does take some force to pull it off the truck.
- 1.5 Remove the Foam part that sat under the stock bumper deck.
- 1.6 Remove plastic bumper clip assemblies that run from the fenders to the taillights.
- 1.7 Remove (if installed) factory pull point on the left side and the metal bracketing that is on the underneath and inside of the frame on the rear.
- 1.8 Remove Back Up Sensors (if installed) and their harness from the inside of the stock bumper.
- 1.9 Unbolt the trailer wiring adapter.

2.0 Bumper Installation

- 2.1 Check frame for excessive weld splatter above and below the frame corners. Lexus is inconsistent with the finish since this is usually hidden under layers of plastic. Since we are installing steel directly to these points for strength, the presence of weld splatter can affect the installation of your new bumper. IF there is excessive weld splatter or welding wire lying on the frame where your new bumper mounts remove it with a file or grinder.
- 2.2 Install the latch mount, landing pads, latch hook, gas strut ball mounts, auto lock, and the slide plate as shown in the images.
- 2.3 HDPE Landing Pads use 1/4" hardware
- 2.4 Latch Plate, Latch, and Slide Plate use 5/16" Hardware
- 2.5 Gas strut balls mount to bumper near the pivot point and the 3-hole mount on the swing out beam and use 5/16 Hardware.

* At this time, it would be wise to install any other accessories onto the bumper/swing out such as the Outpost Offroad Flange Mount LED Lights, OEM back up sensors, and/or CB antenna.

3.0 Install Main Bumper.

* NOTE: Loosely bolt to the frame so it can be adjusted once all the bolts and spacers have been installed.

- 3.1 With the help of a friend lift the bumper onto the truck. **Be careful to not scratch your truck!**
- 3.2 Align the center holes and install the provided 12mm bolts, lock washers and washers.
- 3.3 Use the lower "E" spacer (looks a bit like an E) The two holes will match the two round inside holes on the lower flange mounting point for the bumper.
- 3.4 Use the provided 1/4 spacers on top of the frame (silver in picture)
- 3.5 Install the 12mm bolts, lock washers and washers into the bottom of the frame with the 3/8 bolts, washers, lock washers, and nuts through the lower and upper mounting holes in the bumper. (shown without washers, must install washers!)
- 3.6 Once all is installed loosely, align bumper to desired position and tighten all mounting hardware.
- 3.7 Install the factory trim panel for the bottom of the rear door opening to the factory threaded holes that it sits on/above using the Spacer Bolt Kit (you can mark/drill holes from underneath looking up at the trim panel.

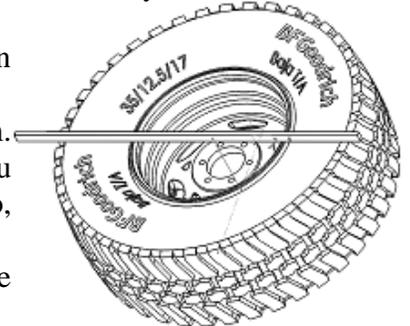


4.0 Install Swing Arm

- 4.1 Hand pack grease (moly or lithium wheel bearing grease) into the two tapered radial bearings.
- 4.2 Wipe any manufacturing dust from the pivot shell at the end of the swing arm. Lightly pre-grease the inner races. (Note we have already installed the inner races for you inside the pivot shell)
- 4.3 With the swing arm upside down/horizontal install large radial bearing into pivot shell on swing arm. NOTE: make sure the taper of the bearing is facing the taper of the race already in the shell.
- 4.4 Tap pivot lip seal into place on top of the large radial bearing. (Tip put a little grease on the outer part of the seal so it seats easier) Use caution to seat the seal evenly, unevenly can damage the seal can rendering it worthless and require replacement. (Metal-Tech 4X4 stocks replacement parts for all components)
- 4.5 Install Latch to the end of the swing out arm as listed in step 2.4 (use the $\frac{3}{4}$ long bolts)
- 4.6 Install swing arm on to the pivot. Drop in upper smaller tapered radial bearing, washer then castle nut. Lift swing arm up and down a bit to help the tapered bearing seat into the race. Tighten the nut firmly but still allowing the pivot to swing.
- 4.7 Close the swing arm and adjust the latch U bolt so it pulls down and locks swing arm in place.
- 4.8 Tighten castle nut then back spindle nut off a $\frac{1}{2}$ turn and install cotter pin.
- 4.9 Install grease cap tapping it into place with a rubber mallet may be necessary.

* TIP: Once dome cap is in place paint it with Rust-oleum Textured Black #7220830 so it matches the bumper. (This cap is not powder coated since the powder coating would be damaged when it is installed. However, it is zinc plated so left silver is fine.)

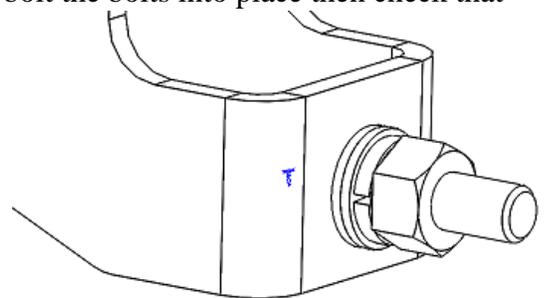
- 4.10 Install tire stinger into clamp on swing arm. **WARNING!** IF the stinger is mounted too far back IT WILL HIT THE BACK DOOR OF YOUR TRUCK AND DAMAGE YOUR DOOR. Use caution as you do this step. The best thing to do is measure the true back spacing needed for your tire/rim combo.
 - 4.10.1 Lay your spare tire face down on the ground.
 - 4.10.2 Place a flat edge across the tire from one side to the other sitting on the rubber.
 - 4.10.3 Measure the distance from that flat edge to mounting flange of the rim.
 - 4.10.4 This is the maximum offset you need for the stinger adjustment. You do want the inside rubber of the tire to touch the swing arm face. So, subtract $\frac{1}{2}$ " from the offset number you got and use that.
- 4.11 Install the stinger and clamp down so the face of the stinger is the distance to the front of the swing arm, you got to set your offset to.



WARNING!!!! SLOWLY CLOSE your swing arm checking that the back of the stinger does NOT contact the back door. Damage to your truck can happen if you do not use caution. If it will hit, you need to shorten the stinger tube by cutting it down.

5.0 **Install Hi-lift** mounting points. These are the lower mounts on the swing arm. They are oblong to allow for adjusting the fit for your Hi-lift jack you use. First bolt the bolts into place then check that your Jack fits over them. Adjust if needed.

- 5.1 NOTE: Remove the bottom foot on your hi-lift, most are on a pull pin and go off and on really easy. Store the foot and pin inside your recovery bag inside the truck. (you will have that bag out if you ever need to use your jack anyway)
- 5.2 Bolt facing to away from truck, use one flat washer under the head of the bolt as TWO stacked with a lock washer and a nut on the other side.
- 5.3 The remaining threads of the two bolts are the mounting studs for the Hi-lift to hang from. The end of the jack with the mechanism goes to the right of the truck. Use the two remaining nuts to secure the jack to the studs.



6.0 Install license Plate Mount

- 6.1 Install the MT license plate holder onto the swing arm mounting holes with the provided $\frac{3}{8}$ hardware.

***The following instruction steps 7 and 8 are for the optional accessories available at www.metaltech4x4.com.**

- 7.0 **Install Utility Rack** onto swing arm with provided ½ hardware with the bolt head on the closing side of the arm. This mount should have come with a license plate mount to replace the stage 1 & 2 version.
- 8.0 **Install the Small Basket, Large Basket, or Fuel can holders** using the supplied hardware.
- 8.1 Align the bolt pattern of the utility rack with the accessory of your choosing and install the provided hardware with the license plate holder in underneath the utility mount extending forward and up to hold the plate tucked up to the desired accessory. (not sticking down to get snagged)
- * The 2 front center bolts are used to mount the provided license plate holder from step 7.0
- 8.2 Use the provided hardware or the pair of License Plate Bolt Lights (available at www.metaltech4x4.com) to install the license plate onto the mount.
- 9.0 **Stock Bumper Cut.**
- 9.1 Once all of the accessories have been installed you are ready to attach the stock bumper parts to cover the exposed areas of the truck.
- 9.2 Measure each gap separately (left & Right) between the taillight and the new bumper. This is the size of the stock bumper parts you will need to remove and reinstall on the truck
- 9.3 Measure, measure, make a mark and cut (leave it long if your unsure, you can always trim more off)
- 9.4 Test fit the pieces on the truck and verify desired fitment/look.
- 9.5 Install supplied Trim and reinstall.
- 9.6 Install the 90° brackets using the provided hardware. They attach the factory bumper skin portions to the top of the new metal bumper (slots are cut into the metal but there will need to be holes drilled in the plastic bumper for exact fitment.
- 10.0 **After 500 miles** or time on the trail, check tightness of all hardware.
- 11.0 **Install Metal-tech 4x4 sticker** on your truck for **10.5 HP gain!** Enjoy a beverage and admire your GX460 with its new utility and armored look ready for the trails.

We welcome your feedback on our products and your experience with Metal-tech.
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