



upTOP ALPHA DEFENDER 110

Effective 2023 we are making some changes to our products that might not be reflected in this guide. Major changes for 2023 include:

- Removal of **lock washers** from hardware kits in some cases.
- Switching to through-bolt assembly on Alpha roof racks instead of rivet nuts.
- Foot to rack bolts upgraded to lock nuts.
- Revised slot array in grooveTEK on Alpha/Bravo roof racks.

Thank you for selecting upTOP™ as the choice for your vehicle. The roof rack designed for your platform requires competency with basic hand tools and assembly procedures. If you are not comfortable or you feel it is above your pay grade you are encouraged to seek professional installation of this product.

Technical support can be reached Monday-Friday 8am-5pm MT or anytime via email at support@uptopoverland.com Please reference your original order number in the subject line.

TOOLS REQUIRED

- 5/32 Allen wrench
- 5mm Allen wrench
- 6mm Allen wrench
- 13mm wrench
- 1/2" wrench (2X)
- 7/16" wrench
- Spudger (Trim Tool)
- T45 Torx Bit (preferably with ratchet)
- Silicone Sealant

WEIGHT CAPACITY

upTOP roof racks often exceed the factory recommended load capacity for static and dynamic weight loads. Refer to Land Rover owners guide or consult dealer for official weight capacity for the Land Rover Defender 110.

Static Weight Capacity: 765 Pounds (346 Kg)

Dynamic Weight Capacity: 375 Pounds (170 Kg)

- **Vibra-Tite VC3 Thread Locking Compound (Included)**

You will need adequate floor space to assemble your roof rack prior to installing it to your vehicle. An area 96x96" is recommended for this assembly.

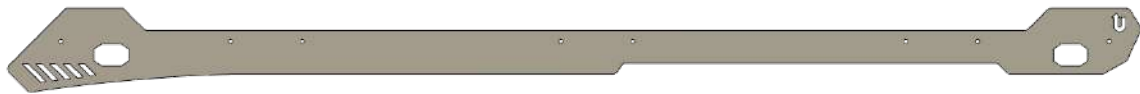
You are encouraged to inspect the contents of your package prior to completing assembly and installation. For any missing/damaged parts email pictures and descriptions to support@uptopoverland.com with your order number as reference in the subject line. A specialist will assist you with the process for field repair or component replacement.

It is important to plan for any wiring that needs to be completed during the course of rack installation. Incorporate these steps into the steps in this guide at points that reduce additional disassembly of the rack while it is installed on the vehicle.

Land Rover Defender 110 Major Component Chart

PART #	Quantity	Description
1075	1	Driver Side grooveTEK
1076	1	Passenger Side grooveTEK
1173	1	Driver Side Armor
1174	1	Passenger Side Armor
LB50	8	Load Bar-50.00"/Black
1357	8	Land Rover Foot-Steel/Black
2261-2273	1	Wind Screen-Options Vary*

**Wind Screens may ship with proprietary hardware specific to your selected lighting option. See Windscreen Lighting Guide located under instructions tab on our website.*



Armor



grooveTEK



1357 Feet



Wind Screen



LB50 Quantity 8

Torque Specifications Land Rover Defender 110

Fastener Location	Required Torque	Thread Locker Required
Load Bar First/Last	80 Inch Pounds	No
Load Bar-All Other	75 Inch Pounds	No
Feet to Rack	125 Inch Pounds	Yes
Wind Screen	65 Inch Pounds	Yes
Armor to grooveTEK	65 Inch Pounds	No
Pressure Foot	125 Inch Pounds	No
Rack to Roof	125 Inch Pounds	SEALANT

Torque specs provided for final assembly AFTER roof rack is installed to vehicle. You are encouraged to hand tighten fasteners prior to final assembly to aid in adjustment for fitting rack to vehicle. Torque specifications provided in INCH POUNDS. 1 Inch Pound = .083 Foot Pound



The following information is provided to prevent an “I told you so” phone call. Read and follow this guidelines below or be prepared to spend an extensive amount of time at a Land Rover dealership.

The Land Rover Defender factory for rack is secured to the roof of your vehicle with hardware installed into threaded inserts installed during the manufacture of your vehicle and must be removed prior to the installation of your upTOP roof rack.

*The hardware is coated with an extreme amount of thread locking compound resulting in the factory hardware being **VERY DIFFICULT TO REMOVE** without **DAMAGING THE THREADED INSERTS** in the roof of the vehicle.*

- **DO NOT USE POWER TOOLS TO REMOVE FACTORY HARDWARE.**
- **APPLY HEAT TO THE HEADS OF THE FACTORY BOLTS PRIOR TO ATTEMPTING REMOVAL.**
- **IF YOU ENCOUNTER A BOLT THAT WILL NOT RELEASE PLEASE CONSULT LAND ROVER DEALER FOR ASSISTANCE WITH REMOVING THE FACTORY ROOF RACK ASSEMBLY.**
- **FORCING THE SITUATION CAN STRIP THE BOLT HEAD OR SPIN THE THREADED INSERT MAKING IT IMPOSSIBLE TO RELEASE WITHOUT EXTENSIVE VEHICLE DISASSEMBLY.**

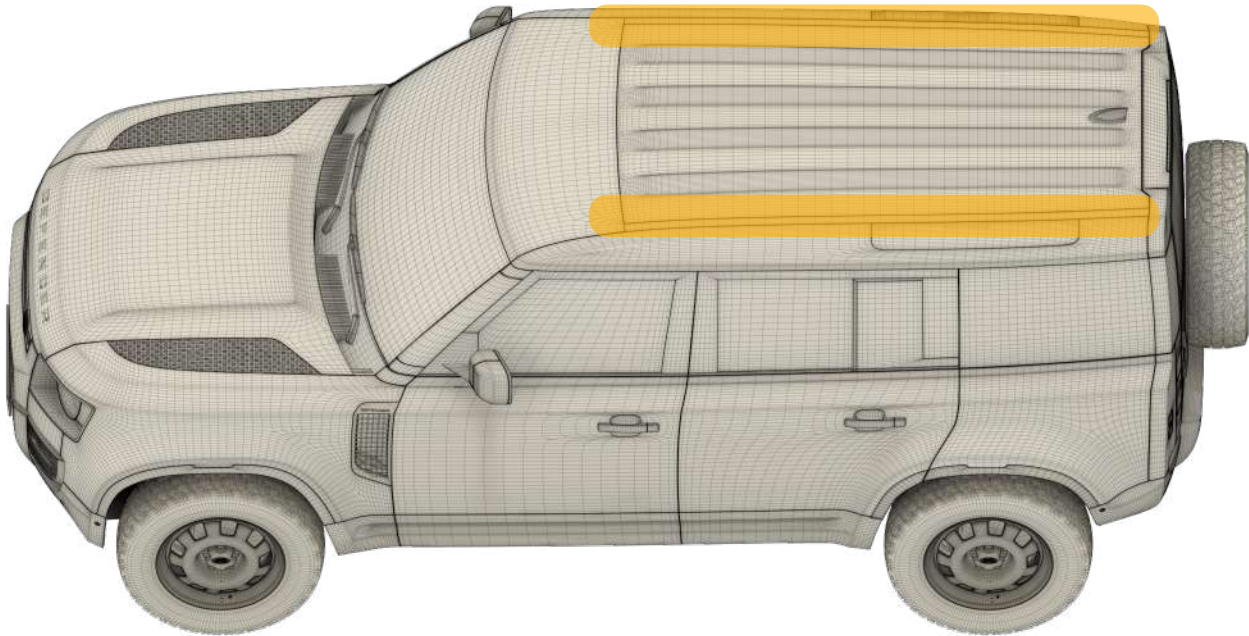


Figure 1
OEM Roof Rails
Shown here in **ORANGE**.

Tools Required:

- Spudger
 - T45 Torx
-
- Use the spudger to free the covers over the factory roof rails to expose the hardware.
 - Use T45 Torx to remove the factory bolts that secure the rails.
 - Remove the rails.
 - Remove the saddle bracket under both rails.

Please refer to warning on page 3 about factory roof rack hardware removal.

- *If hardware is hard to remove apply heat to bolt heads and try again.*
- *If hardware still will not release please consult Land Rover dealer to facilitate removal of hardware without causing vehicle damage.*

Catalogue and store factory roof rail components and hardware for future use. They will NOT be re-used for the installation of your upTOP roof rack.

ROOF RACK ASSEMBLY

- The assembly of your roof rack will take place on the ground and be placed on the vehicle as one completed assembly. The finished weight of the Land Rover Defender 110 roof rack is approximately 86 pounds (39 Kg) BEFORE optional lighting, mounting accessories and assorted pieces of kit.
- DO NOT attempt to lift the assembled roof rack onto the vehicle by yourself. Enlist a friend to help with the heavy lifting and positioning of the roof rack on the vehicle.

GATHER THE FOLLOWING:

- 1075 Driver Side grooveTEK
- 1076 Passenger Side grooveTEK
- 1357 Defender Foot (Qty 8)
- Hardware Bag ID 8001.4
- 1/2" wrench (2X)
- Vibra-Tite VC3 Thread Compound.

APPLY VC3 THREAD COMPOUND TO THE EXPOSED THREADS OF ALL BOLTS INCLUDED IN 8001.4 HARDWARE BAG AND ALLOW TO AIR DRY 15 MINUTES TO CURE THE PRODUCT. VC3 COMPOUND WILL HAVE A GUM-LIKE CONSISTENCY BUT WILL NOT BE WET TO THE TOUCH.

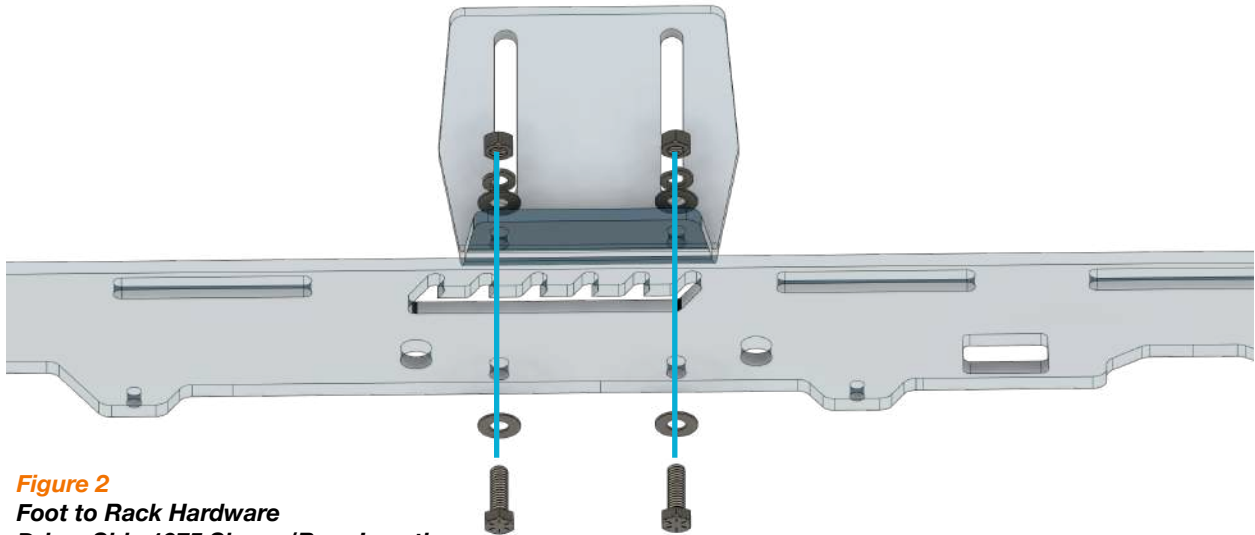


Figure 2
Foot to Rack Hardware
Driver Side 1075 Shown/Rear Location

Tools Required:

- 1/2" wrench (2X)

All included 1357 Feet will be installed with the following hardware in the order shown above:

- 5/16-18x1 Hex Head Bolt
- 5/16 Flat Washer (2X)
- 5/16 Lock Washer
- 5/16-18 Hex Nut

Exact Locations shown on next page.

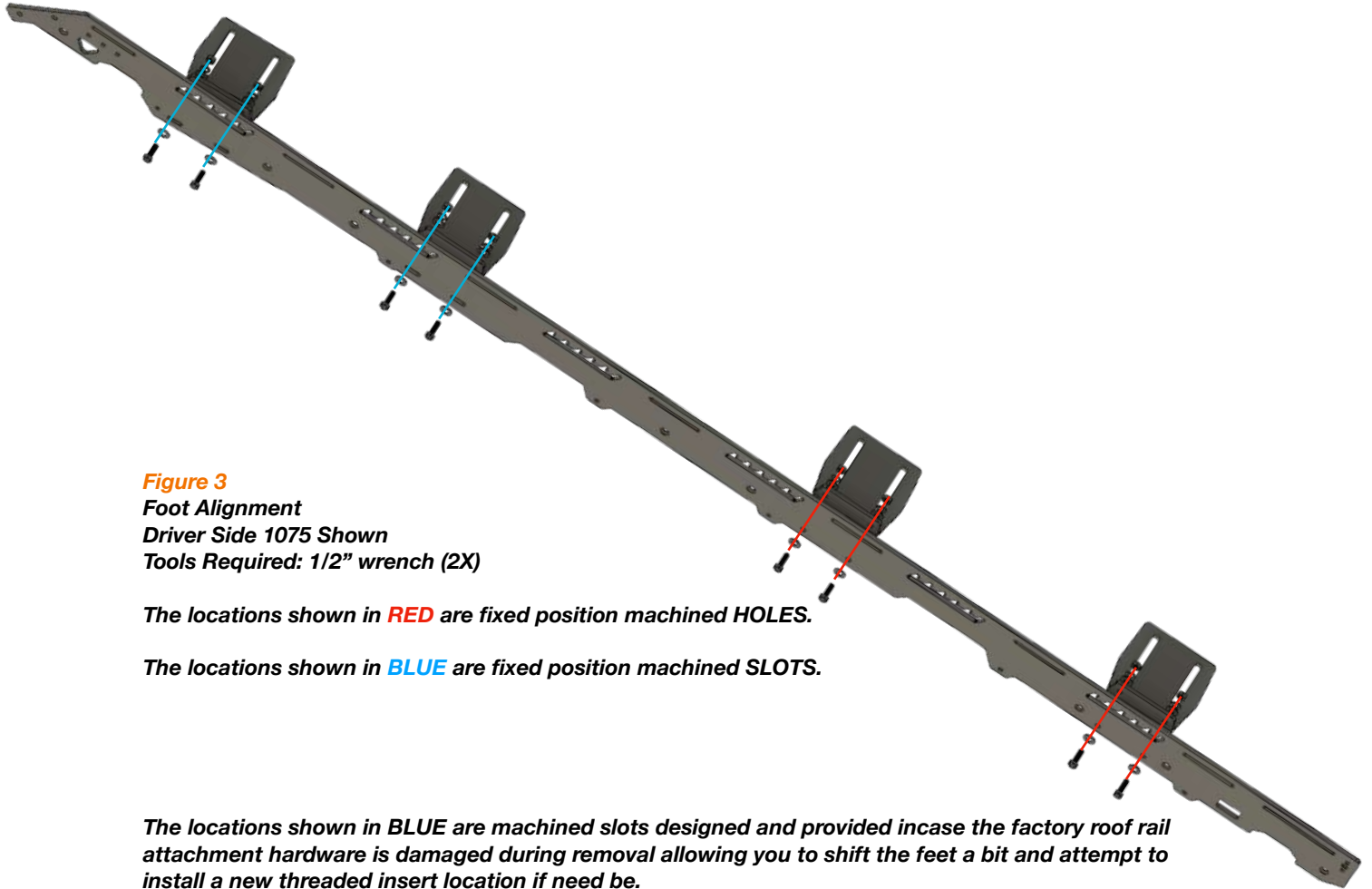


Figure 3
Foot Alignment
Driver Side 1075 Shown
Tools Required: 1/2" wrench (2X)

The locations shown in **RED** are fixed position machined HOLES.

The locations shown in **BLUE** are fixed position machined SLOTS.

The locations shown in **BLUE** are machined slots designed and provided incase the factory roof rail attachment hardware is damaged during removal allowing you to shift the feet a bit and attempt to install a new threaded insert location if need be.

- Align and install the four (4) 1357 Feet to the Driver Side of the grooveTEK.
- The **RED** locations can be fully tightened. Refer to torque specs on Page 3.
- The **BLUE** locations should be snugged into place to allow you to align to the factory roof rail threaded insert locations when mating the rack to the roof.
- Repeat the process on the passenger side (1076) with the remaining four (4) 1357 feet.

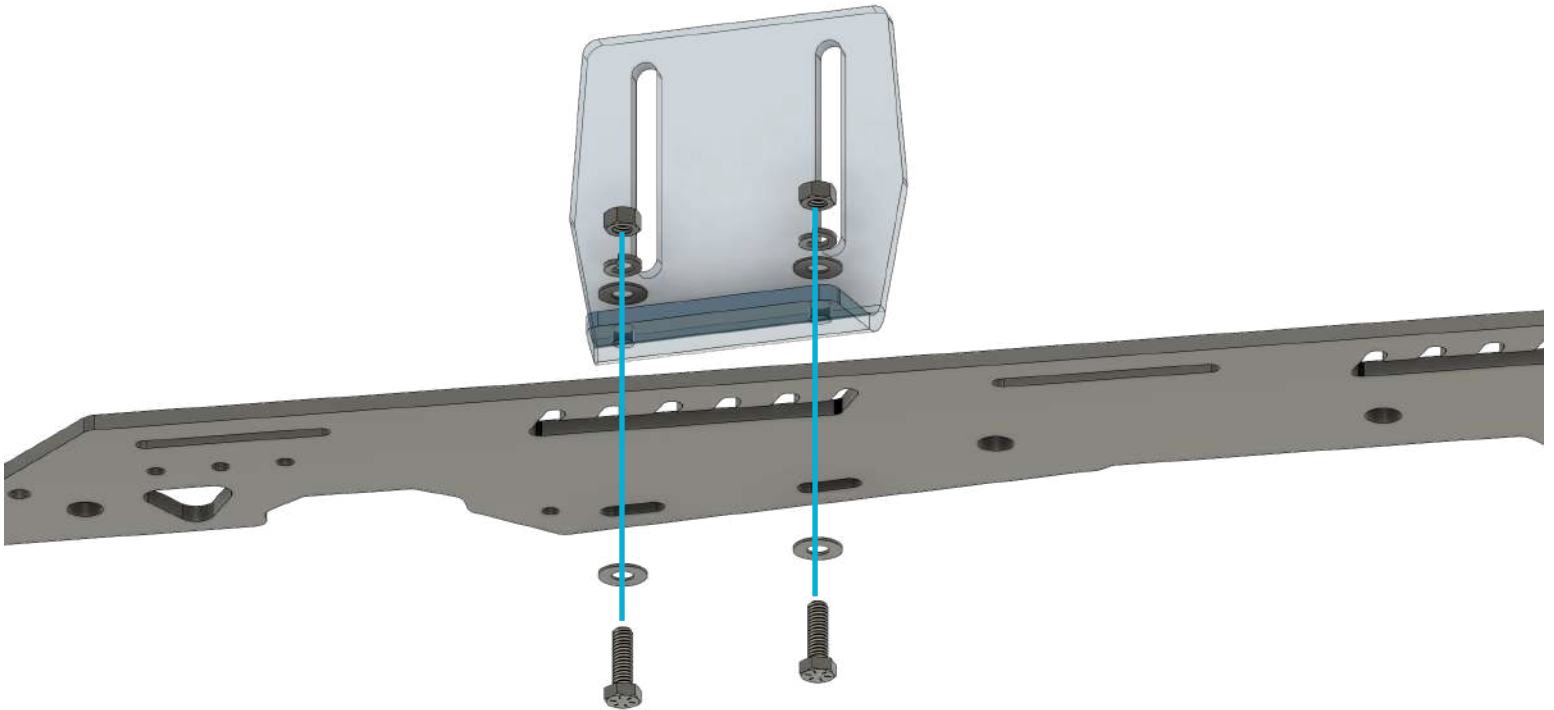


Figure 4
Foot Shift
Driver Side 1075 Shown

This illustration is a close up view of the machined slots allowing the foot to be adjusted in order to install an additional threaded insert should the factory threaded inserts fail during roof rail removal.

If the factory roof rail hardware releases without incident you will align the feet over the factory locations and tighten into place with the rack on the vehicle.

This design feature was included during the prototype phase when designers encountered the issues with the factory rail hardware. As an alternative to returning the vehicle to the dealership for service it was decided to include some adjustability for an additional threaded insert installation.

This machined slot feature is present for the first two (2) sets of feet from the FRONT of the roof rack.



Figure 5
Foot Installation
Driver Side 1075 in foreground/Passenger Side 1076

With all eight (8) feet installed lay the grooveTEK on the ground as pictured above.

- GATHER THE FOLLOWING:**
- **LB 50 Load Bars (Quantity 8)**
 - **Hardware Bag ID 8001.1**
 - **Hardware Bag ID 8001.2**
 - **5/32" Allen wrench**
 - **7/16" wrench**

Proceed to page 9.

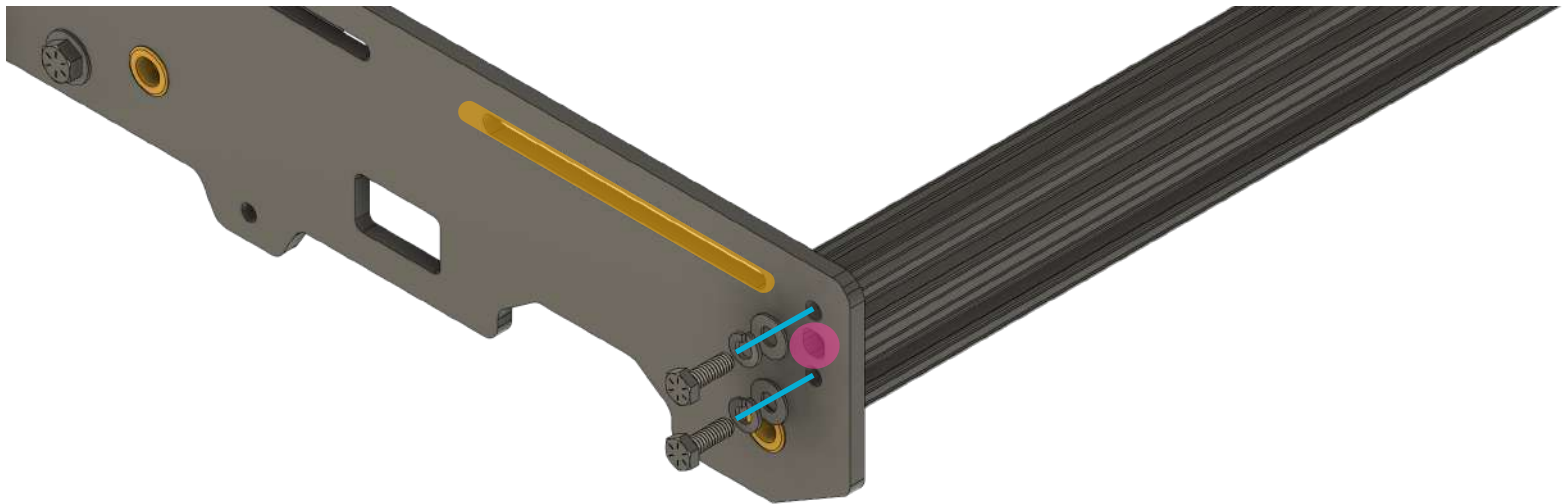


Figure 6
Driver Side 1075 Shown
Rear Load Bar Hardware
Tools required: 7/16" wrench

The rear load bar for your Defender 110 needs to install vertically as shown above at the rear of the rack assembly.

The following hardware will be used for anchoring the rear load bar into the grooveTEK on both sides of the rack:

- 1/4-20x.750" Hex Head Bolt (4X)
- 1/4 Lock Washer (4X)
- 1/4 Flat Washer (4X)

The Hex head bolts are provided as the location of the load bar is hidden on each side of the assembled rack by the armor panels (1173/1174). The Hex head bolts allow easy adjustment of the load bars with the armor installed.

We are fully aware that the rear load bar location for the Defender 110 is fixed in position to retain compatibility with the factory antenna fin/rear view camera however the 8001 Alpha hardware kits are prepackaged and to maintain continuity with our technical support the rear load bar uses hardware from the 8001.1 hardware bag.

- Install the hardware as shown to mount the load bar vertically in the rack assembly.
- Repeat the process on the passenger side.
- Torque the hardware to specifications shown on page 3.

The additional small square hole (shown here in PINK) is a pass through for routing wiring from one side of the vehicle to the other in a stealth manner.

The horizontal slot at the rear of the rack (shown here in ORANGE) is not currently used on the Defender 110 roof rack however it is included in the design to account for possible antenna design changes in the future from Land Rover.



Figure 7
Driver Side 1075 Shown
Front Load Bar Hardware
Tools Required: 7/16" wrench

The following hardware will be used for anchoring the front load bar into the grooveTEK on both sides of the rack:

- 1/4-20x.750" Hex Head Bolt (4X)
- 1/4 Lock Washer (4X)
- 1/4 Flat Washer (4X)

The Hex head bolts are provided as the location of the load bar is hidden on each side of the assembled rack by the armor panels (1173/1174). The Hex head bolts allow easy adjustment of the load bars with the armor installed.

- Install the hardware as shown to mount the load bar horizontally in the rack assembly.
- Repeat the process on the passenger side.
- Torque the hardware to specifications shown on page 3.

The additional small holes (shown here in PINK) are provisions for mounting the front load bar vertically to increase the load capacity of the front load bar allowing a wider array of lighting options for this platform.

Not shown in this illustration are the same small square holes above each PINK holes to serve as wire pass locations when the front load bar is installed to a vertical position.

In the horizontal position the load bar can be adjusted to any spot inside the slot (shown here in BLUE) however it is critical to ensure that the load bar is even on both the driver and passenger side. Failure to adhere to this detail will cause the front of the rack to bow causing a misalignment issue with the mounting feet during installation.



Figure 8

Remaining Load Bar Hardware

Driver Side 1075 in foreground

Tools Required: 5/32" Allen wrench

The following hardware will be used for anchoring the remaining load bars into the grooveTEK on both sides of the rack:

- 1/4-20x1.00" Button Head Bolt (4X)
- 1/4 Lock Washer (4X)

*All of the remaining load bars install into the horizontal slots along the top of the grooveTEK (shown here in **ORANGE**).*

- *Install the hardware as shown to mate the remaining load bars into the rack assembly.*
- *Repeat the process on the passenger side.*
- *Adjust the load bars within the slots to the position of your choosing (they can always be moved later).*
- *Torque the hardware to specifications shown on page 3.*

As with the front load bar please ensure that each load bar is even with itself on the driver and passenger side of the rack to avoid twisting the rack.

WIND SCREEN

The wind screen for your roof rack utilizes a splitter design that cuts through the air at speed and splits the wind. This patent pending design is the result of hundreds of hours of modeling, engineering and testing. The end result is a design that cuts through the air forcing head winds under the rack taking advantage of the aerodynamic signature of your vehicle as well as pushing air up and over the rack giving the roof rack a smaller aerodynamic profile that results in the least amount of wind noise possible with an aftermarket roof rack. The large upper face serves to cut air up and over any gear that you might have attached to it.

For light specific mounting applications download the wind screen lighting guide under the instructions tab on our website.

Apply VC3 Thread locking compound to the threads of all four (4) wind screen bolts and allow to dry. 15-20 minutes. Compound will remain gummy.

If your wind screen is cut for lighting options refer to our “Windscreen Lighting Guide” under the instructions tab on our website. Some lights can be pre-loaded into the rack assembly prior to installing on the vehicle.



Wind screens cut for specific light bars as well as universal 40 cuts will experience significant wind noise when installed into the rack assembly and driven at speed with the light bar absent from the assembly. Wind passes through the open holes and/or slot and is intercepted by the front slot on the load bars.

The wind screens are designed with this in mind and the angles/openings are engineered to work in unison with the light bars to limit or eliminate noise/vibration.

GATHER THE FOLLOWING:

- *Wind Screen Specified in your order*
- *Hardware Bag ID 8001.3*
- *5mm Allen wrench*
- *13mm wrench*

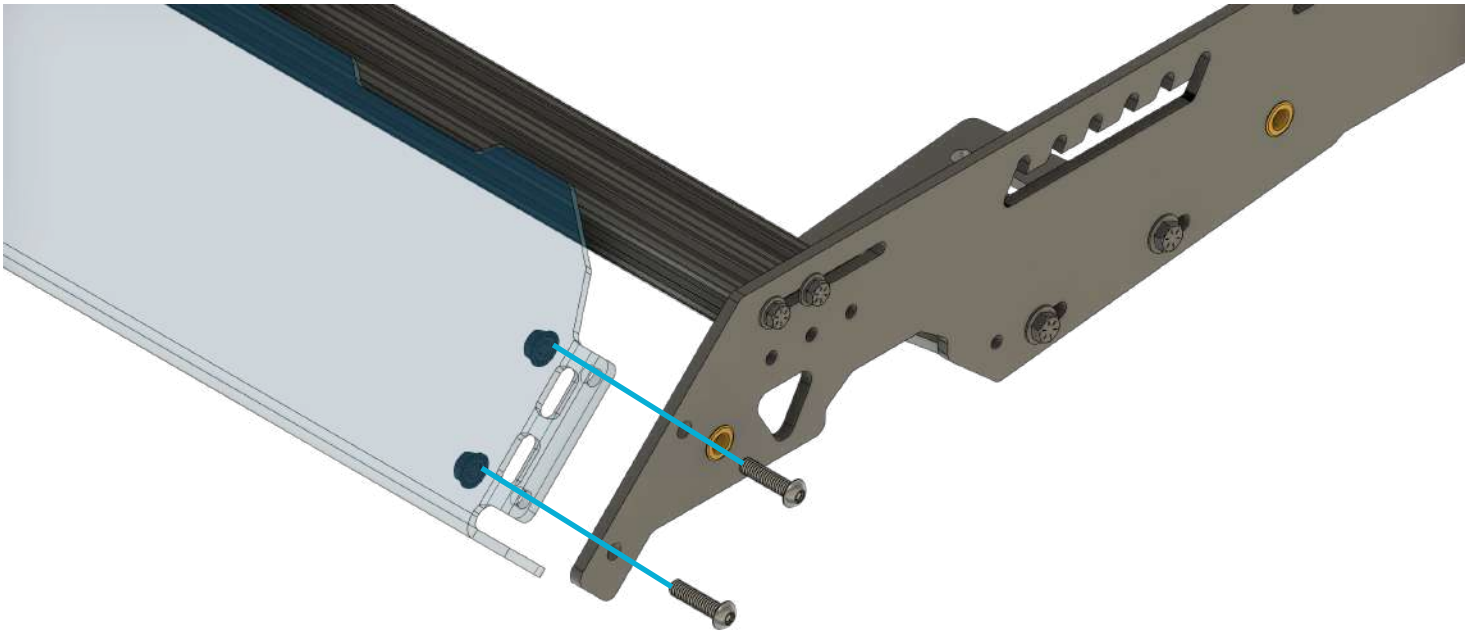


Figure 9

Wind Screen

Driver Side 1075 Shown

Tools Required: 5mm Allen wrench/13mm wrench

Hardware Bag ID: 8001.3

The following hardware will be used for anchoring the wind screen into the grooveTEK on both sides of the rack:

- **M8x1.25 30mm Button Head Bolt**
- **M8x1.25 Serrated Flange Nut**

APPLY VC3 THREAD COMPOUND TO THE EXPOSED THREADS OF ALL BOLTS INCLUDED IN 8001.3 HARDWARE BAG AND ALLOW TO AIR DRY 15 MINUTES TO CURE THE PRODUCT. VC3 COMPOUND WILL HAVE A GUM-LIKE CONSISTENCY BUT WILL NOT BE WET TO THE TOUCH.

- **Align the holes in the folded flange on the side of your wind screen to the holes at the forward most point of your grooveTEK.**
- **Install the bolts so that they pass through BOTH sets of holes.**
- **Reach inside the windscreen and install the flange nuts to the exposed threads on the bolts.**
- **Use a 5mm Allen wrench and 13mm wrench to tighten the hardware to specifications found on page 3.**
- **Repeat the process for the passenger side of the vehicle.**



Figure 10

Wind Screen Flange Nuts

Driver Side 1075 Shown

Tools Required: 5mm Allen wrench/13mm wrench

Hardware Bag ID: 8001.3

The inside view of the flange nuts installed to the wind screen hardware.

*Note that the wind screen folded flanges attach to the **INSIDE** of the grooveTEK.*

- *Verify that the hardware is tightened to specification.*



At this time you are encouraged to break for tea and contemplate any wiring that needs to be completed before attaching the side armor (1173/1174) to the rack assembly.

Our optional quickWIRE™ harness were developed as a snap in solution providing the very best electrical wiring and water proof connections to ensure that your lighting system operates trouble free in even the harshest environment.

GATHER THE FOLLOWING:

- **Driver Armor 1173**
- **Passenger Armor 1174**
- **Grab Handle Kit**
- **Hardware Bag ID 8001.5**
- **Hardware Bag ID 8001.6**
- **5mm Allen wrench**

GRAB HANDLES

As the grab handles are installed to the rack as a completed assembly the next step is to tie and complete the safety wire installation for the grab handles of your rack. The installation of the armor to your roof rack requires the grab handle lace plate as part of the final attachment.

The grab handles and their required components are packaged by themselves. Locate the bag and proceed with lacing the handles.

Our process for handle lacing is outlined in a video on our website under the instructions tab and linked below.

Feel free to follow our method or get creative with your paracord knots and go your own route. The kits are shipped with standard black 550 paracord but you can order any color that you like from paracord planet or other online sources.

The included safety wire and crimp replacements are available on our website or by calling our technical support Monday-Friday from 8am-4pm MST.



If you are viewing this document on a mobile device click the live link above for the grab handle lacing video.

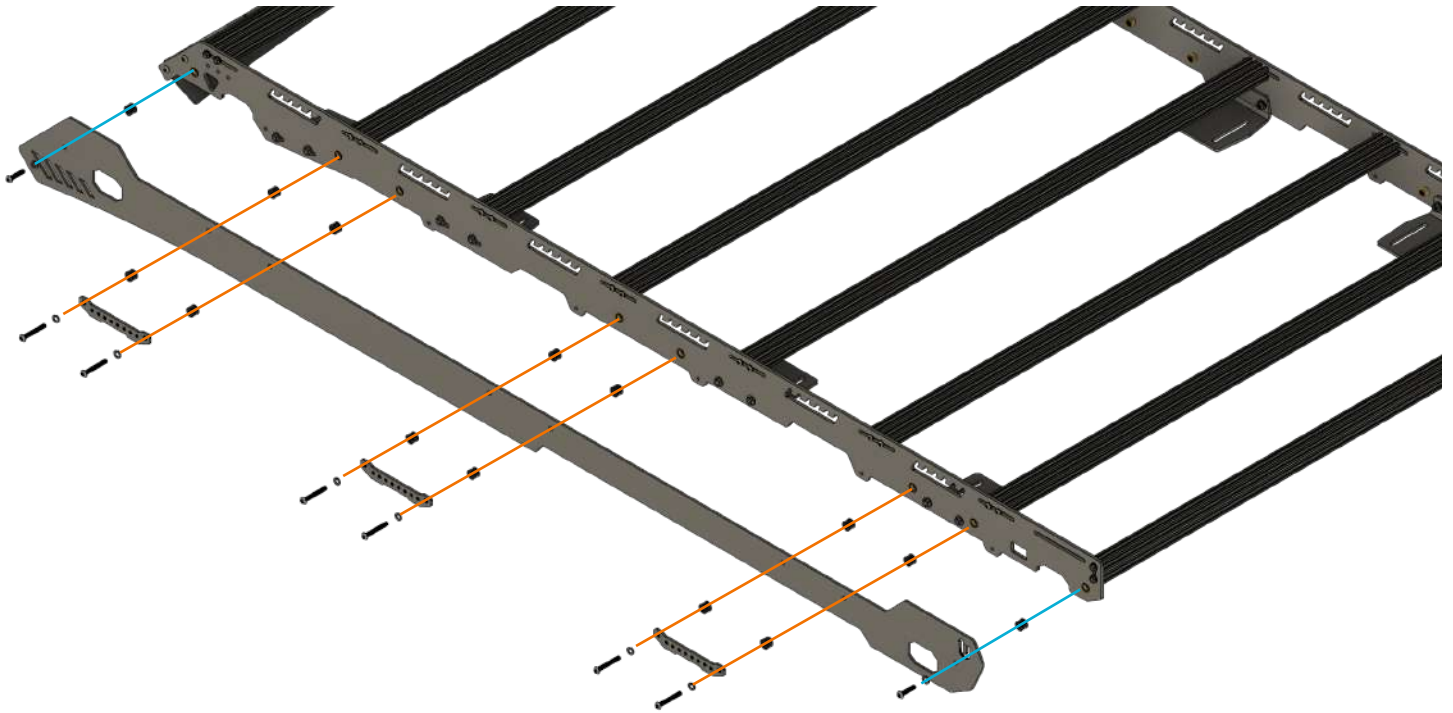


Figure 11
Armor Attachment
Driver Side 1173 Shown
Tools Required: 5mm Allen wrench
Hardware Bag ID: 8001.5/8001.6

With the grab handles properly laced you may proceed:

The applicable hardware for the armor will align with the factory installed threaded inserts pressed into your grooveTEK.

Polymer spacers are provided for allowing clearance for optional wiring as well as the safety crimps installed on the handle assemblies to avoid any damage to the exterior surface of your armor.

- *Align and install the hardware as shown above.*
- *8001.5 Hardware (Shown in **BLUE**) serves to anchor the armor at the **FRONT** and **REAR** of the roof rack.*
- *8001.6 Hardware (Shown in **ORANGE**) will be used for anchoring the handle assemblies/armor throughout the center locations.*
- *All supplied hardware is M8x1.25 Metric thread.*
 - *Hardware in 8001.5 is 35mm in length.*
 - *Hardware in 8001.6 is 55 mm in length.*
- *Repeat the process on the passenger side (1174) with the remaining hardware.*



Figure 12
Completed Assembly

As a progress check before mating the roof rack with your vehicle the pile of parts you began with should now very much resemble the image above.

*The notches in your armor (shown here in **PURPLE**) are designed to retain as much visibility through the side observation windows towards the **REAR** of the Defender 110.*

Now is the part of this process that you will require the assistance of someone else in hoisting the roof rack onto the vehicle and completing the mating of the rack and vehicle.

Go get your friend and proceed to page 18.

SEALANT/SPACER LOCATIONS

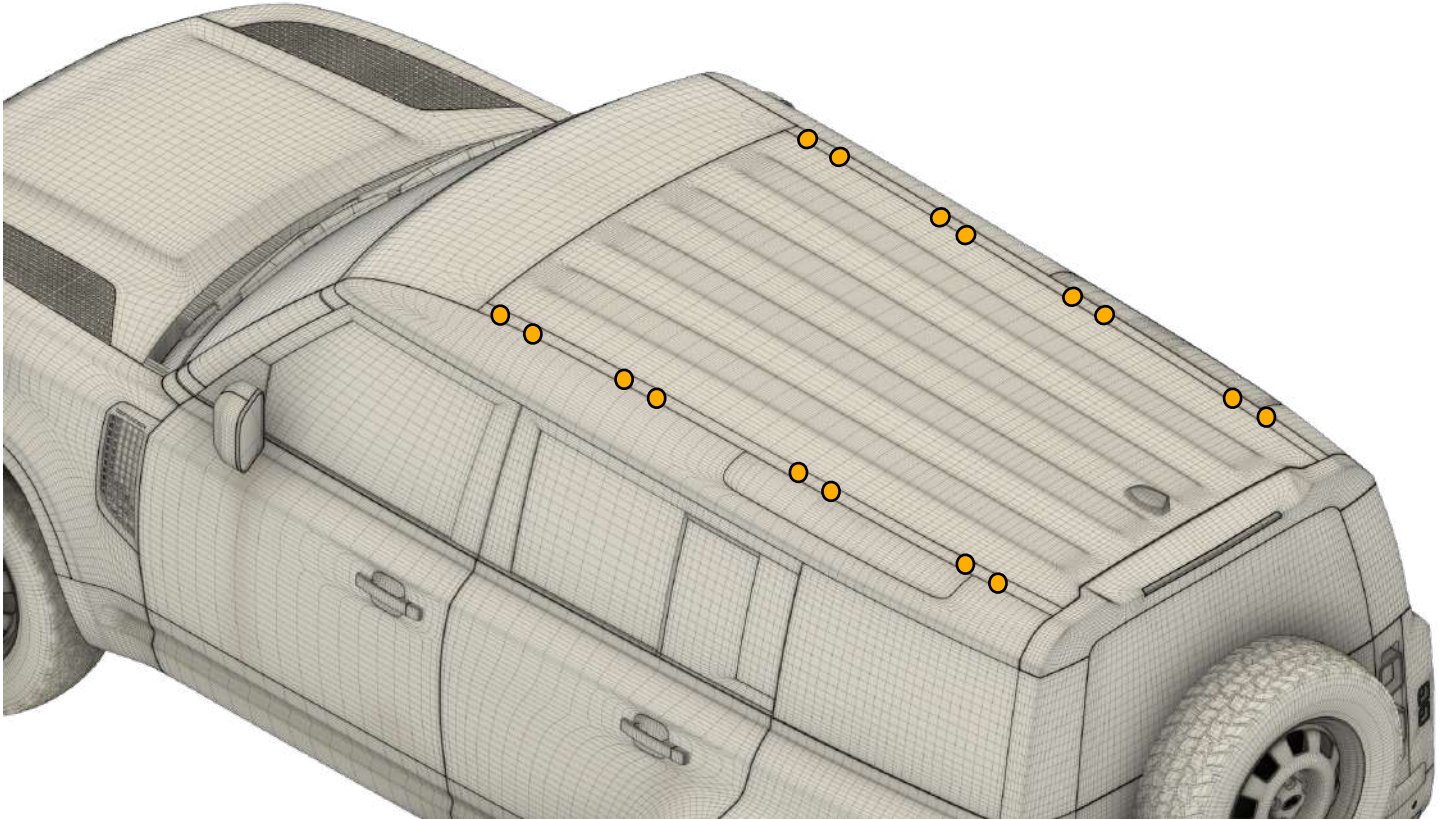


Figure 13
Sealant Locations

Provided as a visual queue for factory mounting locations.

- *Only factory installed threaded inserts threaded M8x1.25 will be used for the final mounting locations for the roof rack.*
- *There are eight (8) Locations per side.*
- *Apply the sealant generously around each location as well as inside the threads themselves.*
- *Defer to sealant manufacturers recommendations for clean up of product applied to areas not wanted.*

SPACERS

- *With the sealant applied install a supplied aluminum spacer centered over each threaded insert.*
- *Eight (8) per side.*
- *Each spacer is .875" in length. Position not specific.*

SEALANT

The brand of sealant you choose for this step is not nearly as important as the type. Source an exterior grade 25 year silicone based sealant for weatherproofing the drill locations on the vehicle.

This product is readily available at any hardware store or online.

- *Be sure the immediate area around each Land Rover installed factory insert is free of dirt/debris. A dirty surface can affect the adhesion to the surface of the vehicle and cause a faulty seal.*
- *There are sixteen (16) threaded inserts in the drip rails of your Defender 110.*
- *Apply a generous amount of sealant around the area AND into the threads of the factory threaded insert.*

SPACERS

All spacers provided with the Defender 110 are the same length and can be used at any location on the vehicle between the mounting foot and drip rail to provide the proper spacing required for the profile fit of the vehicle.

- *Spacer length is .875" At all locations.*
- *Locate and seat a spacer into the sealant puddle around each plusNUT area.*

RACK TO ROOF

GATHER THE FOLLOWING:

- *Hardware Bag ID 8001.8*
- *6mm Allen wrench*
- *With the help of a friend hoist the roof rack up onto the truck and carefully sit the rack into position aligning the SLOTS IN THE FEET with the aluminum spacers.*
- *Have your friend hold the rack in place on the vehicle while you gather the hardware.*
- *BY HAND start each hardware set into the threaded inserts as shown on the following page.*
- *DO NOT fully tighten any specific mounting hardware until all hardware is started and you verify rack alignment (center to center).*

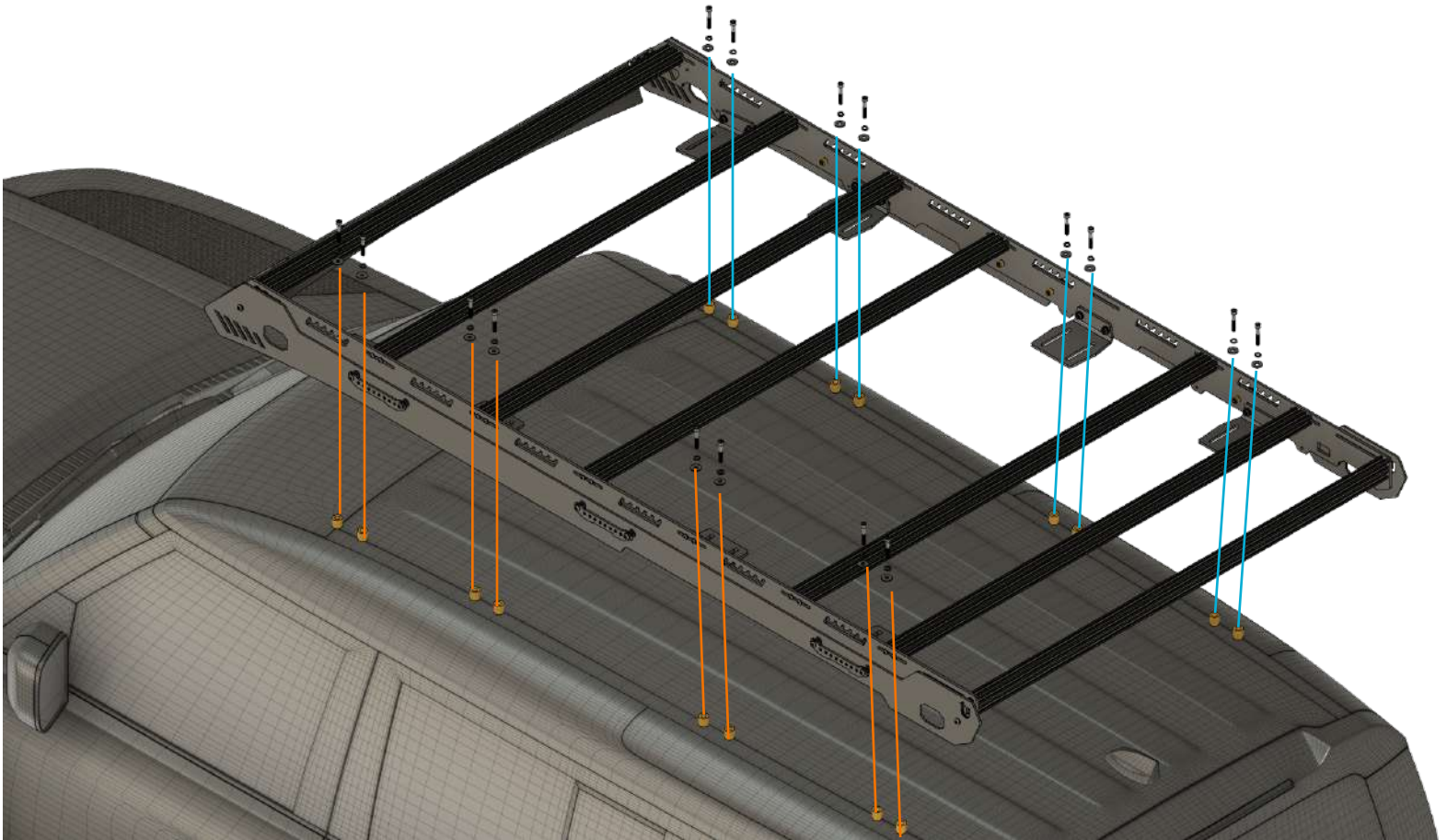


Figure 14

Hardware Alignment

Tools Required: 6mm Allen wrench

Hardware: 8001.8

- *Lift the rack up onto the roof of the Rover and align the slots in the mounting feet to the threaded inserts in the drip rails.*
- *GENTLY sit the rack down so that the feet contact ONLY on the aluminum spacers you installed.*
- *Have your friend hold the rack assembly stable.*
- *Using the hardware in Bag 8001.8 work your way around the vehicle and BY HAND start all of the hardware.*
- *DO NOT fully tighten the hardware at this time.*

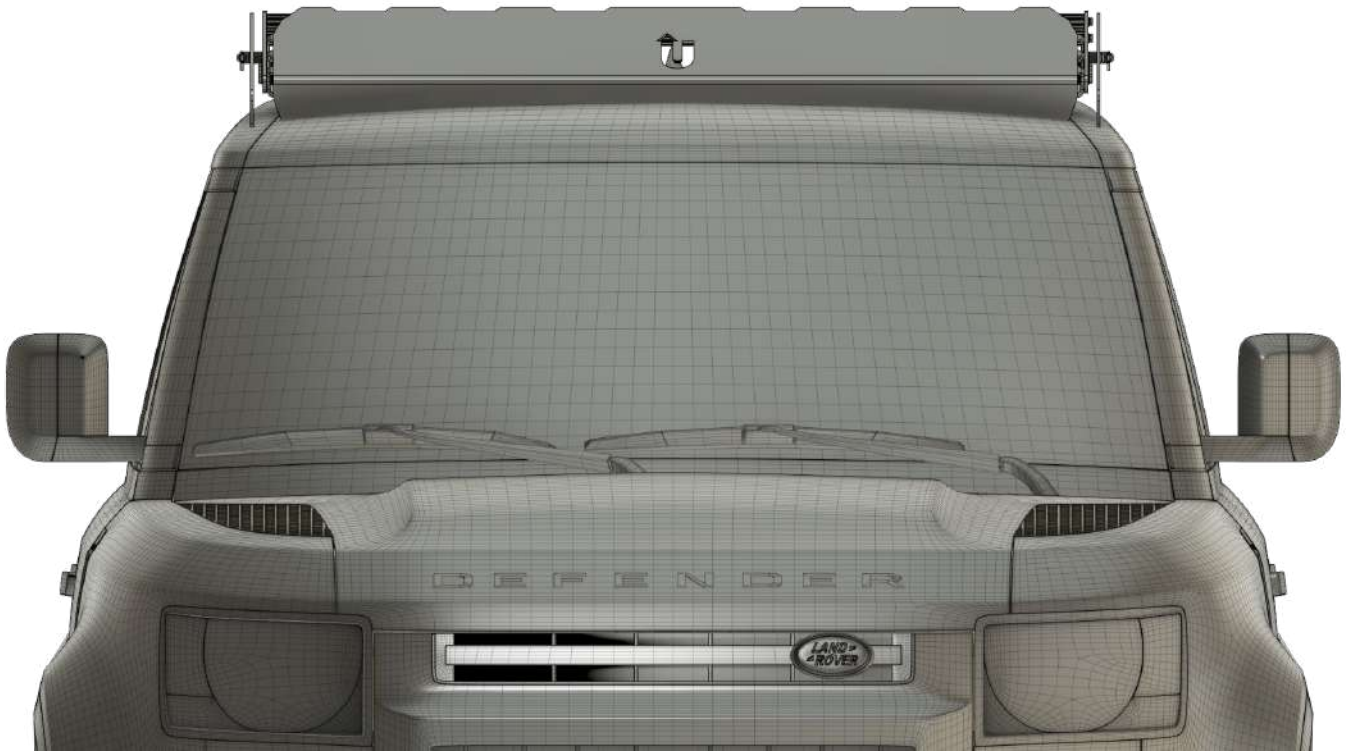


Figure 15

Rack Centering-Front

Tools Required: Tape Measure

- *Use a tape measure to center the rack.*
- *Adjust as needed utilizing the slots in the mounting feet.*
- *The windscreen is exactly 50.00" Wide (Center is 25.00"/635mm)*
- *Use visually centered vehicle design components (Rear view Mirror mount works well) to make final adjustments.*
- *Use a 6mm Allen wrench to tighten the front feet snug enough to hold the rack in place.*

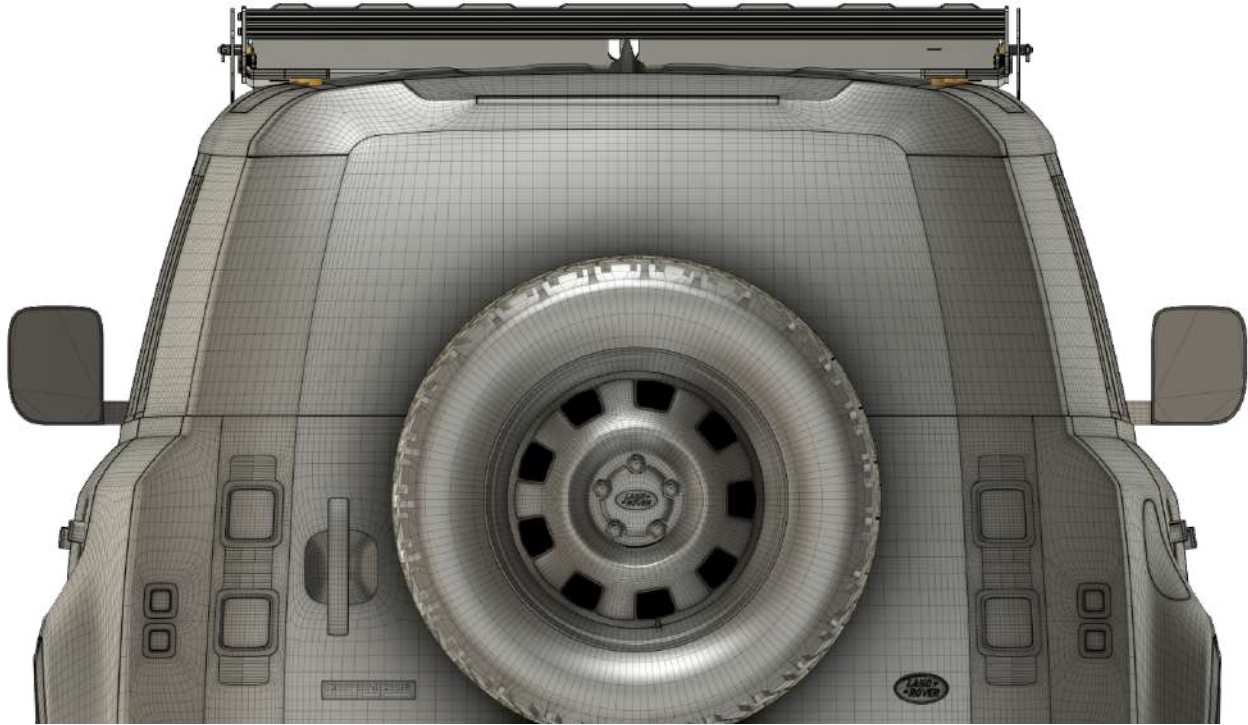


Figure 16

Rack Centering-Rear

Tools Required: Tape Measure

- Use a tape measure to center the rack.
- Adjust as needed utilizing the slots in the mounting feet.
- The rear load bar is exactly 50.00" Wide (Center is 25.00"/635mm)
- The factory antenna is located in the center of the roof of the vehicle.
- Make final adjustments and use a 6mm Allen wrench to tighten the rear foot hardware.

MIDDLE FEET:

The remaining two sets of feet for the center of the roof rack will be aligned properly once the front and rear feet are set in place.

- Tighten the remaining foot bolts in place using the 6mm Allen wrench.

FINAL ASSEMBLY

- Utilize a torque wrench set to INCH POUNDS and refer to chart on page 3 for hardware specifications.
- Apply proper torque to ALL hardware in rack assembly.
- Use 1/2 wrench (2) to fully tighten the hardware securing the feet to the rack assembly.



Figure 17
Installed Rover Rack
Side Profile

- **Tidy up any remaining wiring.**
- **Sort out the gear you want to attach to your rack.**
 - *Load bars used in rack assembly are a standard 10 series extrusion and are compatible with all hardware produced for that extrusion by numerous manufacturers.*
- **Inspect the sealant areas to ensure adequate coverage.**
- **DO NOT leave vehicle exposed to elements or wash exterior of vehicle for 48 hours to allow sealant to fully cure.**
- **Verify operation of panoramic sunroof (if equipped).**



IMPORTANT WARNING

It is critical that all upTOP products be properly and securely assembled and anchored to your vehicle. Improper assembly or installation could result in an automobile accident, could cause serious bodily injury or death. You are responsible for assembling and securing all upTOP products to your vehicle, checking the attachments prior to use, and periodically inspecting the products for adjustment, wear and tear. You must read all of the instructions and precautions regarding your upTOP product prior to installation or use. If you do not understand the instructions and cautions, or if you have no mechanical experience and are not thoroughly familiar with the installation procedures, you should have the product installed by a professional installer or other qualified personnel.



upTOP overland will NOT be responsible for any damage caused by the failure to install and maintain the product according to these instructions.

upTOP finePRINT

- It is recommended to inspect the rack hardware at regular intervals to ensure fasteners are tight. If the rack ever needs to be removed and reinstalled you will need to repeat the silicone sealant steps before reinstallation of the rack to roof hardware.
- The powder coated finish on your rack uses a chemical compound to maintain UV stability for years to come. Wash the roof rack at regular intervals to keep the load bar channels, drip rails and mounting components free of dirt and debris. Foreign objects (mud) can dry and cause noise and vibration.
- If your color matched components are painted care for them in the same manner as you care for the exterior finish of your vehicle.
- Repair or replace worn parts with expediency. All hardware is available for purchase by calling our technical support line at 720.730.6381 Monday-Friday 8am to 4pm MDT or by email 24/7 364 (we don't answer email on Christmas-get over it) support@uptopverland.com
- It is the responsibility of the end user to ensure all electrical connections are secured and fused properly for the circuit load they are carrying.
- upTOP Roof Rack dynamic (moving) weight capacity can often exceed the OEM vehicle manufacturers specification. In all cases the OEM specifications supersede the upTOP dynamic rated load capacity.
- DO NOT use the upTOP product in a manner inconsistent with its design intention. This will void your warranty.
- DO NOT modify or alter structural components of upTOP roof rack assemblies. This will void your warranty.
- Excessive speeds over rough terrain can exceed dynamic weight loads causing structural fatigue or failure of aluminum and steel components. Use your best judgement and common sense before committing to full send with an overloaded rack product.
- Component damage or failure due to negligence will result in voided warranty claims. Any failed component must be returned to upTOP with a properly submitted RMA request. Any product received without authorized RMA request will be returned to sender at their expense.
- Leave. No. Trace. Our planet is fragile. Some parts of it have been undisturbed for generations. Stay on trails and designated routes. DO NOT LITTER. Pack it in Pack it out. Basically be a decent human and protect our culture, wild lands and ecosystems.

REVISIONAL CHANGES

9.3.21 Confirmed and updated information regarding steel feet use.

9.9.21 grooveTEK design change to 22 Series Slanted slot structural version.

9.22.21 Design and instructions approved for release.



Production units will ship with 1075.2/1076.2 grooveTEK specification 22 Series Slant Slot Structural Improvement.