



LC100/LX470 Modular No Cut Rear Bumper Installation Instructions



****If you purchased an aluminum rear bumper, there are 4 nut plates that will need to be installed prior to the bumper being installed. It is important to torque these to 100fp as you will not be able to after the bumper is in place. These will install on both hinge bracket corners.****



1) Remove existing bumper cover, clean off any excess welding spatter from the frame, check and clean threads as needed.

2) Mark the frame as seen in the picture to the right.

There is a hole on the inside of the frame that will need to be enlarged so that a through bolt can be installed. Drill out holes on each side of the frame to fit a 1/2" bolt.

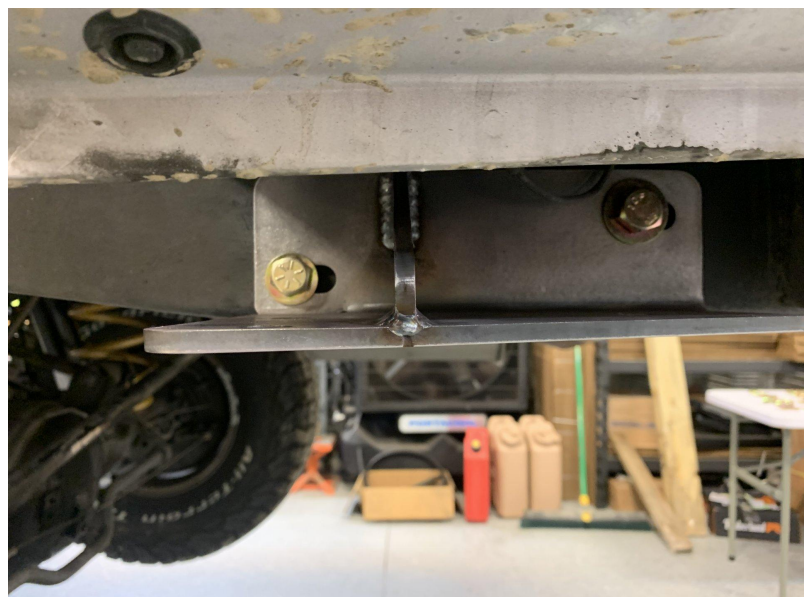
Once the frame is drilled and clean it is recommended to put a fresh coat of paint on the frame.



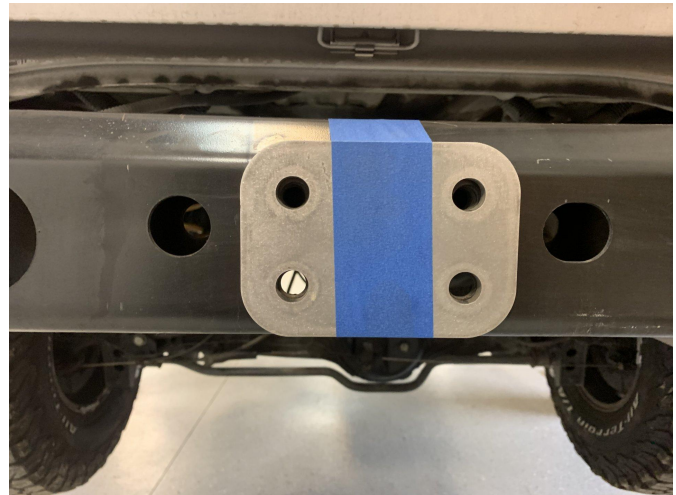
3) At this time you will also need to cut the lower pinch weld seam at about a 45° angle as marked out in the pic below. This is the corner at the wheel arch. Once cut make sure to touch up the paint on the bare metal.



4) Now you will install the wing stiffener plate loosely to the frame using bolts, nuts and washers provided.



5) Using masking tape, tape on one of the 1/4" hitch spacers to the frame.
(Note, on some 03 and up models equipped with the integrated towing cross member these spacers will not be used.)



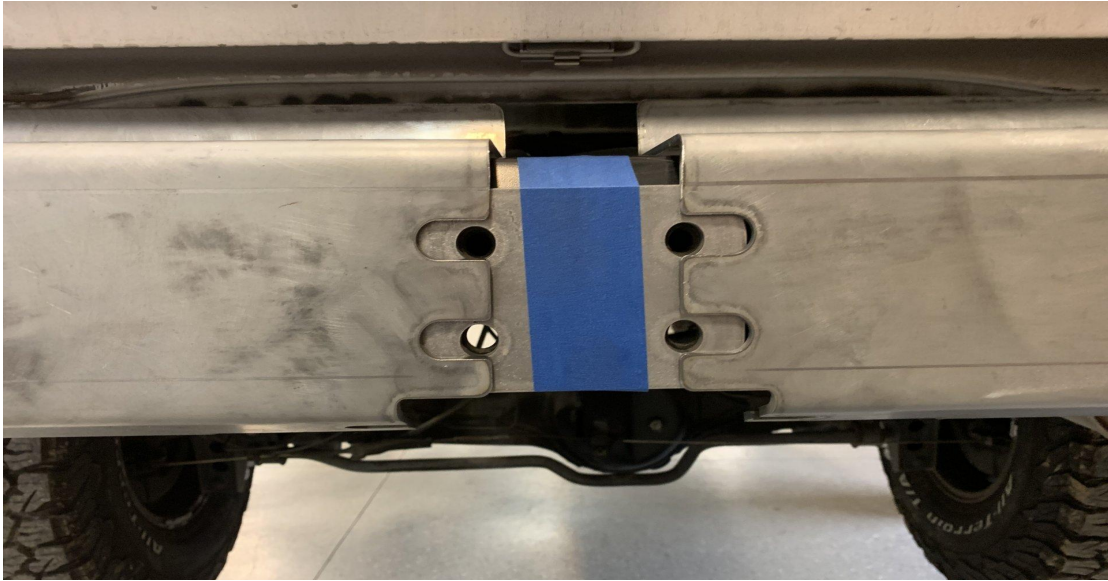
6) Now install the wings into place and loosely install the 3 lower m14 bolts.
(If swing outs are being installed you will want to install the ball studs for the gas struts into the bumper before hand)



****If you have an aluminum bumper make sure that you installed the nut plates from page 1 before installing the wings****

7) Once the wings are in place you can now move them around for proper alignment. Once the desired alignment is achieved go ahead and snug the lower m14 bolts while holding the center of the bumper tight to the frame.





8) Now it's time to install the hitch.

First, slide the hitch into place, install the top m12 bolts loosely.



Install the lower hitch bolts loosely.



Next, the back 1/4" spacer and back plate can be installed along with the 4" through bolts. Install all hitch bolts loosely.



9) Now you will begin to tighten the bumper.

After confirming everything is still aligned start with tightening the lower hitch bolts



Then the through bolts



And lastly the top bolts



10) Now we will move on to the wing stiffener.

Loosely install the three 1/2" bolts on both sides with nuts and washers.



Once installed you can tighten up all bolts. All 1/2", m14 and m12 bolts should be tightened to roughly 95fp.

At this point if you will not be installing the swing outs you can finish off the bumper by installing the logo badge, trailer plug, backup lights, latch plate blank off bolts and hinge blank off bolts.

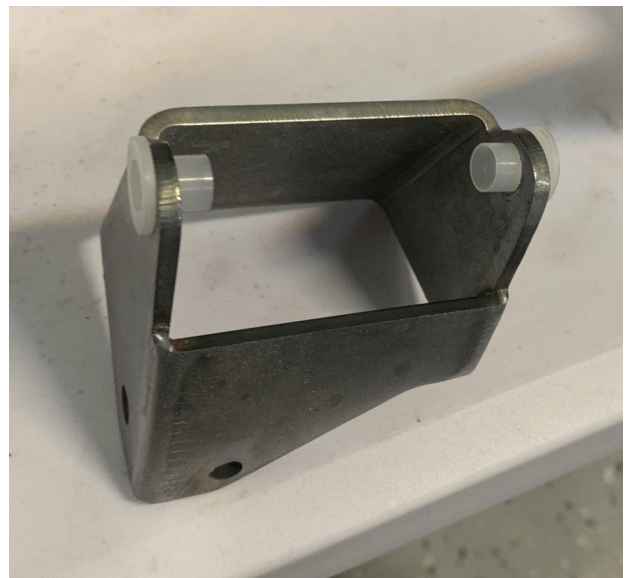
It is important to check and clean all captive and tapped holes to ensure they are not clogged with powder coating. If they are, it may be necessary to clean the threads with a tap.

Also note that it is recommended to use anti seize on all tapped and captive bolts as well as all stainless!

Swing Arm Installation

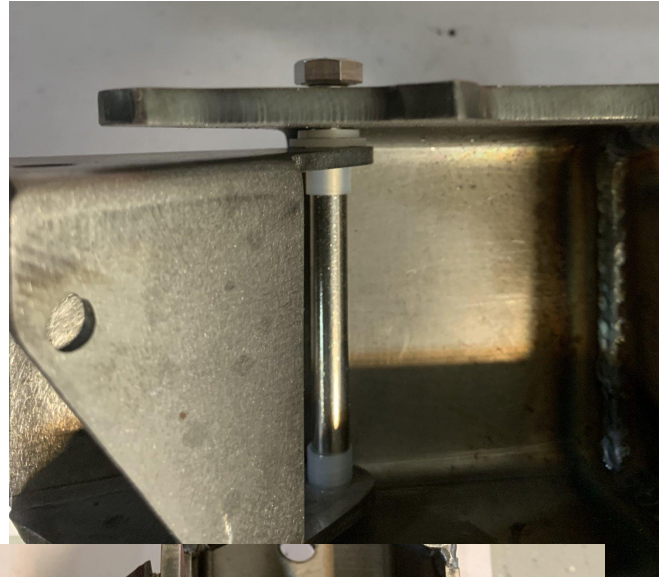
We will start by assembling the swing arm.

First install the nylon liners into the handle along with nylon washers top and bottom.



Install the 5/16 stainless bolt from the bottom of the swing arm up. (Nut will be on top) use anti seize on threads!

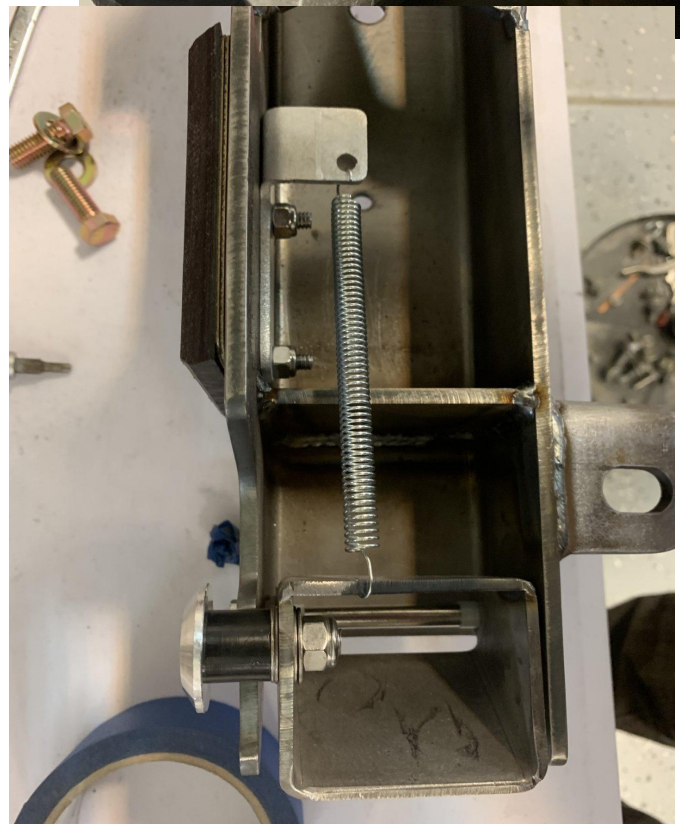
Making sure the latch is straight, tighten the bolt until there is no slip in the latch but it still moves freely.



Next install the striker, there are extra washers included as alignment shims if needed but a good start is 2 washers.

Now install the uhmw pad and spring bracket. The pad will come with 3 stainless steel shims however we will start with 2.

It should look like the picture on the right when done.



Now install the bearings, press the seal in, add the bearing spacer, and grease fittings to the top and bottom.

It is a good idea to pack the bearings with grease prior to installation.



Next loosely install the proper hinge bracket

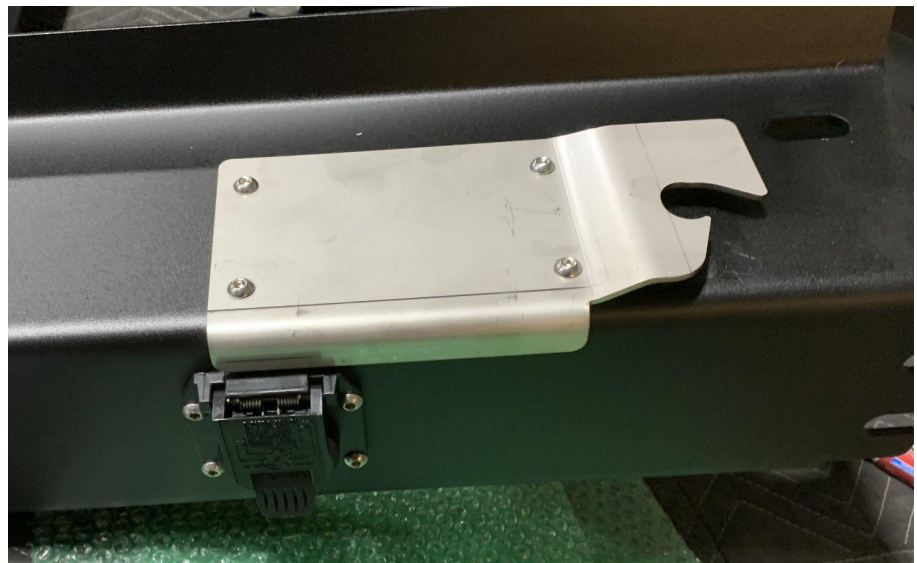
Put a light coat of grease on the hinge bolt.

The nut will be installed at the bottom with no washer.

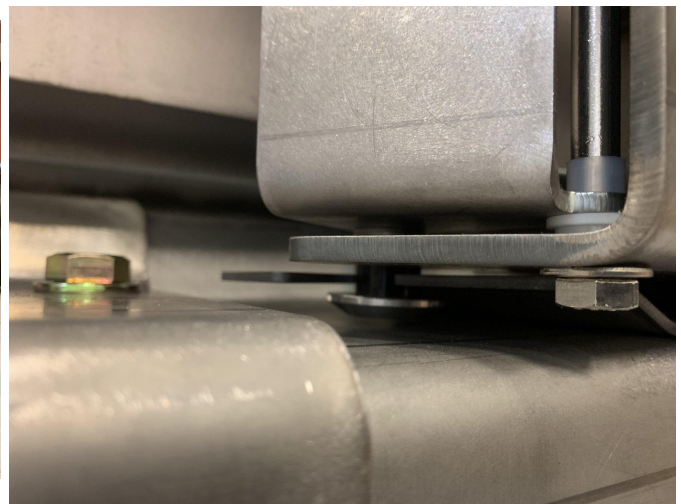
Final assembly should look like the picture to the right.



Next you will install the uncoated stainless striker pads with the 1/4x20x3/8 stainless button head bolts.



Now set the swing arm into place and let it latch closed



Install the 2 outer 7/16 bolts on the hinge with the swing arm closed. While paying close attention to the uhmw pad, tighten the outer bolts. (We will torque to final spec after checking alignment). Once tight you can tighten the main hinge bolt to where you feel the preload on the bearings.

Next swing open the swing arm, install and tighten the 2 inner 7/16 bolts.

Now check everything is aligned and working properly. Add or remove shims as needed. (Note that you will want the aluminum washer on the striker to set in between the bumper and striker pad like in the photo above. Add or remove washers as needed.

Now is a good time to grease the bearings via the grease fittings if you didn't pre pack them.

Next install the gas strut as pictured

Once the swing arm is aligned torque the 4 7/16 bolts to 52 foot lbs.
(DO NOT OVER TORQUE!)



Once the gas strut is in place, install the 1" bump stop on the inside of the swing arm and the smaller bump stop on the outside.

Once installed check that the swing arm is not over extending the gas strut, install supplied spacers as needed.

The inside bump stop sets a preload on the latch. Make sure there is a proper preload on the latch to prevent rattling while driving. Add or remove washers as needed.

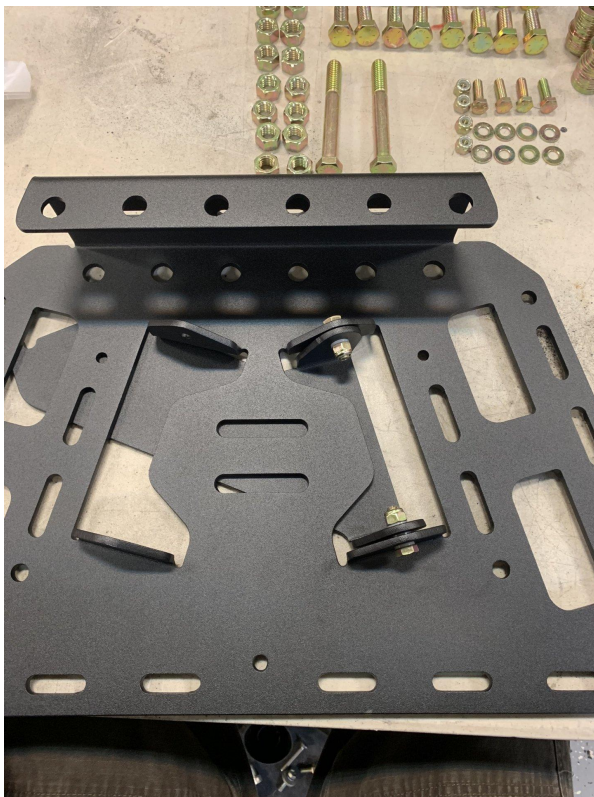


Once the swing arm is installed, aligned and greased we can move onto the tire carrier.

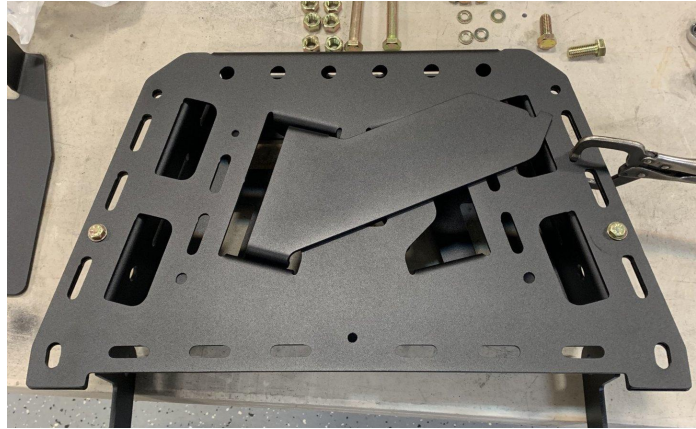
The tire carrier will get pre-assembled on a work bench prior to installation on the bumper. First lay out all the parts.



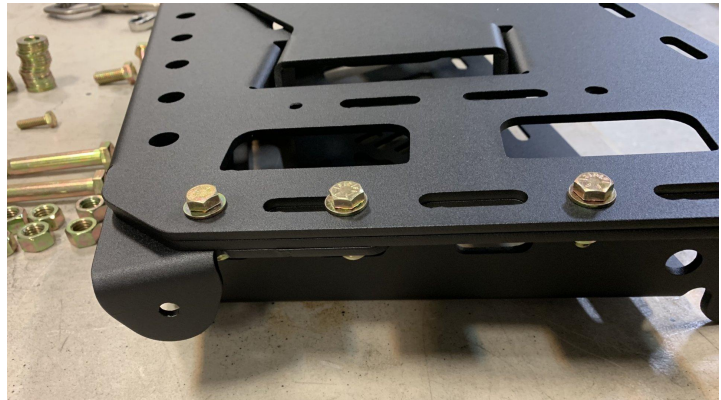
Next install the table leg to the back plate as pictured.



Next install the back plate on the front plate as pictured. (Note the orientation of the bolts and duplicate the photo)



Install the table bracket loosely.



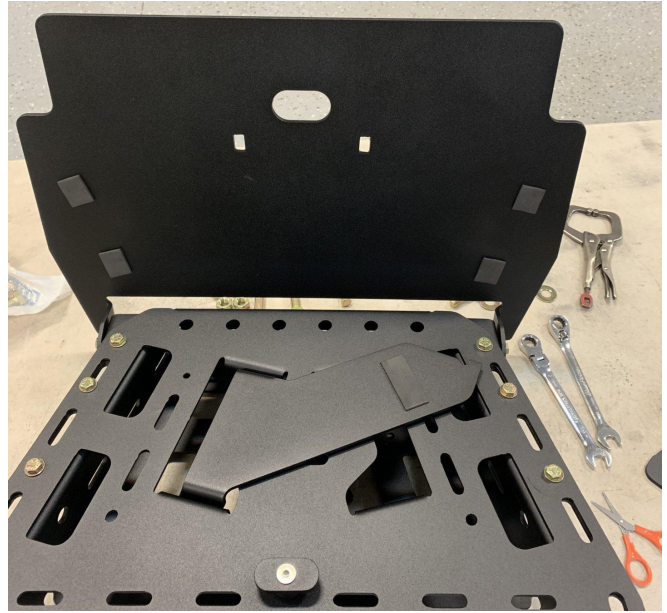
Install the table latch, with the 10 mm nylon spacer, and two nylon washers.



Install the table with nylon washers as shown below.



Cut and install supplied foam on both sides of the table leg and over the bolts that contact the table.



Next tighten up all moving parts to the table where they are snug but still move freely.

Install swash plate



Install tire carrier clamps



Loosely install tire mount.



Install internal reinforcement plates



Tighten all bolts and install table/tire assembly onto the swing arm. Adjust tire to desired height and angle and tighten bolts.
(Note the tire mount can be flipped 180 degrees from the photo to gain an additional 1" in height if desired.)