



Installation Instructions:

Ford Transit 8020 Roof Rack Bracket



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The Unaka Gear Co Team is here to help. If you have issues or questions, please do not hesitate to contact us at info@unakagearco.com.

Contents

1. Overview	3
2. Rack Overview.....	3
2.1. Van Roof Load Rating.....	3
2.1. Roof Rack Terminology	3
3. Safety	4
4. Required Tools	5
4.1. Tools Required for Unaka Ford Transit Rack Brackets.....	5
5. Required Materials.....	5
6. Roof Rack Bracket Locations	6
6.1. 148" WB Roof Rack Bracket Locations.....	6
6.2. 148" WB Extended Length Roof Rack Bracket Locations.....	7
7. Roof Rack Bracket Installation Steps.....	8
7.1. Transit Standard Roof Rack Bracket Installation.....	8
7.2. Transit 148" Ext. Length Rear Roof Rack Bracket Installation	11
8. 8020 Side Rail Installation.....	13

1. Overview

This set of instructions is a basic guideline on how to install your Ford Transit 8020 Roof Rack Brackets. If you have questions or issues with our product do not hesitate to contact us at info@unakagearco.com.

2. Rack Overview

2.1. Van Roof Load Rating

Even though the Unaka Gear Co rack mounts can support more weight per point, we DO NOT recommend that anyone to exceed the vehicle manufacturer's specifications. Ford publishes the maximum loads per roof attachment points as well as the max allowable load for any rack. Go to their website here at <https://fordbbas.com/publications>. From this page you can find the Body and Equipment Mounting manuals for your specific van year. This document contains many design recommendations including the roof rack mount point dimensions and loading for that specific year.

Check the link above to confirm the load ratings for your specific year. The van roof load ratings for the 2020 transits state each van mounting location can hold up to 79.3 kg (174.8 lbs.) with a max load of 190Kg (418.8 lbs) per van roof no matter what size or the number of attachment points are used. Figure 1 shows the 2020 Ford Transit rack load ratings per the 2020 Transit Body and Equipment Mounting Manual which can be found by clicking [HERE](#).

5.12.2 Roof Racks and Load Carriers

Load Retaining Fixtures



WARNING: Refer to the Owner's Manual for information on Load Carrying and maximum roof loads.

NOTE: Read and follow the manufacturer's instructions when fitting a roof rack.

NOTE: The number of load retaining fixtures vary depending on the vehicle.

Roof racks may be fitted to all Van, Bus and Kombi variants providing the following is satisfied:

- Load not to exceed 79.3kg at individual attachment points for local durability
- Load not to exceed 190kg total for roof structure durability
- [Refer to: 1.12 Load Distribution \(page 20\)](#). For guidance on centre of gravity information

Figure 1: 2020 Ford Transit Load Rating Excerpt

2.1. Roof Rack Terminology

Figure 2 shows a high-level overview of the components that make up most roof racks. This image shows a rack made using 8020 side rails and cross bars, but other materials can be used as well. Table 1 outlines the main parts that make up a roof rack highlighted in Figure 2.

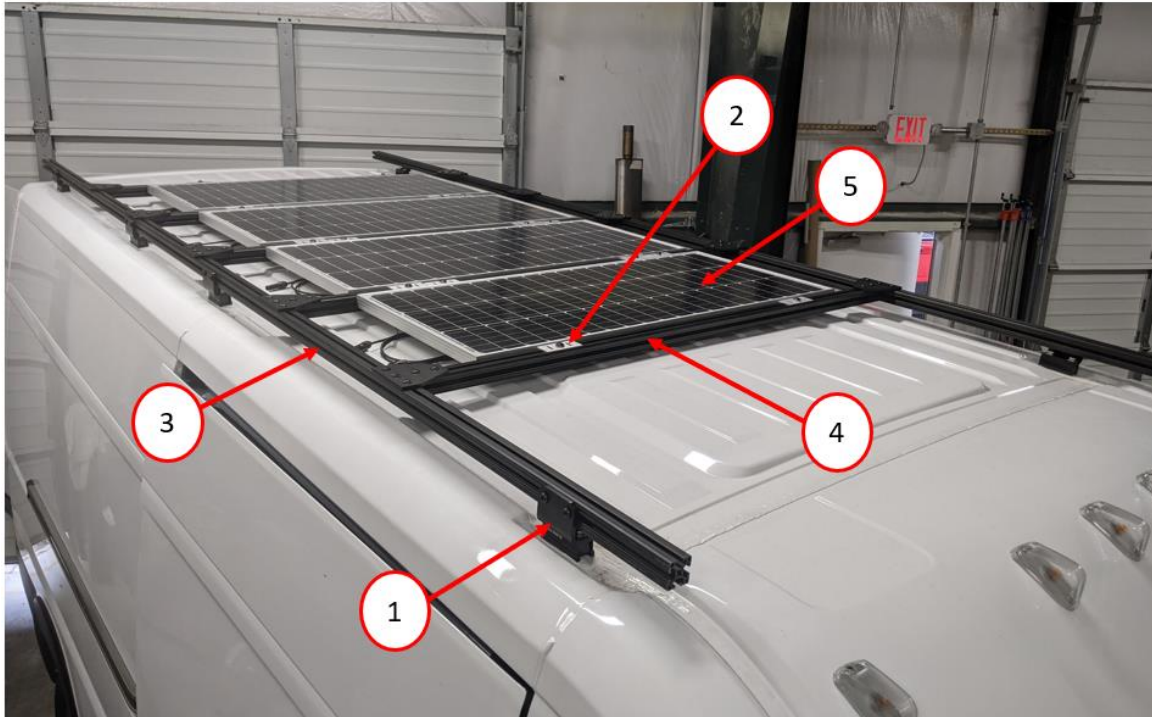


Figure 2: Roof rack overview and terminology

Table 1: Roof rack part breakdown

Item #	Item	Notes
1	Unaka Roof Rack Bracket	Sold in sets of 2, to build a small rack a minimum of 2 sets of brackets is required to give you 4 mounting points
2	Unaka Flush Mount Solar Panel Brackets	Our flush mounting solar panel brackets allow you to easily install your solar panels flush or near flush with the top of your 8020 side rails giving you a truly sleek look.
3	Side Rail	Side rails run along the length of your van. This example shows 15 Series 8020 side rails.
4	Cross Bar	Cross bars run perpendicular to your side rails. They can sit flush with your side rails as shown in this example or they can sit on top of your side rails.
5	Solar Panel *Unaka Sells Solar Panels, contact us today!	The most common reason to install a rack is to mount solar panels without drilling extra holes in your van roof. Solar panel mounting depends on the size of the panels and your roof rack design.

3. Safety

Working with tools involves inherent risks that could result in injury or in extreme cases death. It is important to know how to perform the job and perform it safely. Always use the correct tools for the job and wear the required personal protective equipment (PPE) necessary for the job. If you are unsure of how to complete a task safely consult a friend or a professional. Below are some suggestions for PPE to help stay safe but as individuals may approach a job differently, they may need to adjust the required PPE accordingly.

Suggested PPE:

- Safety Glasses
- Gloves
- Hearing Protection

Ladder Safety: Installing a roof rack will require the use of a ladder. Any ladder used should follow the manufactures guidelines with respect to proper usage.

4. Required Tools

The following tools or a combination of these tools should be used for this installation.

4.1. Tools Required for Unaka Ford Transit Rack Brackets

- Standard Allen Wrench Set (must include 3/16" Allen Key)
- Metric Allen Wrench Set (must include 5mm Allen Key)
- Metric Wrench and Sockets (must include 13mm)
- Torque Wrench (Must go up to 180 in-lbs or 15 ft-lbs and be compatible to use with 3/16" Allen Key)
- Torque Wrench (Must go up to 180 in-lbs. or 15 ft-lbs. and be compatible to use with 5mm Allen Key)

5. Required Materials

- Dicor RV Roof Lap Sealant or similar UV resistant sealant
- Blue 242 Loctite
- Minimum of 2 Sets of Roof Rack Brackets
 - Most installs require more than one set to build a rack.
- Rail or Rack Materials (8020, Aluminum Angle, Etc.)

Figure 3 shows a detailed breakdown of the parts that make up a set of Unaka mounting brackets. Note each Set of brackets that you order from Unaka comes with two complete mounting brackets and associated hardware.



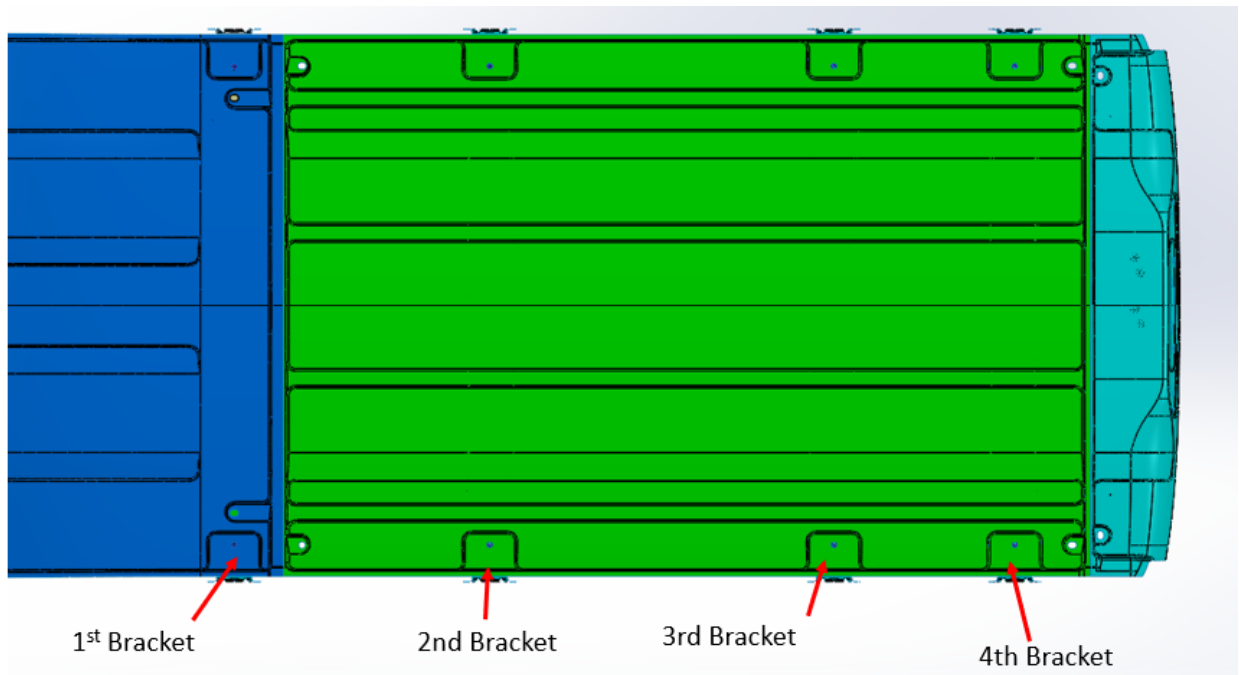
Figure 3: Unaka rack bracket component breakdown

6. Roof Rack Bracket Locations

The information below highlights where the Ford Transit Brackets are typically installed.

6.1. 148" WB Roof Rack Bracket Locations

The mounting locations on the standard transit are straight forward but are highlighted below.



6.2. 148" WB Extended Length Roof Rack Bracket Locations

The Ford Transit 148" WB Ext. Length van has five standard mounting locations, and one rear mounting position which uses a slightly different bracket, Figure 4. The installation of this rear bracket is covered at the end of this manual. We recommend using all the mounting locations on every van with some exceptions based on design and loads. If you plan to extend your side rails to the back of the van, we recommend using a set of our Ford Transit Rear Brackets as without these you would have to much overhang past the fifth bracket to correctly support your rails. Our 8020 Ford Transit Rack kits use mounting points 1, 2, 3, 5, and the rear bracket. We skip the fourth position as it is so close to the fifth position which better distributes the load.

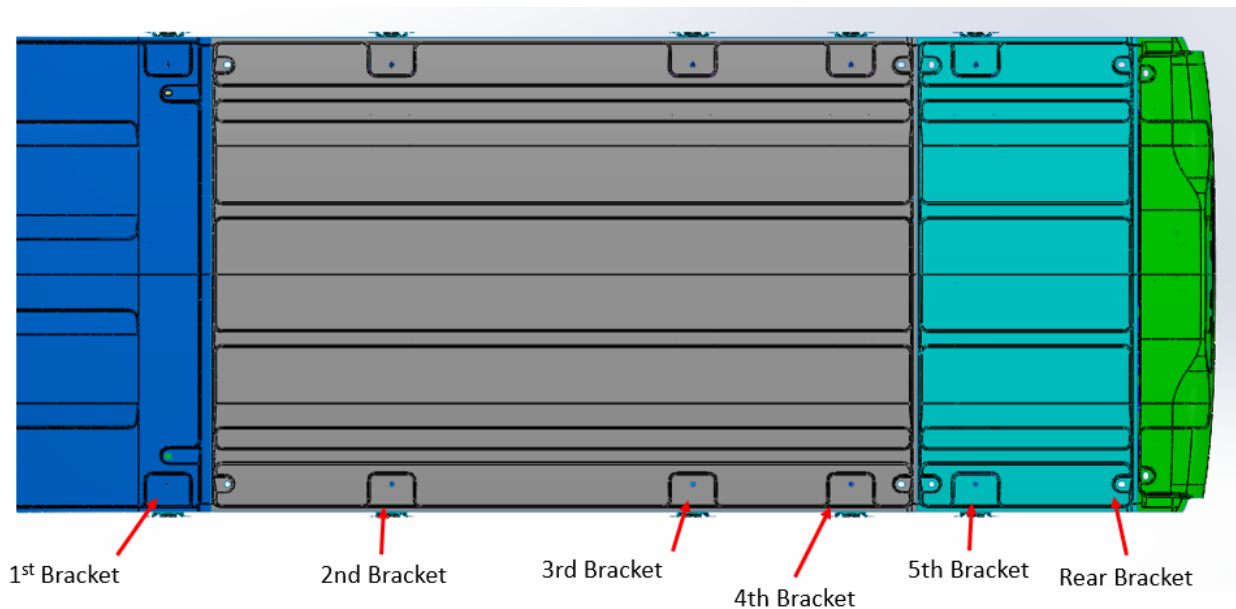


Figure 4: 148" WB Ext. Length Mounting Locations

Figure 5 shows the last four mounting positions with brackets, and the fourth mounting location being skipped like it is with our standard transit extended length rack kits.

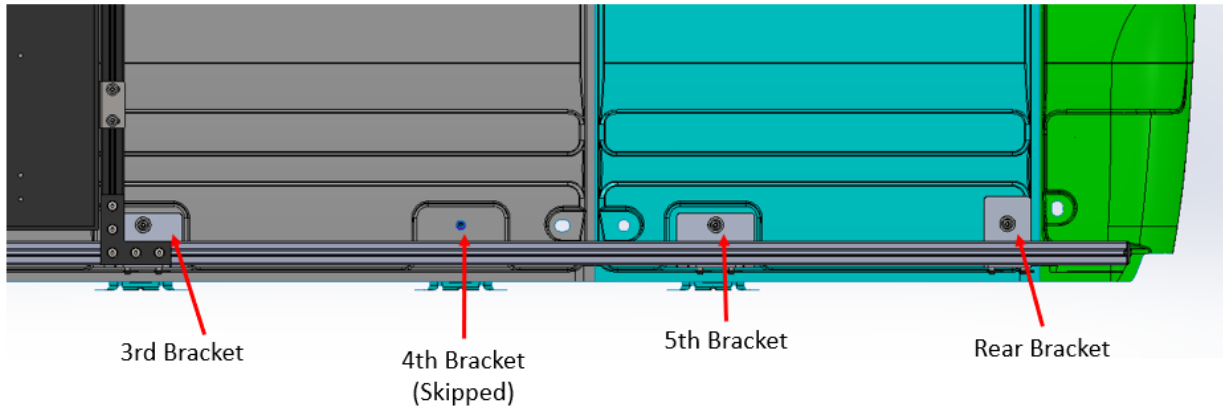


Figure 5: Detailed view showing 148 Ext Lg. back bracket locations

7. Roof Rack Bracket Installation Steps

****Important:** Read all the directions below before beginning your installation!

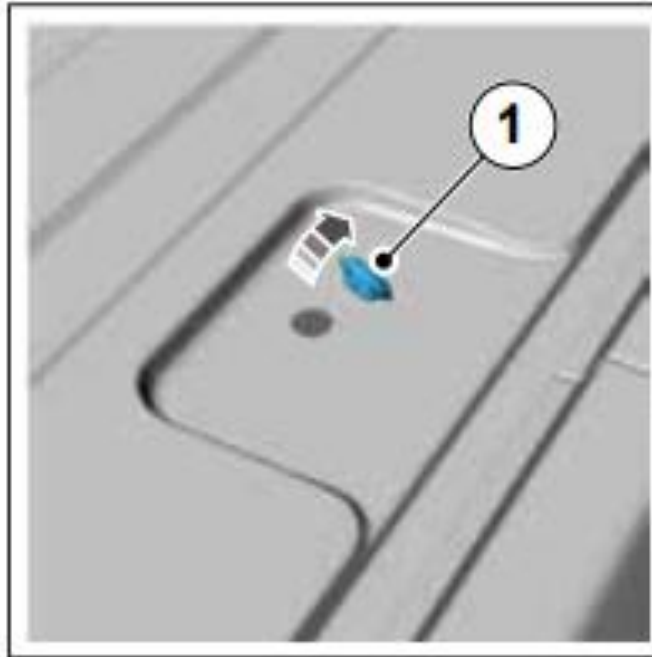
7.1. Transit Standard Roof Rack Bracket Installation

These instructions do not cover how to install your specific rack but only how to connect our brackets to your Ford Transit and your main rails.

1. Un-wrap your roof rack brackets and remove the hex bolts and washers.
2. Place a bracket and its hardware at each mounting point you plan to use on the van roof.
3. Carefully remove rack mounting hole covers at mounting pad locations

****Other hole covers may be present on the roof, only remove the hole covers at the rack mounting pad locations****

- a. A plastic scraper or putty knife can be used to pry up and pull off the covers over the holes
- b. Light heat can be applied to the hole cover if needed to help loosen up any adhesive



4. Enlarge any holes in the van roof as needed
 - a. This should not be required on every hole, but it is common to have to enlarge 1 to 2 mounting hole locations that were not aligned correctly at the Ford factory
 - b. If any of the bolt locations are covered up by the sheet metal of the van roof use a file, tin snips, or a small Dremel to open the hole to allow access to the bolt hole. ****Protect the rest of the van roof from metal shavings as needed****
 - c. Remove any metal shavings from the roof of the van and clean the area completely
 - d. After cutting, apply primer and paint to any bare metal after cutting is complete
5. Loosely install each rack bracket at the desired mounting locations
 - a. Center the lower slot over the bolt hole
 - b. Loosely tighten the M8 bolt using the 5mm Allen key to keep the bracket in place. Do not fully tighten at this time so that the brackets can be aligned to each other using your side rails.
 - c. **Helpful Tip:** Do NOT fully tighten this hardware yet, leave it slightly loose. Check the alignment of all brackets along the length and the spacing from one side rail to the other. As you get things in place slowly snug up a few pieces of hardware to hold it in place. If you are using 8020 cross bars you may want to hold up or temporarily bolt it in place to check the alignment. Re-check and once everything are in place and parallel go back and tighten all the hardware

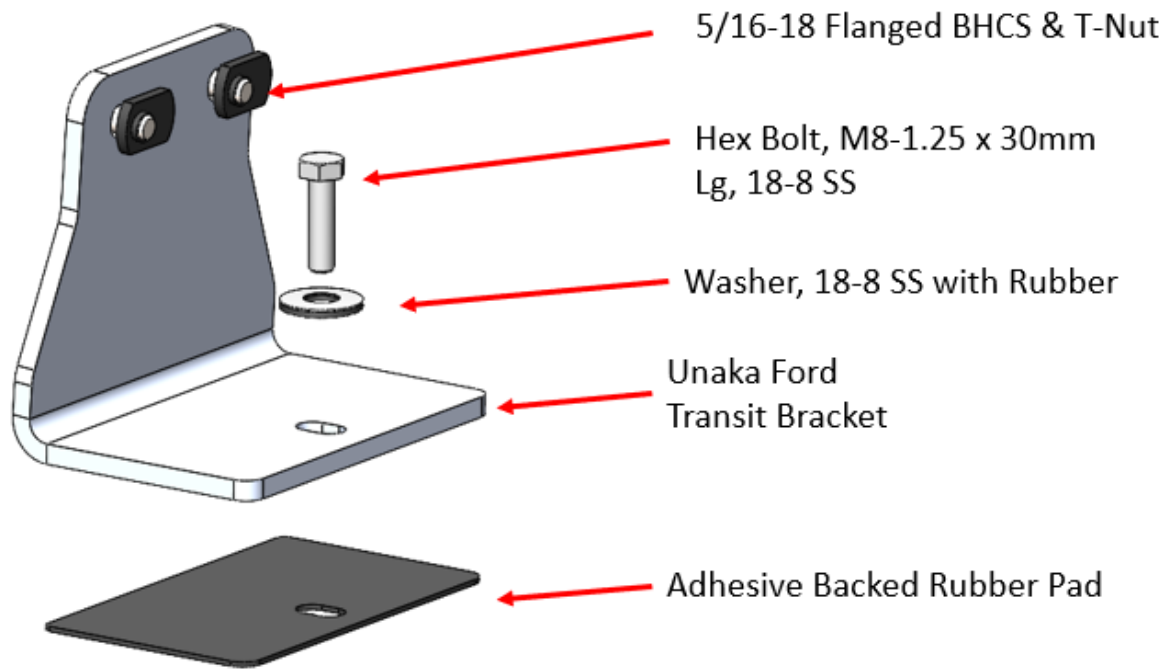


Figure 6: Transit Bracket hardware locations

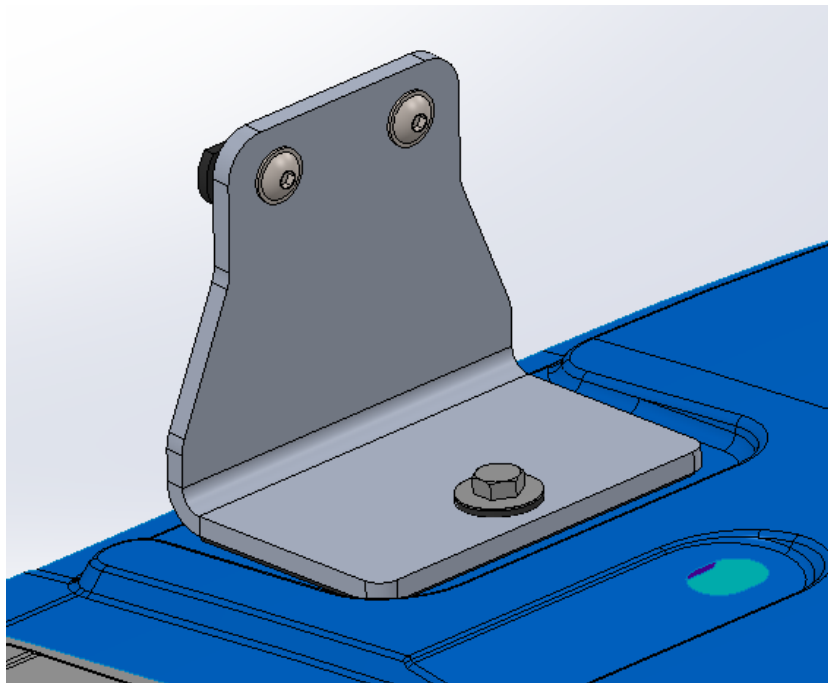
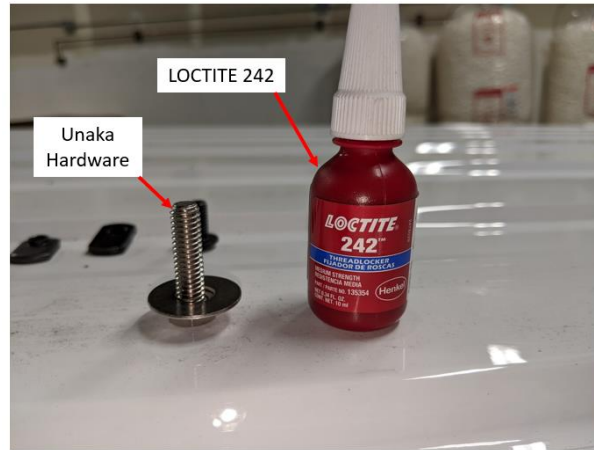


Figure 7: Transit bracket secured to van roof

6. After the initial fit up and before final installation of any hardware, apply LOCTITE 242 to the hardware per their directions.



7.2. Transit 148" Ext. Length Rear Roof Rack Bracket Installation

To better utilize more of the roof on the Ford Transits, we designed a unique bracket to help extend and support your rack side rails. The installation process of this bracket is very similar to the standard bracket with a few small differences.

1. Steps 1 through 4 are identical to those for the standard bracket
 - a. During step 4, there is no threaded insert underneath the cap area
2. Loosely install each rack bracket at the desired mounting locations
 - a. Center the lower slot over the bolt hole
 - b. Insert the M8 bolt through the sealing washer, and the rear bracket, and into the van as shown in Figure 8
 - c. From inside the van, insert the provided square or second large round washer onto the bolt, and the M8 Nyloc nut. **Apply anti seize to the end of the bolt before installing the nut.
 - d. With one person on the outside, and one person on the inside, do not fully tighten at this time so that the brackets can be aligned to each other using your side rails.
 - e. Helpful Tip: Do NOT fully tighten this hardware yet, leave it slightly loose. Check the alignment of all brackets along the length and the spacing from one side rail to the other. As you get things in place slowly snug up a few pieces of hardware to hold it in place. If you are using 8020 cross bars you may want to hold up or temporarily bolt it in place to check the alignment. Re-check and once everything are in place and parallel go back and tighten all the hardware
3. With all the bracket in place, you can proceed to the next step and install your 8020 side rails

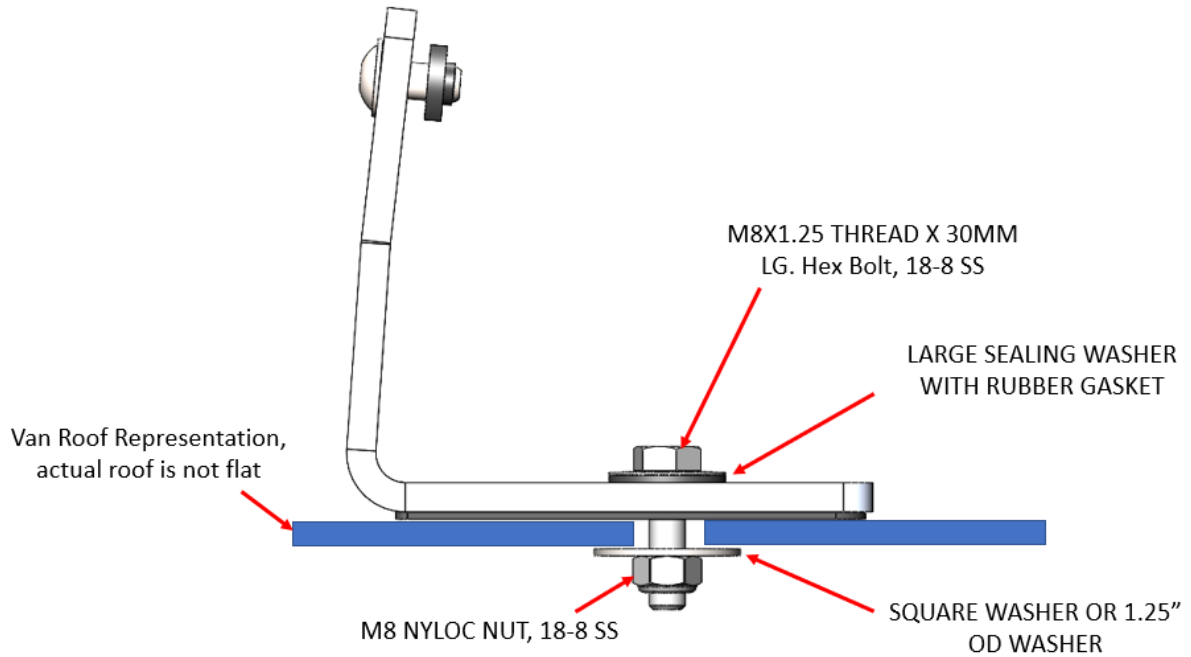


Figure 8: Transit rear bracket hardware

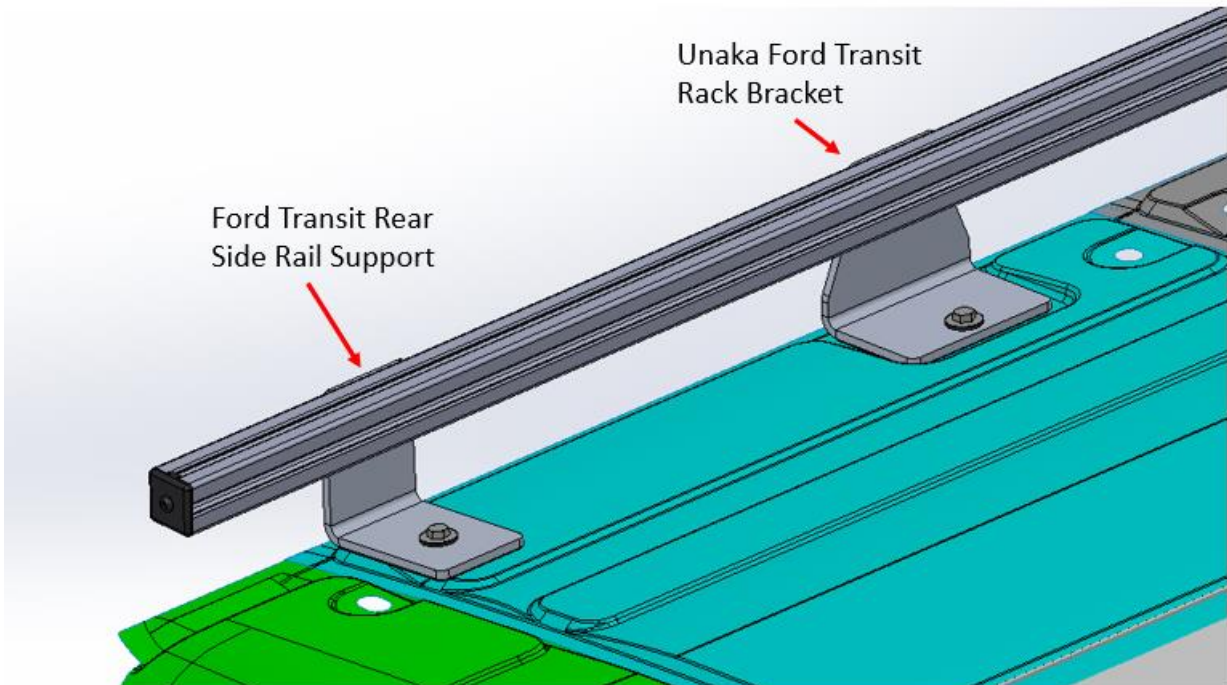


Figure 9: Standard versus rear transit bracket

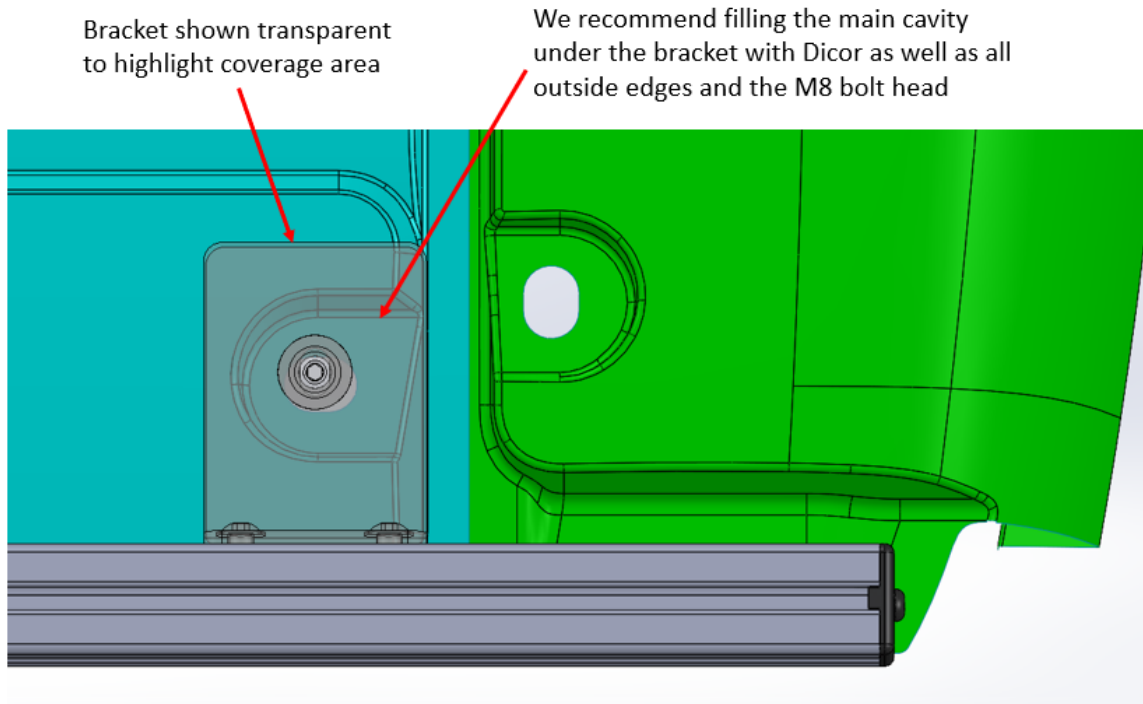


Figure 10: Transit rear bracket location

8. 8020 Side Rail Installation

1. At this point all the roof rack brackets and 8020 adapters should be in place but with the hardware still slightly loose or barely snug.
2. Place your 8020 side rail on the roof of your van on the inside of the rack brackets. You may want to put a towel or rags down on each end to help protect your van roof from the ends of the extrusion.
3. Pick a t-slot in the extrusion (typically the top or the side closest to the adapters). Slide 2 x T-nuts into the extrusion for each 8020 adapter you will be bolting to. Space the T-nuts so they are 2" to 3" outside of the 8020 adapter profile on each side, Figure 11. This will allow you to slide them into place when you are ready to insert the hardware. We typically place the long end of

the t-nut towards the center of the bracket.

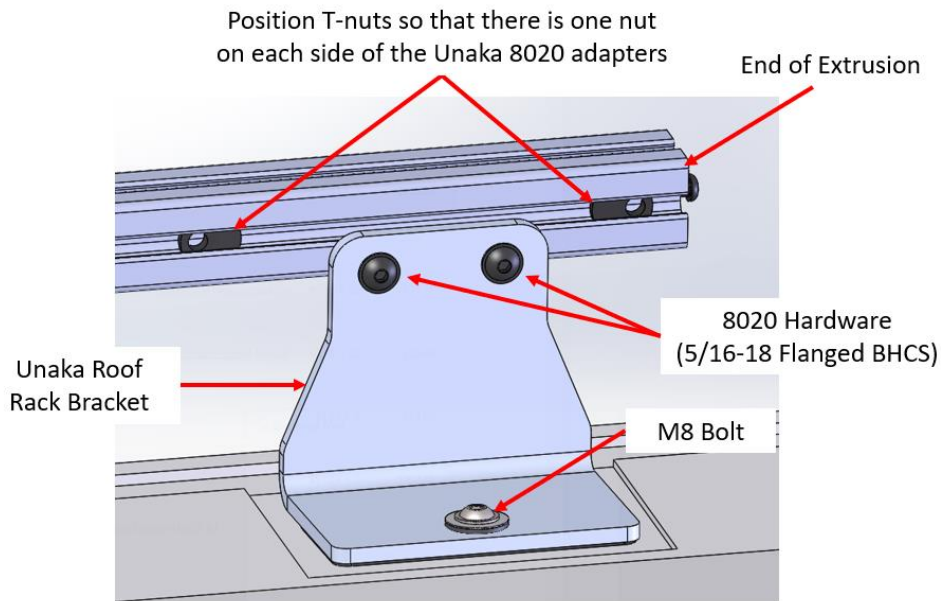


Figure 11: Unaka 8020 adapter hardware installation

Note 8020 specifies the boss on the t-nut should be facing the middle of the extrusion as shown in Figure 12.

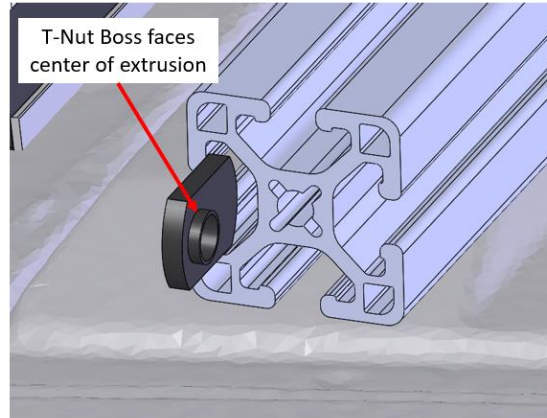


Figure 12: 8020 T-Nut Installation

4. Once all the hardware for one side rail is in place and spaced on both sides of the Unaka 8020 adapters, the rail can be bolted to the adapters. Start at one end of the 8020. Place the 8020 against the rack bracket, slide one of the 2 nuts so that it lines up with the hole in the Unaka Adapter, then insert the Flanged Button Head Cap Screw and tighten it using a 3/16" Allen Key. Do not fully tighten, leave this loose.
5. Go to the opposite end of your side rail and repeat the previous step of aligning the nut, and loosely inserting the bolt.

6. Now go through and repeat this process for all the nuts along the length of the side rail. Leave all bolts loose until you get all the bolts in place on both side rails.
7. Verify side rail alignment from one to the other along the full length. Make slight adjustments as needed until rails are positioned as desired and are parallel to each other.
8. Tighten up the M8 BHCS using the 5mm Allen key to secure the transit brackets to the roof of the van. Torque to 14 ft-lbs. (168 in-lbs.)



9. Once both side rails are positioned with respect to each other as desired, go back and snug up all the side rail hardware using your 3/16" Allen Key.
10. Once all the 8020 hardware is snug, torque to 13 ft-lbs. (156 in-lbs.).
11. After the entire rack bracket installation is complete, we highly recommend sealing the lower perimeter of the bracket where it meets the van roof as well as covering the edge of the washer and flanged BHCS with Dicor RV roof sealant or a similar UV resistant adhesive sealant.

****The EPDM rubber pad on the bottom of the rack bracket and the washer should minimize the chance of water finding its way into your van but even after testing other competitor rack brackets which use similar features Unaka concluded that the only way to truly keep water from finding its way into your van is to fully seal the perimeter and the hardware with sealant. After the sealant is applied and has cured per the manufactures recommendations a leak check should be conducted and more sealant applied until all leaks are eliminated. ****

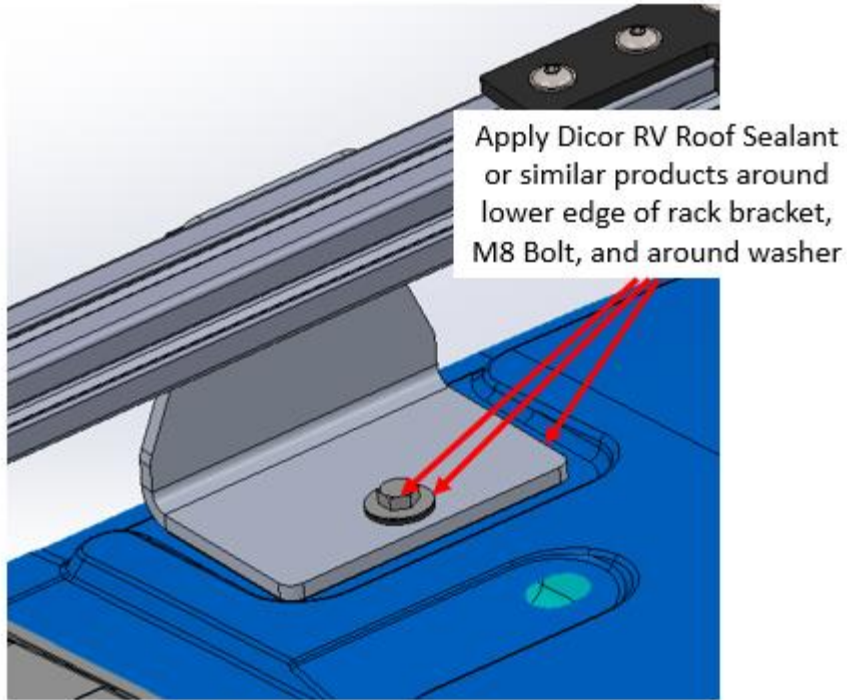
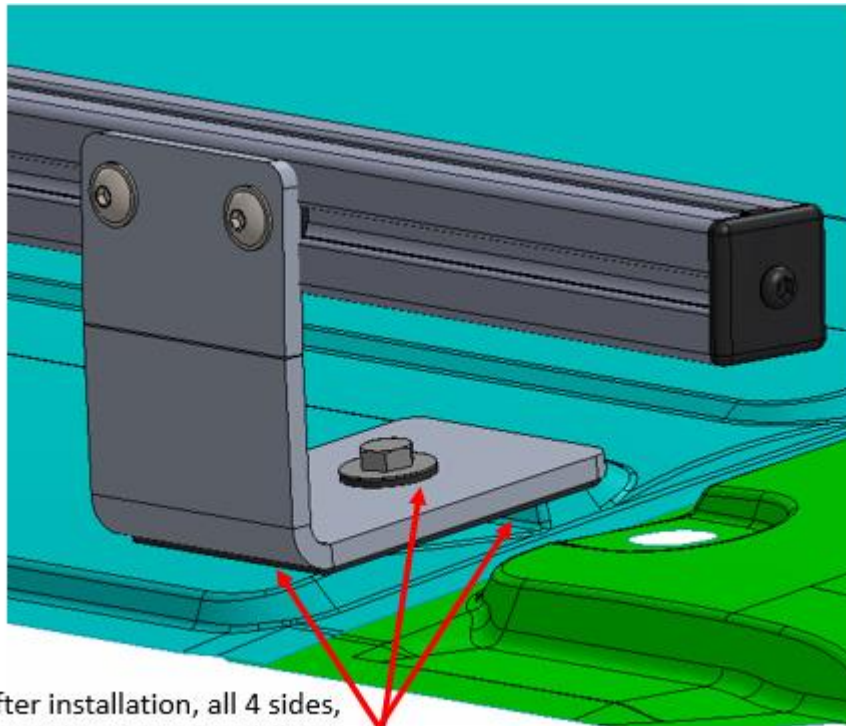


Figure 13: Sealing around roof rack bracket and hardware



Figure 14: Dicor RV Roofing Lap Sealant



After installation, all 4 sides,
the main gap, and bolt head
should be sealed with Dicor

Figure 15: Rear bracket Dicor locations

12. This completes the installation of your 8020 side rails.

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