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Rough Country 51099 Installation Instructions

High Winch Mount, 12000-Lb Winch and DRL Bar for Bronco 4WD

Part number: 51099

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Scan for fitment, price and install help

ROUGH COUNTRY
SUSPENSION SYSTEMS®

21-UP Bronco High Mount Winch

Thank you for choosing Rough Country for all of your suspension needs.

Rough Country recommends that a certified technician install this system. In addition to these instructions, professional knowledge of disassemble/reassembly procedures as well as post installation checks must be known. Attempts to install this system without this knowledge and expertise may jeopardize the integrity and/or operating safety of the vehicle. Please read all the instructions before beginning the installation. Check the kit hardware against the ‘’Kit Contents’’ list below. If question exist, please call us @1-800-222-7023. We will be happy to answer any questions concerning this product. Check all fasteners for proper torque. Check to ensure for adequate clearance between all components. Periodically check all hardware for tightness. Be sure you have all the needed parts and understand where they go. Also, please review the “Tools Needed” list to be certain you have the necessary tools to complete the installation.

NOTICE TO DEALER AND VEHICLE OWNER

⚠NOTICE Any vehicle equipped with any Rough country product must have the “Warning to Driver” decal installed on the sun visor or dash. The decal is to act as a constant reminder for whoever is operating the vehicle of its unique handling characteristics. INSTALLING DEALER—It is your responsibility to install the warning decal and to forward these installation instructions on too the vehicle owner for review and to be kept in the vehicle for its service life.



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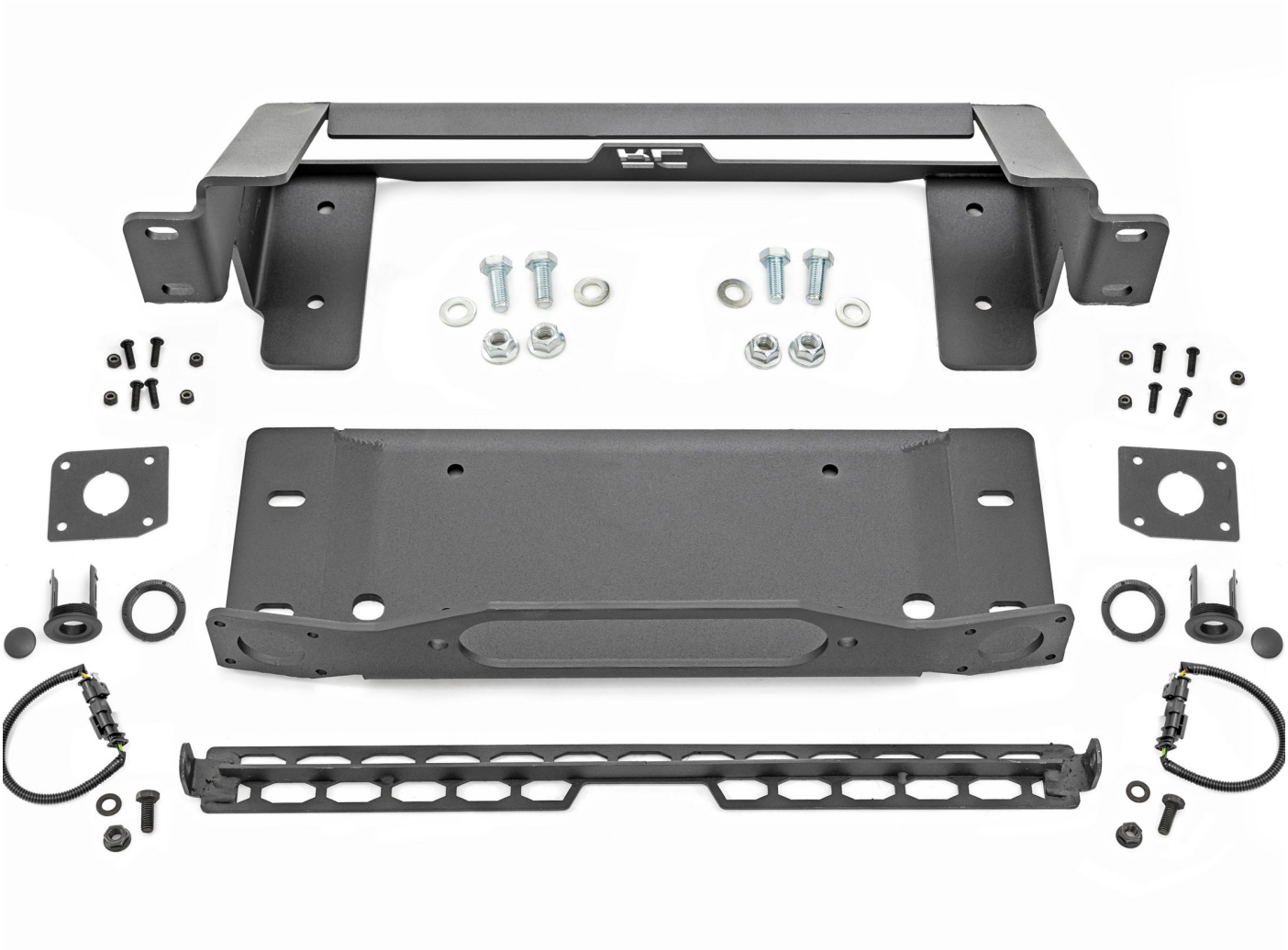
21 Bronco High Mount Winch

TOOLS NEEDED:
Hex Wrench Set
Cutting Tool
Sander
Pliers
Pocket Flat Head
Small Flat Pry Tool
Wire Crimp Tool

Metric Wrench/Socket
10mm
15mm
16mm
18mm
19mm

KIT CONTENTS:
Winch Tray
Mounting Bracket
Sensor Mount Kit
Sensor Mount Plate (2)
20” Light Bar Block Off Grill
1/4” Spacer (4)

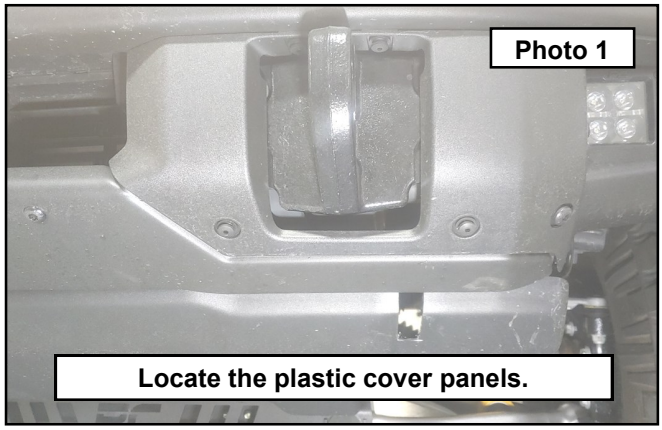
HARDWARE INCLUDED:
6mm Black Button Head Bolt (8)
6mm Washer (8)
6mm Nut (8)
8mm Bolt (2)
8mm Washer (4)
8mm Nut (2)
12mm Hex Head Bolt (4)
12mm Washer (4)
12mm Flange Nut (4)

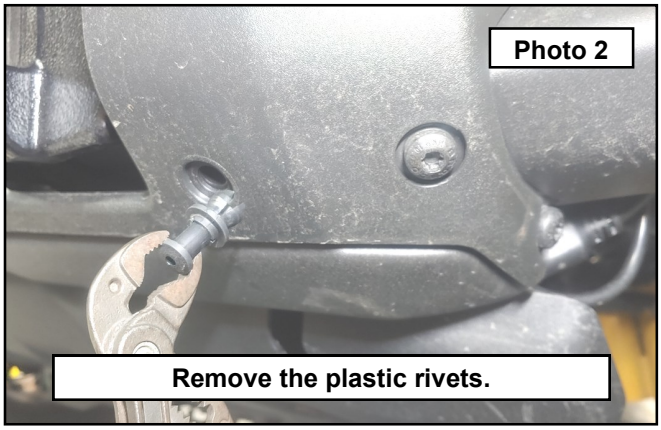


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High Mount Winch Installation

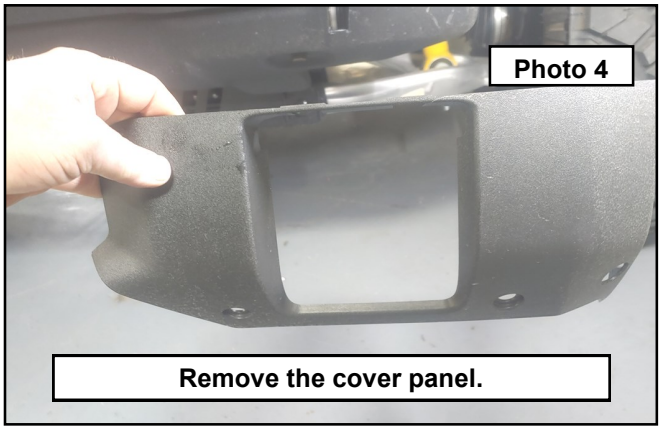
1. Park your vehicle on a clean flat surface, engage the parking brake and block the rear tires.
2. **Save all hardware removed from the vehicle unless otherwise noted.**
3. On the front of the vehicle you will see the plastic cover panels. **Photo 1**
4. Remove the 4 plastic rivets per cover by pulling the center pin out. The rivet body should follow. **Photo 2**



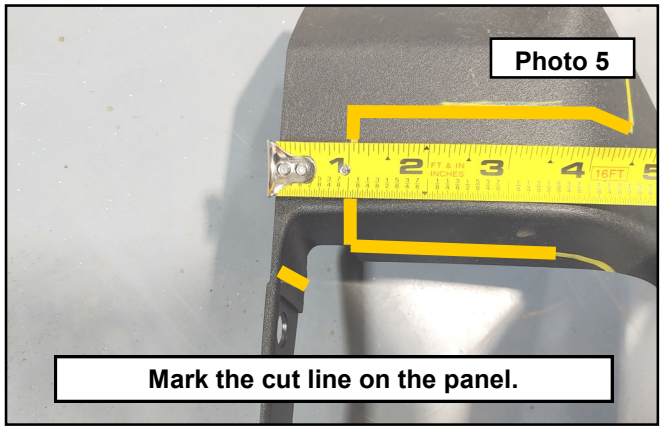


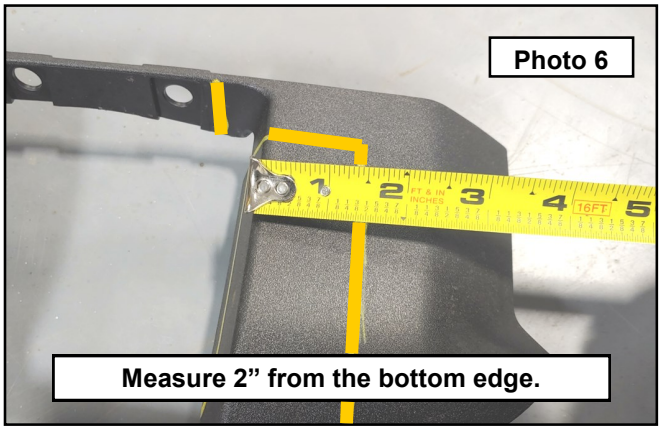
5. Once the rivets are removed, grab the cover and pull away from the bumper. **Photo 3**
6. Remove the cover panel. **Photo 4**



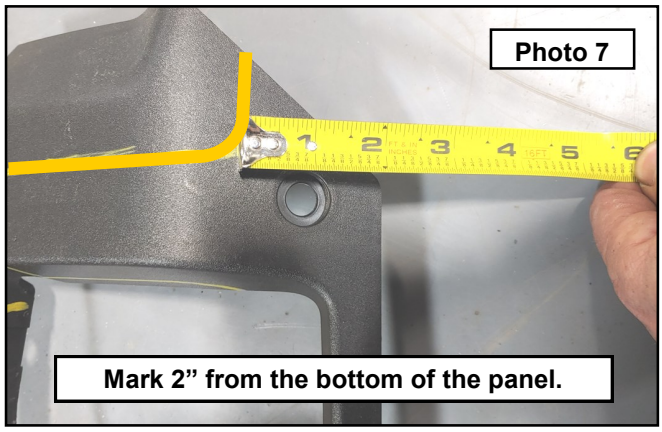


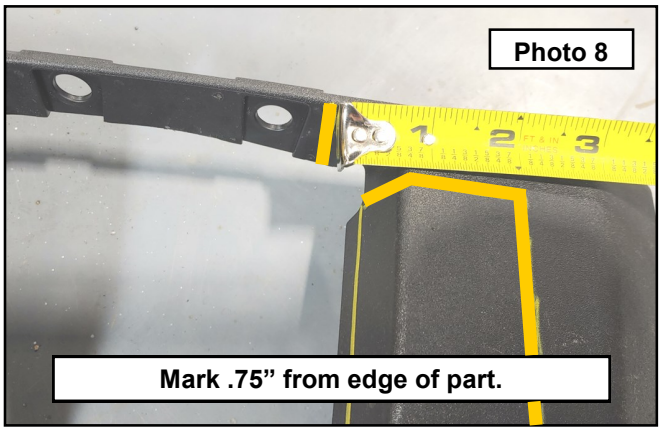
7. You will need to mark the cover where shown in preparation for trimming. Passenger side shown. You will mirror the cut to the driver side panel. Mark a horizontal line 1” from the top edge of the panel. In this photo you will see the outline of all the cutting needed. **Photo 5**
8. From the inside edge measure in 1.5” for a vertical line. **Photo 6**



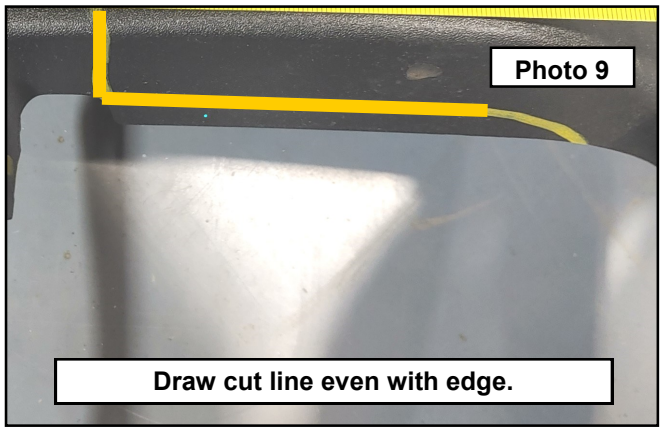


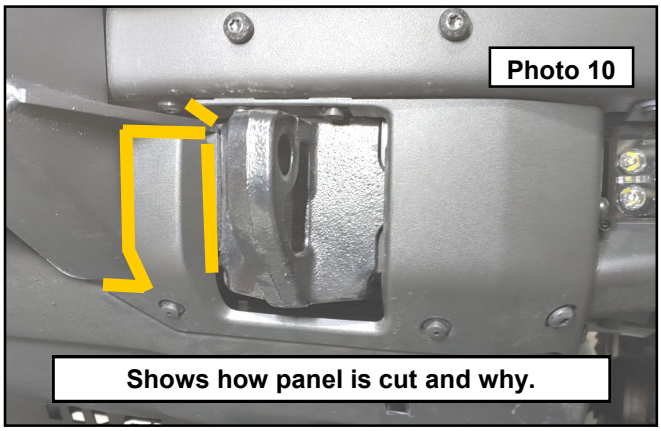
9. From the bottom edge of the panel measure 2” and mark a horizontal cut line. In this corner you can add a .25” radius for a more finished look. **Photo 7**
10. From the inside edge measure .75” over towards the mounting hole and make your cut line. **Photo 8**



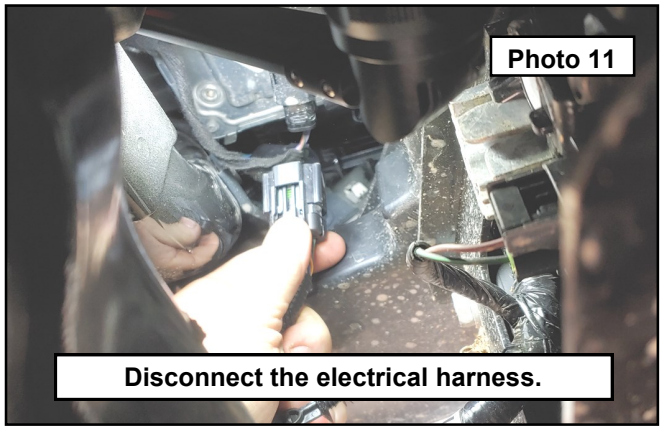


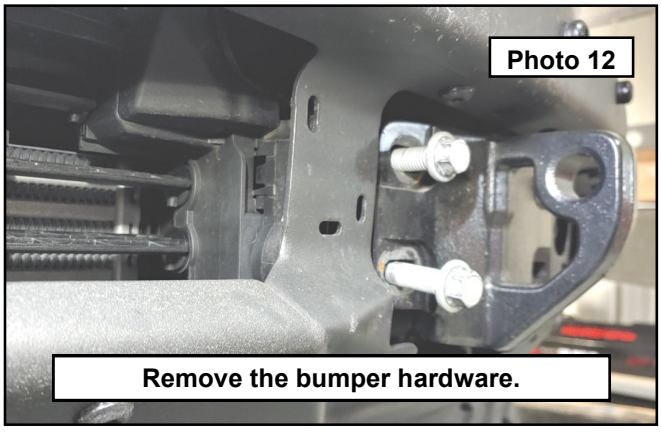
11. On the inside of the pocket mark a line even with the front edge as shown. Use a suitable cutting tool to cut along your marks. **Photo 9**
12. Photo 10 shows the cut panel installed so that you can have an idea where and why the trimming is needed. **Photo 10**





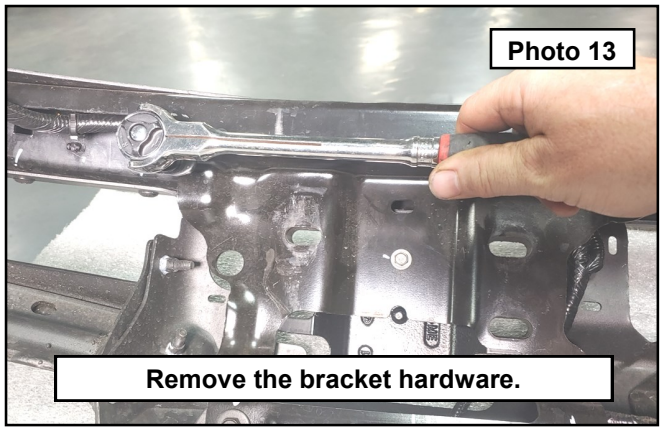
13. **<u>Non sensor vehicles skip to step 21</u>** **<u>Sensor Optioned Vehicles</u>:** You will need to remove the bumper to gain access to the center sensors. Start by disconnecting the main harness located behind the bumper on the driver side. This will be difficult to see and is mounted onto the core support under the headlight. **Photo 11**
14. With an assistant, remove the 6 bumper mounting bolts from the front of the bumper and pull the bumper away from the frame rails. **Photo 12**

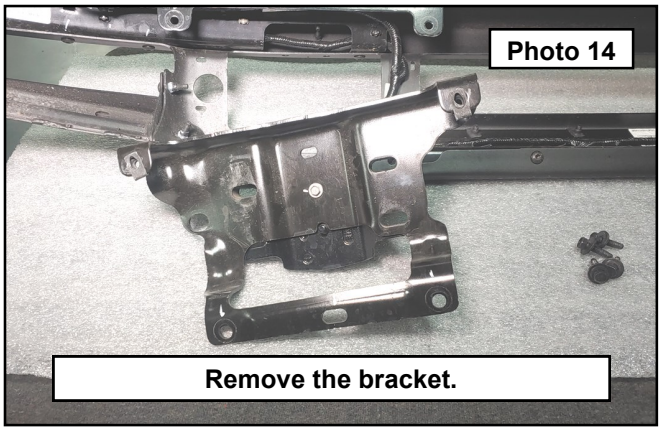




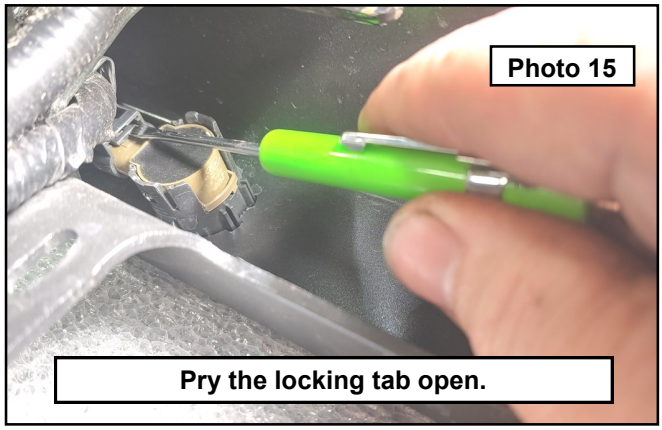
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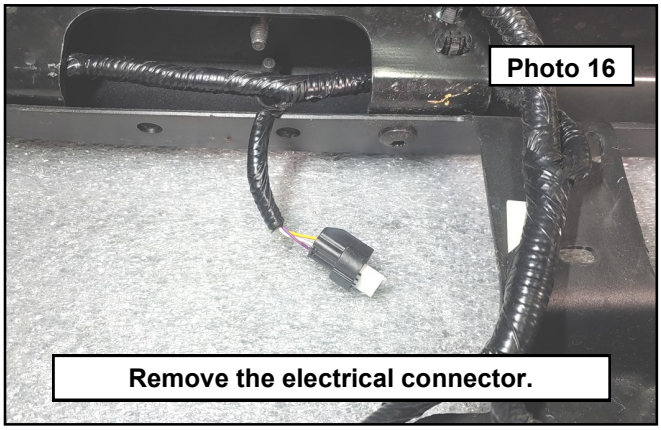
15. Lay the bumper onto a protected work surface face down. Remove the 4 mounting bracket bolts per side from the bumper using a 15mm socket. **Photo 13**
16. Rotate the bracket 90 degrees to remove from the bumper to expose the wire harness and sensors. **Photo 14**



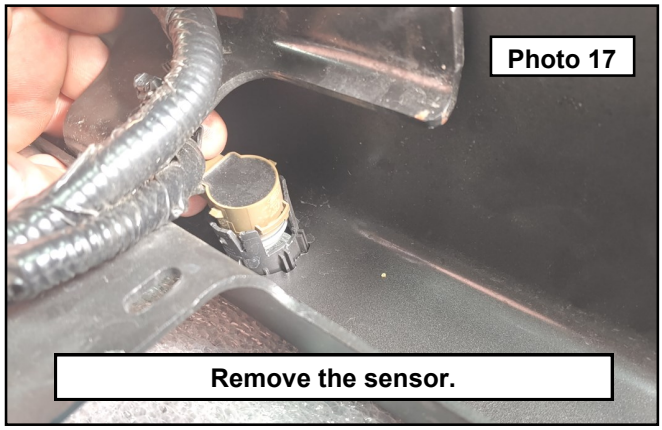


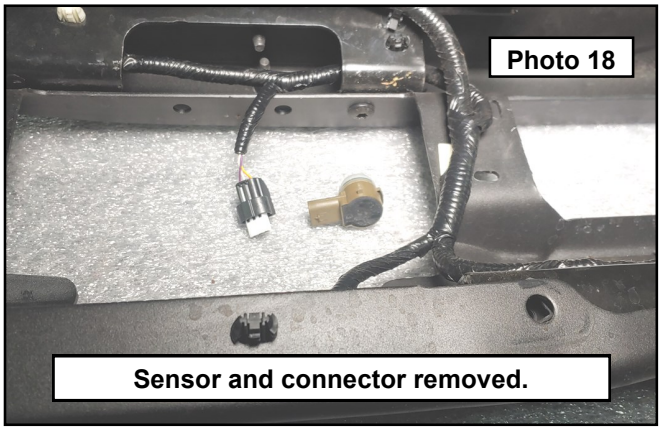
17. Use a small flat blade screwdriver or pry tool to release the sensor electrical connector locking tab while pulling on the connector away from the sensor. **Photo 15 / 16**





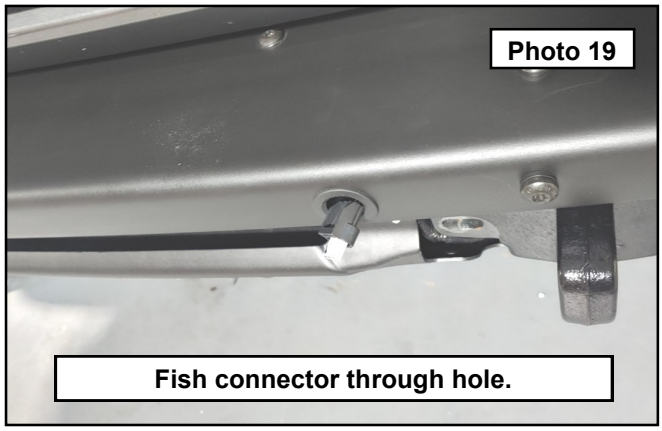
18. Use the same small pry tool to pry open the locking tabs holding the sensor in place. Pull the sensor out of its plastic mount. **Photo 17 / 18**

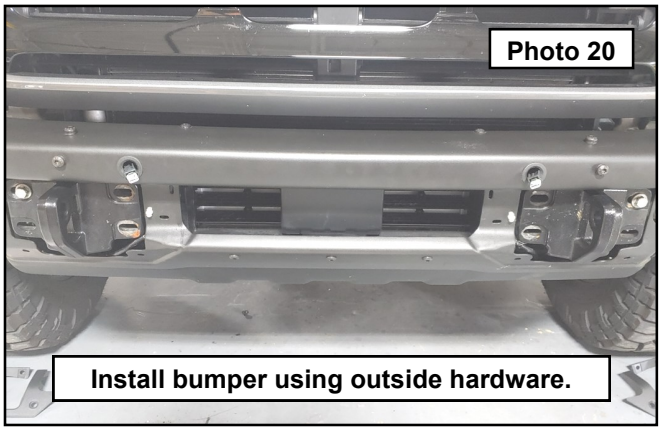




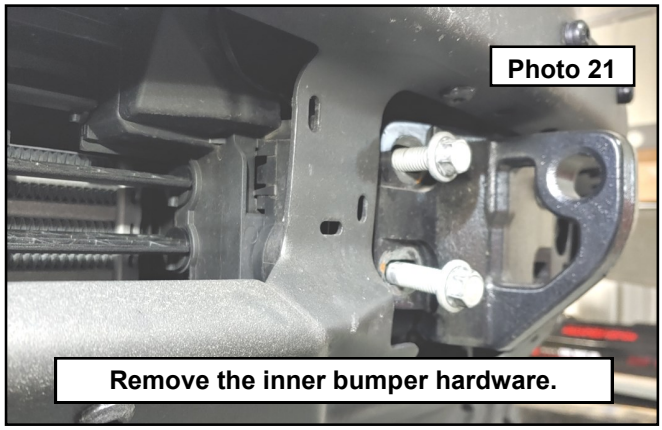
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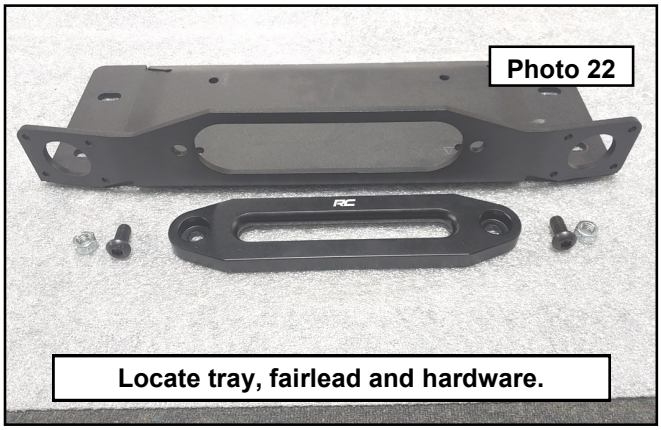
19. Fish the sensor electrical connector through the sensor mounting hole. **Photo 19**
20. Reinstall the bumper mounting plates and install the bumper to the vehicle only using the outside bolts. Set the bumper level and center side to side. **Photo 20**



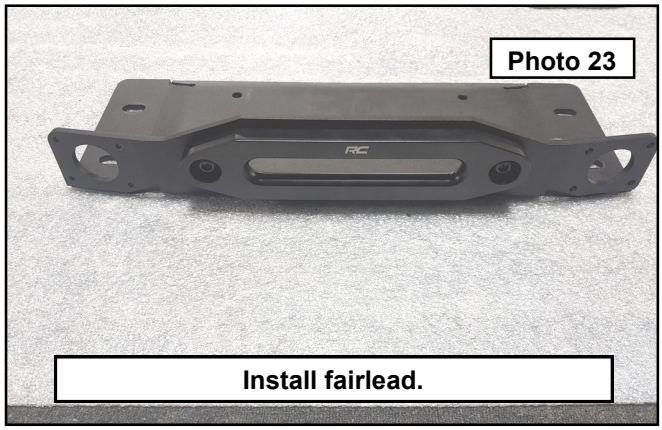


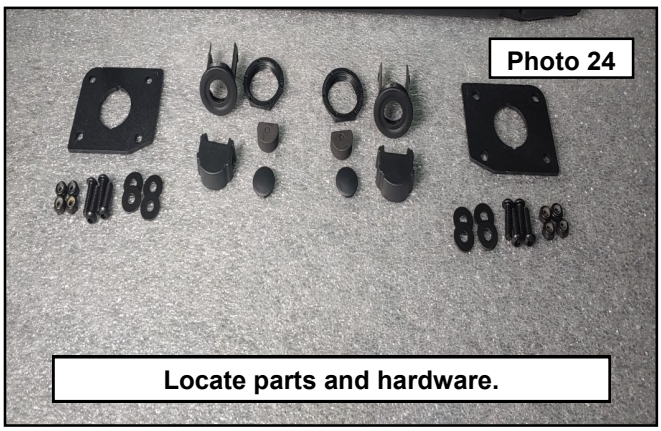
21. **Non Sensor Optioned Vehicles:** Remove the inner bumper mounting hardware using a 15mm socket. **Photo 21**
22. **Winch Mount Assembly:** Locate the fairlead and 12mm nuts from the winch box, and the winch tray and 12mm button head bolts from the mounting kit. **Photo 22**





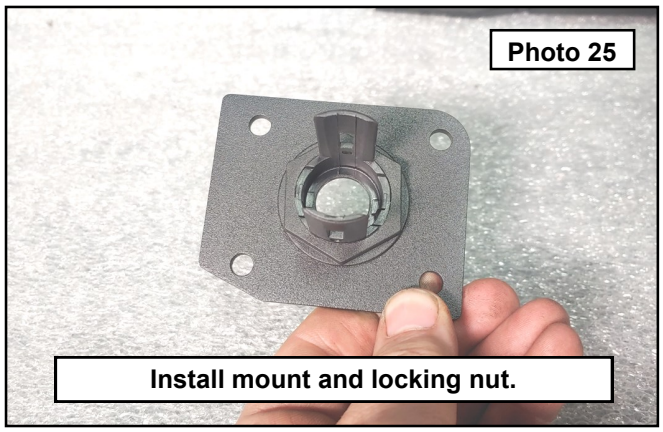
23. Install the fairlead to the winch tray. **Photo 23**
24. Locate the sensor mounting plates, 6mm button head bolts, 6mm washers, lock nuts, and sensor mounting kit parts from the mounting kit. The sensor mounting kit is a universal kit and will have more parts than you need for this install. If you do not have sensors, you will still use this kit to block off the hole. **Photo 24**

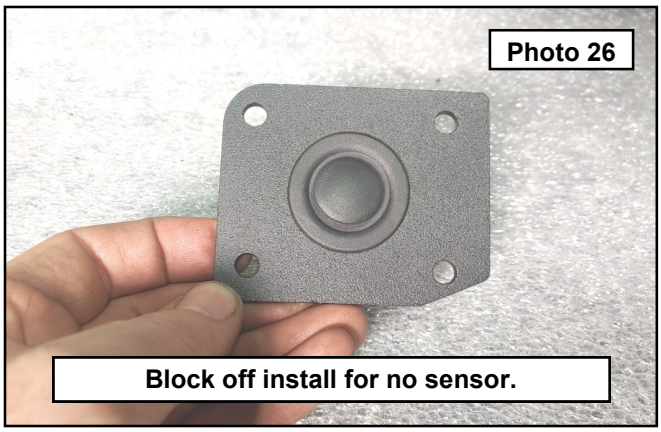




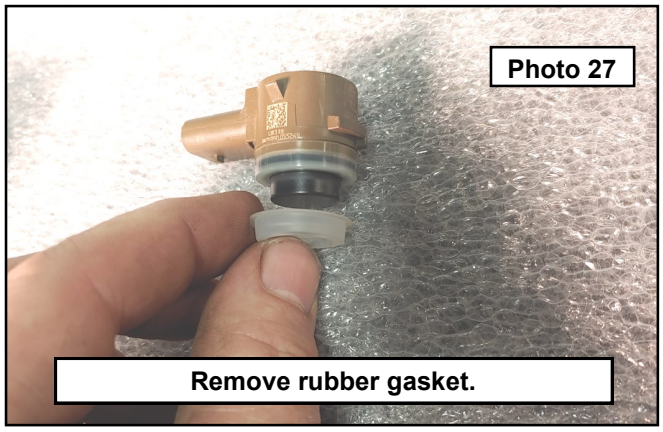
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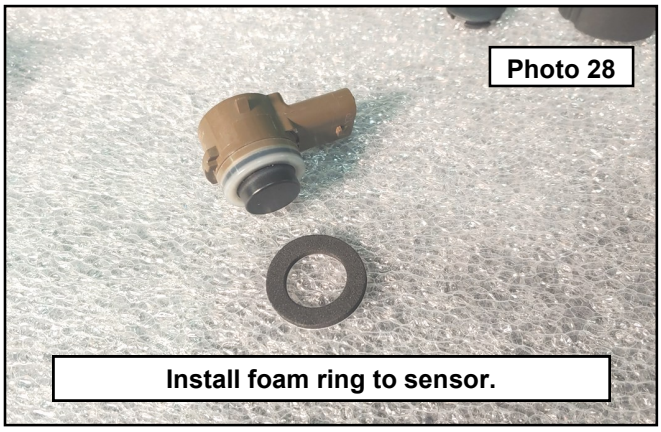
25. Start by installing the sensor mount through the hole in the plate. There are locating tabs so make sure these are lined up. Install the sensor mount locking nut to the back of the mount. **Photo 25**
26. **Non-sensor Vehicles**: Install the block off plug by snapping into place. Skip steps pertaining to sensor optioned vehicles. **Photo 26**



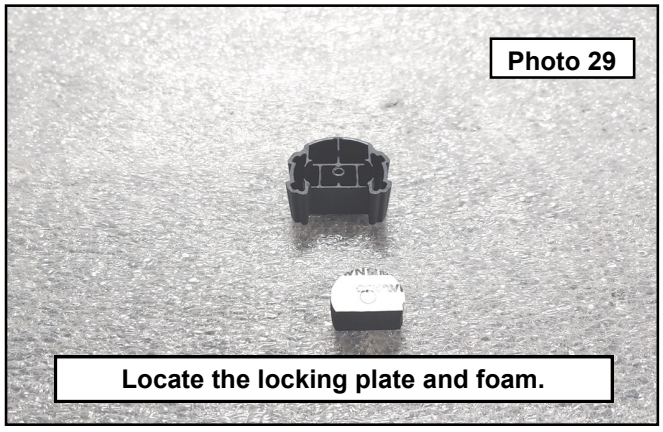


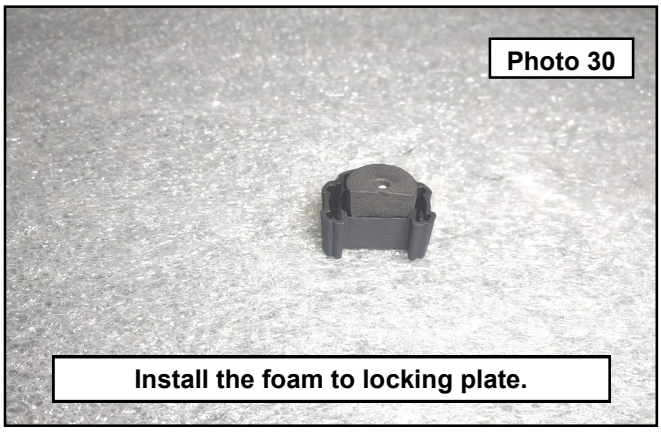
27. Sensor Option Vehicles: Remove the rubber gasket from the front of the sensor. **Photo 27**
28. Locate the foam ring from the sensor mount kit and install onto the end of the sensor. **Photo 28**





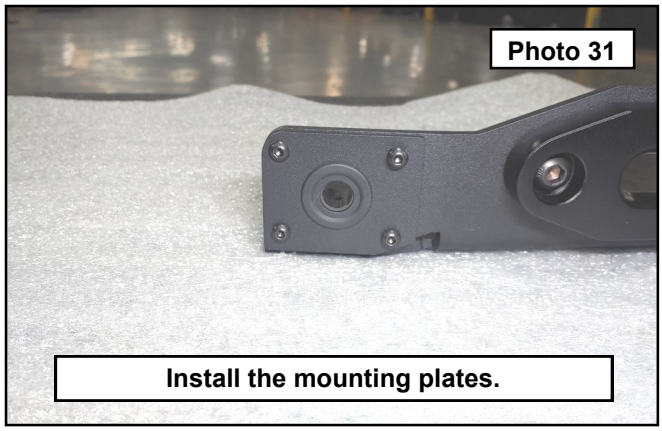
29. Locate the locking plate and foam from the sensor mounting kit. **Photo 29**
30. Remove the tape from the back of the foam and stick to the locking plate as shown with the flat edges lining up. **Photo 30**

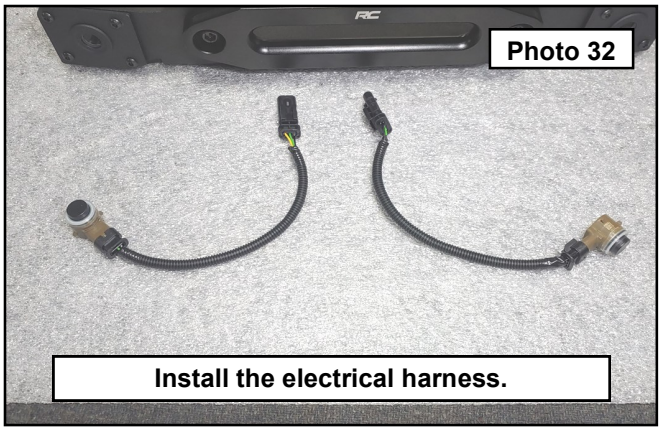




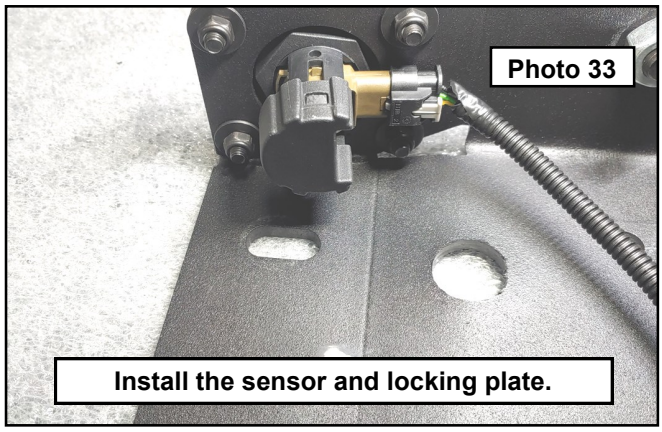
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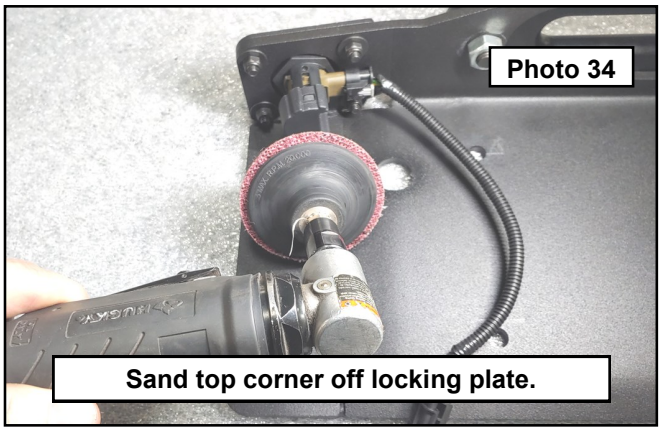
31. Install the sensor mounting plate to the winch tray using the provided 6mm button head bolts, washers and nuts. Tighten using a 5mm Allen wrench and 10mm socket. **Non-sensor vehicles skip to step 36. Photo 31**
32. **Sensor vehicles:** Install the electrical extension harness to the sensor. **Photo 32**



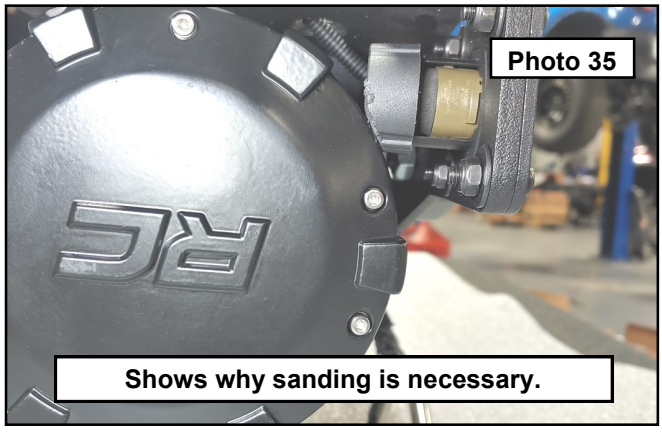


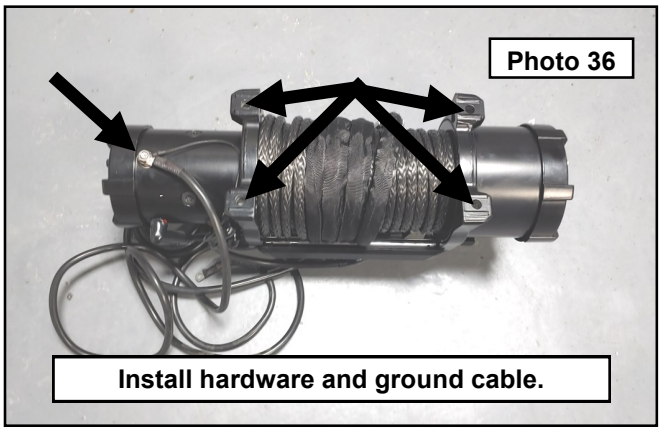
33. Install the sensor to the mount, and then install the locking plate to the back of the mounting tabs until they lock in place as shown. **Photo 33**
34. On the driver side sensor locking plate, you will need to shave some of the material off the top edge of the locking plate. This is done for clearance on the winch motor housing. Use a sander to sand the corner off at a 45 degree angle. You only need to take the top corner off the plate stopping before you get into the locking notch. Photo 34





35. Photo shows why the sanding is necessary. Sand just enough to clear the winch motor. The picture is upside down because of the following steps and ease of installation. **Photo 35**
36. Set the winch onto its control box upside down on your workspace. Install the square nuts from the winch hardware kit into the legs of the winch. Install the winch ground cable to the ground lug on the winch using a 13mm socket. **Photo 36**

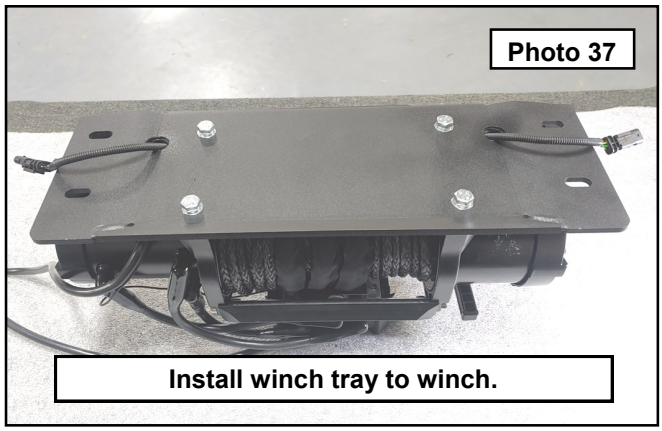


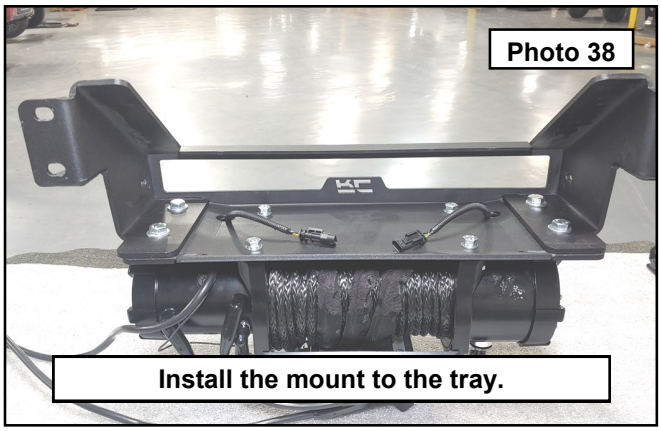


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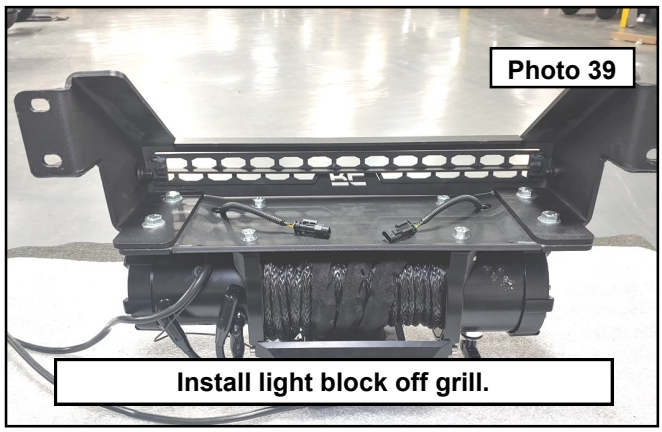
37. Install the winch tray to the winch using the hardware from the winch kit and 16mm socket. Torque to 35 ft-lbs. **Sensor vehicles:** Route the sensor harness through the holes in the winch tray. **Photo 37**

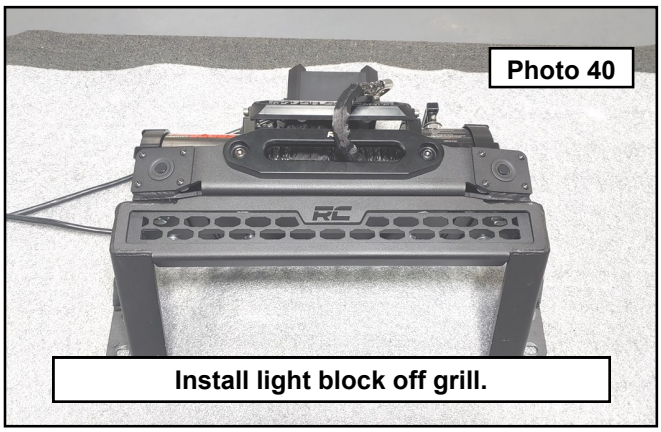
38. Install the winch mount to the winch tray using the provided 12mm bolts, washers and flange nuts as shown. Bolt and washer need to be on the inside as shown. Center the mount to the tray and tighten the hardware using a 18 and 19mm wrench. Torque to 45 ft-lbs. **Photo 38**



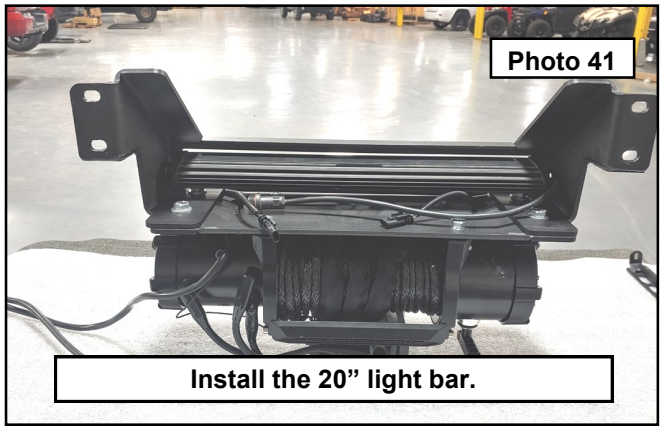


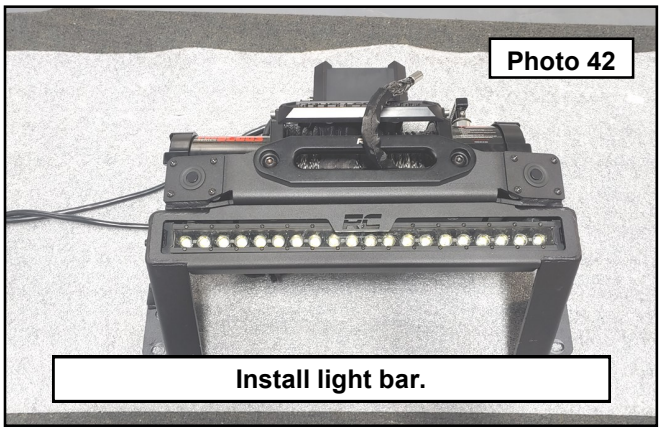
39. **Non-light option kits:** Install the light block off grill to the mount using the provided 8mm bolts, washers and nuts. This mount will sit behind the opening when installed for a 3d effect. **Photo 39 / 40**





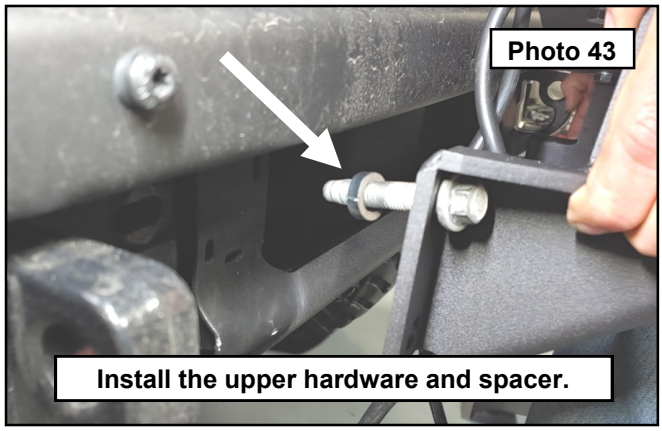
40. **Light optioned kits:** Install the 20” light bar to the mount using the provided hardware from the light kit. **Photo 41 / 42**

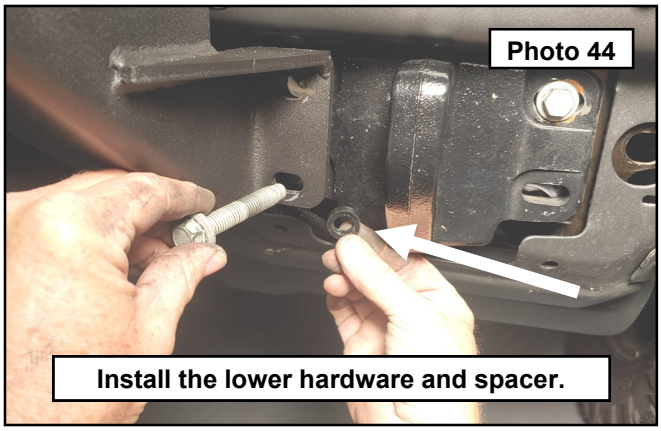




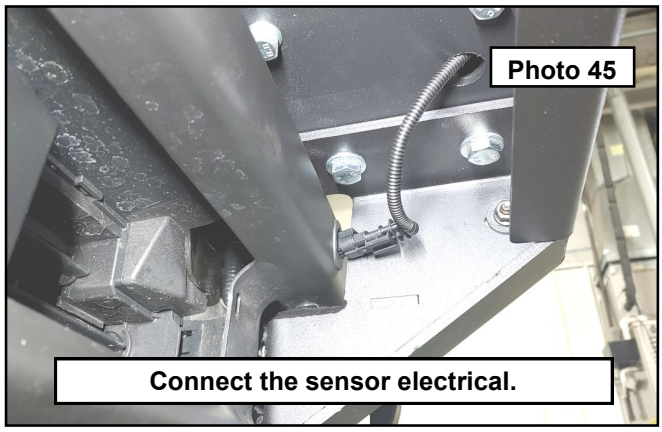
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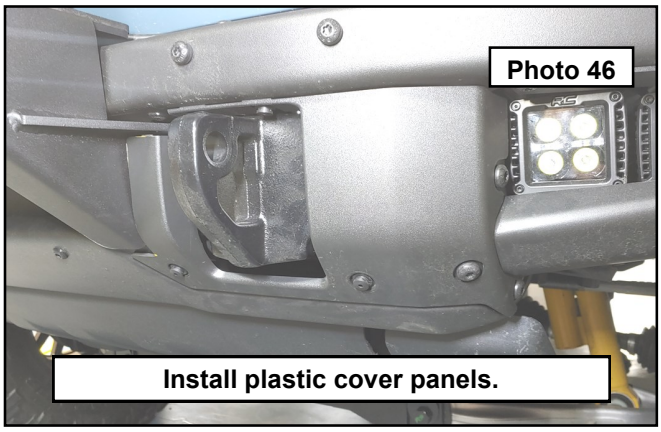
41. Have an assistant help hold the assembled winch mount up to the bumper. Install using the stock hardware and the provided 1/4” spacers between the bumper and winch mount. Start by installing the upper hardware and getting it to begin engaging the threads. Once the tops are started, have the assistant pull out slightly to angle the mount enough so that you can install the lower hardware and spacer. Once all are started, center the assembly and torque the hardware to 45 ft-lbs. **Photo 43 / 44**



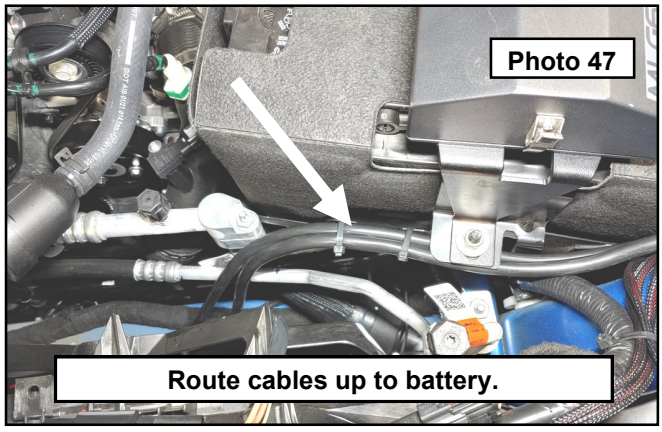


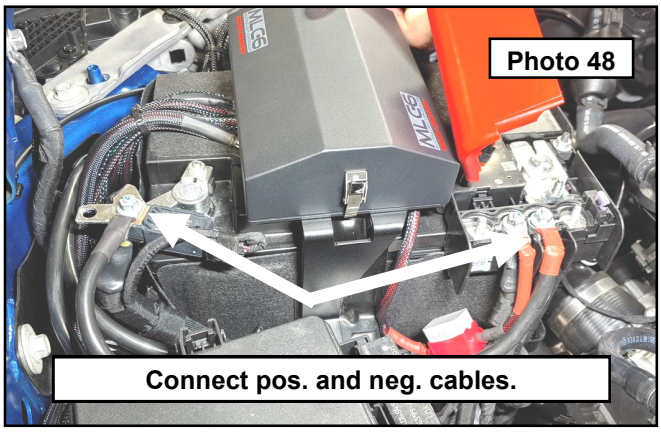
42. **Sensor vehicles:** connect the sensor electrical harnesses. **Photo 45**
43. Install the previously cut plastic cover panels to the bumper using the factory plastic rivets. **Photo 46**





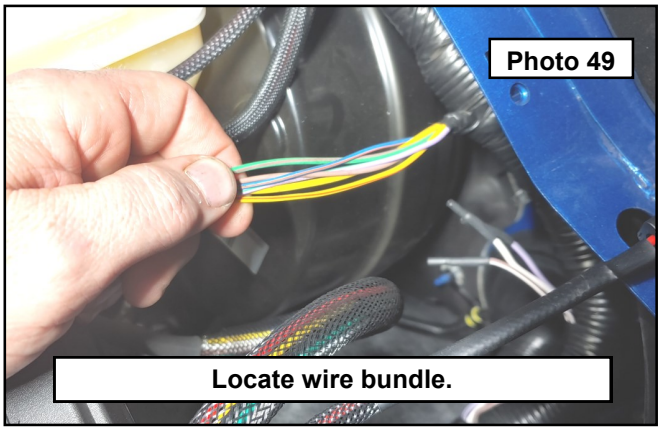
44. Route the positive and negative cables of the winch between the bumper and the grill over to the driver side. Run the cables up to the battery and connect to the positive and negative terminals on the battery. **Photo 47 / 48**

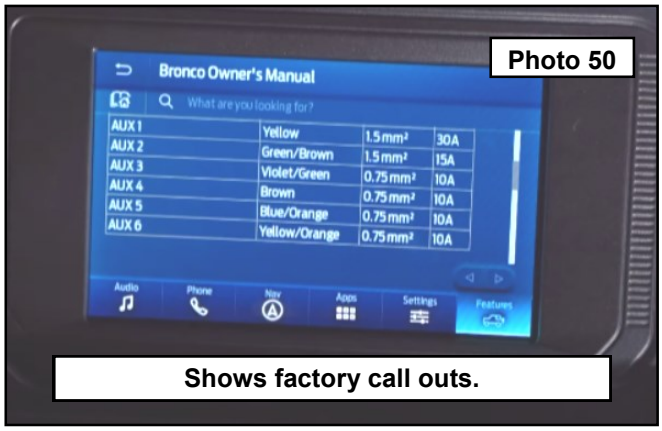




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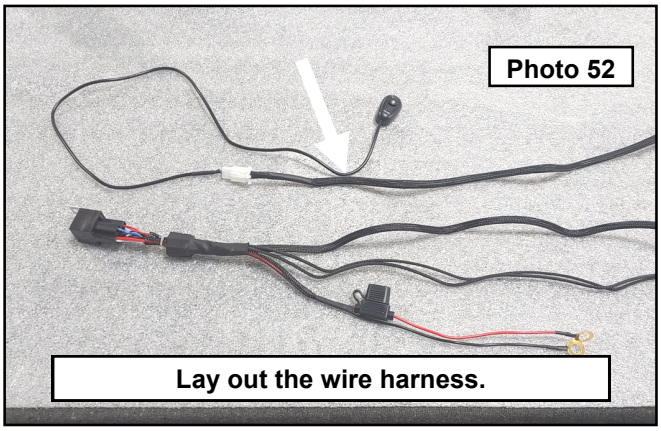
45. **<u>Light option kits</u>:** Under the cowl next to the brake booster you will find the AUX switch panel wires. These circuits from the factory are rated at #1 at 30 amp, #2 at 15 amp, #3, #4, #5, and #6 at 10 amps. #2 through #6 are only large enough to be trigger wires for lighting options included with this bumper. We still suggest using the relay and fuse section of the light bar harness for protection of the factory wiring. **Photo 49 / 50**



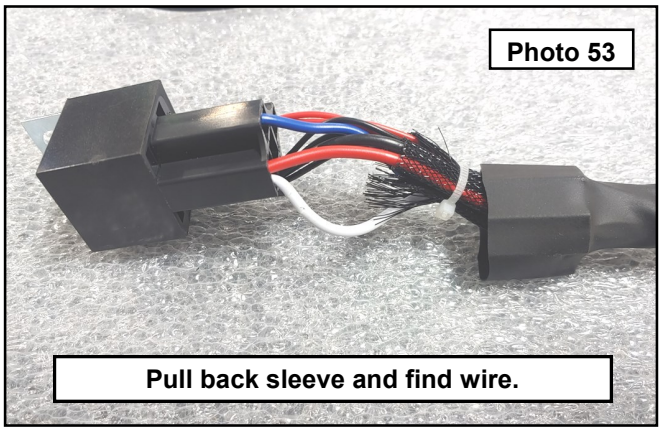


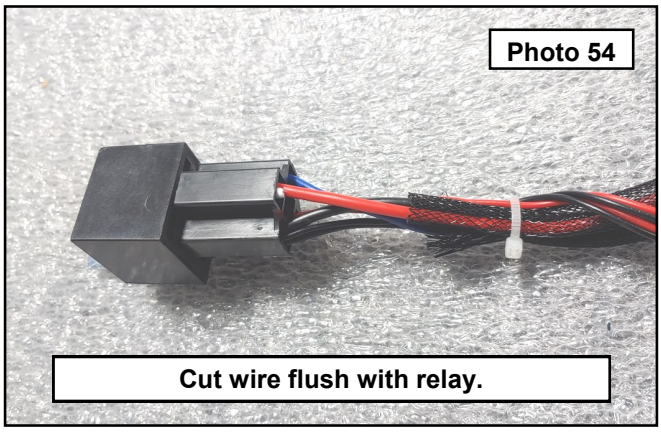
46. Route the light bar harness up between the grill and core support into the engine bay. It is suggested for a clean installation to purchase the MLC6 controller box which can control six 30 amp circuits and attaches to the factory AUX switch panel inside the cab of the vehicle. **Photo 51**
47. If you do not use the MLC6 unit, you can attach the light bar and/or cube harnesses to the AUX switch wires under the hood. You will need to cut the switch end of the harness and use the trigger wire to attach to the AUX wires coming from the vehicle. Lay out the light bar harness. **Photo 52**



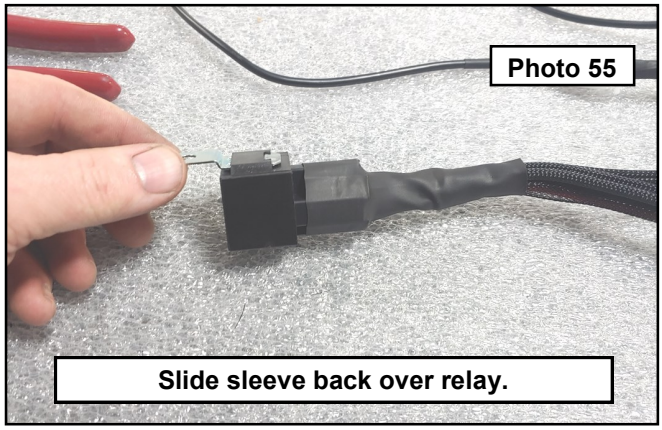


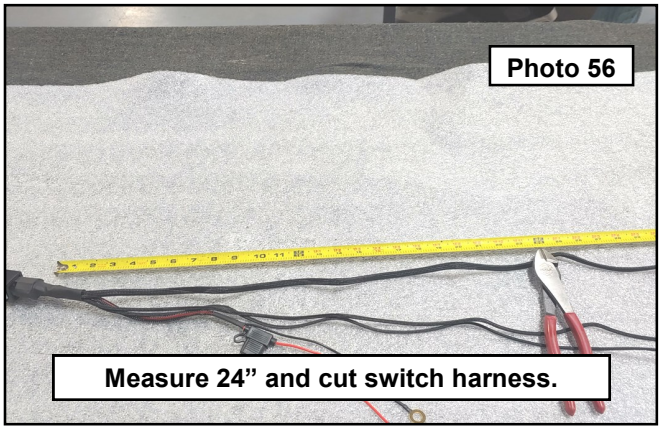
48. Pull the protective sleeve cover from the relay to access the wires. Find the color wire that is doubled up with the Red power wire going to the relay. **Photo 53**
49. This wire should be white but could be blue. Cut this wire flush with the relay. This gave power to the switch that you are about to remove. **Photo 54**



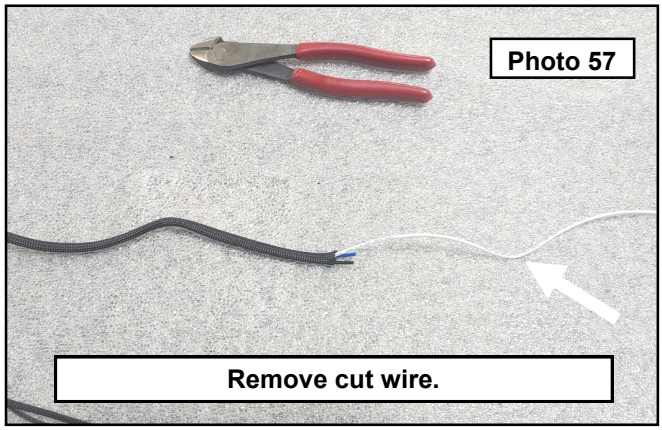


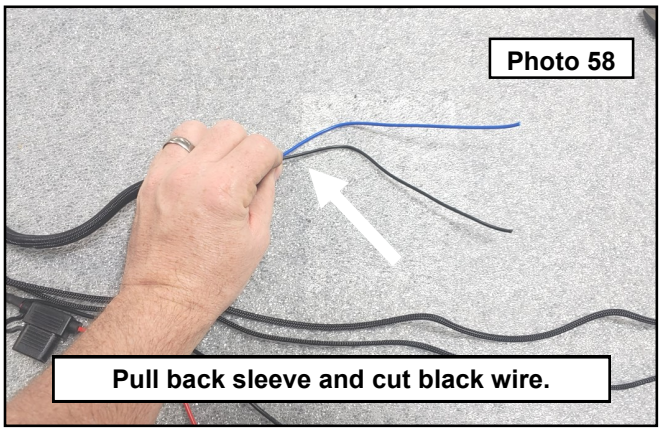
50. Slide the protective sleeve back over the relay. **Photo 55**
51. Measure 24” from the relay end down the switch side of the harness and cut using a pair of wire cutters. You will be cutting through 3 wires and the sleeve. **Photo 56**



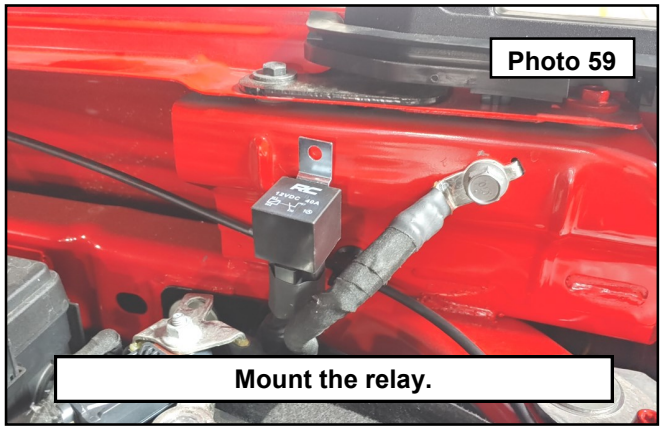


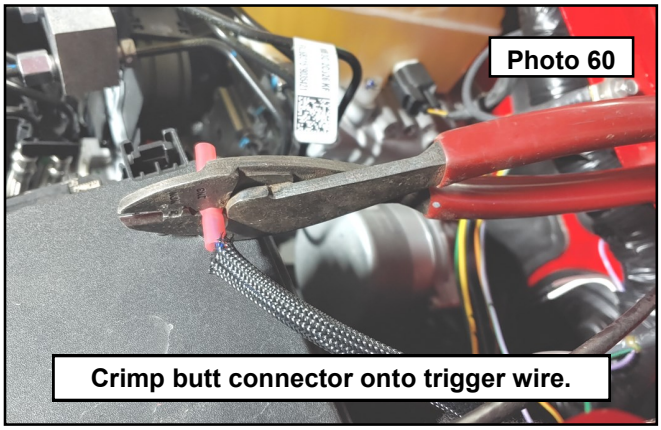
52. Once you have cut the harness, dispose of the side that is attached to the switch. On the relay side, pull back the protective sleeve to reveal the three wires. Pull out the wire that you previously cut at the relay and discard. **Photo 57**
53. Pull the protective sleeve back about 5” and cut the black wire. This is the ground for the switch that has been removed and is no longer needed. **Photo 58**





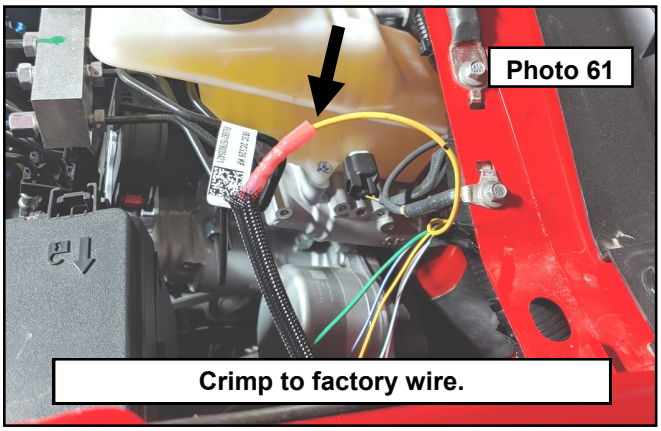
54. Find a spot close to the battery to mount your relay. Use a self tapping screw or drill a hole to mount the relay. You can also use a zip tie to hold it out of the way. **Photo 59**
55. Run the trigger wire side of the harness down the fender next to the fuse panel. Strip the wire back and add a butt connector. Crimp the connector in preparation for attaching to the AUX wires. **Photo 60**

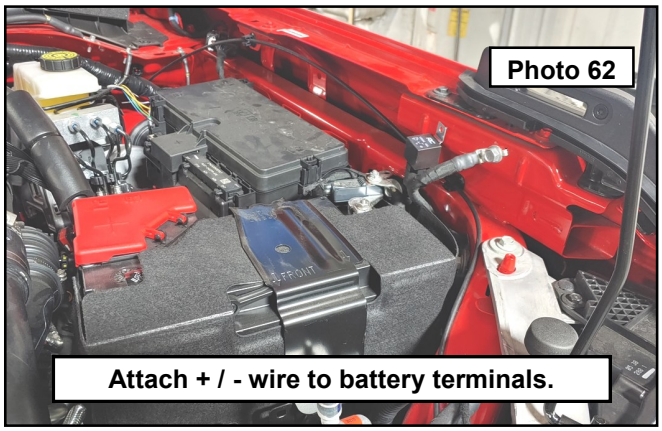




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56. Strip the AUX wire of choice and connect the butt connector. **Photo 61**
57. Attach the positive and negative connections to the battery terminals using a 10mm socket. **Photo 62**







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