



2014 - 2021 4 Runner DIY Hybrid bumper

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. Check and retighten wheels at 50 miles and again at 500 miles. 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.

PRODUCT USE INFORMATION

▲WARNING As a general rule, the taller a vehicle is the easier it will roll. We strongly recommend that seat belts and shoulder harnesses be worn at all times. Braking performance and capabilities are decreased when significantly larger/heavier tires and wheels are used. Do not add, alter, or fabricate any factory or after-market parts which increase vehicle height over the intended height of the Rough Country product purchased. Rough Country makes no claims regarding lifting devices and excludes any and all implied claims. We will not be responsible for any product that is altered.

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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TOOLS NEEDED:

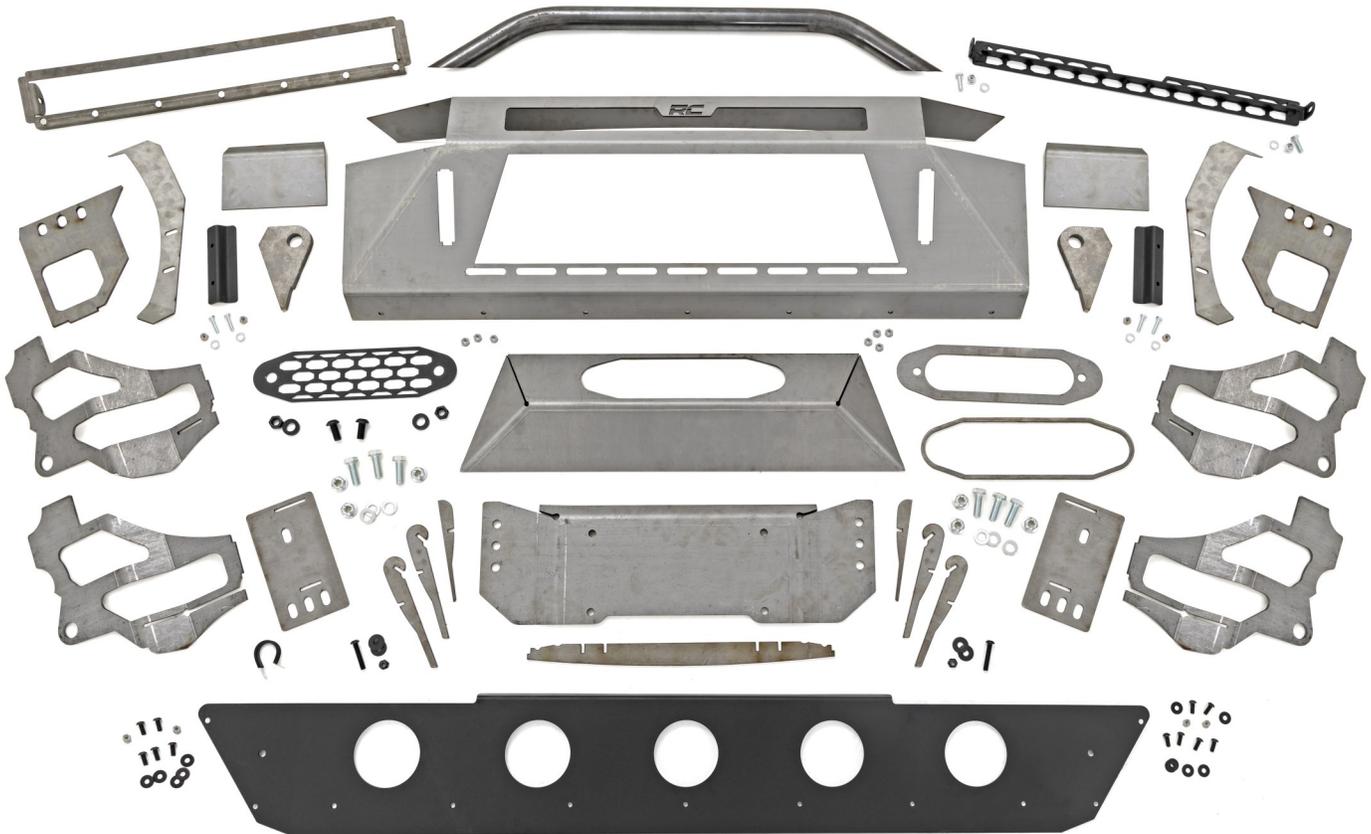
Jack
Safety Stands
Wheel Chocks
Saw
Drill
Tape
Pry Tool
Welder
Grinder
Sander
Metric Wrench/Socket
10mm
14mm
16mm
18mm
19mm

KIT CONTENTS:

Center Skin (1)
Winch Chin Skin (1)
Fairlead Spacer Plate (1)
Fairlead Mount Plate (1)
Driver Side Skin (1)
Pass Side Skin (1)
Driver End Cap (1)
Pass End Cap (1)
20" Light Bar Mount (1)
D-Ring Mount (2)
Stinger Tube (1)
Driver Inner Frame Mount (1)
Pass Inner Frame Mount (1)
Driver Outer Frame Mount (1)
Pass Outer Frame Mount (1)
Frame Mount Plate (2)
Winch Tray Mount (2)
Winch Tray (1)
Winch Tray Cross Rib (1)
Winch Tray Inner Rib Support (4)
Outer Rib Support (2)

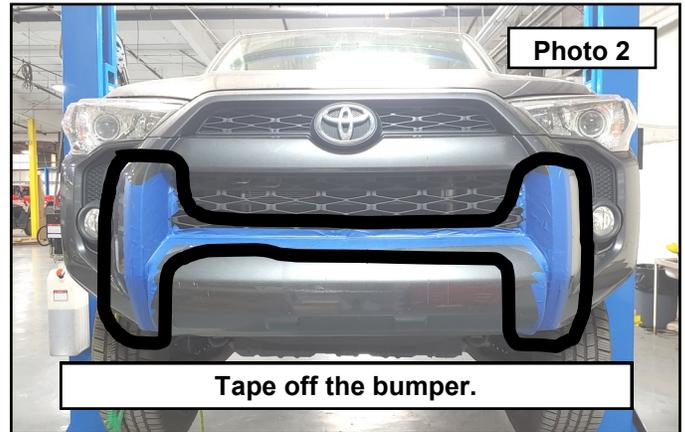
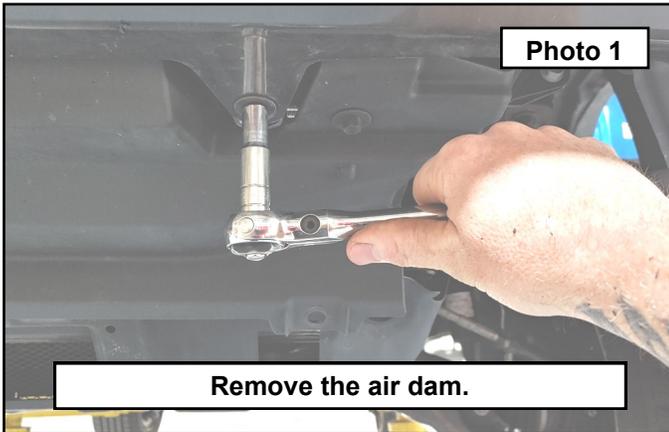
HARDWARE INCLUDED:

12mm x 25mm Button Head Bolt (2)
12mm x 35mm Bolt (6)
12mm Flange Nut (6)
12mm Weld Nut (2)
12mm Washer (6)
8mm x 25mm Bolt (2)
8mm Nut (2)
8mm Washer (4)
6mm x 25mm Bolt (5)
6mm Nut (5)
6mm Washer (10)
1/4" Button Head Bolts (11)
1/4" Washers (15)
1/4" Nuts (4)
1" Adel Clamp (1)

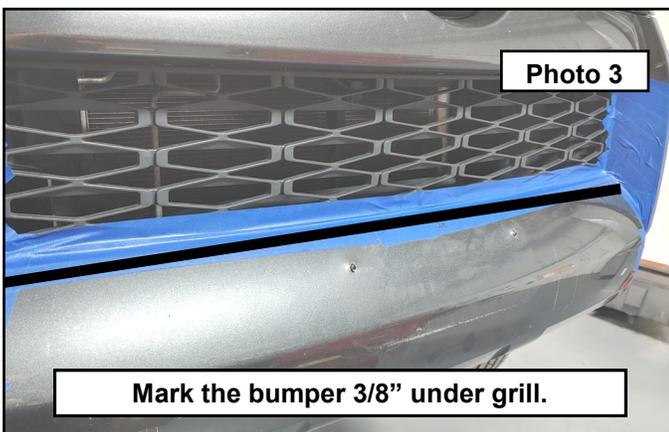


Front Installation

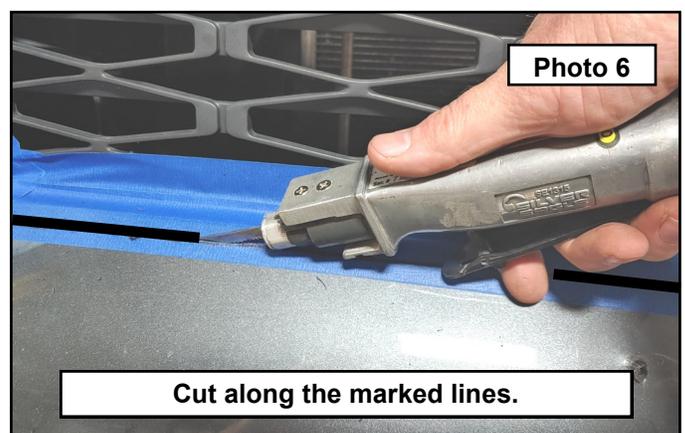
1. Park your vehicle on a clean flat surface, engage the parking brake and block the rear tires.
2. **Save all hardware removed from the vehicle unless otherwise noted.**
3. Open the hood and disconnect the negative terminal on the battery.
4. Remove the air dam attached to the bumper and skid plate if you have one using a 10mm socket. **Photo 1**
5. Tape off the area of your front bumper that will need to be cut for the installation of the Hybrid Bumper. **Photo 2**



6. Mark a line 3/8" under the grill. **Photo 3**
7. Mark down the valley of the bumper where the middle meets the sides. This is your initial cut line. **Photo 4**

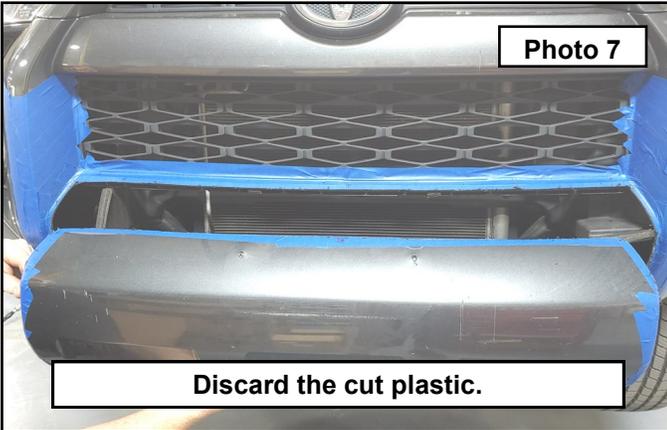


8. At the corner of your marked lines, drill a 1/2" hole. **Photo 5**
9. Using a suitable cutting tool (air body saw shown) cut along your marked lines. **Photo 6**



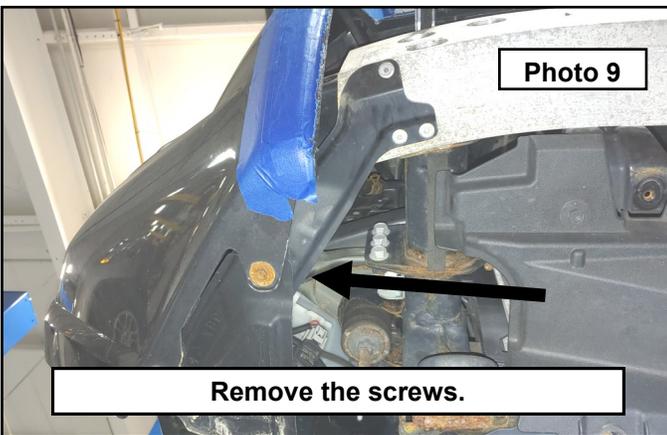
10. Remove the plastic and discard. **Photo 7**

11. Remove the foam low speed impact bumper by pulling it out of the aluminum bumper and discard. **Photo 8**



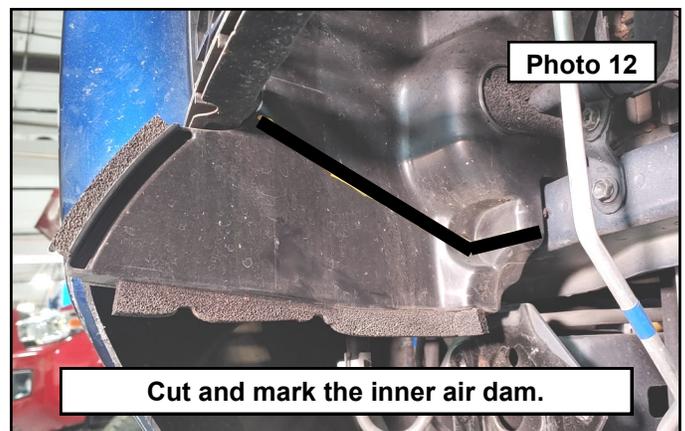
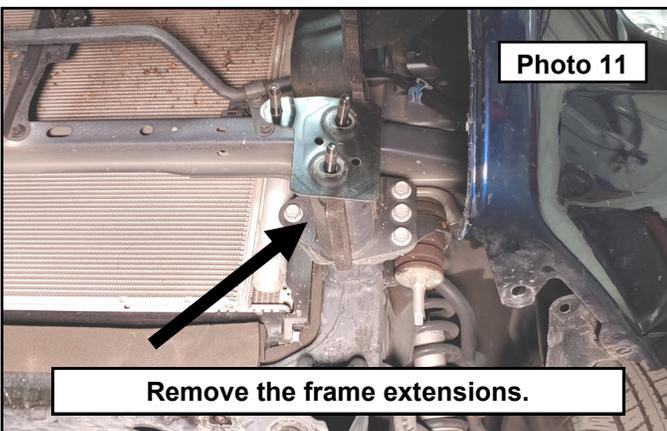
12. Under the vehicle, remove the screws holding the plastic bumper to the brackets coming from the aluminum bumper. **Photo 9**

13. Remove the aluminum bumper hardware through the holes in the front face using a 14mm socket. Rotate the aluminum bumper so that the front face is towards the ground. Slide the aluminum bumper to the passenger side behind the plastic bumper and then down and out of the way. Discard all. **Photo 10**



14. Remove the bumper frame extensions using a 14mm socket on both sides of the vehicle. Discard the frame extensions but save the hardware. **Photo 11**

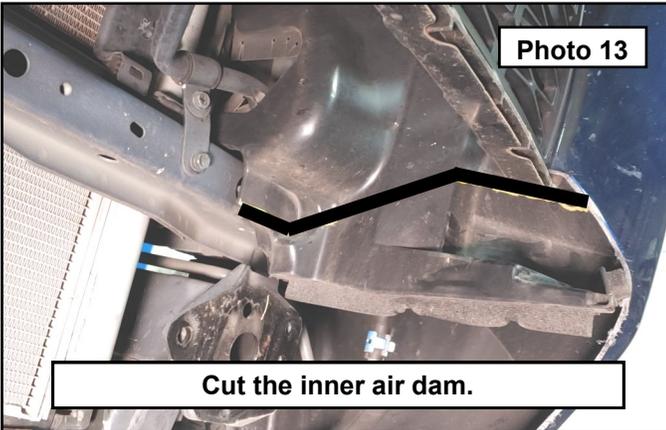
15. Mark the inner air dam on the passenger side as shown. Cut along the marked line and discard. Sand any burrs smooth. **Photo 12**



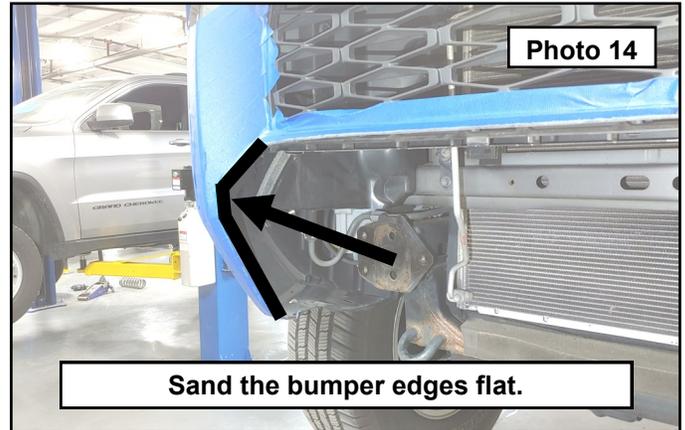
16. Mark the inner air dam on the driver side as shown. Cut along the marked line and discard. Sand any burrs smooth.

Photo 13

17. Use a suitable sanding tool, clean up the edge of the plastic bumper. You will want to sand any remaining lip flush with the bumper side so that it is a flat surface for the bumper end caps. **Photo 14**



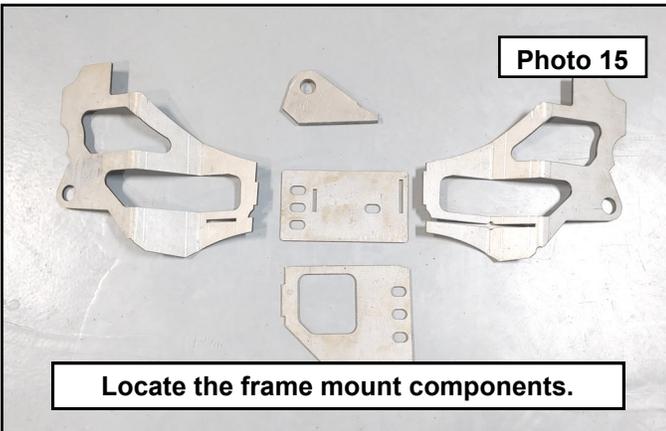
Cut the inner air dam.



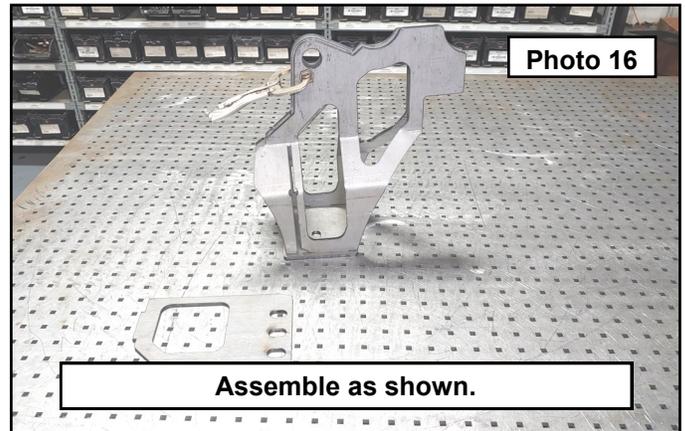
Sand the bumper edges flat.

18. The instructions from here on out will be more of a guide and proper welding, clamping and measurement techniques are on the assembler for the assembly of the bumper. Locate the frame mount components. Passenger side parts shown. **Photo 15**

19. Using the tab and slots created in the parts, assemble as shown. The outer frame mounts have small slot and tabs, the inner frame mounts have the large tab and slot. Once you have everything located via the slots, insert the 1/2" thick d-ring mount between the inner and outer mounts. Line up the hole and clamp into place. The D-ring mount is larger in its outer perimeter than the plates for welding at a later step. Tack the inner, outer, frame plate, and winch mount together. Do not weld anywhere around the D-ring mount perimeter at this time as it could cause interference when installing into the main bumper skin. **Photo 16**

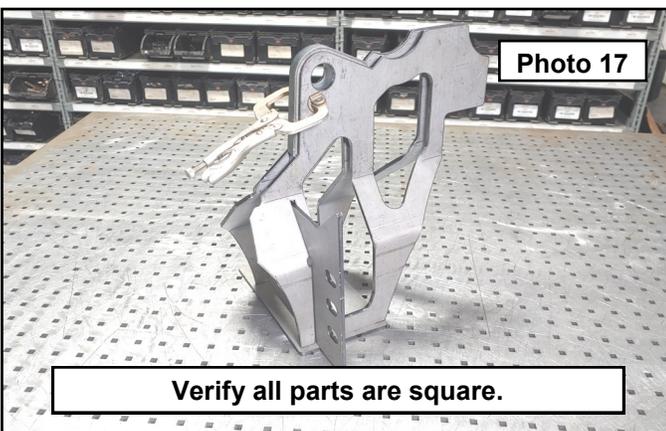


Locate the frame mount components.

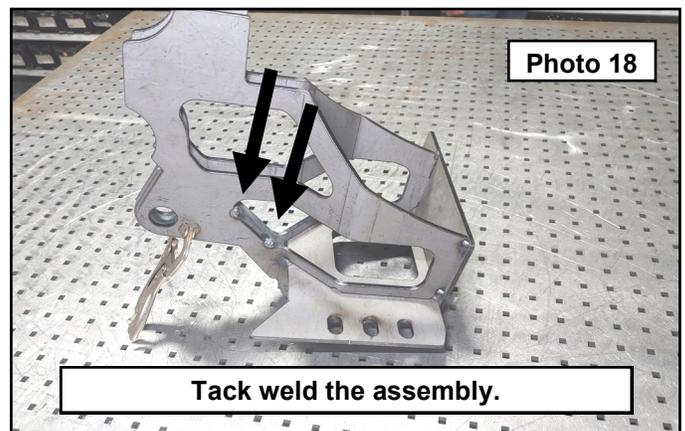


Assemble as shown.

20. Make sure all the parts are square to each other before any full welds are applied. Once you have verified all parts are square and the D-ring mount is positioned correctly, tack weld the corner pointed to in the picture on both sides of the assembly. This ties the side plates to the d-ring mount. Do not weld around the outside of the d-ring mount yet. Tack weld all the joints of the assembly. **Photo 17 / 18**

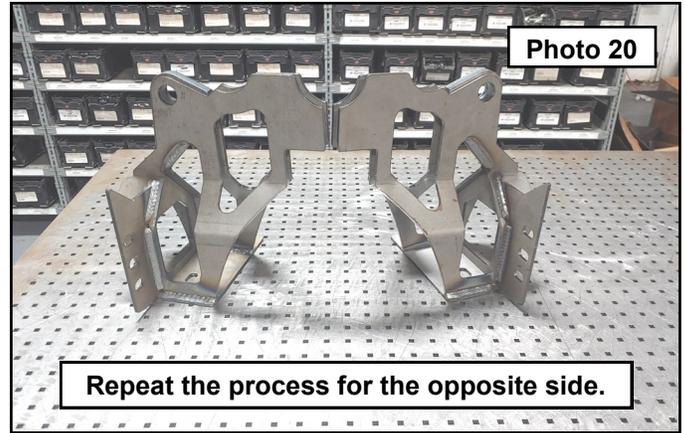


Verify all parts are square.

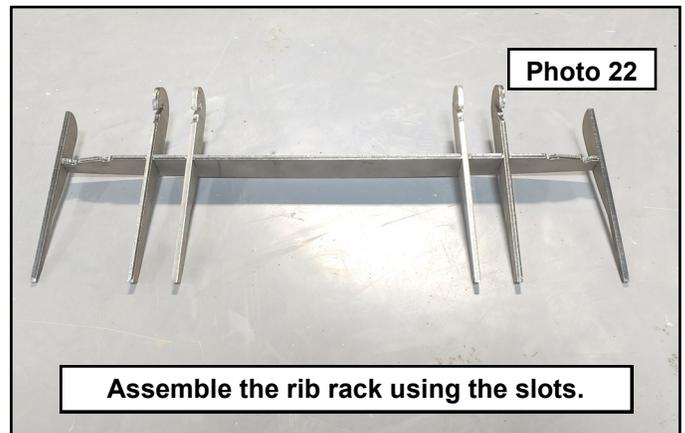
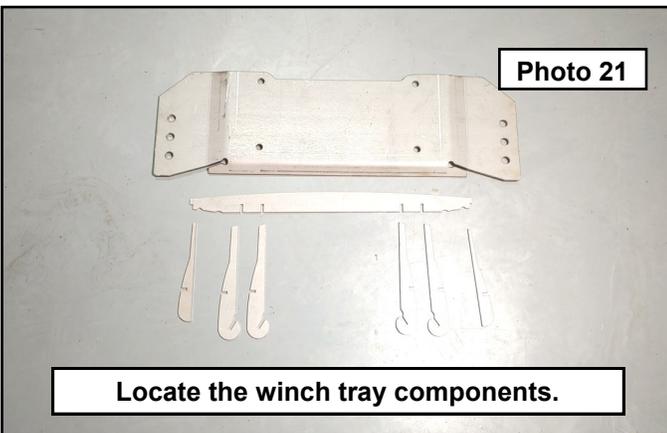


Tack weld the assembly.

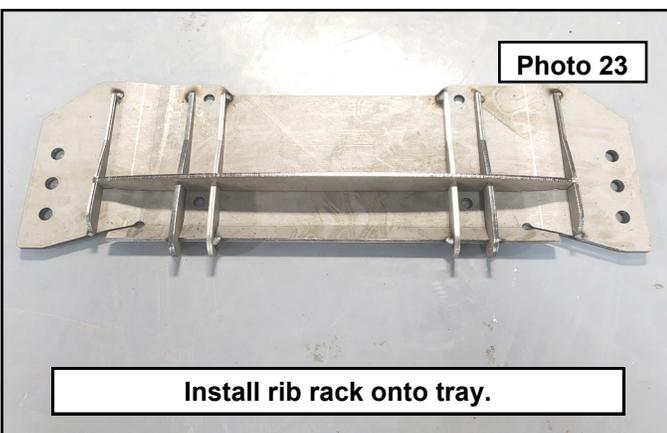
21. Weld all corners of the frame mount inside and out where the parts come together. Remember this is the main mounting point for the bumper skin and the winch and is very important to make as strong as possible. **Photo 19**
22. Repeat the process for both frame mounts. Set aside to cool. **Photo 20**



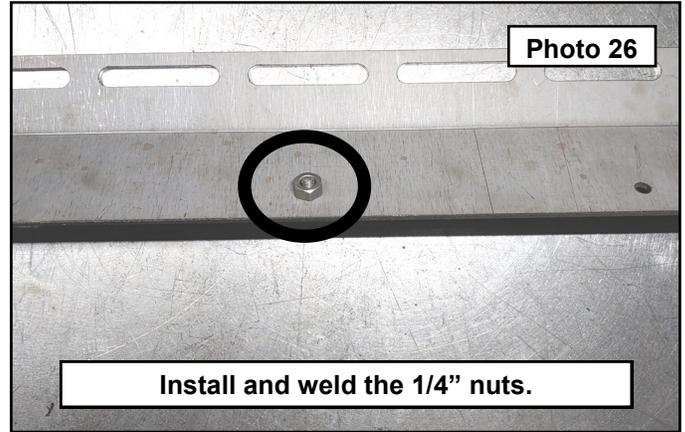
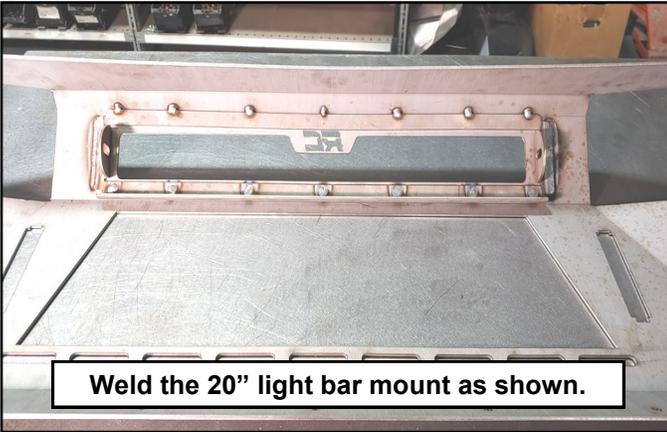
23. Locate the winch tray parts. Even if you decide not to run a winch, you will still need to weld this together as it ties the two frame halves together for strength. **Photo 21**
24. Assemble the winch tray support ribs using the slots in the parts. The 4 inside ribs have a hook on the end which will slide over the back of the winch tray. **Photo 22**



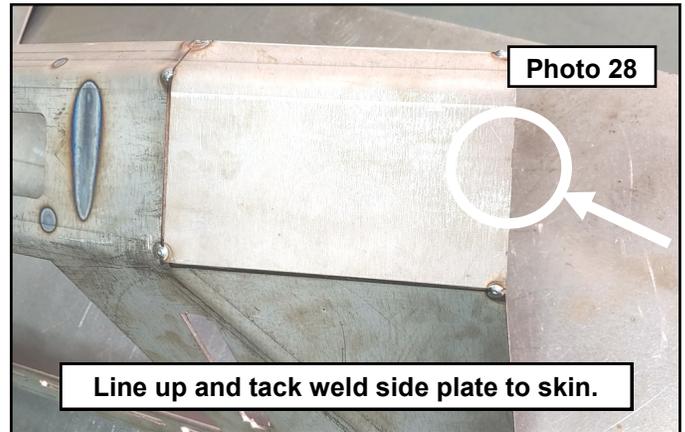
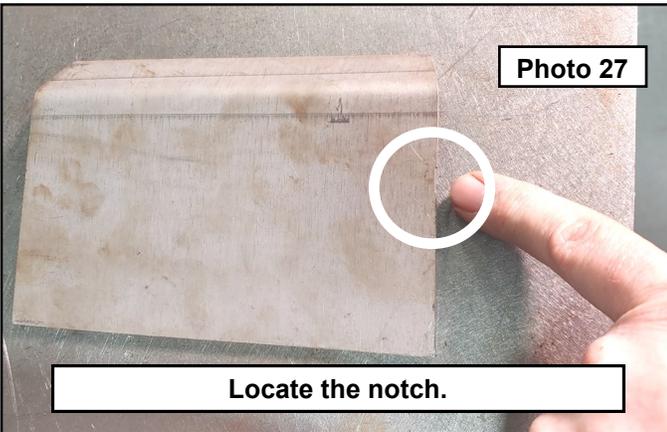
25. Lay the winch tray upside down onto your work surface. Slide the rib rack onto the tray with the hooks catching the back edge of the tray. The inside ribs will straddle the winch mounting holes while the outside ribs will line up with a line created by the bend tooling. **Photo 23**
26. Weld the ribs to the winch tray as shown. Do not weld on the inside of the 4 ribs where the mounting holes of the winch are. Weld the hook portion of the rib around to the top face of the tray. Set aside to cool. **Photo 24**



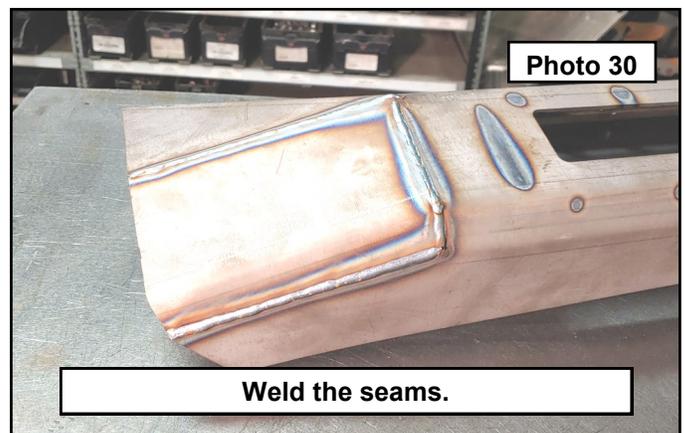
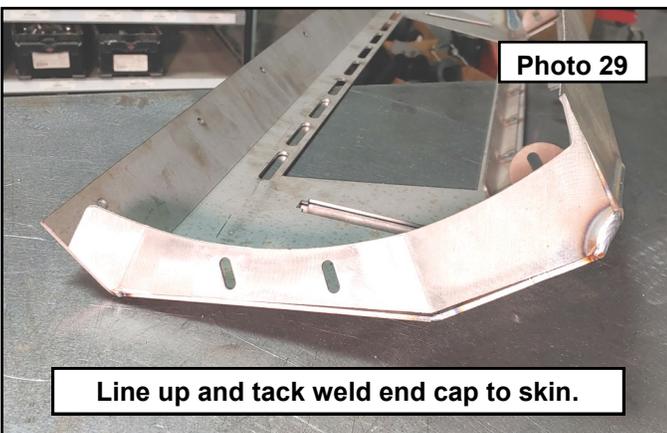
27. Start with the 20" light bar mount. Center this in the main skin opening on the backside. The light bar mount has a bent edge with holes in it, this will be mounted to the bottom of the skin. Once centered left to right and up and down, tack weld in place starting from the center out and alternating from top to bottom. Plug weld the holes in the bottom of the mount. Once all the holes and tacks are done, weld the two sides of the light bar mount. **Photo 25**
28. Using the provided raw 1/4" nuts and 1/4" button head bolts, install so that the nut is on the inside of the center skin. Tack weld on both sides of the nut. These are to hold the skid plate to the bumper later. **Photo 26**



29. Look at the two side skin parts, you will see a small notch in the part. This is an indicator to show which side of the bumper they will go onto. The notch will be installed so that it is to the outside of the bumper skin. Driver side shown. **Photo 27**
30. Line up the side skin to the main skin (making sure the notch goes to the outside of the bumper skin). Set the gap between all the edges to about .030" and tack weld in place. You may need to play with the skin to get everything to line up correctly. A pair of pliers and helper may be necessary to achieve the proper gaps. Repeat for the other side. **Photo 28**

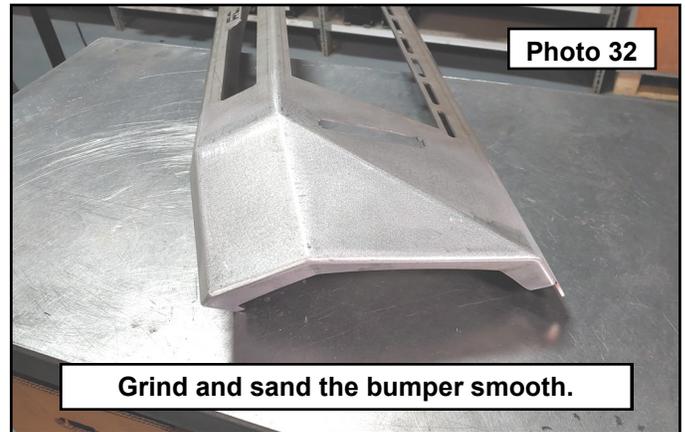
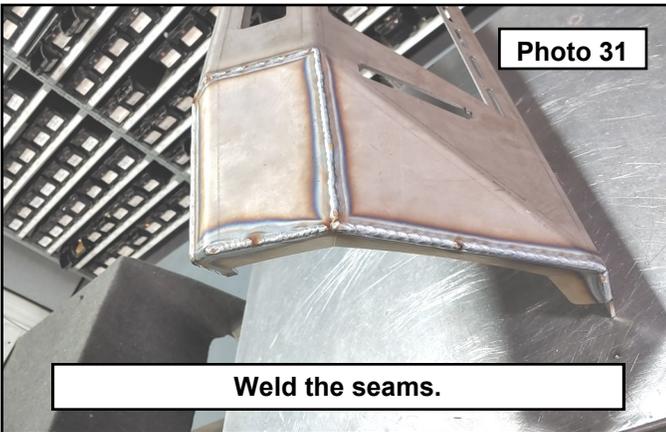


31. Locate the end cap that fits the side that you are working on. This piece will be welded as a corner to corner part and does not extend all the way to the end of the lower portion of the main skin. Tack in place. **Photo 29**
32. Once you are satisfied with all fitments, weld the seams fully. **Photo 30**



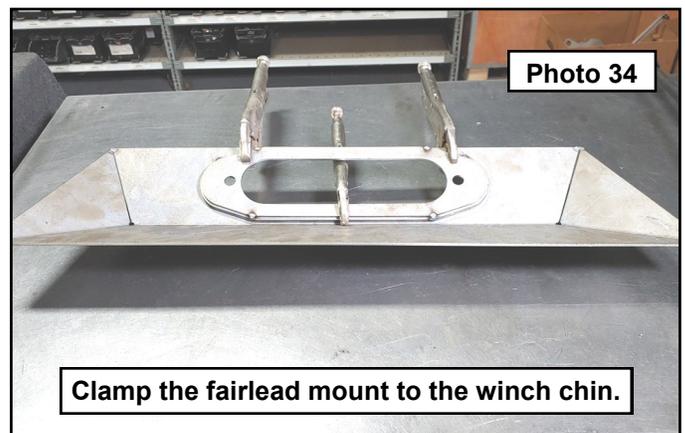
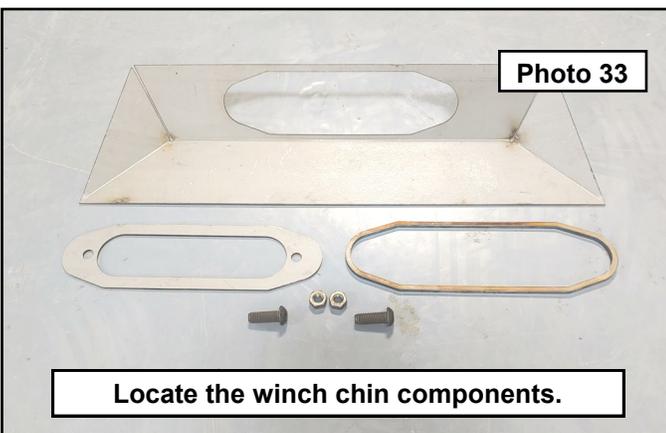
33. Weld the end cap corners. **Photo 31**

34. Grind down and sand the welds making sure to round the corners at the end caps. **Photo 32**



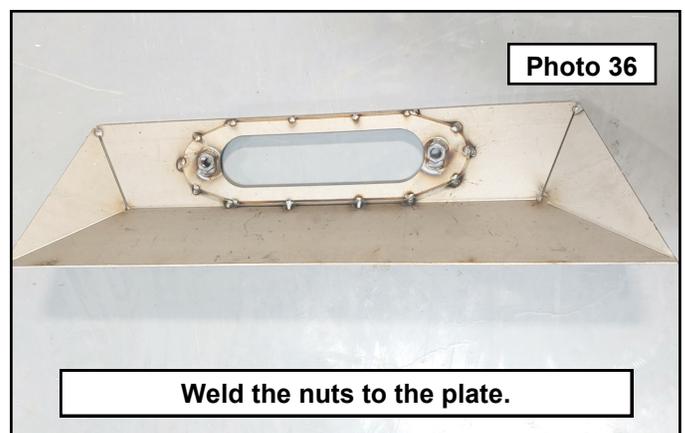
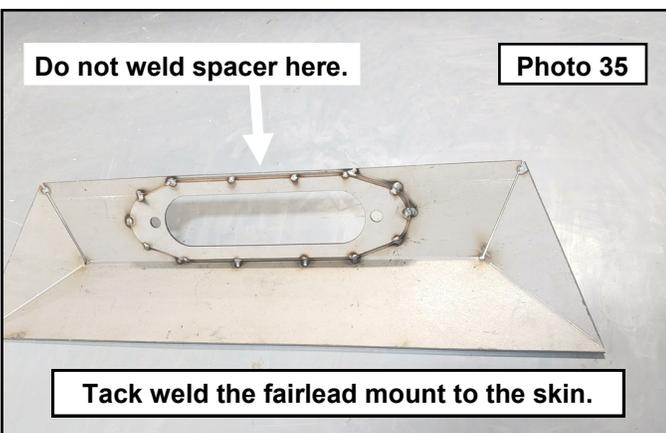
35. Locate the winch chin components. In the hardware bag you will find two 12mm raw nuts, and 12mm button head bolts. **Photo 33**

36. Tack weld the plate to the spacer ring and then clamp to the winch chin as shown. **Photo 34**

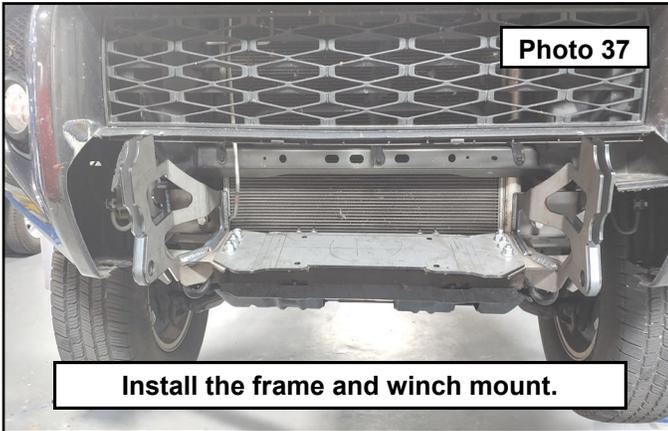


37. Tack weld the spacer ring to the winch chin. DO NOT tack the spacer ring along the top edge of the skin (Arrow). This can cause interference when welding to the main skin later. In the picture, the top tacks are only on the plate to spacer, not spacer to skin. **Photo 35**

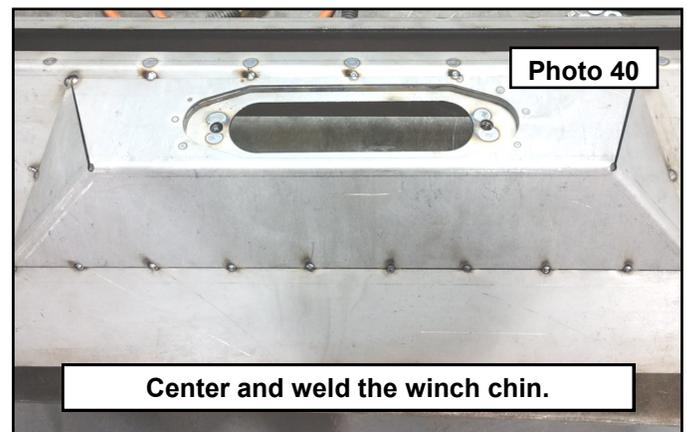
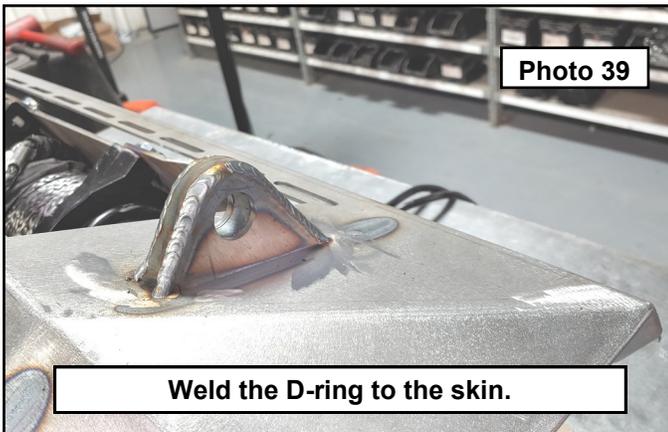
38. Install the raw nuts to the backside of the fairlead plate using the button head bolts. Weld both sides of the nut to the plate. Remove the button head bolts. **Photo 36**



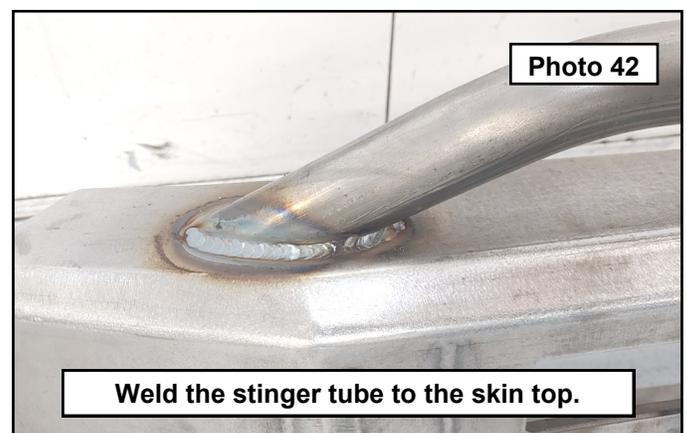
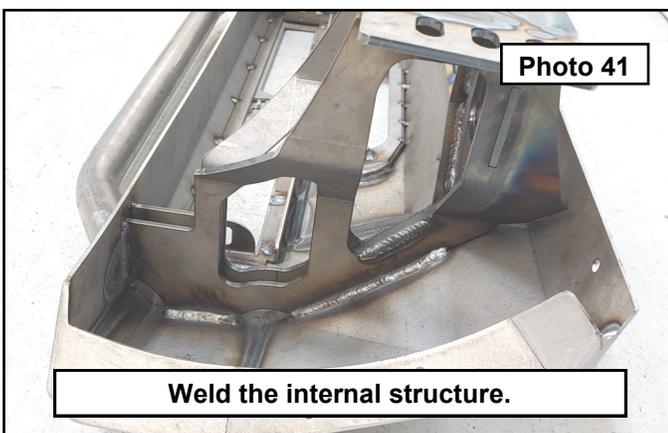
39. Install the frame mounts to the frame using the factory hardware. Leave loose so that you can adjust them when installing the skin. The skin will set the proper spacing for welding. Install the welded winch tray to the frame plates as shown using the provided 12mm bolts, thick washers on the bolt head side, and flange nuts. Install with the bolts running from the bottom up. Leave loose. **Photo 37**
40. Install the skin onto the frame mounts so that the D-ring mounts are protruding through the skin holes. Center the mounts and tighten to the frame. Tighten the winch tray down. Verify that the skin fits into place on the mounts and the body. Adjust as necessary. Tack weld the skin to the D-ring mounts making sure the skin is pushed all the way against the frame mounts. Everything should now be held together enough to remove for final welding. **Photo 38**



41. Set the bumper assembly onto a flat surface with the skin facing up and the frame mounts sitting flat. Weld the D-rings around their outer perimeter. **Photo 39**
42. Center the winch chin to the main skin. The lower edge will line up with the bottom of the drain slots in the skin. Tack weld around the perimeter of the chin. You will need to control your heat on this step. To avoid warping of the parts, it is suggested to weld around the skin in stages. **Photo 40**



43. Weld the internal structure to the skin at all points it meets. **Photo 41**
44. Optional: Center and weld the stinger tube to the top edge of the main skin 1/4" from the bend with the angle leaning towards the face of the bumper skin. **Photo 42**



45. Once the bumper is completely cooled, check the fitment onto the vehicles frame. Once all is verified for fitment, remove the bumper. Remove the winch tray and have all parts coated in your preferred paint, or powder coat.
46. **Light Bar Option Kits:** Install the light bar to the mount using the hardware provided in the light bar kit. Some light bars will require spacers that are provided with the light bar so check all hardware bags. **Photo 43**
47. **Winch Option Kits:** This bumper is designed around the Rough Country synthetic rope fairlead which comes in the winch box or can be purchased separately. Install with the provided button head bolts from the bumper kit. **Photo 44**

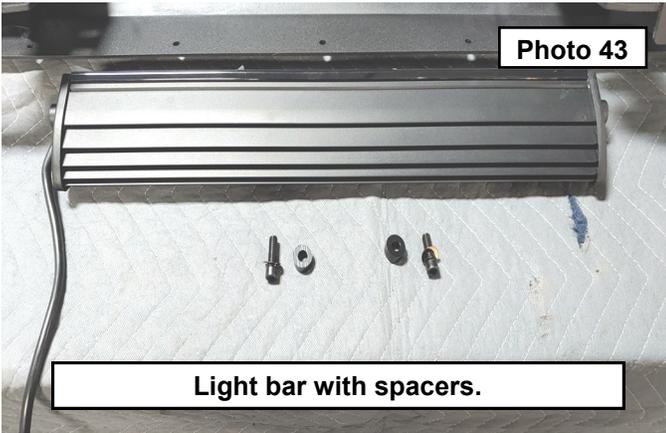


Photo 43

Light bar with spacers.



Photo 44

Install the winch fairlead.

48. **Winch Option Kits:** Install your winch to the winch tray using the provided hardware with the winch. **Photo 45**
49. Install the winch tray and winch to the bumper using the 12mm bolts, washers, and flange nuts. Torque to 95ft-lbs. **Photo 46**

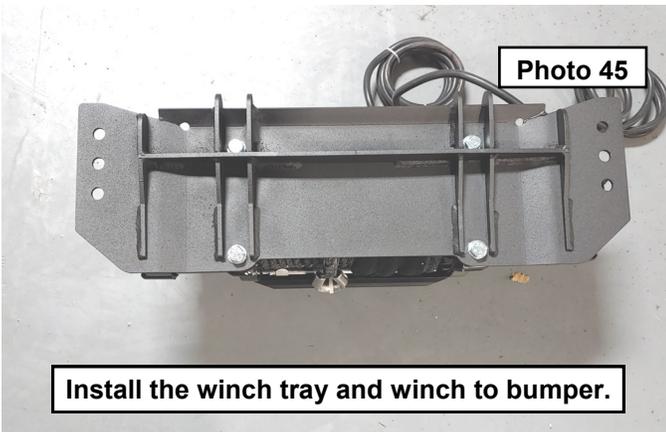


Photo 45

Install the winch tray and winch to bumper.

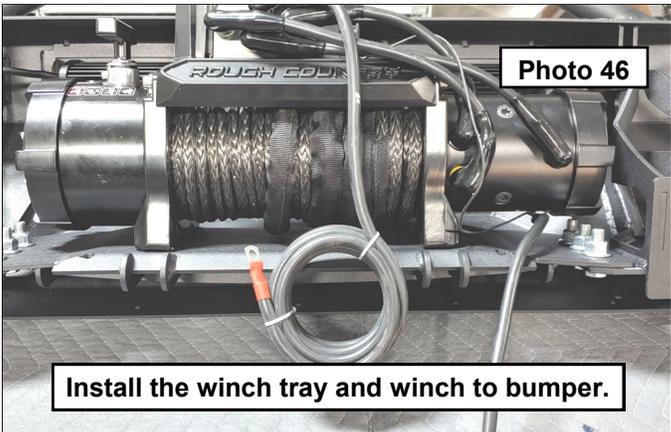


Photo 46

Install the winch tray and winch to bumper.

50. If your vehicle is equipped with a trans cooler line, gently rotate the line towards the center support rib. Install the 1" rubber coated clamp around the line and to the support rib using the supplied 6mm bolt, washers, and nut. This is hold the line off the winch control box. **Photo 47**
51. **Non Light Option Kits:** Install the light block off grill using the provided 8mm bolts, washers, and nuts from the bumper kit hardware bag. **Photo 48**



Photo 47

Install the cooler line clamp.

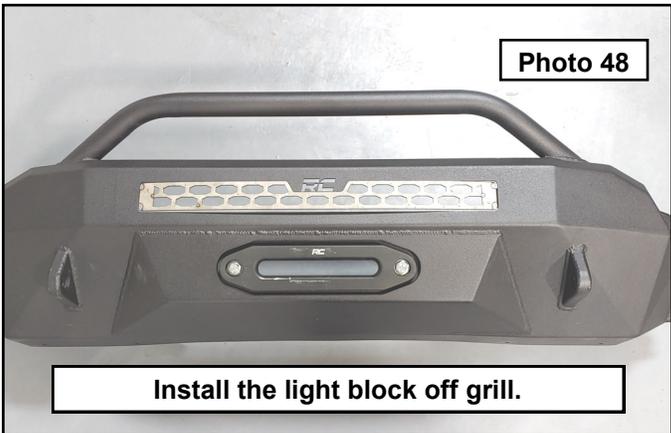
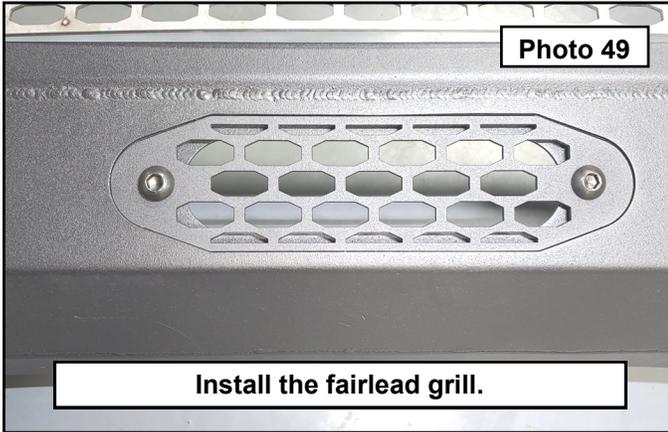


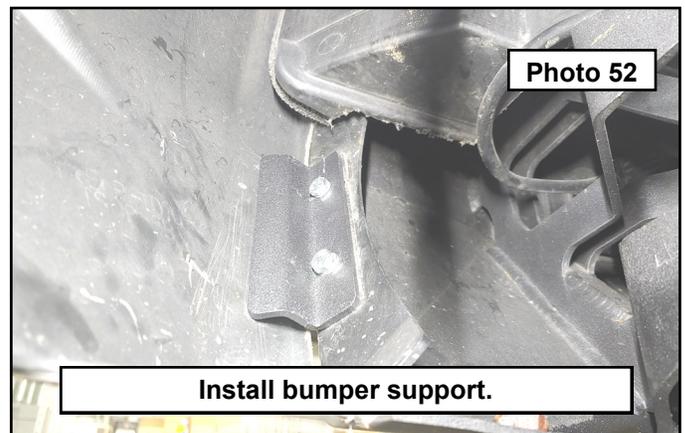
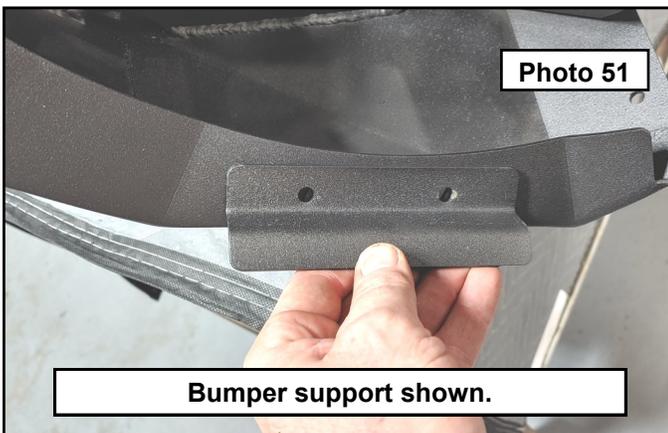
Photo 48

Install the light block off grill.

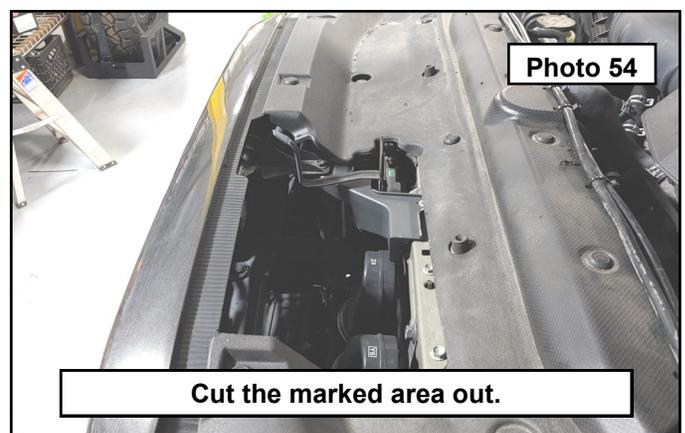
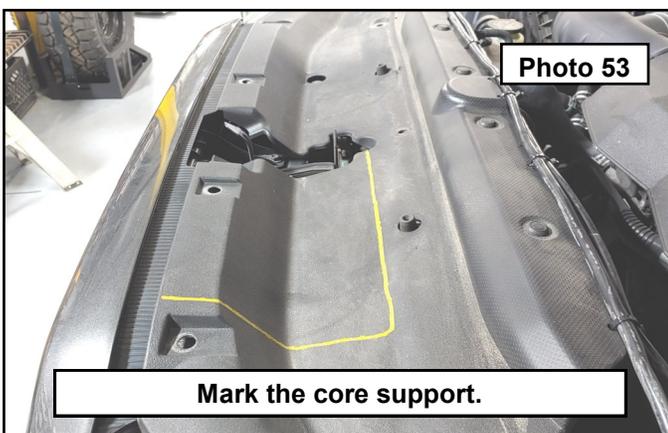
52. **Non Winch Option Kits:** Install the fairlead block off grill using the provided 12mm button head bolts and 1/4" thick spacers behind the grill. Center the grill and tighten the bolts. **Photo 49**
53. Install the bumper to the vehicle using the factory hardware. Center the bumper and torque to 45 ft-lbs. **Photo 50**



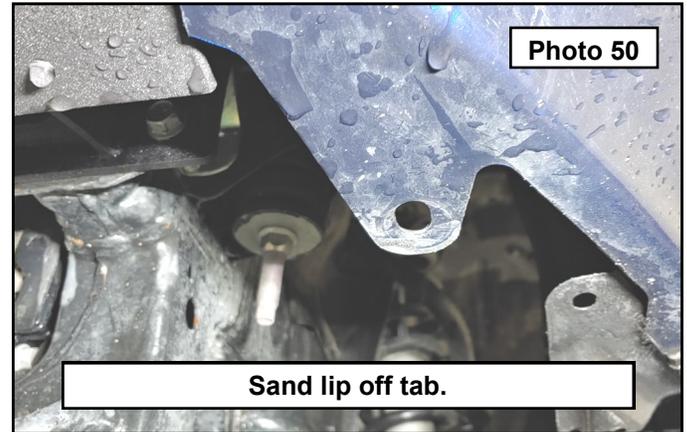
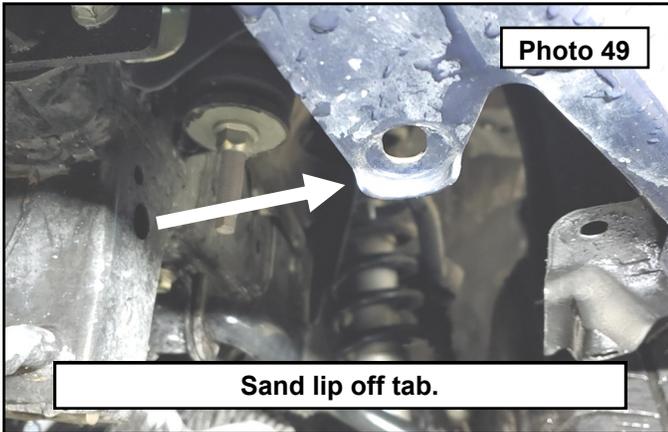
54. Once everything is tight, you have the plastic bumper support that will bolt to the sides of the bumper. Photo 51 is shown off the vehicle for clarity. Push the plastic bumper so that it lines up with the fabricated hybrid bumper. Install the plastic bumper support using the provided 6mm bolts, washers, and nuts. This is designed to keep the front bumper plastic from walking behind the new bumper when flexing occurs. **Photo 51 / 52**



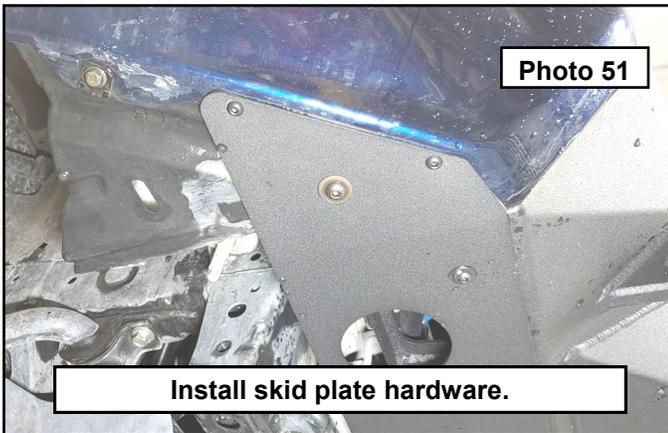
55. **Winch option kits:** This step is optional but will allow you access to the winch free spool handle. Mark the plastic core support filler as shown. **Photo 53**
56. Cut the plastic using a suitable tool and sand any burrs. There will be a tab hanging off the grill that can be removed as well. You can permanently attach the winch controller lead to the winch box and tuck out of the way or if you have purchased the Rough Country winch, you can purchase an extension lead to install in your preferred location. **Photo 54**



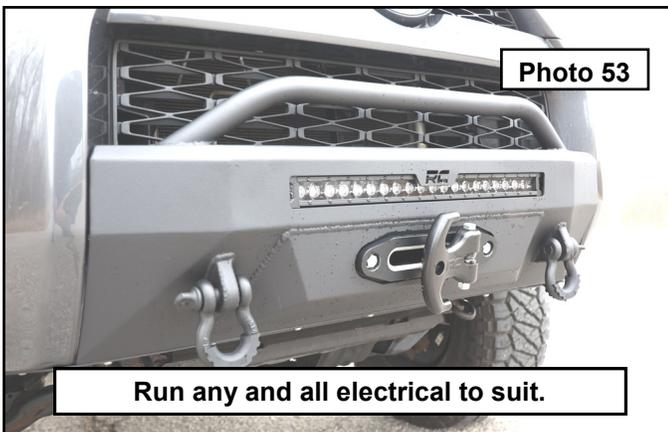
57. Under the vehicle, on the plastic bumper tabs there is a lip, use a suitable tool to sand this off flush with the tab surface. **Photo 49 / 50**



58. Install the lower skid plate using the 1/4" button head bolts, and washers to the bumper bottom edge. Drill out the outer plastic bumper mounting holes using a 1/4" drill bit. Install the provided 1/4" button head bolts, washers and nuts to the outer holes and the 8mm button head bolt, large washers and nuts to hold the inner fender liner to the skid plate. **Photo 51 / 52**



59. Run any and all electrical for light and winch to suit. Reconnect the battery negative terminal. **Photo 52**



By purchasing any item sold by Rough Country, LLC, the buyer expressly warrants that he/she is in compliance with all applicable , State, and Local laws and regulations regarding the purchase, ownership, and use of the item. It shall be the buyers responsibility to comply with all Federal, State and Local laws governing the sales of any items listed, illustrated or sold. The buyer expressly agrees to indemnify and hold harmless Rough Country, LLC for all claims resulting directly or indirectly from the purchase, ownership, or use of the items.