TRAIL FORTRESS

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Rough Country 51021 Installation Instructions

Roof Rack with 40-Inch Black Series LED Bar for F-150 (2015–2018)

Part number: 51021

trailfortress.com/rough-country-roof-rack-51021

Scan for fitment, price and install help

ROUGH COUNTRY SUSPENSION SYSTEMS®

921510200

51020BAG

FORD 2015-20 F-150 Roof Rack

Thank you for choosing Rough Country for all your vehicle needs.

Please read instructions before beginning installation. Check the kit hardware against the kit contents shown below. Be sure you have all needed parts and know where they go.

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.

KIT CONTENTS:

- Right Side Panel x1
- Left Side Panel x1
- Center Cross Bars x4
- Front Cross Bar x1
- Rear Cross Bar x1
- Front Panel x1
- Front Light Brackets x2
- Rear Light Brackets x2
- Roof Rack Mounting Brackets x8
- Rear mounting Brackets x2
- Mounting Gaskets x10
- Rubber Edge Trim 18 Feet

TOOLS NEEDED:

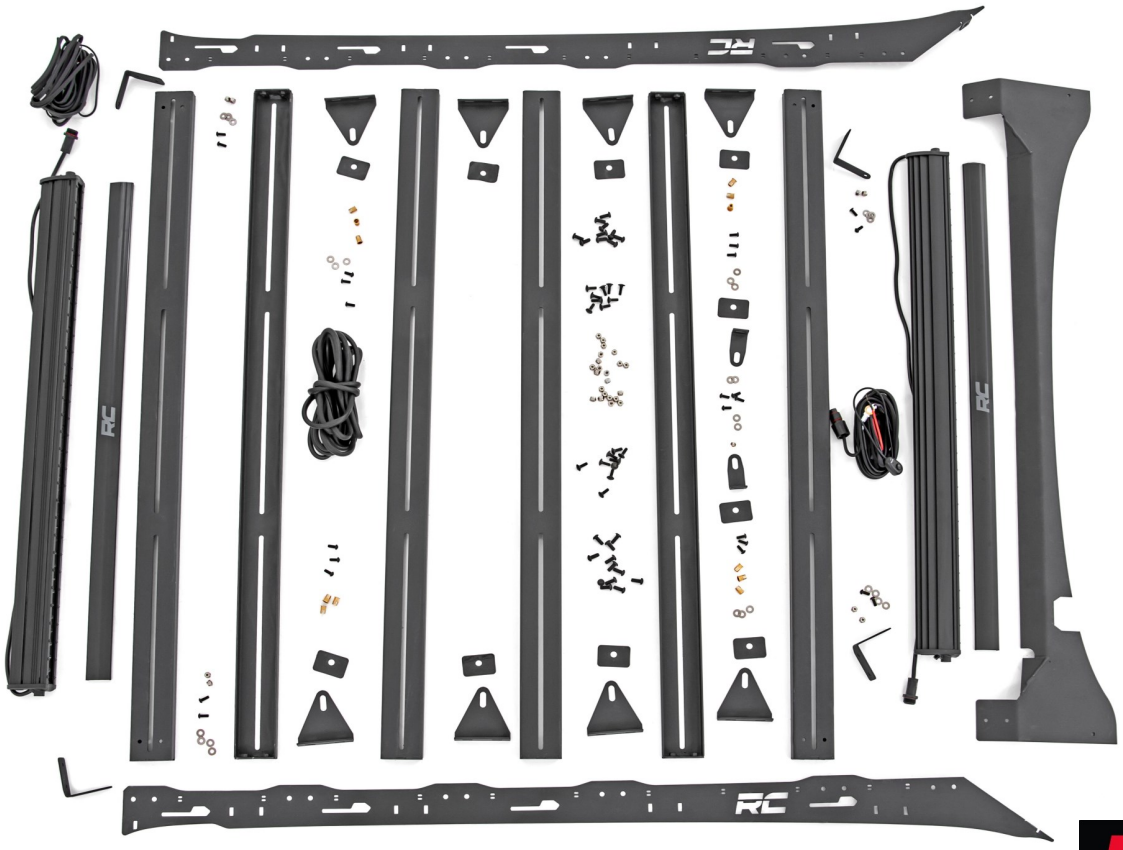
- 25/64 Drill
- Drill Motor
- 3/16 Allen Wrench
- 5/32 Allen Wrench
- 7/16 Wrench or Socket
- Tape Measure
- Painters Tape

HARDWARE INCLUDED:

- 1/4-20 Square Mounting Bolts x18
- Rivet Nuts x12
- 1/4-20 x1” Button Head Bolts x18
- 5/16-18 x 1” Button Head Bolts x24
- 1/4-20 Nylock Nuts x30
- 1/4” Flat Washers x30
- 8mm Oversized Washer x10

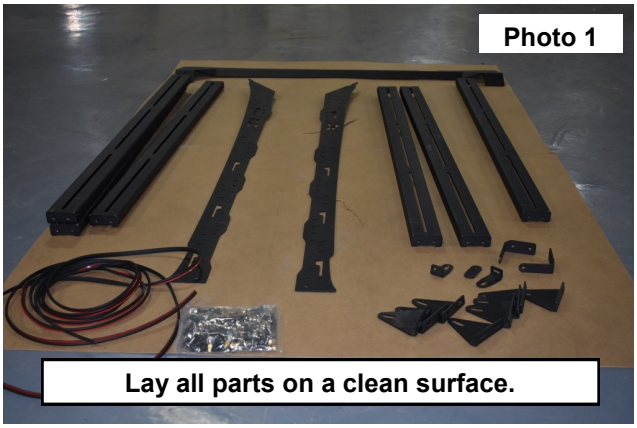
Rivet Nut Installation Hardware

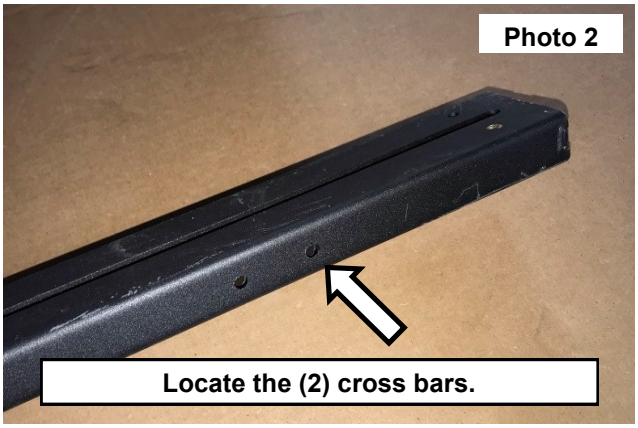
- 1/4-20 x 1 Hex Bolt x1
- 5/16 Hex Nut x1
- 1/4” SAE Flat Washers x2



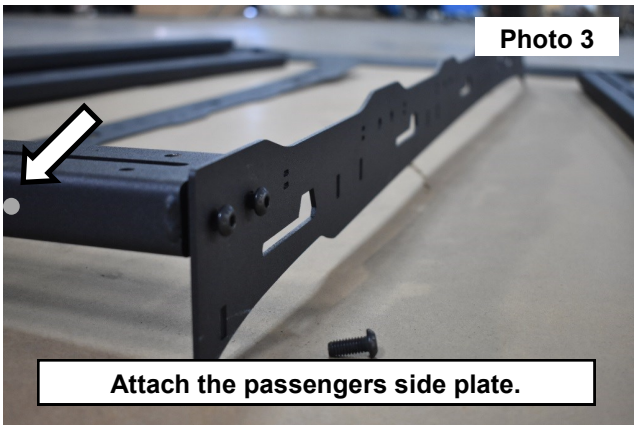
INSTALLATION INSTRUCTONS

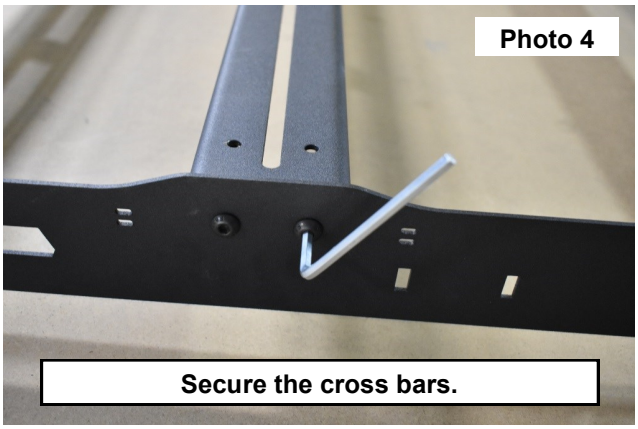
1. Remove all of the parts and hardware onto a large space to assemble the roof rack. **See Photo 1.**
2. Locate the (2) cross bars for the front and rear of the roof rack. **NOTE:** These cross bars will have the two light bracket mounting holes on each side of the cross bar and will be placed into the roof rack so that the lights will face front to rear of the vehicle. **See Photo 2.**



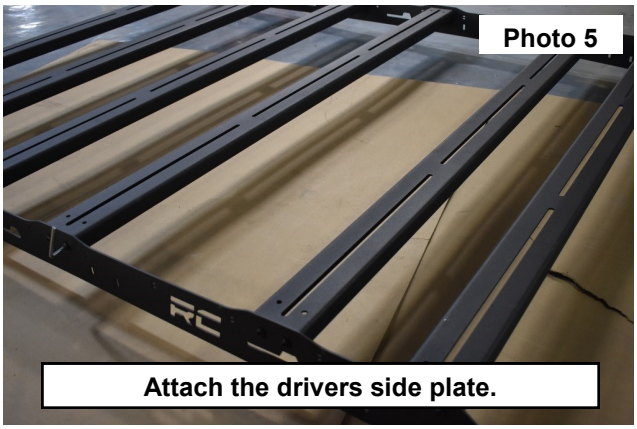


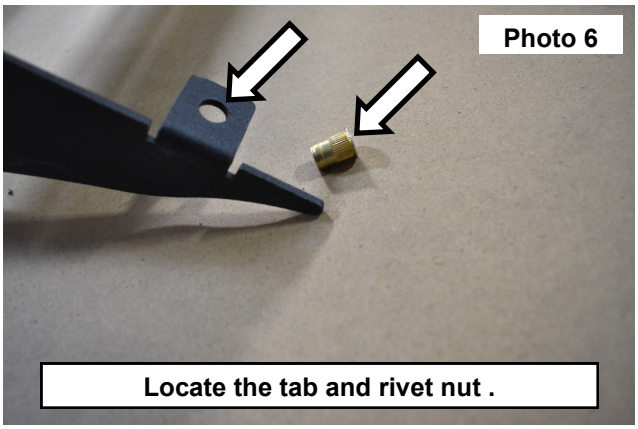
3. Place the cross bars to the side plate. Passengers side shown with the light bracket holes to the rear. **NOTE:** The side plate will have the RC logo shown to the out side and the front tabs will be located to the inside of the roof rack. **See Photo 3.**
4. Secure using (2) of the supplied 5/16-18 x 3/4 button head bolts. Snug the hardware using a 5/32 Allen wrench. **See Photo 4.**
5. Attach the Drivers side plate to the installed cross bars using the supplied hardware.



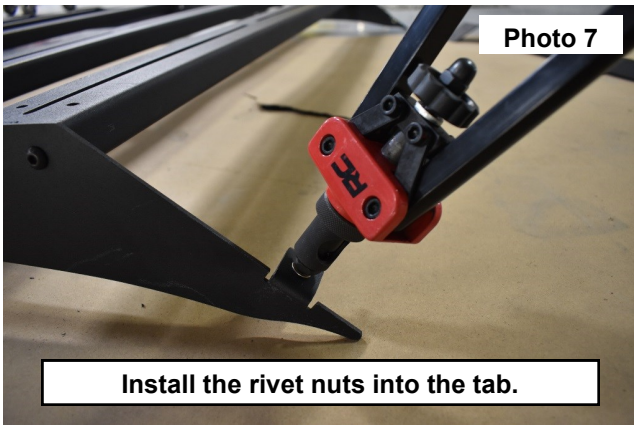


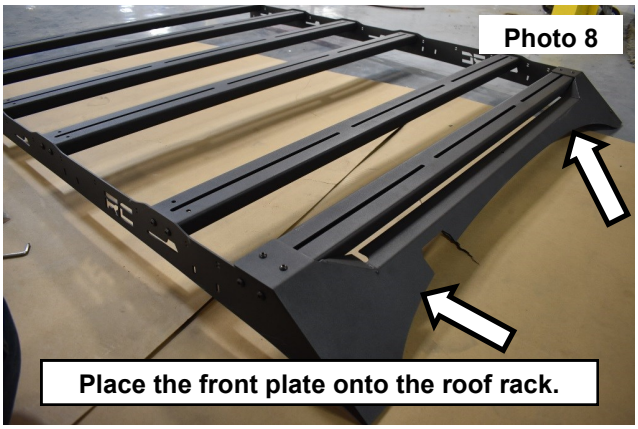
6. Place the remaining cross bars in-between the side plates and secure using the supplied hardware. **See Photo 5.**
7. Locate (1) of the 1/4-20 rivet nuts and front tab of the roof rack. **See Photo 6.**



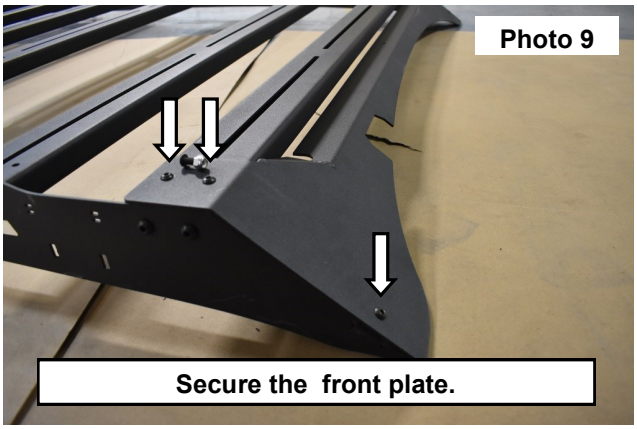


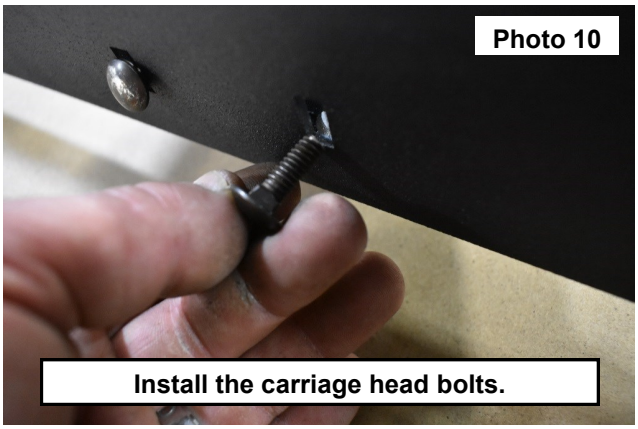
8. Install the rivet nuts into the front tabs on each side of the roof rack using a rivet nut installation tool. **See Photo 7.**
9. Place the front plate onto the roof rack. **See Photo 8.**



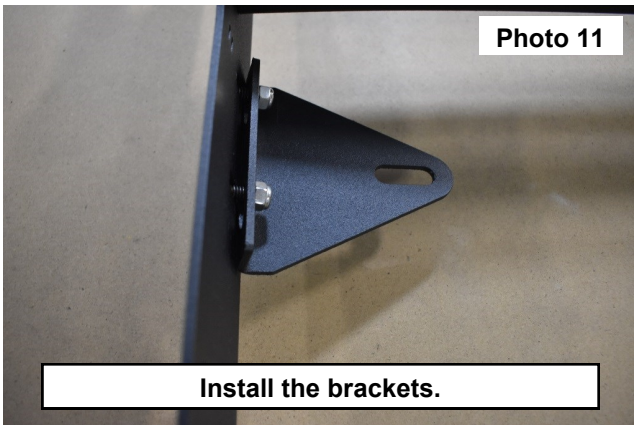


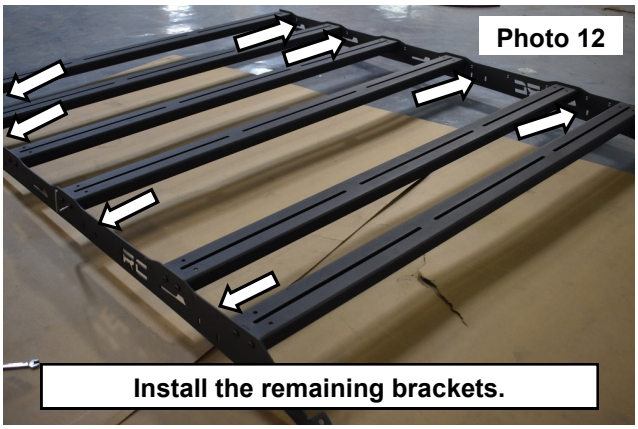
10. Secure the front plate using (2) of the supplied 1/4-20 x1 button head bolts and (2) 1/4-20 nylock nuts on top of the cross bar and (1) of the supplied 1/4-20 button head bolts on each side of the front pate into the rivet nut. Tighten using a 3/16 Allen wrench. **See Photo 9.**
11. Place (2) of the supplied 1/4-20 carriage head bolts into the outside of the side plate. **See Photo 10.**



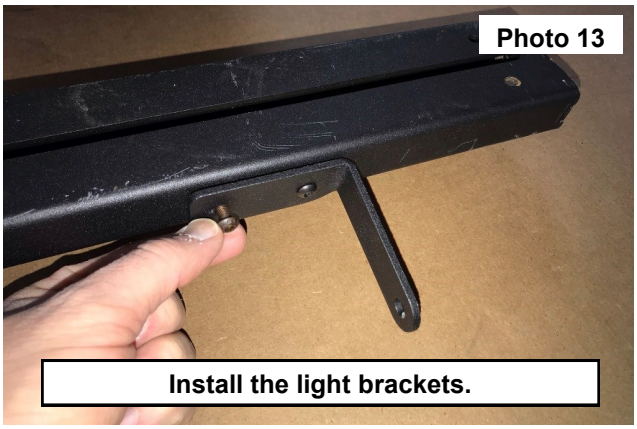


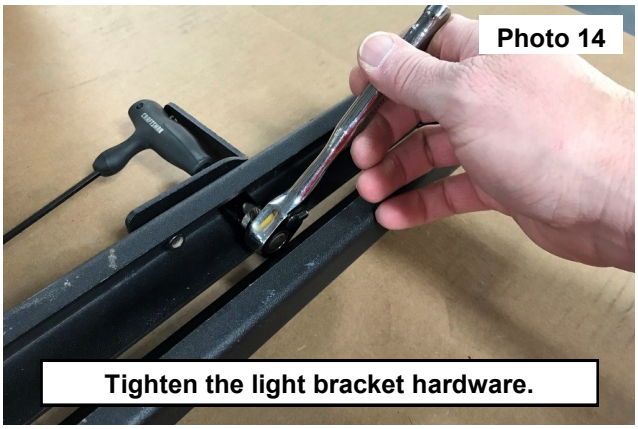
12. Install the (1) of the (8) brackets to the inside of the roof rack on the side plate on the bolts, secure using (2) of the supplied 1/4-20 nylock nuts onto the carriage head bolts. **See Photo 11.**
13. Repeat steps 10 and 11 for the remaining 7 brackets. **See Photo 12.**



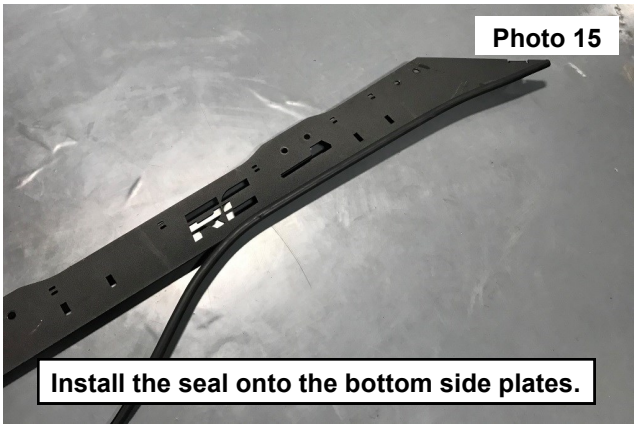


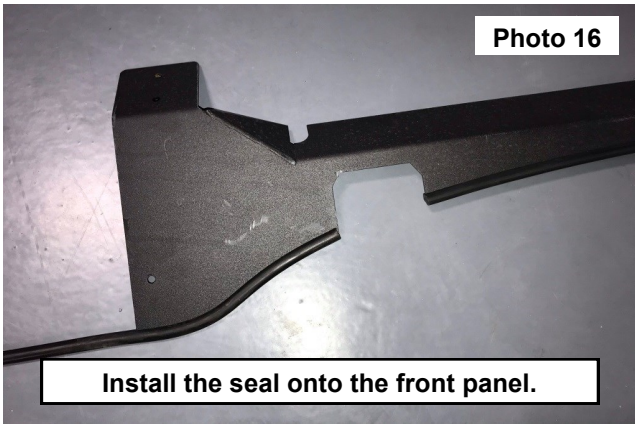
14. Install the light brackets onto the front and rear of the roof rack using the supplied 1/4-20 button head bolts and (2) 1/4-20 Nylock Nuts. **See Photo 13.**
15. Tighten using a 3/16 Allen wrench and a 7/16 socket. **See Photo 14.**





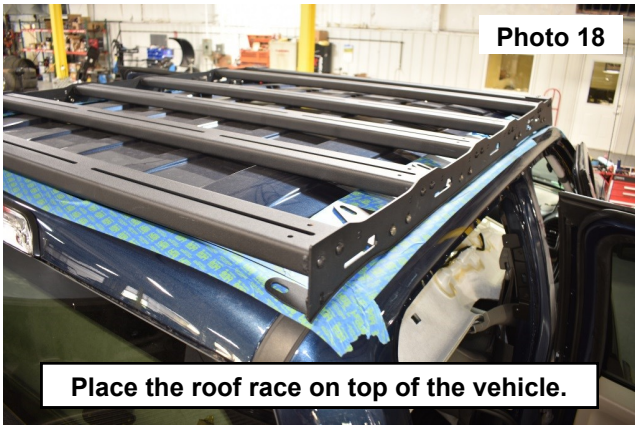
16. Install the seal onto the bottom of the side plates and trim as needed. **See Photo 15**.
17. Install the seal onto the front panel and trim as needed. The notch does not require the seal. **See Photo 16.**



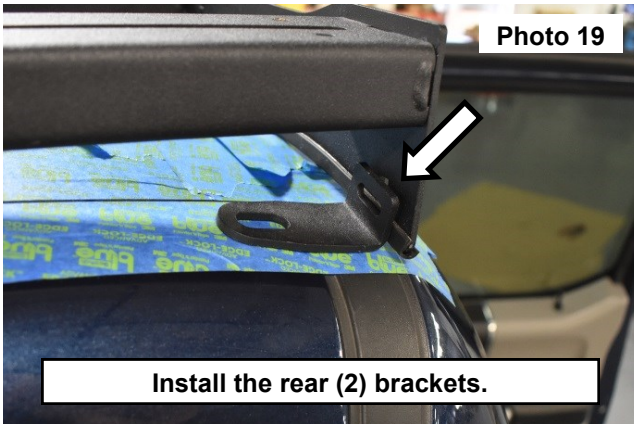


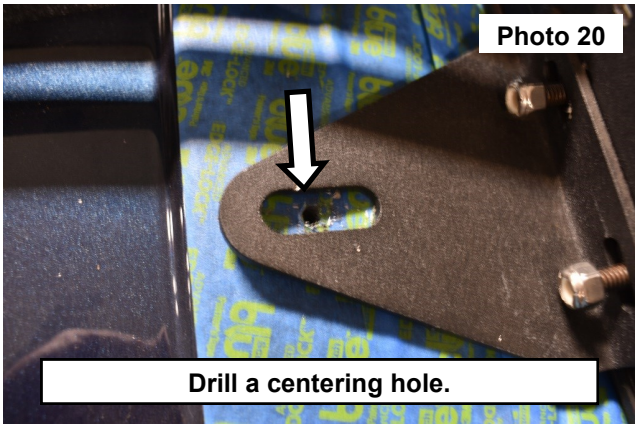
18. Place painters tape around the outer sides of the roof during placement of the roof rack. **See Photo 17.**
19. Place the roof rack on top of the vehicle. Use a tape measure to square the roof rack on the roof. **See Photo 18.**
20. Adjust the roof rack into the desired position. Front to the rear and right to left.



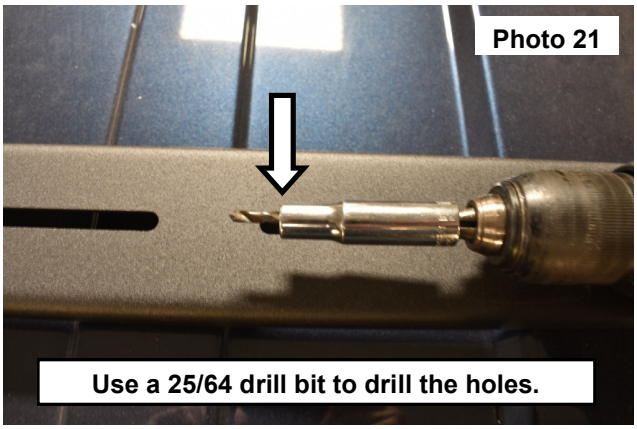


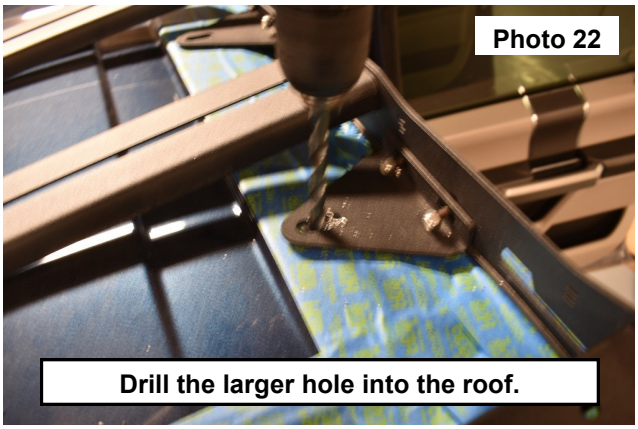
21. Place the rear brackets onto the roof rack using the supplied 1/4-20 carriage head bolt and 1/4-20 nylock nut. **See Photo 19**.
22. Center all roof rack brackets onto the side panels.
23. Drill a centering hole into the roof skin using a shallow 1/8” Drill bit. Only drill through the roof skin layer of the vehicle. **NOTE:** Using a socket or wrapping the drill bit in painters tape 1/4” from the edge of the bit to help prevent the bit from going any lower into the roof skin. **See Photo 20**.



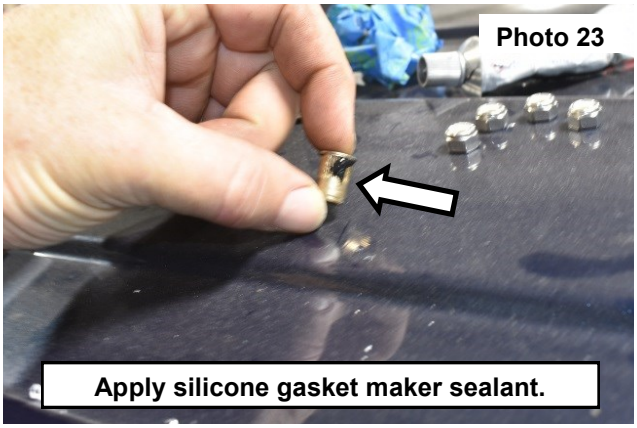


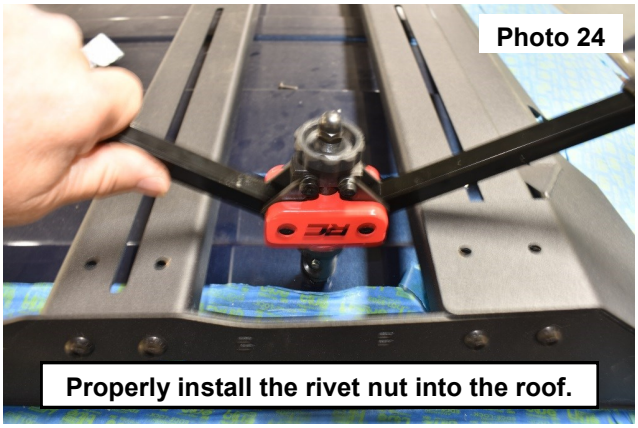
24. Use a 25/64 drill bit to open all of the center drilled hole in the roof to accommodate the rivet nuts. **NOTE:** Using a socket or wrapping the drill bit in painters tape 1/4” from the edge of the bit to help prevent the bit from going any lower into the roof skin. **See Photos 21 and 22.**





25. At this time remove each bracket or the roof rack from the vehicle to prepare the drilled holes for the rivet nuts.
26. Remove the painter tape and clean any shavings from the area.
27. Apply a silicone gasket maker sealant onto each rivet nuts before installation. **See Photo 23.**
28. Install and secure the rivet nuts into the roof using a rivet nut installation tool or the supplied bolt, nut and washer. **See Photo 24.**





29. Insure that a good seal is made with the silicone gasket maker sealant. **See Photo 25.**
30. Locate the rubber gasket. Remove the applicator covering and apply over the center of the rivet nuts on the roof. **See Photos 26 and 27.**



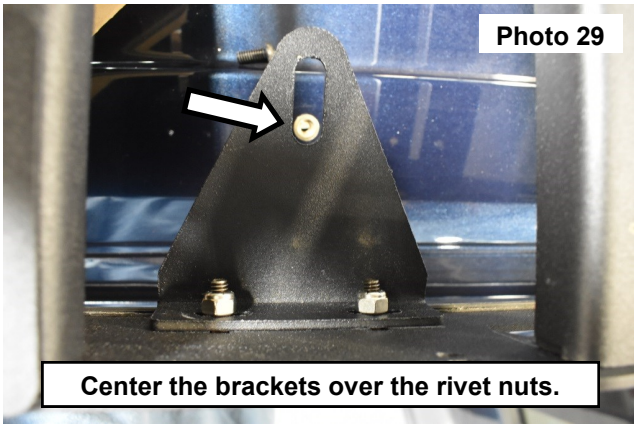


31. Place the roof rack on top of the vehicle centering the brackets over the rivet nuts. **See Photos 28 and 29.**



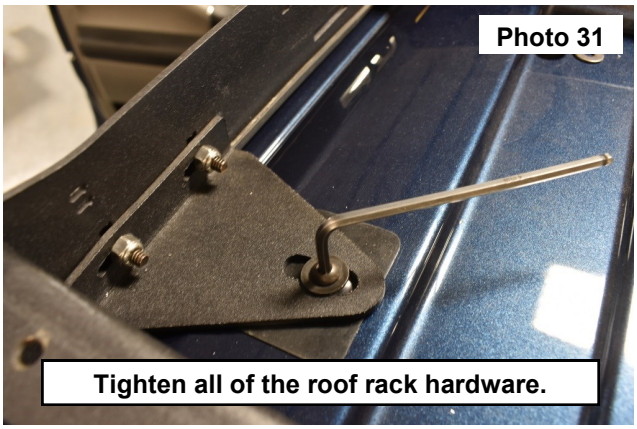


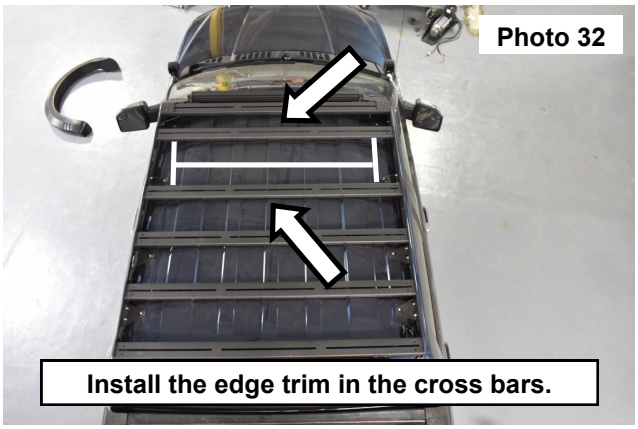
32. Install the 8mm oversized washer onto the Thread sealant can be applied to each bolt before its installed into the roof brackets. **See Photo 30.**





33. Tighten all of the installed brackets and 6mm bolts to secure the rack to the roof. Use a 4mm allen wrench. **See Photo 31.**
34. Install the edge guard along the inside rails of the 2nd and 3rd cross bars. **See Photo 32.**





35. Install the front and rear light bars using the supplied hardware in the light bar kit.
36. Connect the wiring harness to the vehicles power supply and to the light bars using the corresponding instruction sheet. **See Photos 33 and 34.**





Torque Specs:

Size	Grade 5	Grade 8	Size	Class 8.8	Class 10.9
5/16”	15 ft/lbs	20ft/lbs	6MM	5ft/lbs	9ft/lbs
3/8”	30 ft/lbs	35ft/lbs	8MM	18ft/lbs	23ft/lbs
7/16”	45 ft/lbs	60ft/lbs	10MM	32ft/lbs	45ft/lbs
1/2”	65 ft/lbs	90ft/lbs	12MM	55ft/lbs	75ft/lbs
9/16”	95 ft/lbs	130ft/lbs	14MM	85ft/lbs	120ft/lbs
5/8”	135ft/lbs	175ft/lbs	16MM	130ft/lbs	165ft/lbs
3/4”	185ft/lbs	280ft/lbs	18MM	170ft/lbs	240ft/lbs



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