Kaymar Bumper Installation: 2014+ Lexus GX460

****** Note that the base information and many pictures for the install instructions came from TX GX460 on IH8MUD (https://forum.ih8mud.com/threads/his-and-her-gx-460-builds.1073592/post-12122650). Huge thanks to TX GX460 for documenting these initial install steps! Note that I am elaborating in those sections where my specific install was slightly different or the information seemed inconclusive and I wanted to simply provide more context.

(1) First step is to remove the OEM bumper cover, disconnecting the lights and parking sensors. There are a lot of 10MM screws that will need to be removed from all around and in the wheel wells before pulling the bumper cover off. Pry the OEM bumper off with constant pressure but do not yank on it as you will need to re-use. Start from a lower corner of each wheel well and move up from there.

Make sure to label or indicate where the wire leads run to (or belong) before detaching them so you know what they went to, especially for the sensor locations.

Place the OEM bumper cover on a blanket or bunch of towels to protect the paint from scratching. Leave it out of the way as you won't need it until near the end of the install when you have to cut to fit.

Remove the chrome exhaust cover/tip from the end of the exhaust pipe. It will not fit once the bumper is installed.

Remove the OEM Tow Electrical Wiring Harness and bracket.

(2) Second, go ahead and install the rear lights to the new bumper.

If the lights come pre-installed – skip this step.

The lights are installed with white on the bottom, red on the inside top, amber on the outside top. You will need to separate the rubber gasket from the back to fit the light through the opening, then line it back up with the rear of the light before screwing the light in. I will discuss the wiring later in the thread.

Picture below for reference:

(3) If you received the Kakadu model

(http://www.kaymar.com.au/Kaymar2018/kaymar_site/vehicles/toyota/toyota_Prado150_GXL_FROM_Nov2017_SENSOR_MODEL.html)

the parking sensors are pre-drilled and ready for install once you clean and prepare the OEM sensors for re-installation to the new bumper.

For models that don't have parking sensors drilled and you still need to drill them, use the following measurements to drill each hole location. There are four (4) sensors to install.

*** Note that following the marking for holes, reconfirm that the sensors will clear all obstacles located within the bumper. You will need at least 2.5" from any obstacle so you may need to shift these measurements accordingly to clear.

Use a step-drill bit up to 5/8" for the completed holes but confirm and adjust accordingly for your specific sensors. Use these measurements below for each side:

Corner: 3” down / 4.5” from edge of light
Middle: 4.25” down / 3.5” from edge of light

Picture for Reference:

To prep the sensors, you will need to remove the old foam tape in its entirety from the sensor brackets (remove the actual sensor from each bracket first). You can use a razor blade or a belt sander works very well to get the old foam off.

Once done with the removal of the old foam adhesive, clean the sensor bracket mounting location with rubbing alcohol and let dry before attaching new adhesive. Use a 3M Scotch double sided tape like 5952 VHB tape. (I also took the added step of applying black RTV silicone once they were installed on the bumper)

Prior to applying to the new bumper, clean the mounting surface around the hole on the interior of the bumper.

Test the fit for each respective sensor prior to adhering. Make any modifications required before applying.

Pictures below…

Corner Sensor

Middle Sensor

(4) Wiring. The all-in-one lights on the bumper require leads from two locations:

- The reverse lights are powered from the same wiring harnesses as the parking sensors.
- The brake lights, tail lights and turn signals are pulled from the back of the light assembly above the bumper cover.

Try to tie the grounds together from both locations for efficiency. Below is a photo of the reverse light wiring coming from the parking sensor wire harness. Note that I followed the Kaymar light wiring, in which the ground wire is white and the reverse light is black. For the Kaymar lights, the right-hand side light has a green turn signal wire, while the left-hand light has a yellow turn signal wire. All other wire colors are the same between them.

On the GX460 the wires are identified as such:

Turn signal - Green with Yellow Stripe
Ground - White with Black Stripe
Brake - Green with White Stripe
Tail light - Solid Green

Kaymar Wiring (note that ground is WHITE):

	Right hand side	Left hand side
LEFT INDICATOR	YELLOW	YELLOW
RIGHT INDICATOR	GREEN	GREEN
REVERSE	BLACK	BLACK
STOP	RED	RED
TAIL	BROWN	BROWN
EARTH	WHITE	WHITE

Tie into the lights just behind the harness on each OEM light, then run the wires through a braided sleeve or other protection before terminating them. The brake light is a smaller gauge wire than the rest, which is the reason for the different connector.

I used wire-tap connectors and crimped terminal connectors so that I could wire each side and connect them once the bumper is installed.

Back of GX460 light housing:

(5) Wing install. The side wings provide support for the forward sections of the bumper toward the fender wells. They each have a downward-hanging bracket that points down during the install. As it turns out, these are to reattach the Prado 150 stock mud flaps, which are different in design from the Lexus mud flaps. So they are useless and can be retained or removed.

Note that the correct driver's side wing is the Kakadu model below:

K6155_wing_brace_for_Prado150_Kakadu

This brace allows the OEM compressor to be remounted to this brace. ***only this brace will work for the 2014+ GX460 unless you've fully removed the compressor from your vehicle.

Use the supplied shorter bolts, lock washers, and washers to attach these to each side. You will need to use a flexible magnet to hold and feed the passenger side bolts into place through the frame. *** This technique will be used a couple times to feed bolts into position

(6) Bumper Support Brackets. These “Z” shaped fixtures install to the body using the supplied rivets. ***You will need a rivet tool to complete this step.

The Bumper Support Brackets provide spacing for the bumper cover after it is cut so it maintains the original body line. Follow the installation instructions provided by Kaymar, but location precision isn't vital here. Just make sure it is snug against the body protrusion shown below. Add some primer or paint on the holes drilled for the rivets just to prevent corrosion. Use two-sided tape or Velcro to adhere the bumper cover to this bracket once the OEM bumper cover is cut and verified for final fitment.

(7) Enlarge Bolt Hole. Prior to installing the new bumper, you will need to enlarge one hole in the frame on each side to fit a supplied bolt. The bolt will be fed on the attached wire from a hole located in the rear fender area and bolted from the outside. Because the fender fits so tightly onto the frame you should drill out the hole before attempting to mount the bumper, but don't bother trying to thread it through until after the bumper has been mounted. After drilling, remember to add primer or paint to the cuts for rust prevention.

To get access to a hole large enough to feed the bolt/wire, there are a couple locations near each wheel well that are covered with plastic covers that can be popped off – use a tool for popping off these plastic fasteners if you have one.

Picture below:

You'll feed the bolt/wire through this hole until you get to the hole you widened. Use your magnet to pull it through/position it.

After the bolt is in place and secured, push the wire completely in the frame and put the cover back on the hole in the wheel well. It's recommended to keep the lead wire as long as possible in case you ever need to remove and reinstall; don't cut it off.

(8) Kaymar Bumper install. Before you mount the bar, you should have mounted the bracket circled below onto your frame. The bumper will bolt into this bracket from underneath.

The bar itself is not terrible to mount, but it had some difficult steps. On the plus side, it can be placed on the rear frame member and rest there while you attach the bolts. On the minus side, the location where it will sit easily is not the correct final location.

Get help and lift the bumper onto the frame.

It's recommended that you loosely (specifically, as long as the bolt will allow) attach at least one bolt location between the wing brace and bumper on each side. This prevents the bar from sliding off the frame or tilting too much.

Second, position the lateral bolt hole in the bumper that matches the clearance hole drilled for the bolt/wire that passes through from the inside of the frame. This positioning will allow the rest of the bolts to be installed with relative ease because it places the bumper in approximately the right location. Lift each side into place by hand and then pass the bolt from the bolt/wire through from the outside using your magnet. In order to get the best location

for each of these holes (a necessity for easily pulling the bolt through from the inside), I used a large center punch as leverage in the holes to line them up.

The frame attaches to the wings, to the frame by two bolts under the frame on each side, with a spacer in between the bumper and frame, and at the hitch area with two additional bolts.

The wings are pretty self-explanatory. They should be attached loosely to the frame, and should be also loosely attached to the bumper wings at this time.

Below are photos of where the frame spacer should be placed. It slides in, so if you loosely locate the bolt holes first you can slide it in on each side around the bolts before tightening. ***But don't tighten yet until you get the remaining bolts located.

The other bolts are passed through the hitch location gold bracket shown earlier and thread into captive nuts welded into the Kaymar bumper frame. The photo below is looking up and to the rear from under the hitch area. Again, loosely locate these at first.

How they mate up:

Next, start tightening bolts. First loosely advance all of the bolts to make sure they all aligned properly. The lateral bolts on the frame don't have much play in them, so tightened the ones in the hitch area first, followed by the ones in the bottom of the frame (making sure the spacers were in place), followed by the lateral bolts in the frame, followed by the connections between the wings and wing braces, and finally tightening down the wing braces to the frame (then checking everything again).

(9) Middle/Rear Step Section Trimming. The trim for the middle step section is unclear and a little misleading in the Kaymar instructions due to the differences between vehicles. The function of keeping this section is to secure down the two layers on top of it. The bumper cover attaches to the body with screws, and the step surface and trim both secure into the bumper cover using the OEM clips.

When trimming the step area, the rule of thumb is to trim it so it does not interfere with the diamond plate step piece. The diamond plate starts out flat and as it approaches the body it has a rise with space to overlap the bumper and trim pieces.

For the step piece, trim along the line of the first set of ridges closest to the door. The main reason for this piece to be included is that it provides some of the mounting locations/OEM clips for the top trim piece. So again, precision is not key here. The step piece pops into place using tabs.

Below is a photo of screwing the bumper cover step area into place, which gives you an additional look at the trim location used.

The cover then pops into place into the step piece without trimming.

And finally, you install the diamond plate with the included hex head bolts, making sure to line up the holes in the rubber gasket with the mounting holes during the install. This last step should only occur AFTER you complete mounting of the bumper, or otherwise you are likely to damage either the diamond plate or your door.

(10) OEM Bumper Cover trimming. Remember that when trimming, the bumper cover is attached to the body while the Kaymar is attached to the frame. Articulation will result in flex and movement between them, so be mindful of this when making your cuts. A 1/4" to 1/2"

gap is correct. There is also a constraint with the step trim portion of the bumper cover that provides a lowest practical cut line, as circled below. Follow this line all the way around and when test fitting the OEM Bumper Cover, adjust as necessary.

Use a jig saw to trim once you have tapped (blue painters' tape) the exact cut line.

Once installed, you'll notice that the sides of the OEM Bumper Cover actually sits just on the outside of the Kaymar bumper line.

Below is a photo of the side trim. Kaymar provide some two-sided edge trim in two sizes. If you get only a small size included from Kaymar, you can also purchase the larger two-sided edge trim from Amazon.

https://smile.amazon.com/dp/B00NL477JE/ref=cm_sw_em_r_mt_dp_U_QdInCbE6DFAMV

This side edge trim will be installed on all the newly cut sides on the OEM Bumper Cover.

Once the sides are trimmed to your liking and fit, the OEM Bumper Cover will need some fine adjustment trimming once you get to the spindle location on each side. See picture below:

This process will be a bit of trial/error as you should slowly cut and reattach the OEM Bumper Cover to ensure clearance for the installed spindle. Use the Jerry Can spindle to test either side for clearance. Based on fit, continue to trim until each side Spindle fits.

Once you got the right clearance – doesn't need much. Use the small two-sided edge trim to trim this area out.

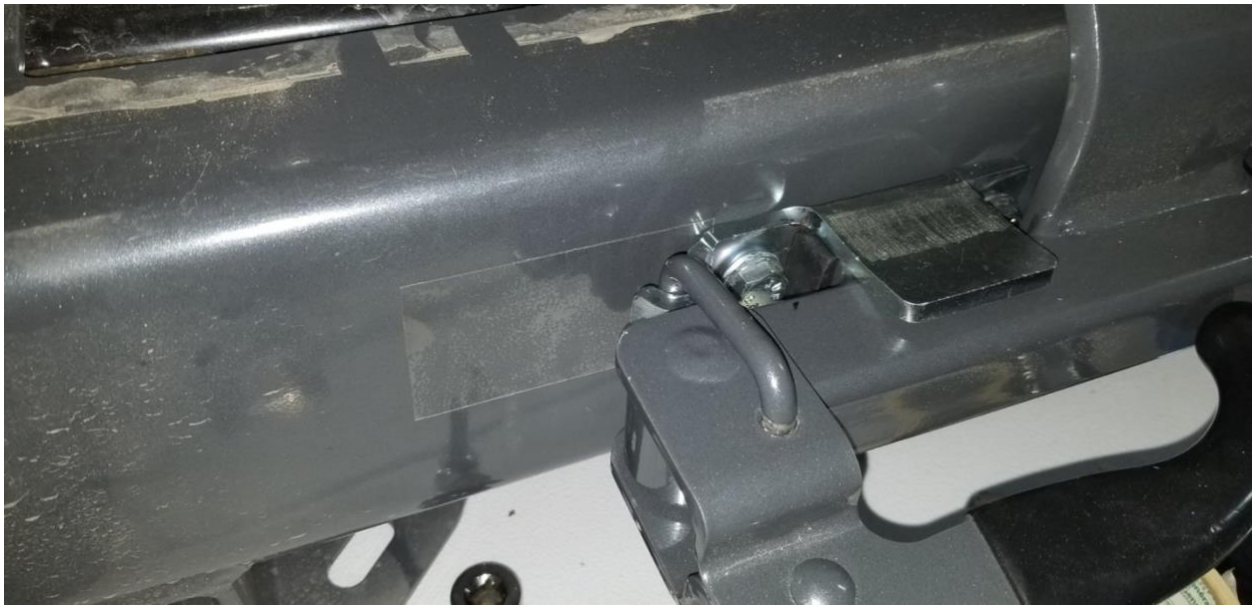
You will also need to trim the OEM Bumper Cover around the Middle/Rear Step Section. You'll need to trim in order to fit the gas springs on the passenger side. Key here is to trim as little as possible at first and test fit everything, slowly trimming more in order to ensure everything fits.

(11) Gas Springs. To install the gas springs, you must do the install **BEFORE** fully installing the swing arm. Connect the gas spring on each bumper side. On each gas spring, change the bolt on the spindle side to the middle bolt location.

Then install each spindle (driver side Jerry Can / passenger side Tire Carrier), then partially lower the swing arm onto the spindle until the gas spring bolt post lined up with the mounting hole on the arm (middle bolt hole). Tighten down the gas spring on the swing arm side (making sure that you are not so tight that the gas spring lock tab can't rotate in place). Then lower the swing arm the rest of the way onto the spindle, install the upper bearings, and finish with the washer, nut, cotter pin and cap (greasing properly at each step).

You'll need to use a rubber mallet to attach the cap.

(12) 3M Clear Vinyl Strips. The kit comes with a few 3M clear vinyl strips. They are meant to protect your bumper from scratches from the locking mechanism. Clean the surface of the bumper on the inside location of the latch points as shown below.



Another thing to note: the latch points are side specific and are marked as "Passenger Aus" and "Driver Aus". Note that Australia (Aus) is left hand drive, so these should be installed on opposite sides to how they are marked for the Lexus.

(13) License Plate Wiring. You'll want to tie the power/ground for the license plate wiring back to the driver's side wiring already configured for the bumper lights. Run a power and ground back to the wires and attach the ground to the black wires and the power to the brown wire as indicated on the Kaymar installation guide. Use wire split loom or similar to shield the wires. Make sure you have enough wire length to support opening/closing the Jerry Can spindle.

(14) Electrical Clean Up. Zip tie all your electrical under the bumper to make sure it is contained within the bumper cavity and is not hanging down or exposed.

(15) Tow Electrical. If your Lexus came with an OEM towing electrical harness, this will not fit and need to be removed. Replace this with model: https://www.etrailer.com/Custom-Fit-Vehicle-Wiring/Hopkins/HM11141920.html

Finished Bumper:


ALUMNI
CALIFORNIA
USC