

**INSTALLATION NOTES**

Please review the product instructions prior to attempting installation to ensure installer is equipped with all tools and capabilities necessary to complete the product installation. We recommend thoroughly reading the instructions at least twice prior to attempting installation.

We recommend all fasteners that do not utilize a locking nut (Crimp-Lock or Nyloc), or reuse a lock nut (as these are technically one-time use), use a medium-strength thread-locker to ensure a good, mechanical connection. We use Loctite 243 in-shop. Further, all torqued bolts should be torque-striped/paint-marked for future inspections confirming hardware has not loosened.

Recheck all torque after the first 500 miles.

**LIFETIME WARRANTY**

Carli Suspension provides a limited lifetime product warranty against defects in workmanship and materials from date of purchase to the original purchaser for all products produced by Carli Suspension.

For full Warranty details, see: <https://www.carlisuspension.com/warranty/>

**PARTS CHECKLIST**

Before beginning disassembly of the vehicle, check to ensure you've received all parts necessary to complete installation to avoid potential down-time in correcting discrepancies. Any discrepancies will be handled by Carli Suspension and the correcting products will be shipped UPS Ground.

(Qty. 1) - PC-BRBMPR-21-F-CTR — Bronco Front Bumper Center

(Qty. 2) - PC-BRBMPR-21-F-WING — Bronco Front Bumper Wings, Mirrored

(Qty. 2) - PC-BRBMPR-21-F-FOGBRKT — Bronco Front Bumper Light Brackets, Mirrored

(Qty. 1) - AP-BRBMPR-21-F-HARNES — Bronco Front Bumper Light Harness

(Qty. 2) - MP-BRBMPR-21-F-FAIRSLEEVE — Bronco Front Bumper Fairlead Reducer Sleeve

(Qty. 1) - AP-BRBMPR-21-F-HK — Bronco Front Bumper Hardware Kit:

- (Qty. 8) - 1/2"-13 x 1" Grade 8 Bolt—*Attach Wings to Bumper*
- (Qty. 8) - 1/2" Flat Washer—*Attach Wings to Bumper*
- (Qty. 4) - 3/8"-16 x 3/4" Grade 8 Bolt—*Attach provided XL80 Brackets to Bumper*
- (Qty. 4) - 3/8" Flat Washer—*Attach provided XL80 Brackets to Bumper*
- (Qty. 2) - M10-1.5 x 50mm Grade 10.9 Bolt—*Upper Winch + Fairlead*
- (Qty. 2) - M10-1.5 x 40mm Grade 10.9 Bolt—*Lower Winch*
- (Qty. 4) - M14 Flat Washer—*Parking Sensors*
- (Qty. 4) - 1-1/8" Internal Retaining Ring—*Parking Sensors*

**NOTE 1:**

If equipped with Adaptive Cruise Control, the module will require relocation to the upper grill area. We do not include, nor sell provisions for this; we recommend ICON: 45209.

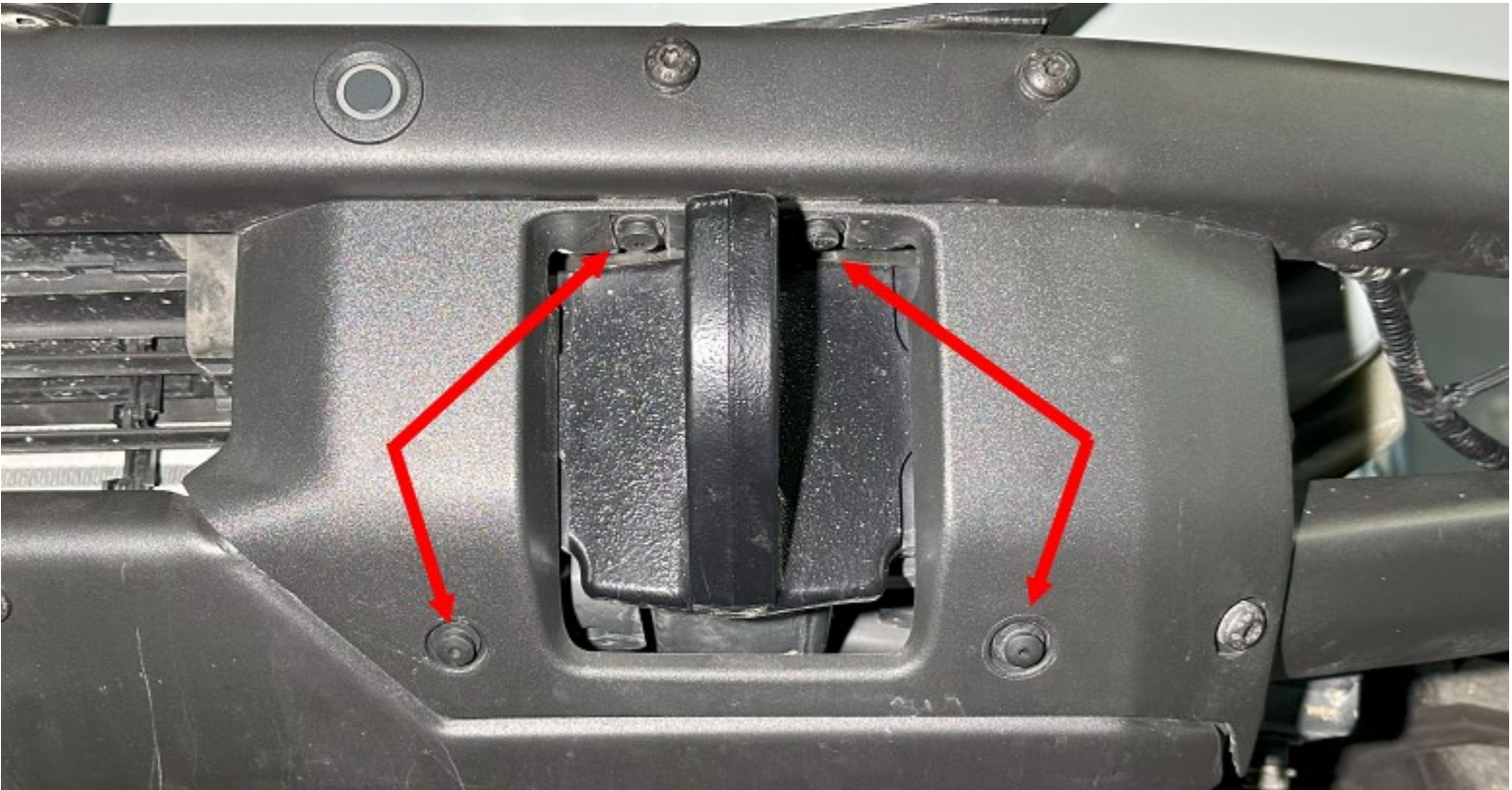
**NOTE 2:**

Installation was performed on a 2021 Bronco First Edition. Different trim packages may vary slightly in installation procedure. Be sure to double-check for electrical connections, skid plates or hardware that may not be present in these instructions prior to removing your bumper.

1. Disconnect the electrical connection from the Driver's side of the bumper (behind the bumper, under the headlight).



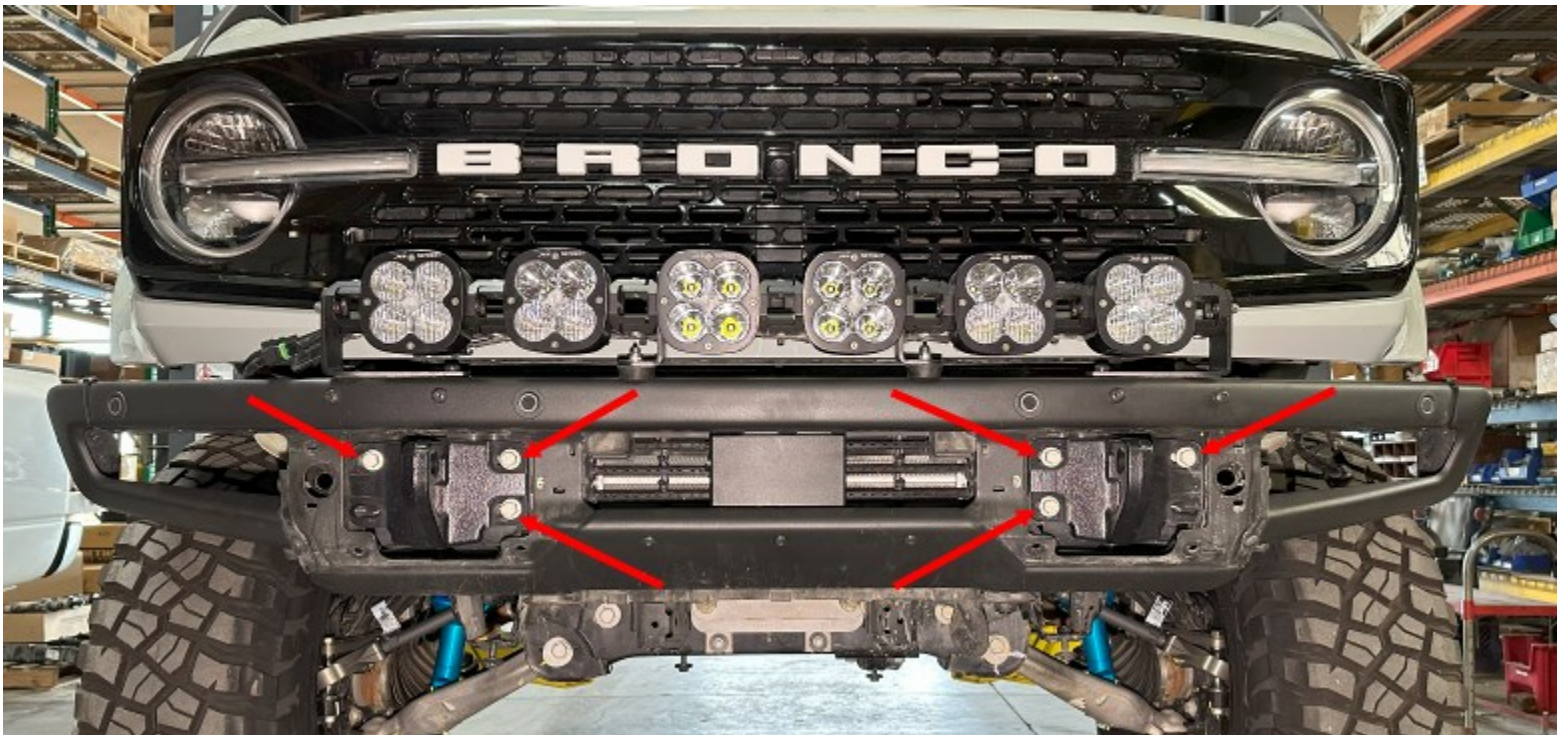
2. Remove the 8 Push-Fittings, 4 per side around the Tow-Hooks. The center of these pulls outward to release tension on the fitting, then they pull out.



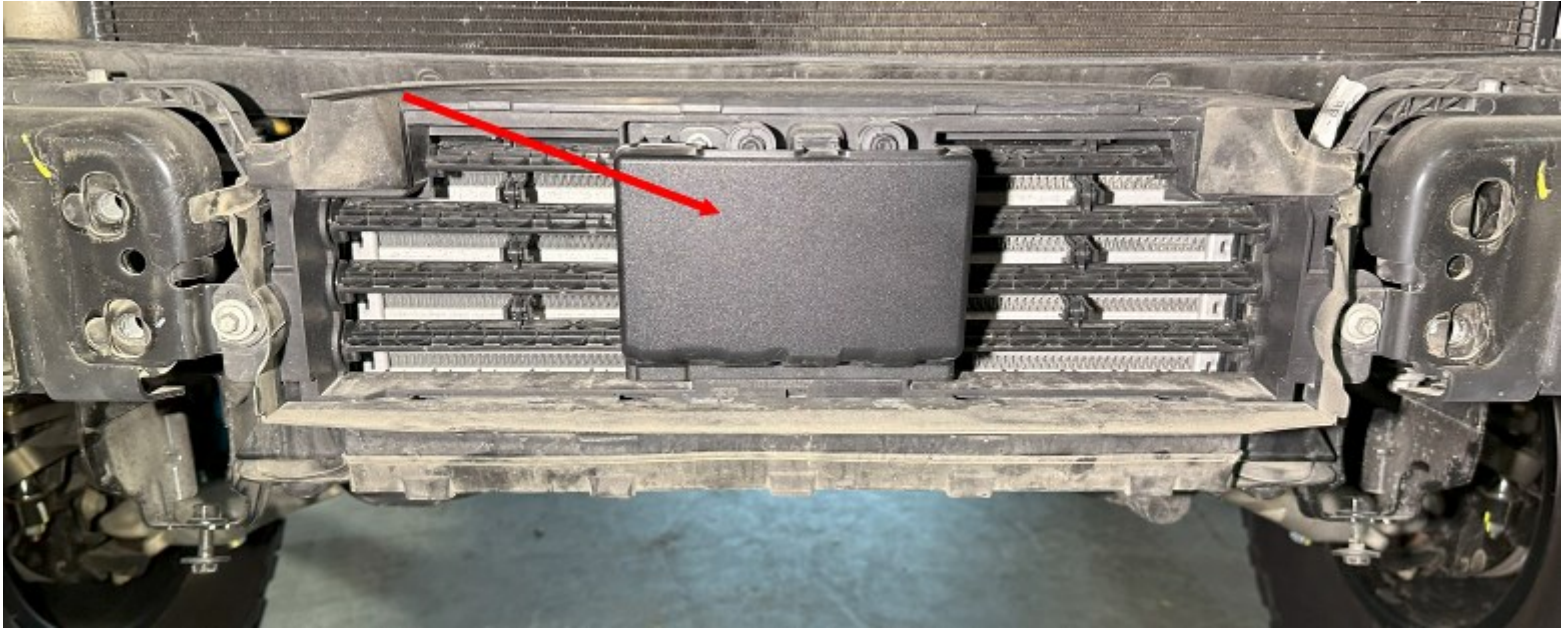
3. With the push-fittings removed from both sides, you can pull the cover straight out to dislodge the remaining clips and remove the cover to expose the bumper bolts/tow hook base.



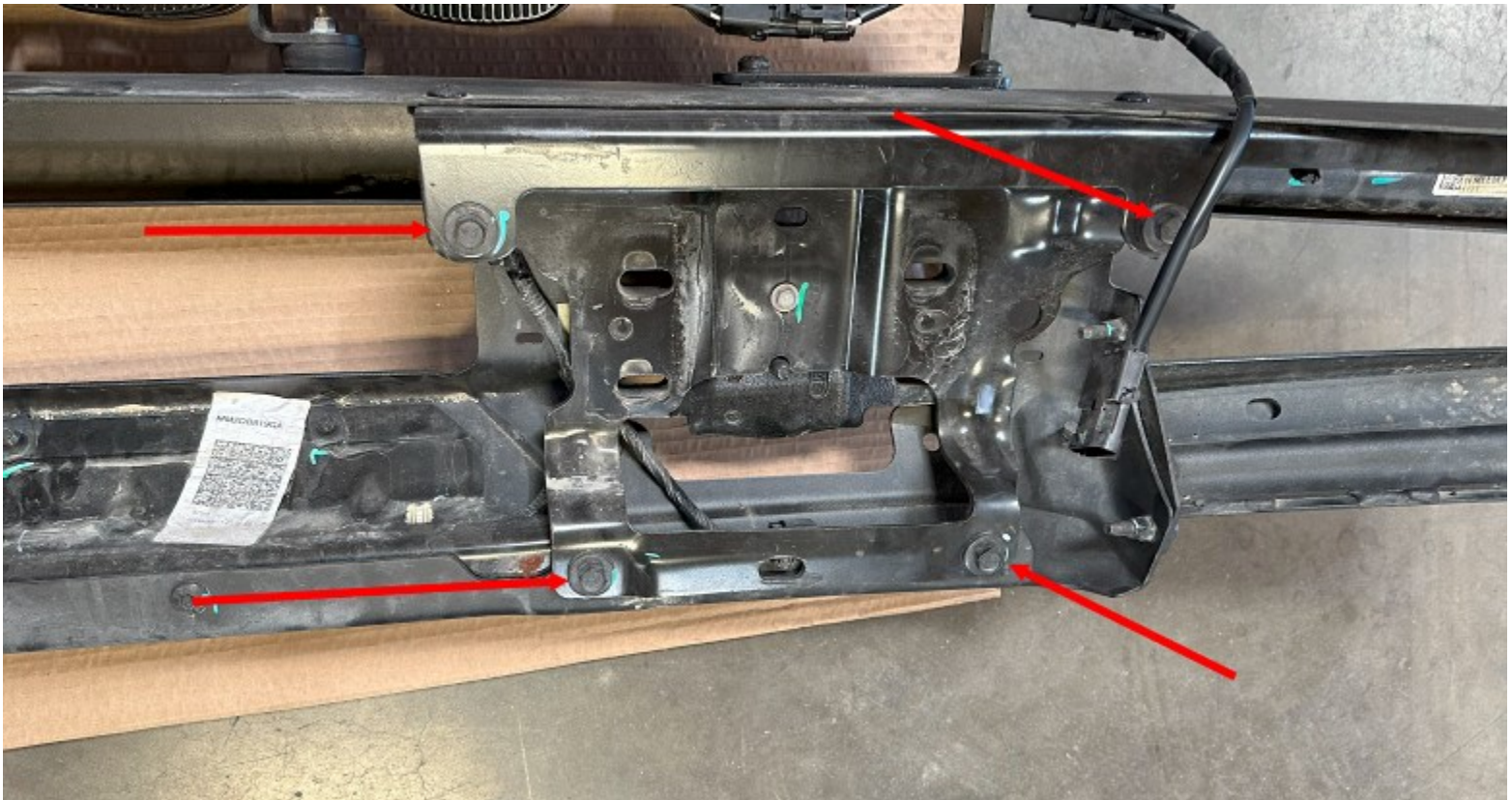
4. 15MM Socket — Remove the 6 bolts retaining the factory bumper. And remove the bumper.



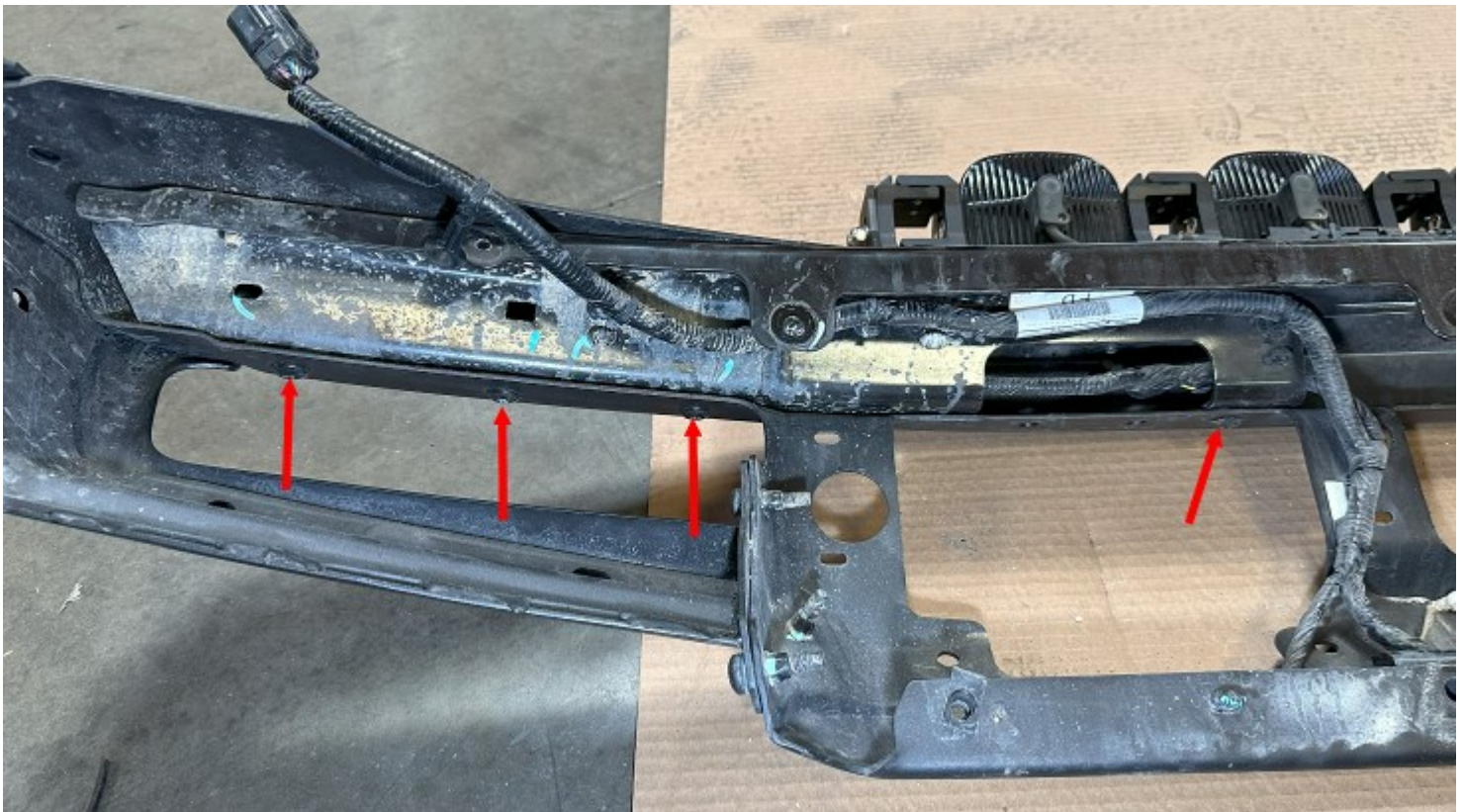
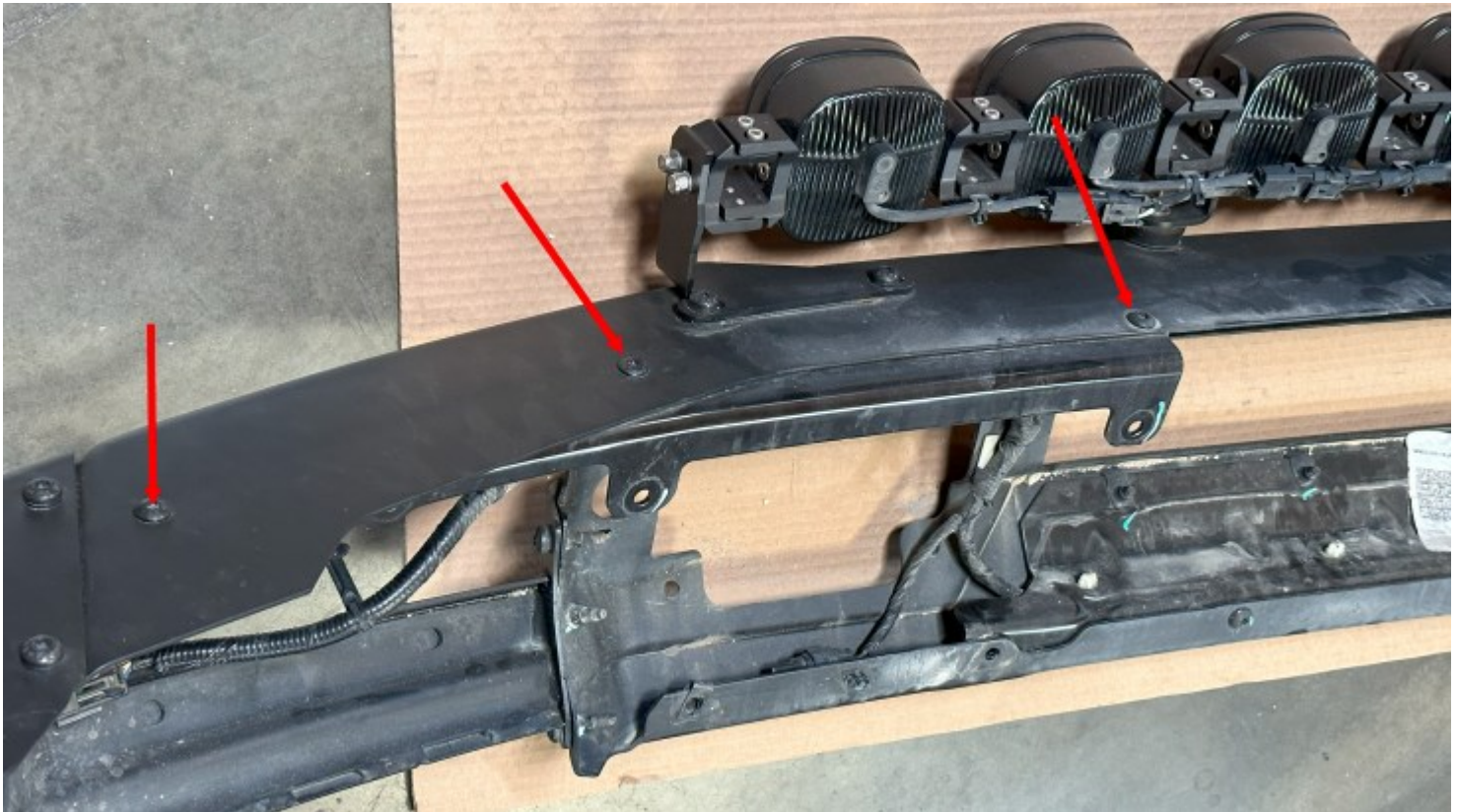
5. If your Bronco is equipped with Adaptive Cruise Control, now is the time to relocate the module as the stock location will not work with our Bumper.



6. 13MM Socket—Remove the 4 bolts retaining the Tow-Hook Brackets to the factory Bumper.



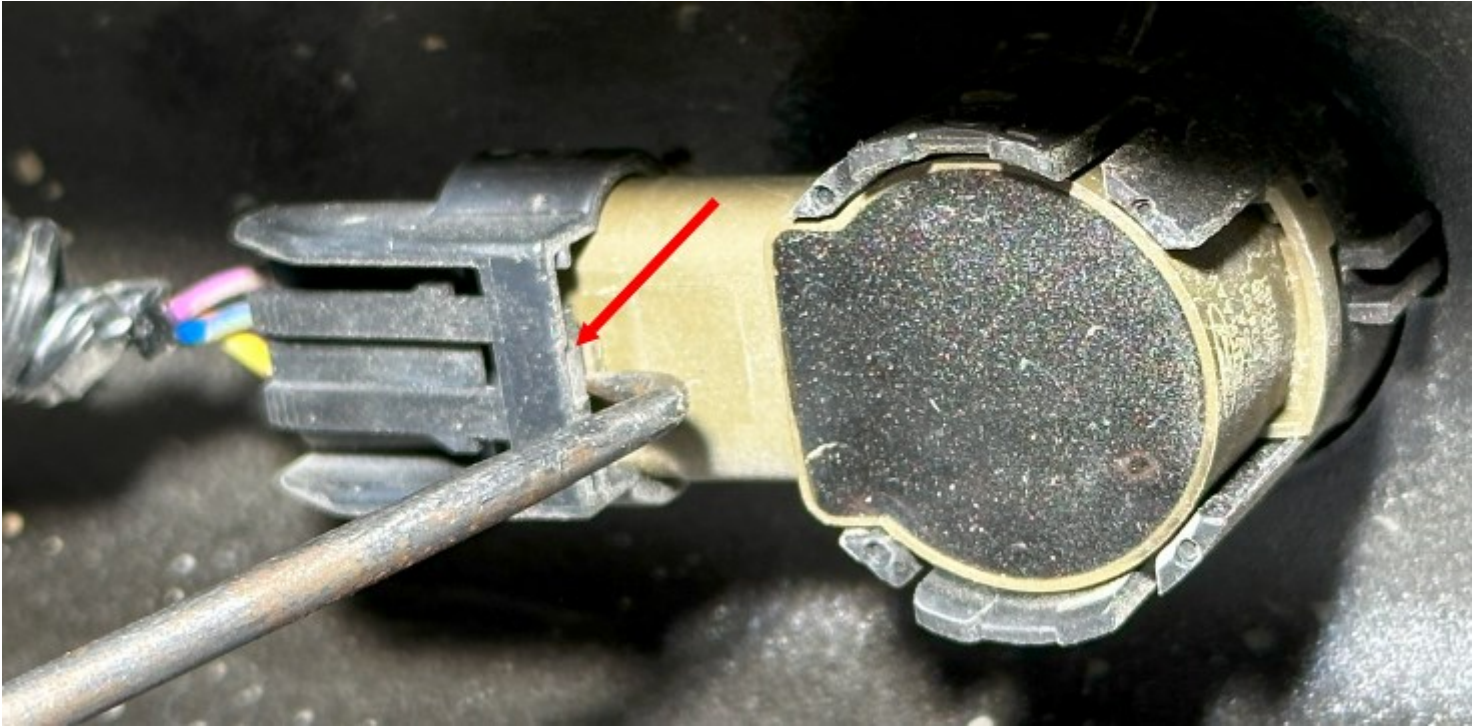
7. T40 Driver—Remove 7 bolts securing the Driver's side inner bumper bracket pictured. When the bracket is removed, use a panel popper to remove the parking sensor harness from the bracket.



8. T40 Driver—Remove the remaining 5 bolts securing the center internal structure of the bumper to which the parking sensor harness is connected. There are 2 bolts on the back, 3 from the front. When the bracket is removed, use a panel popper to remove the parking sensor harness from the bracket.



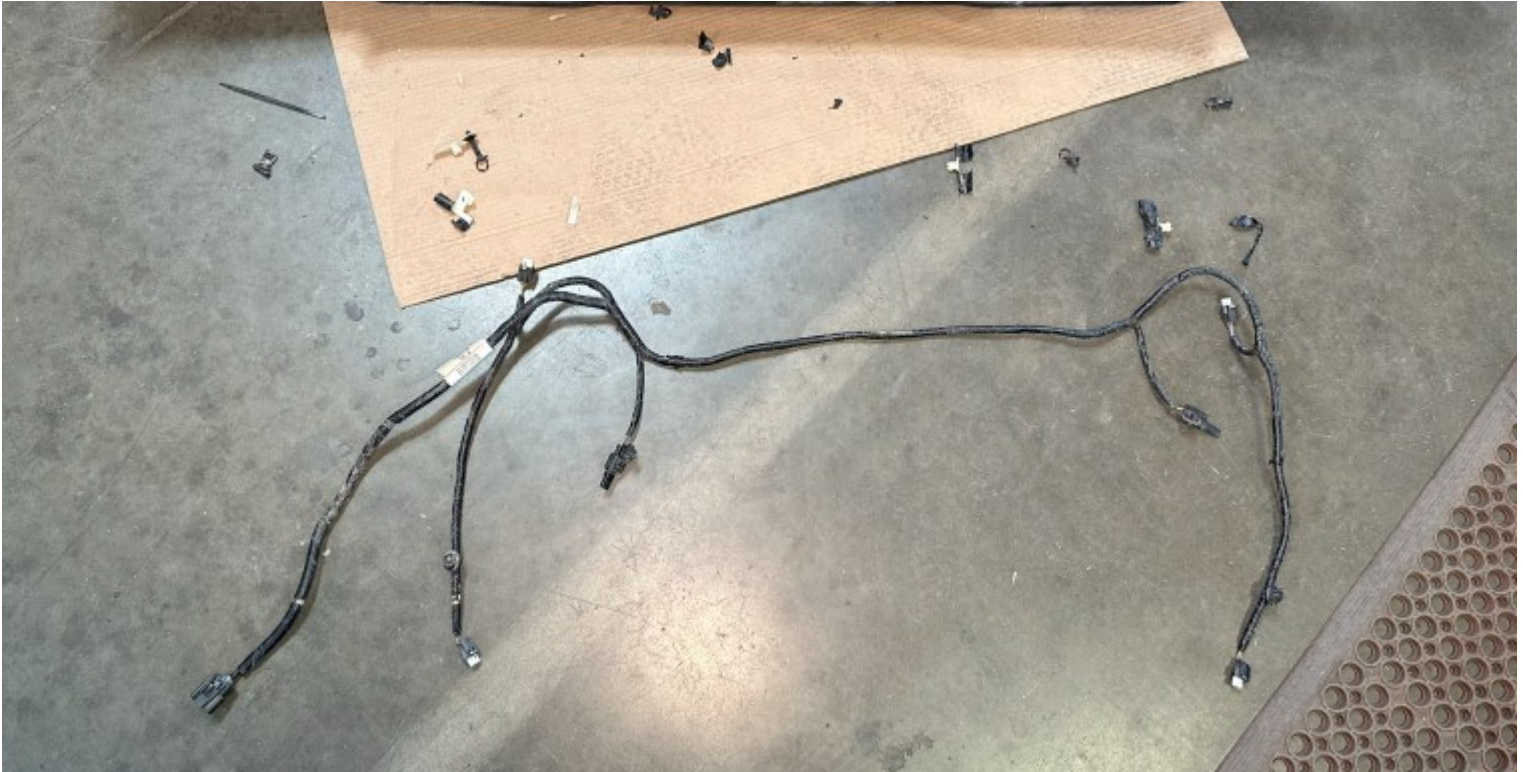
9. Use a panel popper to dislodge any other push-fittings securing the parking sensor harness to the bumper.
10. Use a Pick to release the connection and slide the connectors off the parking sensors.



11. Spread the ears retaining the parking sensors to the bumper and remove the sensors from the bumper.



12. With the parking sensor harness removed from the bumper, remove all the taped push-fittings that affixed the harness to the factory bumper so you're left with a clean harness. The push lock fittings will not be reused on the Carli Bumper.

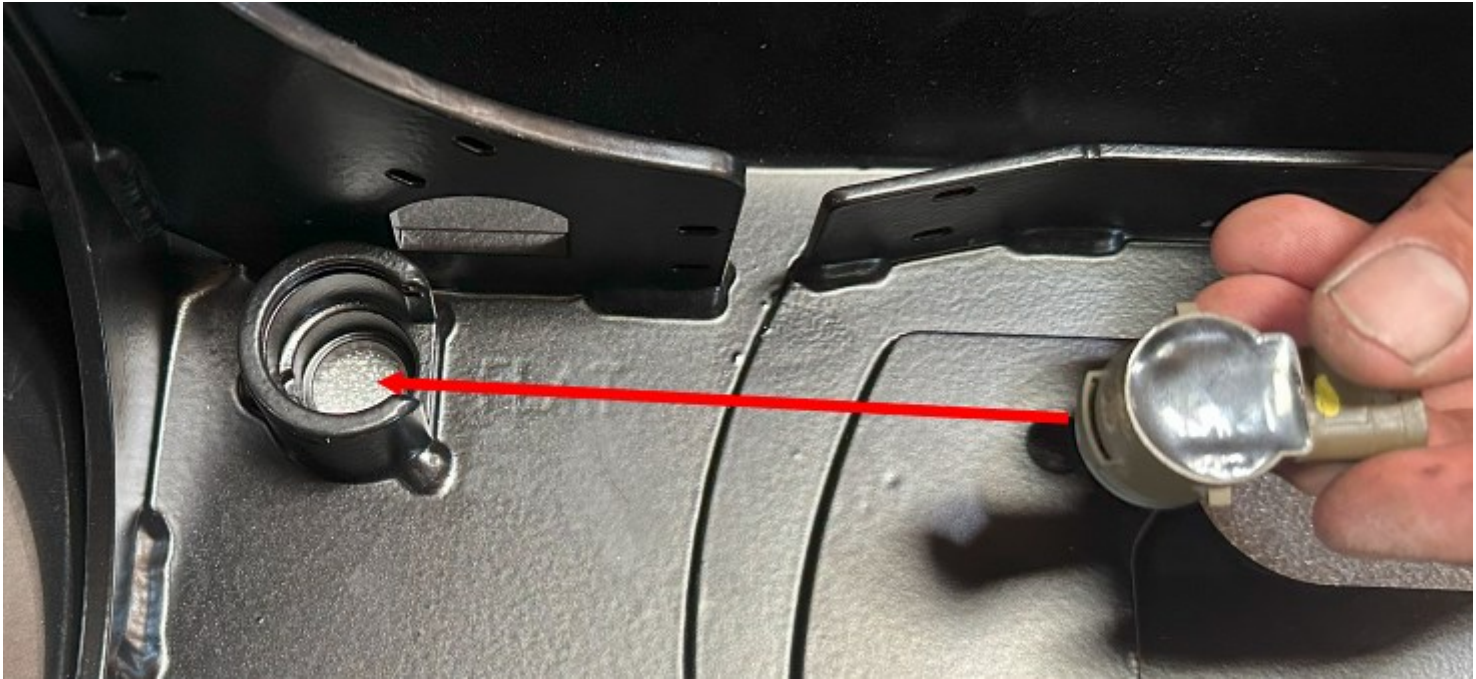


13. Remove the rubber damper/grommet from the front of the parking sensors.





14. Insert parking sensors into Carli Bumper from the back.



15. Place an M14 Flat Washer on the back of the sensor in the bumper, then insert the 1-1/8" Internal Retaining Ring (using snap-ring pliers ensuring it seats fully into the groove) to secure the sensor in place.



16. Above the winch and sensors, there's a channel we've engineered to internally route the wiring. This keeps everything clean and out of the way of the moving parts of the winch. In this channel, there are pre-cut holes through which zip-ties are routed to retain the completed wiring. We recommend pre-installing the zip-ties as pictured.



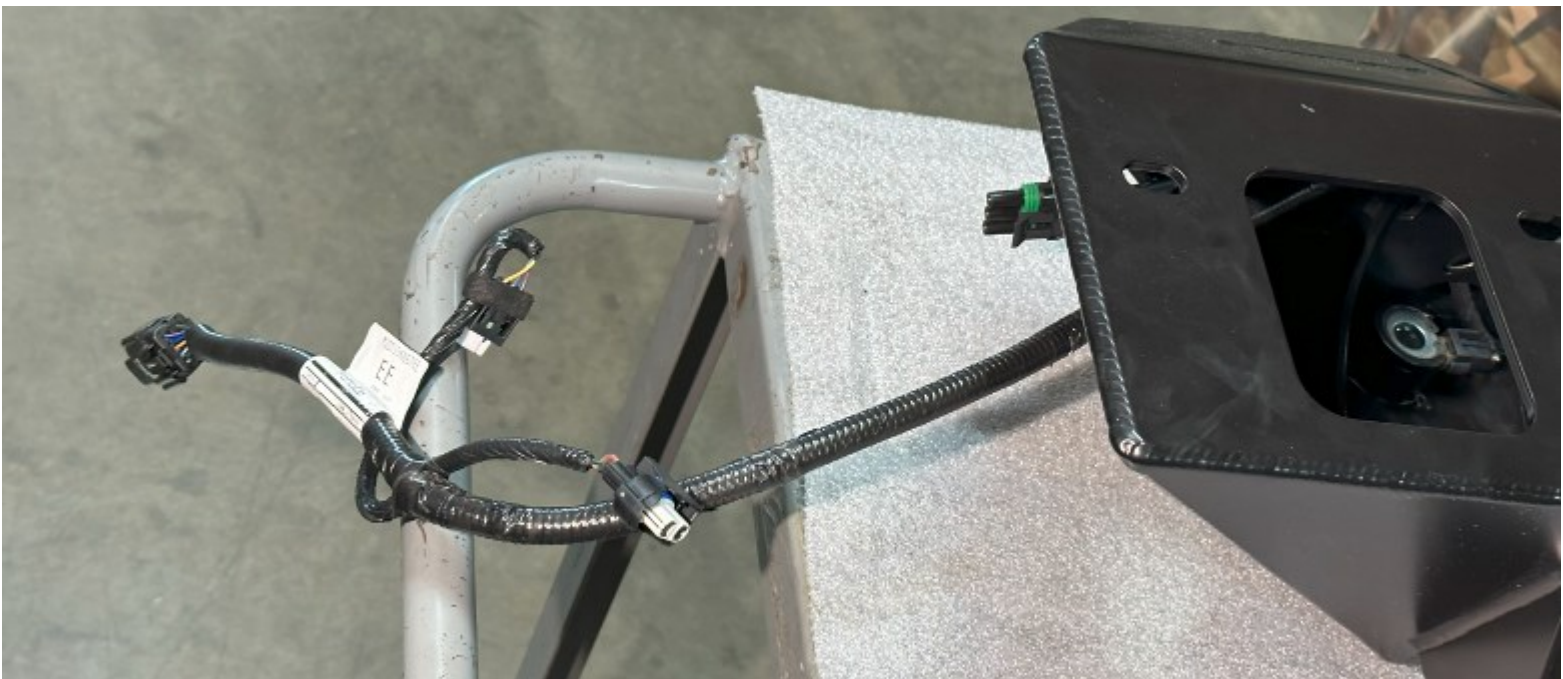
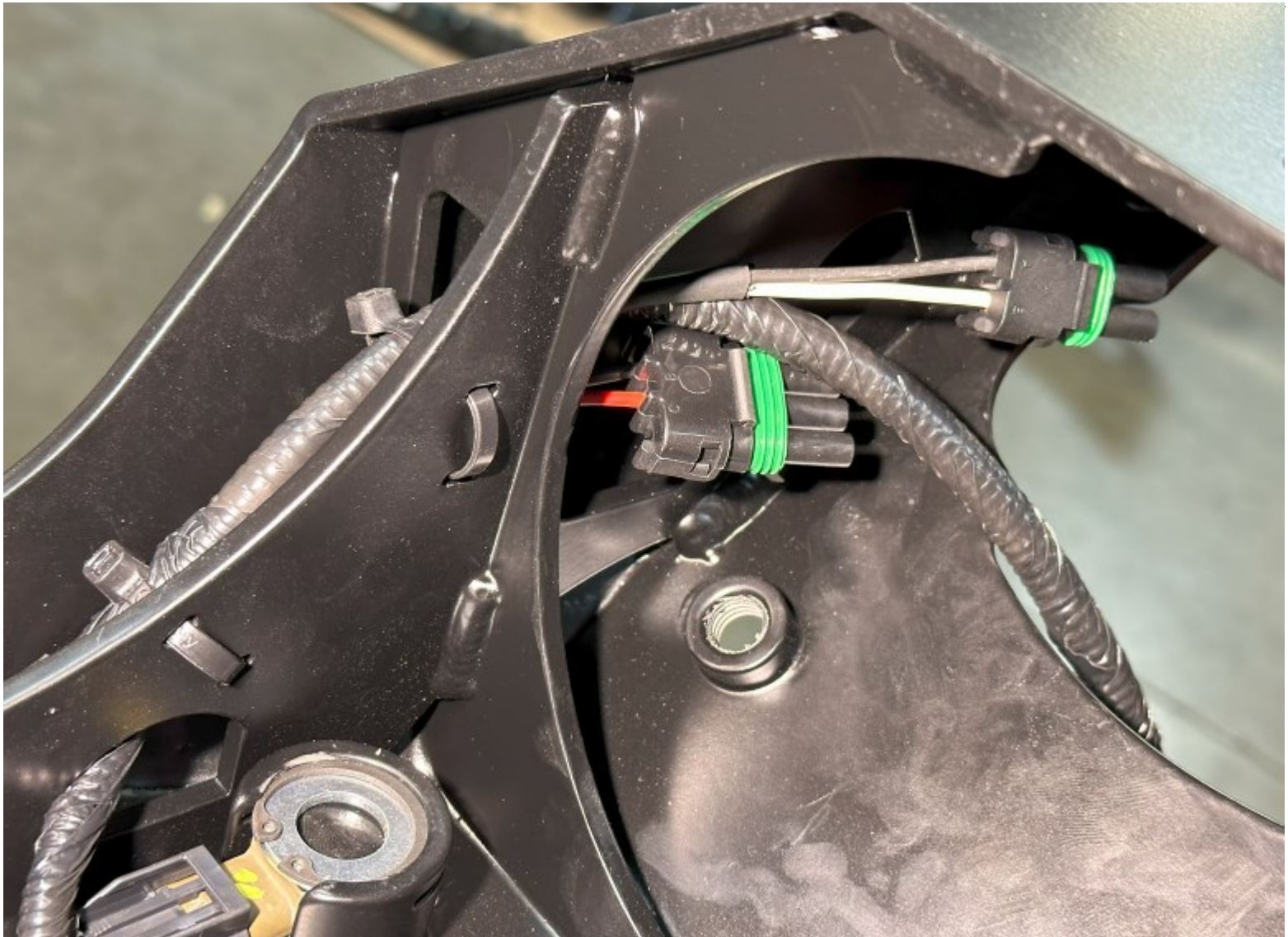
17. Install the parking sensor harness and provided light harness (for the Baja Designs S2 and XL80) into the center channel ensuring all connections are internally routed through the designed passages AND have sufficient slack to reach all sensors and lights. Once confirmed, secure zip ties and cut off excess. (more pictures on next page)  
**NOTE: Plug for the sensor harness should be on the Driver side of the winch to reach the factory connector, so should the lead for the light harness to easily route to the driver's side upfitters**





**PN: CS-BRBMPR-21-F**

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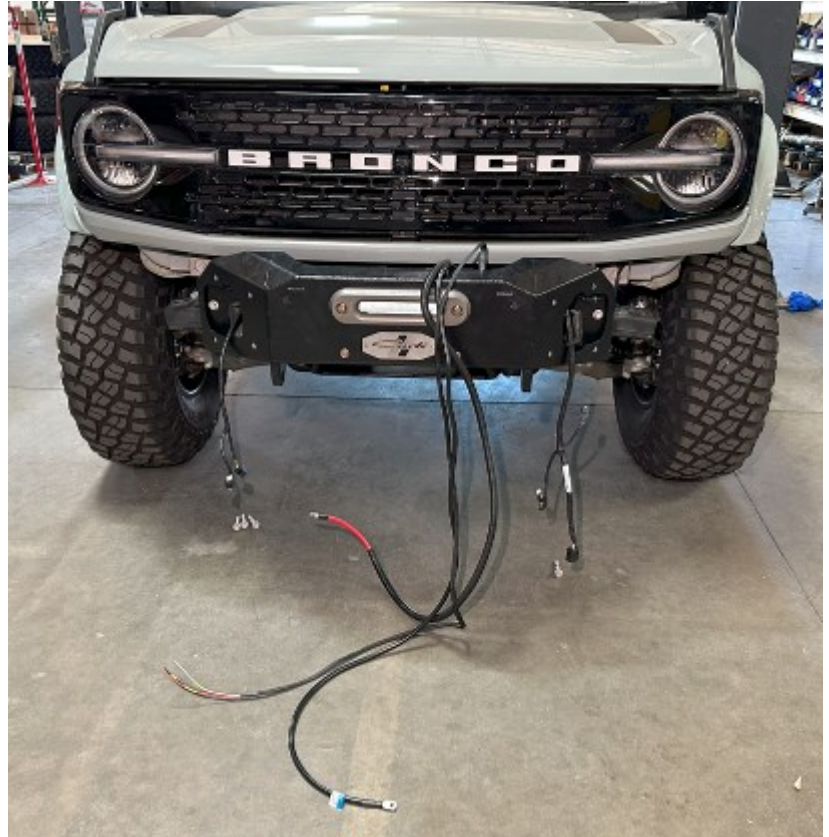




18. Put the bumper face down and ensure the bolt-pattern matches your winch.
19. Place the nuts into the winch footing and set the winch chassis into the structure of the bumper. **The winch should orient so the wiring is on the Driver's side; the clutch release will be on the passenger's side.**
20. Place the fairlead on the front and secure with the M10-1.5 x 50mm bolt provided.
21. The shorter M10-1.5 x 40mm will secure the bottom of the winch.
22. With all bolts in, torque M10 bolts to: 45lb/ft.
23. With the winch secure, flip the wiring to the front of the bumper and use the factory hardware (6 Bolts) to secure the bumper to the frame horns.
24. Level the bumper and torque the 6 bolts to: 81lb/ft.

**NOTE:**

We the M10-1.5 x 50mm bolts fit perfectly to the Factor 55 Fairlead we used. If you're installing with the factory Warn fairlead, **you'll need to utilize the provided reducer sleeves** on the M10 Hardware to center the bolts to the fairlead.



25. Install the 1/2"-13 x 1" Grade 8 Bolts with a washer on each into the Nut-serts in the center section of the bumper. Put them in a couple threads and ensure the washers are all the way to the head of the bolt.



26. Install Parking Sensor and zip tie into the wings.



27. Slide the wing onto the bolts and tighten using a stubby 3/4" wrench. Torque to 64lb/ft where possible.  
**NOTE: The profile of the inner cutout of the wing and center section should be perfectly aligned with the bolts tight. This will ensure proper alignment of the wing to the bumper center. The wiring should pass into the wing from the center section though the semi-circle clearance shown by the red arrow below.**



28. Repeat wing installation on the other side.
29. With the wings on, install the Baja Designs XL80 to the provided Light Brackets.
30. With the lights installed to the brackets, plug in both your XL80s and S2(s) to the harness in the bumper.



31. Place the XL80 in the Carli Bracket into the mounting bracket inside the bumper and secure it from the backside of the bumper with the provided 3/8"-16 x 3/4" Bolts and washers.



32. Adjust the light alignment as necessary, then use a 9/16" to torque the hardware to 25lb/ft.



33. Install the S2 flush mounts into the bumper with the hardware provided with the lights. We use Blue Loctite on these.



34. Tidy up the wiring behind the bumper, reconnect the parking sensor harness to the factory connector, then run the winch power cables, and light harness into engine compartment.  
35. Connect the winch power directly to your battery.  
36. Connect the light harness to your power source (we connected to the factory upfitter harness).  
37. Install your winch cable and winch hook.

