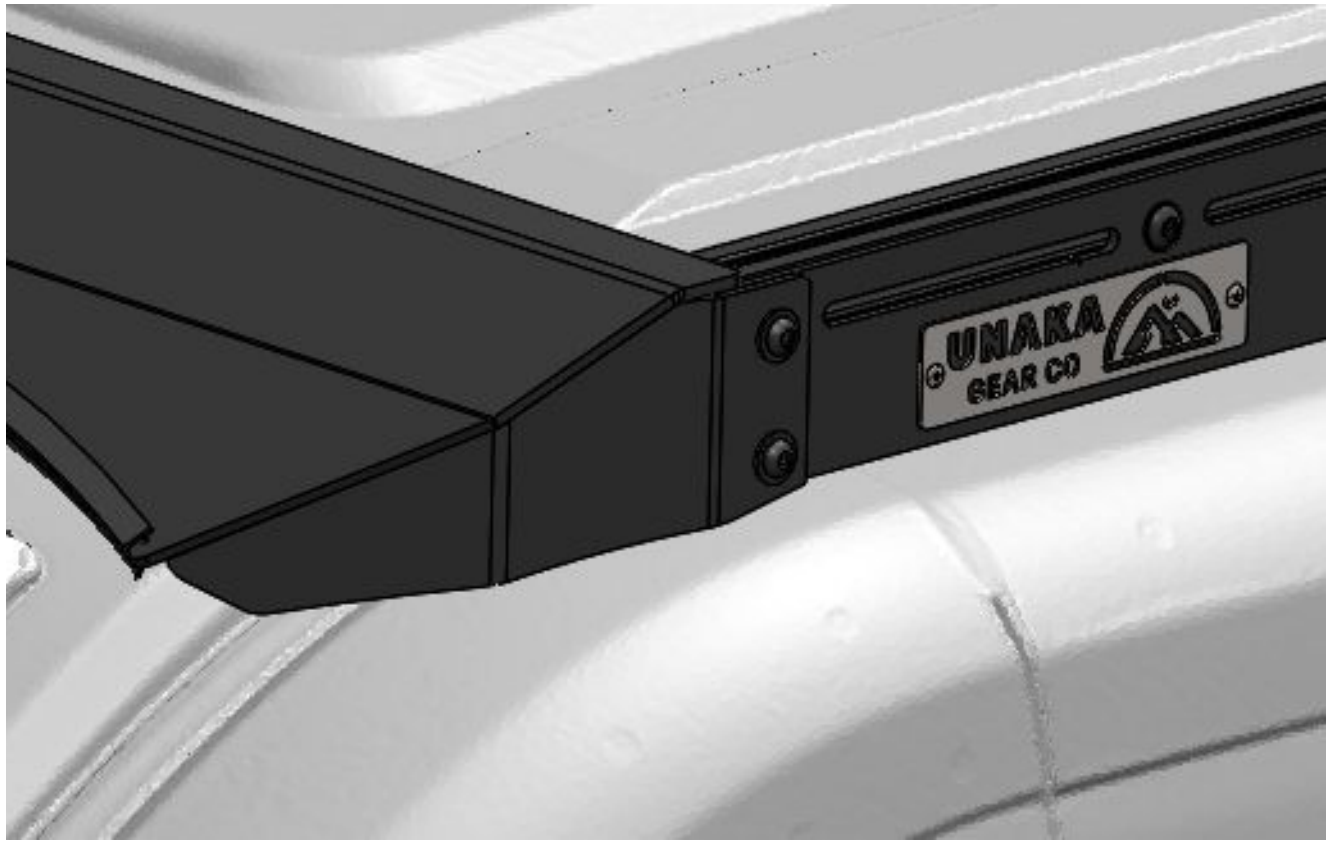
UNAKA
GEAR CO



Installation Manual:

ProMaster Roof Rack - Premium 136 - High Roof

SKU: 1001-MK55-00 REV 2

Date: 3/27/25

Revision: 0

Notes

Premium Vs. HSLD: As of 8/13/2024 all HSLD (High Speed Low Drag) Racks are now referred to as our Premium racks. During this transition period packaging, labels, part or kit descriptions, and manuals may use HSLD in their wording or text. This transition is only a descriptive change and is not representative to any physical change in parts.

Disclaimer: Unaka Gear Co. is committed to providing high-quality products, but it is important to note that we are not liable for any damage, failure, or loss resulting from incorrect installation or safety precautions taken during installation or use of our roof racks. Proper installation is crucial to ensure safety and functionality. We strongly recommend that all installation be performed by a qualified professional or according to the detailed instructions provided with the product. By using our roof racks, you acknowledge and accept that Unaka Gear Co. is not responsible for any issues arising from improper installation. For any questions or concerns, please contact our customer service team.

Installation Safety: Installation of this roof rack requires two ladders for two people to help with the installation. Make sure that your ladders are tall enough, and that you have a level area to use them on. Accessing the roof of your van will put you at risk to potential falls which can result in injury or death.

Terms of Service & Warranty: To see our complete terms, conditions, as well as warranty information use the link below or head over to our website. https://unakagearco.com/policies/terms-of-service

Preventative Maintenance: In order to ensure proper performance of your rack you must do an initial torque check after 4 to 7 days, follow up checks after 1 month, routine checks every 3 to 4 months, and after moderate driving on bumpy or gravel roads.

Installation Overview

- Layout and identify all parts
  - *Keep hardware kits separate; some pieces may be only slightly different and are **not** interchangeable*
  - *Failure to follow this step may result in extended delays in resolution and additional steps on the customer to determine origin of error*
- Pre-install selected hardware
- Initial cross bar assembly
  - TIP: Review solar panel installation to ensure all t-nuts are installed during this step
- Install and locate roof rack brackets
- 8020 Side Rail installation and positioning
- Initial cross bar installation, and positioning
- Set side rail to side rail and rack brackets final position
- Premium side plate installation
- Final wind fairing installation, and positioning
- Solar panel installation (optional)
- Confirm all hardware torqued and tightened

2 x

Torque Wrench (75 to 132 in-lbs)

½” box wrench

2 x Ladder

SAE Socket set – ½” & 7/16” socket required

Tape Measure

Shipping & Packaging
This rack kit is typically shipped in a single box

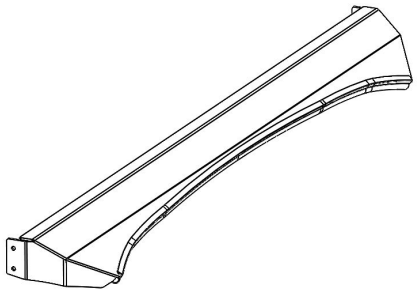
Loctite 242

*Apply this to any bolt that is not used with a nylock nut

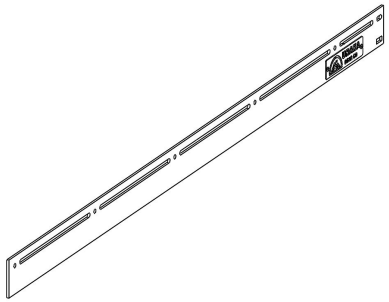
Loctite C5-A Anti-Seize

Apply a dab of anti-seize to the side of each bolt that will be paired with a nylock nut. Nylock nuts have a small plastic insert to make them vibration resistant.

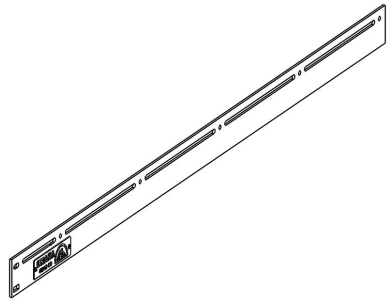
Rack Components



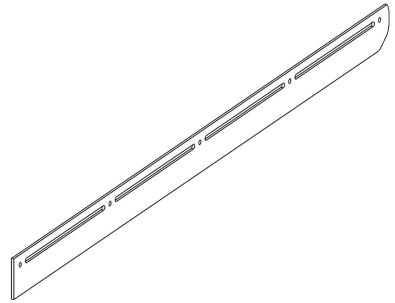
WIND DEFLECTOR WELDMENT
[ITEM 1] {QTY. 1}



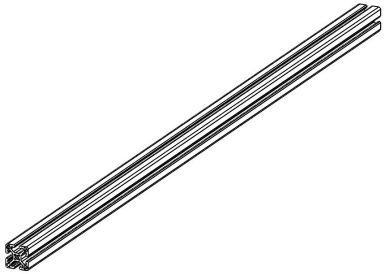
PASSENGER FRONT SIDE PLATE
[ITEM 2] {QTY. 1}



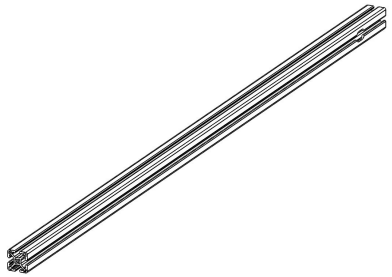
DRIVER FRONT SIDE PLATE
[ITEM 3] {QTY. 1}



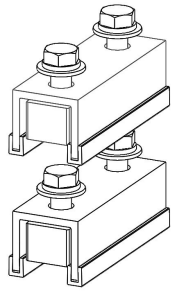
REAR SIDE PLATE
[ITEM 4] {QTY. 2}



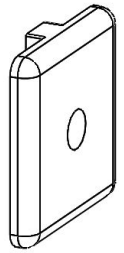
8020 SIDE RAIL-61.656" LG
[ITEM 5] {QTY. 1}
*One label per extrusion. 4 total



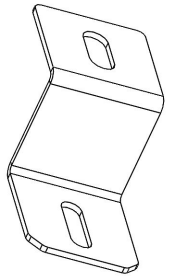
8020 CROSS BAR-60.25" LG
[ITEM 6] {QTY. 1}
*One label per extrusion. 4 total



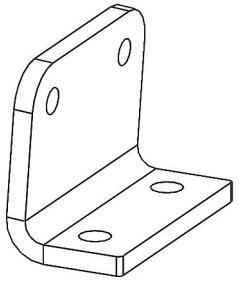
ROOF RACK BRACKET SET OF 2
[ITEM 7] {QTY. 3}



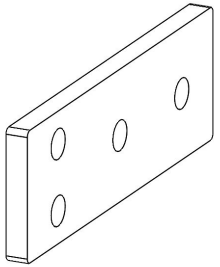
8020 SIDE RAIL END CAP
[ITEM 8] {QTY. 2}



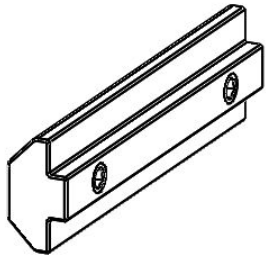
SOLAR PANEL BRACKET, FLUSH
[ITEM 9] {QTY. 16}



ROOF RACK BRACKET 8020 ADAPTER
[ITEM 10] {QTY. 6}

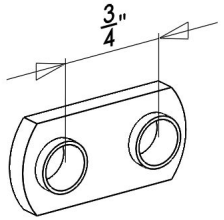


CROSS BAR CONNECTOR
[ITEM 11] {QTY. 8}

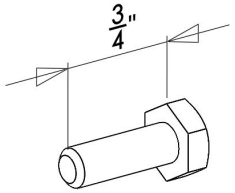


8020 INSIDE SPLICE PLATE
[ITEM 12] {QTY. 4}

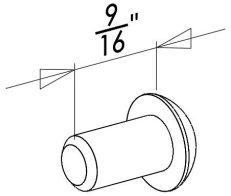
Hardware Components



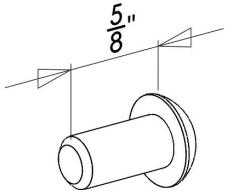
DOUBLE T-NUT
[ITEM 13] {QTY. 8}



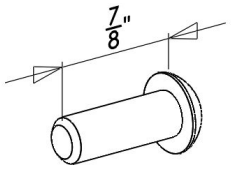
1/4-20 X 3/4" HEX SCREW
[ITEM 14] {QTY. 16}



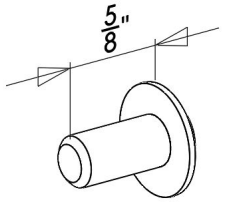
5/16-18 X 9/16" NON-FLANGED SCREW
[ITEM 15] {QTY. 16}



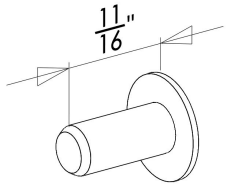
5/16-18 X 5/8" NON-FLANGED SCREW
[ITEM 16] {QTY. 4}



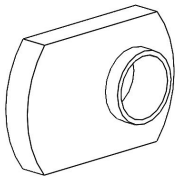
5/16-18 X 7/8" NON-FLANGED SCREW
[ITEM 17] {QTY. 4}



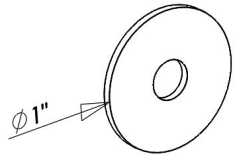
5/16-18 X 5/8" FLANGED SCREW
[ITEM 18] {QTY. 20}



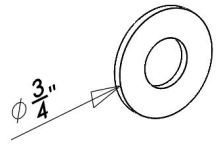
5/16-18 X 11/16" FLANGED SCREW
[ITEM 19] {QTY. 44}



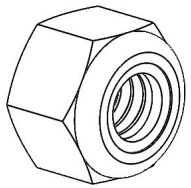
SINGLE T-NUT
[ITEM 20] {QTY. 54}



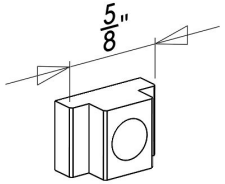
1/4" WASHER
[ITEM 21] {QTY. 32}



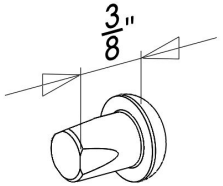
5/16" WASHER
[ITEM 22] {QTY. 20}



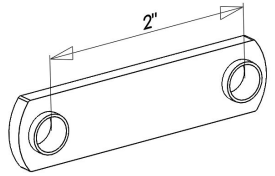
1/4-20 LOCKNUT
[ITEM 23] {QTY. 16}



T-SLOT NUT
[ITEM 24] {QTY. 2}

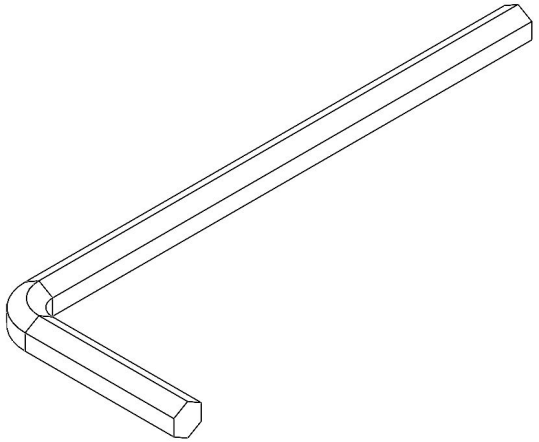


M7 x 0.36", SELF TAPPING SCREW
[ITEM 25] {QTY. 2}

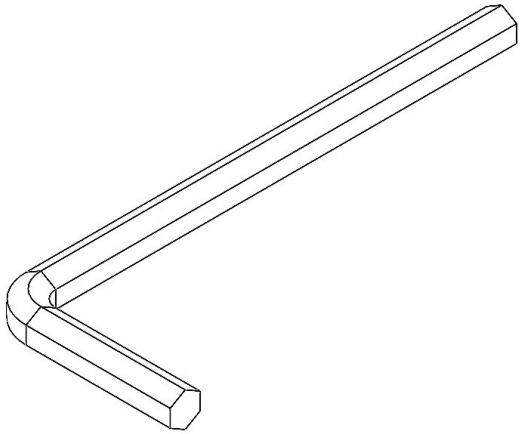


DOUBLE T-NUT, 2" SPACING [ITEM
26] {QTY. 6}

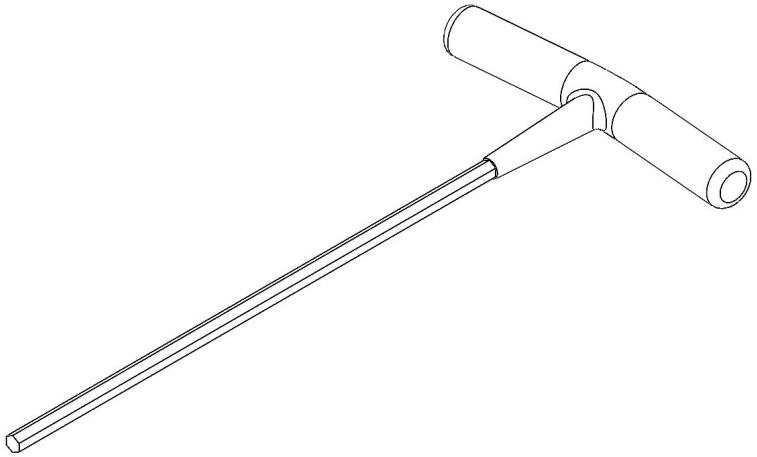
Included Tools



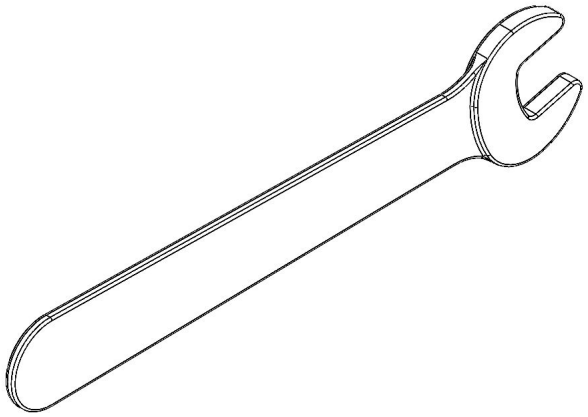
1/8 ALLEN WRENCH
[ITEM N/A] {QTY. 1}



5/32 ALLEN WRENCH
[ITEM N/A] {QTY. 1}



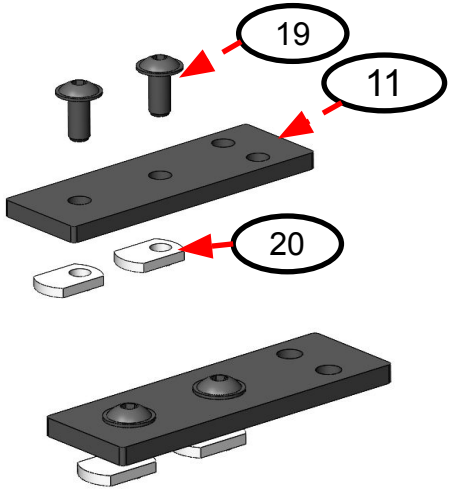
3/16 T-HANDLE ALLEN WRENCH
[ITEM N/A] {QTY. 1}



7/16 SIMPLE OPEN SPANNER
[ITEM N/A] {QTY. 2}

Pre-install Select Hardware

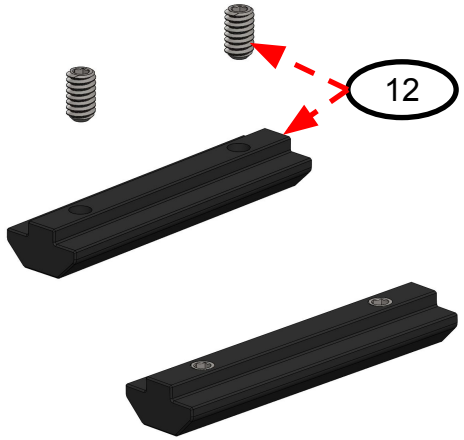
- Pre-install the hardware for each sub item as shown.
- Hardware should be loose so that the brackets or items can easily slide onto the 8020 channels in later steps.
- Take care not to leave hardware so loose that it falls off or out while being handled.



Qty 8

Hardware Sub Kit: Narrow Cross Bar Brackets & Hardware for qty. 4 8020 Cross Bars

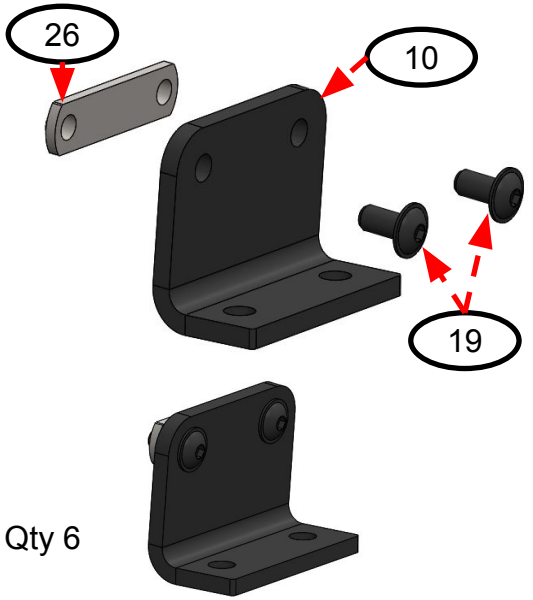
Note: *Qty 38x Item 20 and 28x Item 32 bolts will remain unused in this step*



Qty 4

Hardware Sub Kit: Inside Splice Plate Kit, 8020 insert with set screws

Note: *Set screws are already installed in the insert. If not, install them now.*



Qty 6

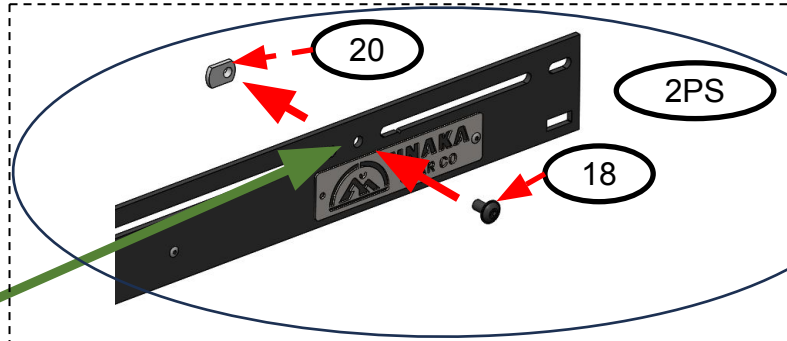
Hardware Sub Kit: ProMaster Rack 8020 Adapter Bracket & Hardware

Note: *Qty 0x Item 26 and 16x Item 19 bolts will remain unused in this step.*

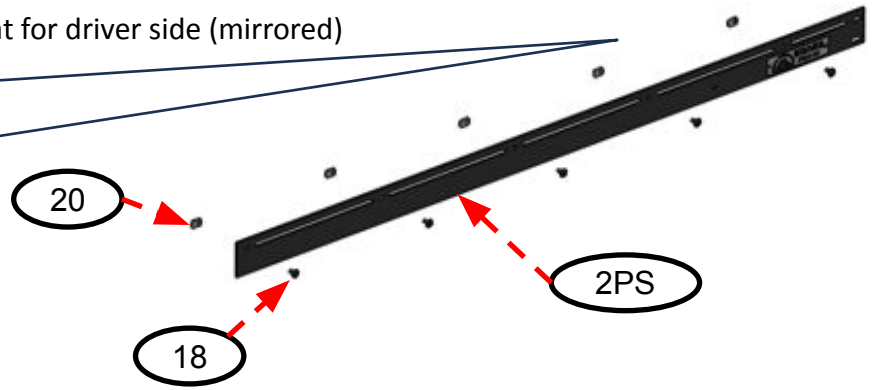
Pre-install Side Plate Hardware

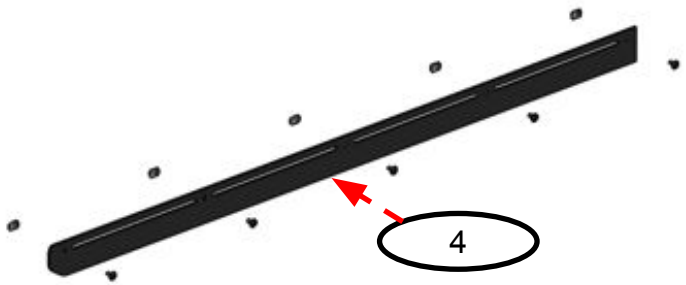
- Pre-install the Flanged BHCS (Item 18) and T-nuts (Item 20) into the designated holes in the side plates as shown.

Bolts go through specified circular holes in side plate.



**Repeat for driver side (mirrored)



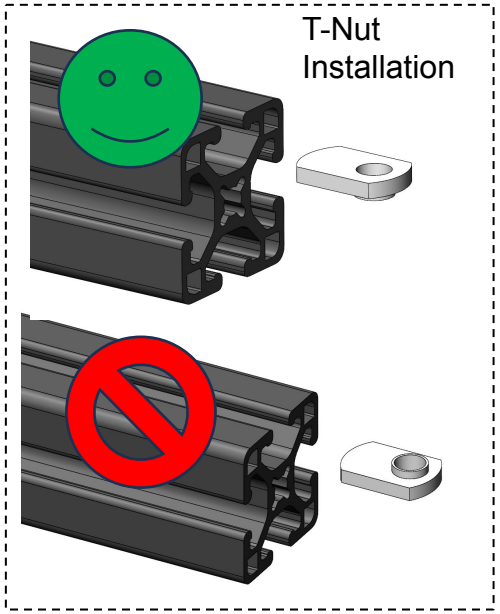


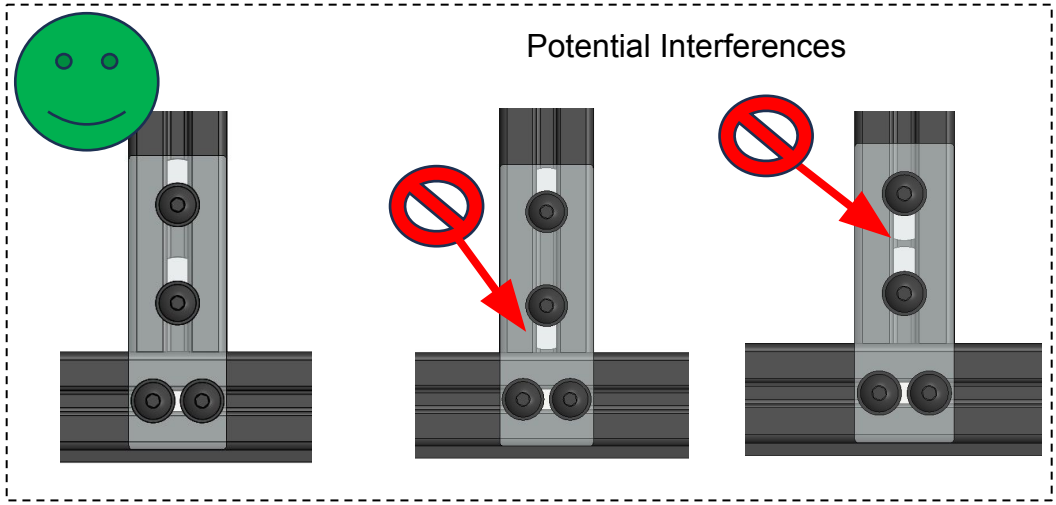
Hardware Sub: ProMaster Side Rails & Hardware

Note: *Qty 18x Item 20 and 0x Item 18 will remain unused in this step.*

General T-Nut Installation Tips

- Install T-nuts (Item 20) long side first and boss down.
- If long side of T-nut faces outside, it will interfere with adjacent 8020.
- If long side of adjacent T-nuts face each other, they may interfere.





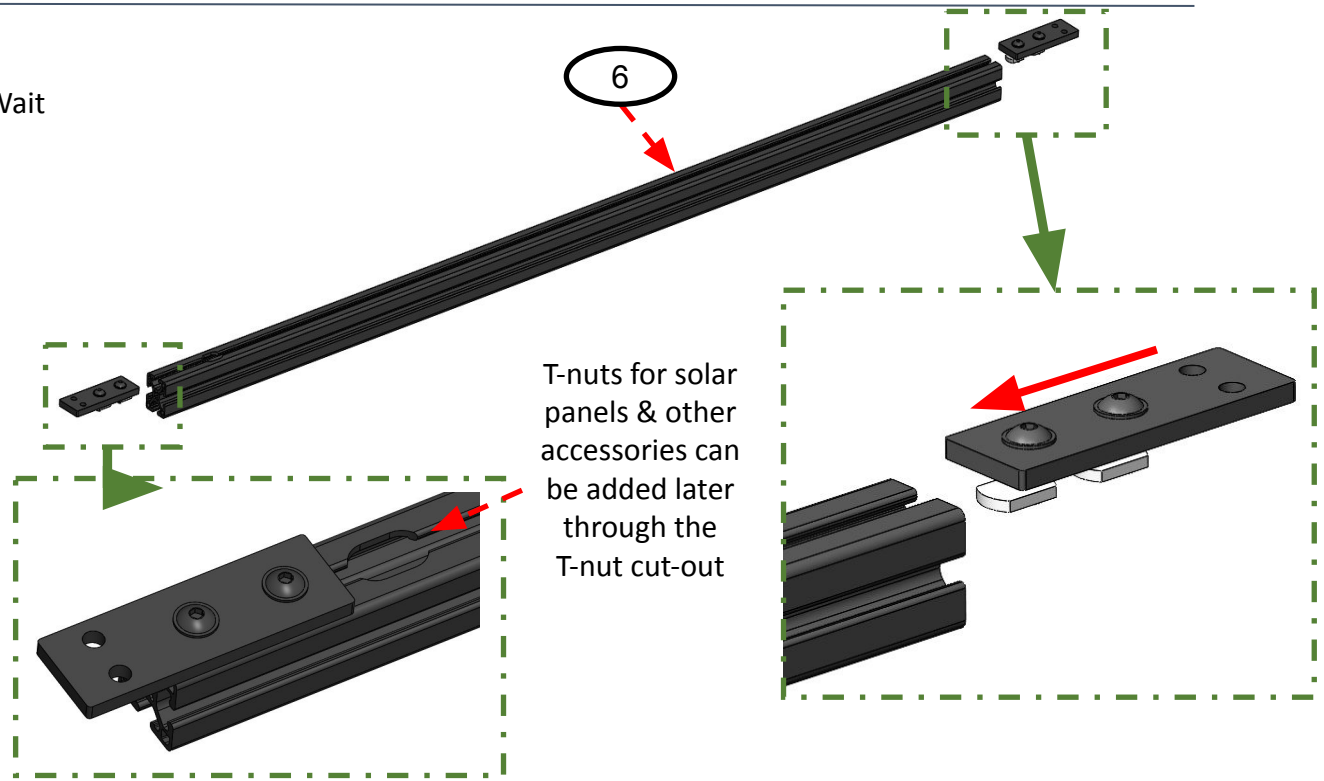
Cross Bar Initial Assembly:

1 x   3/16 Allen  Wait

- The cross bar 8020 length is 60.25” long, and should be oriented so the machined cut out on one end is facing up
- Slide in Narrow crossbar connectors with T-nuts long side first and boss down from both ends.
- The Narrow crossbar connectors should be installed on the same side as the T-nut cut-out in the 8020 crossbar.
- DO NOT fully tighten the hardware at this time, but they should be snug enough so they can not slide off while handling.
    - Double T-nuts (Item 13) and remaining Item 19 bolts are installed later.
- Repeat until all 4 cross bars are ready

Pro Tip:

- *See later pages for solar panel hardware information.*



Install Rack Brackets (Premium and Standard racks)

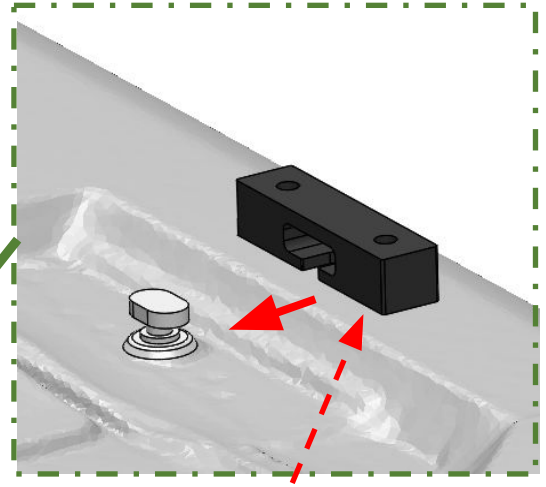
2 x & 2 x

• ½" Socket
• -

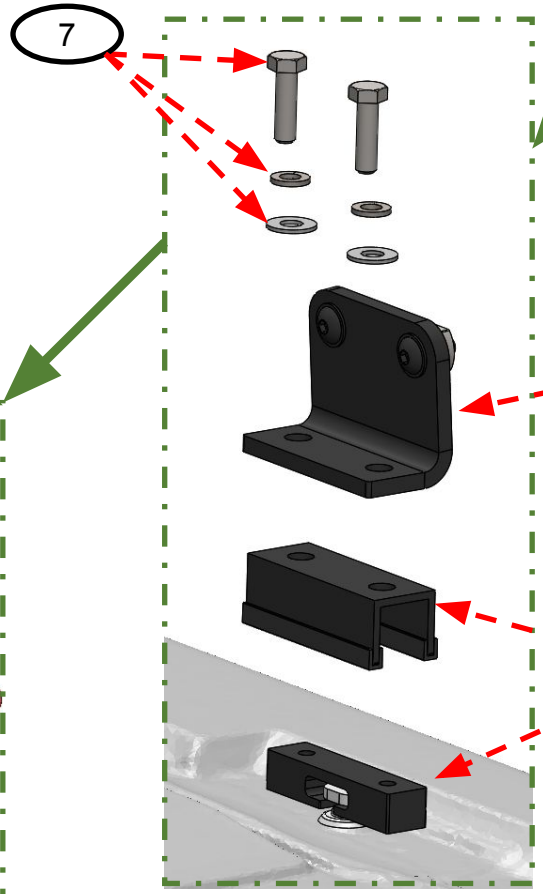
Wait

- Separate the parts in the roof rack bracket (pre-assembled for packaging).
- Slide the threaded block over the T-post on the roof of the van, from the outside in.
- Reassemble the roof rack bracket as shown to include the previously assembled 8020 adapter bracket and hardware.
- Repeat for all 6 brackets (3 driver and 3 passenger side positions)
- Note bracket positions below:
- Do not tighten brackets. Leave them loose enough to have play.

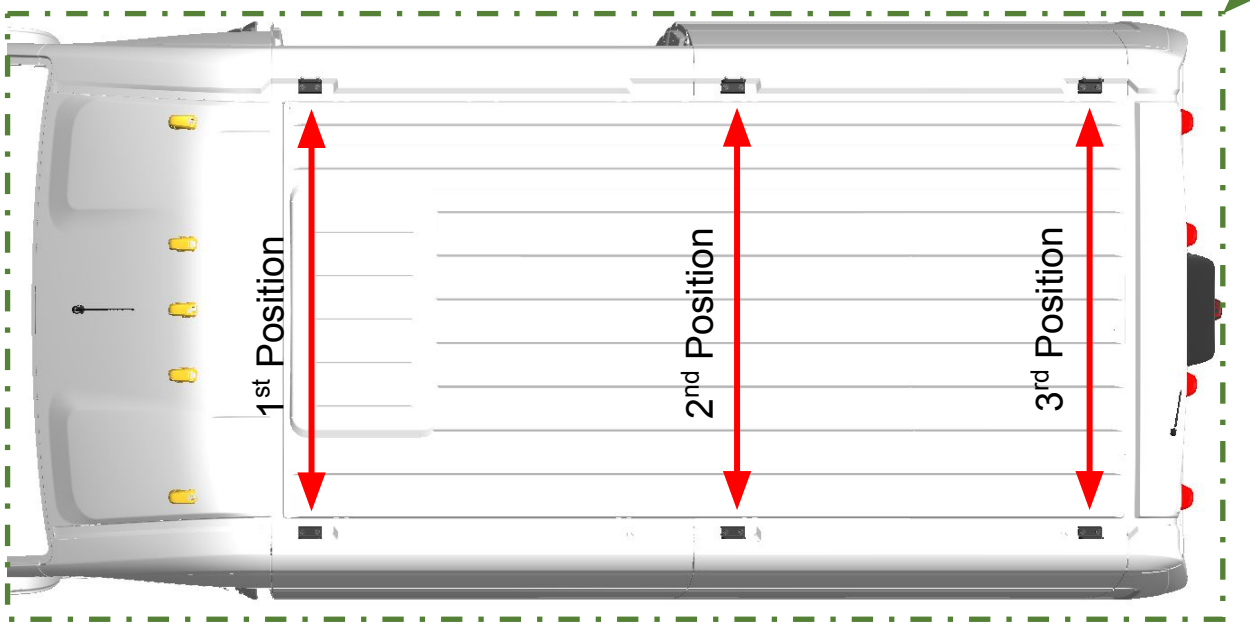
First



Second



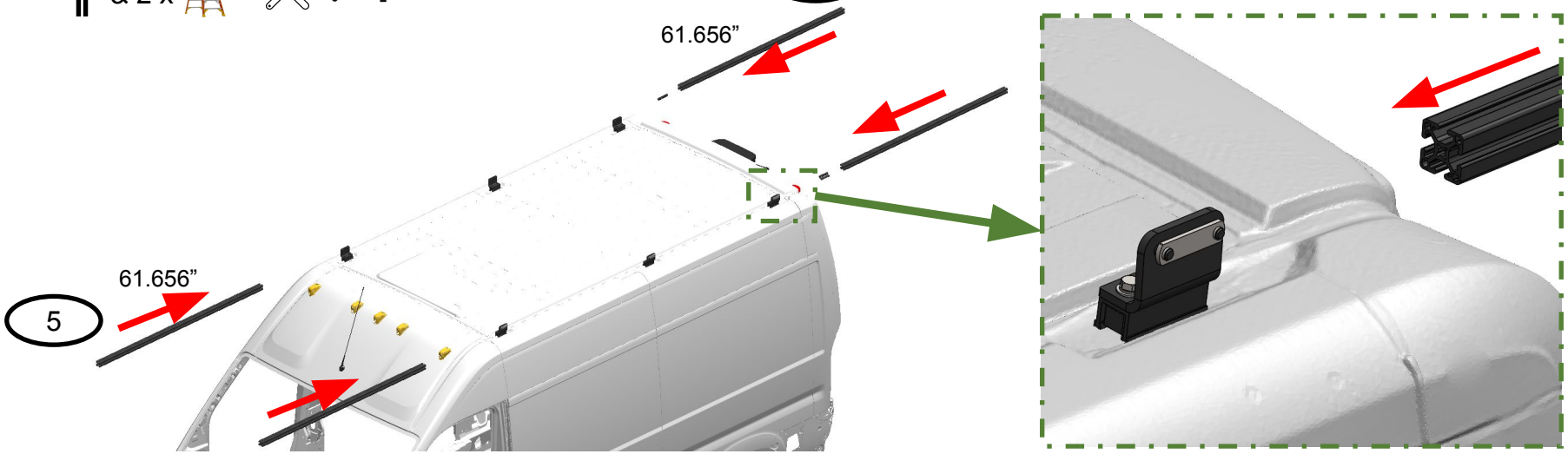
Third



Side Rail Assemblies (Premium and Standard racks)

2 x & 2 x : ½" Socket : - Wait 5

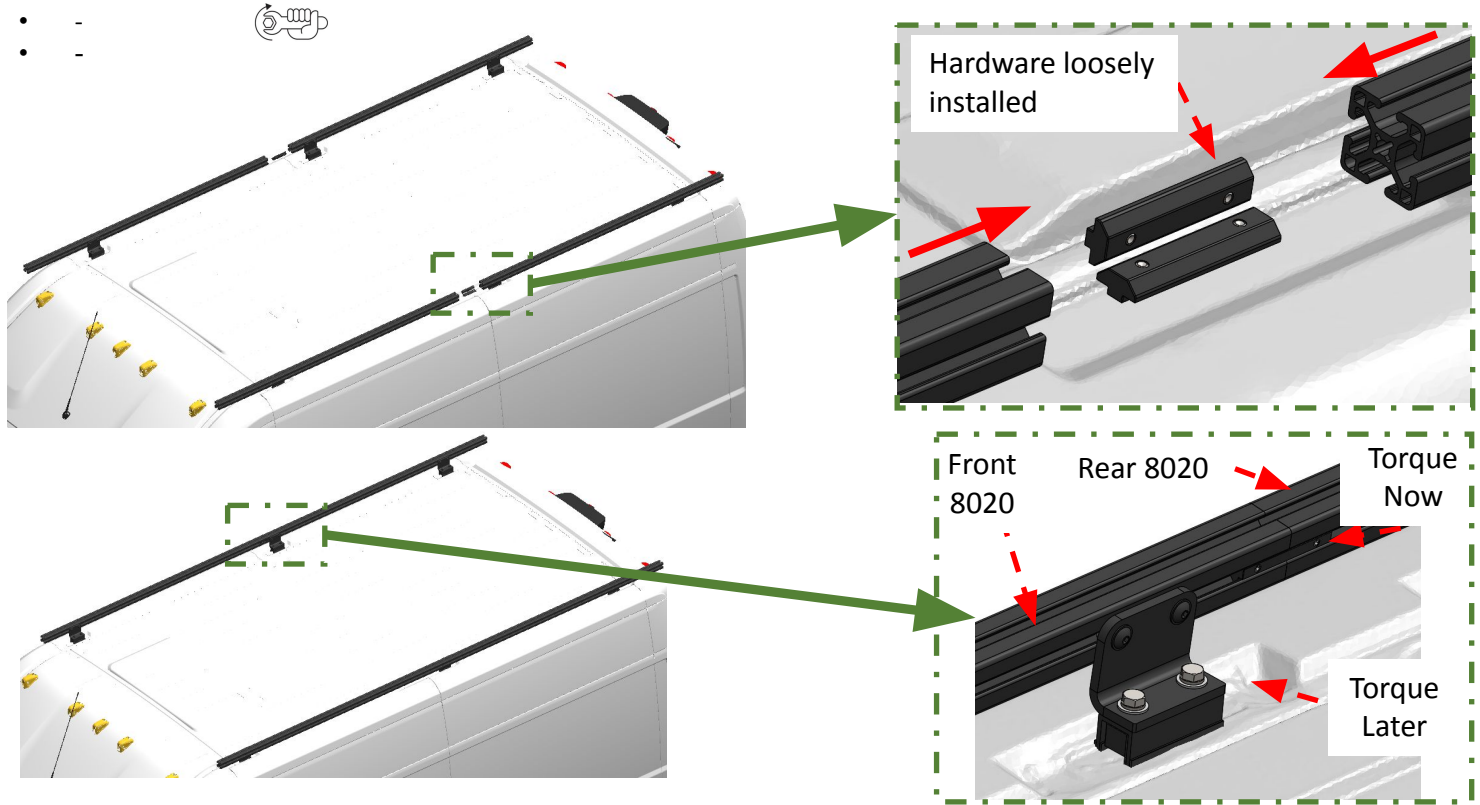
- Slide 8020 side rails onto rack brackets from the front and rear. Note, all 3 side rail pieces are the same length
- **PRO TIP**: If you encounter too much resistance to slide, loosen the t-nuts but do not fully unthread them.



Join Side Rails with Splice Plate (Premium and Standard racks)

2 x & 2 x : - : -

- Slide the Inside Splice Plate Assembly with pre-installed set screws into the inside and bottom channels of the 8020 at each connection. Note, loosen splice plate set screws if needed
- Hand tighten the set screws, inside and bottom, into one of the 8020 side rails. This will ensure the Inside Splice Plate does not slide as you adjust the rails.
- Fully push together all butt connections of the 8020 side rails.
- Adjust the Inside Splice Plate Assemblies so they are set halfway between each 8020 side rail.
- DO NOT fully tighten or torque hardware securing the brackets to the factory roof T-posts. The side rail should still be able to move around as a complete assembly.



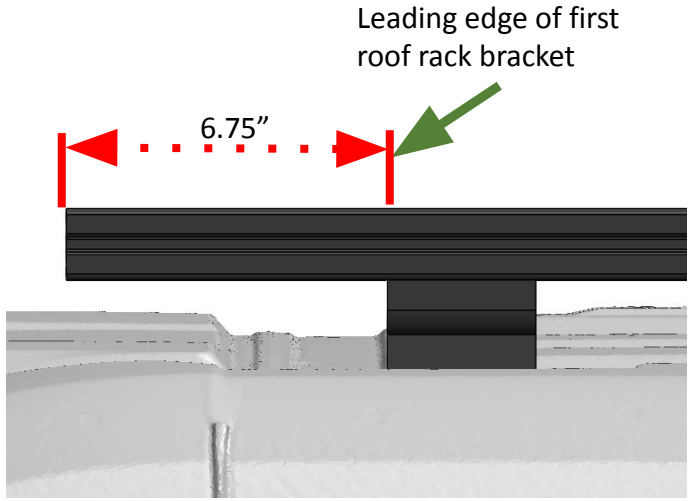
Side Rail Positioning (Premium and Standard racks)

2 x & 2 x

- ½" Socket
- -

Wait

- Position front side rails so they are 6.75" from the leading edge of the 1st position roof rack bracket. Whatever final dimension you end with, ensure driver side and passenger side rails are set to same dimension.
- Note, this is a target dimension and can be adjusted as needed once wind fairing is installed but may require loosening hardware.



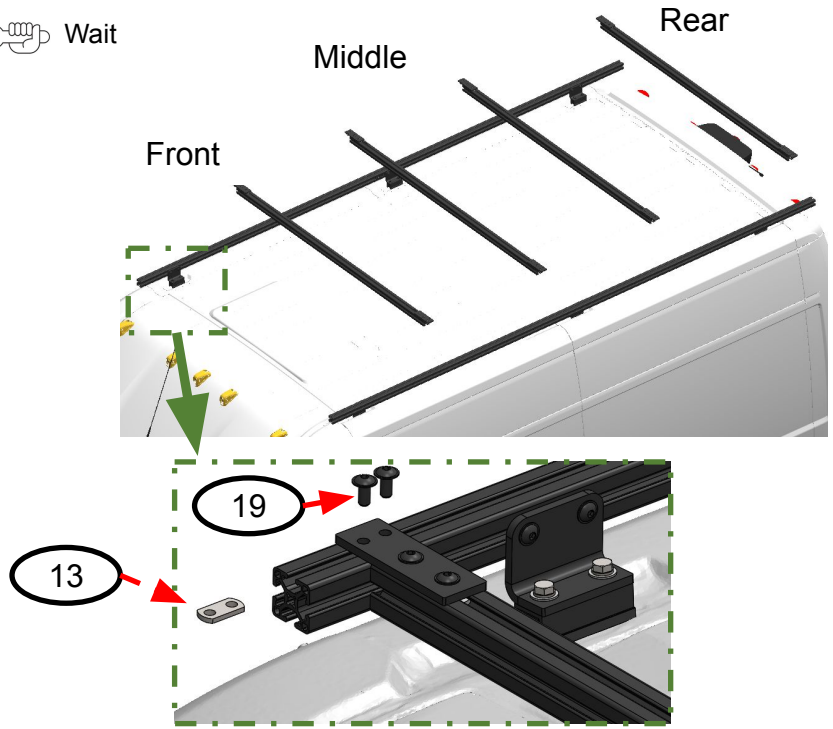
Install Cross Bar Assemblies

2 x & 2 x

- 3/16 Allen
- -

Wait

- Roughly position at least 3 cross bars to set the side rail spacing using at least one crossbar towards the front, one in the middle, and one towards the back – does not need to be their final location.
- Slide 1 double t-nut (Item 13) with bosses down into the top of each side rail assembly for each cross bar bracket.
- Slide any additional t-nuts into the top of your 8020 side rails that you may need for other accessories (awnings, tie downs, etc.).
- Lower your cross bars onto the 8020 side rails.
- Apply Blue Loctite 242 to the Item 19 bolts if required, and thread them into the installed t-nuts. Do not fully tighten.



Setting Side Rail Spacing

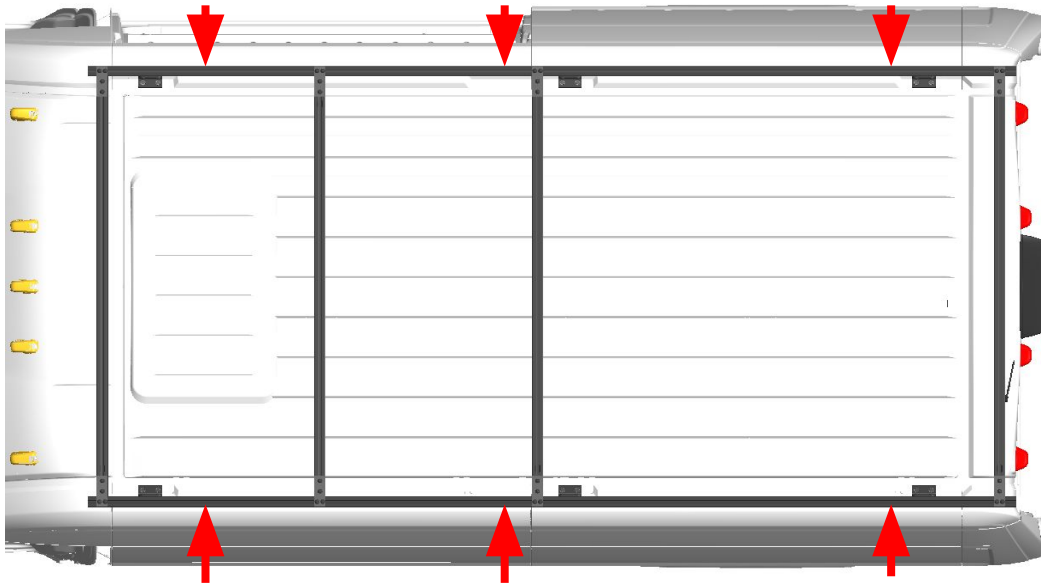
2 x & 2 x

- 3/16 Allen
- ½” Wrench & Socket

132 in-lbs

- Once cross bars are in place, center the rack on the van and set the side rail to side rail spacing so that the cross bars are snug, but can still be removed, or adjusted forward or backwards.
- As you adjust the rail to rail spacing, snug up the 8020 Adapter brackets and crossbar hardware to hold things in place.
  - If the 8020 adapter brackets are too tight, loosen just enough to allow the rail to rail spacing to be set.
- Once everything is parallel and square, Torque lock nuts securing 8020 adapter brackets & side rail assemblies to the factory channels to 132 in-lbs.
- Double check that all 8020 adapter bracket BHCS are tight and torqued before moving to the next step. Once solar panels and other items are installed, tightening and checking these is difficult.

Center Rack on Van



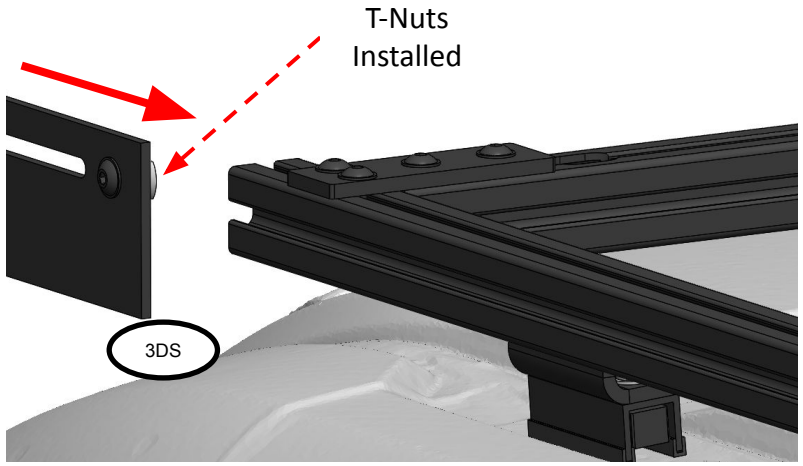
Install Side Plates

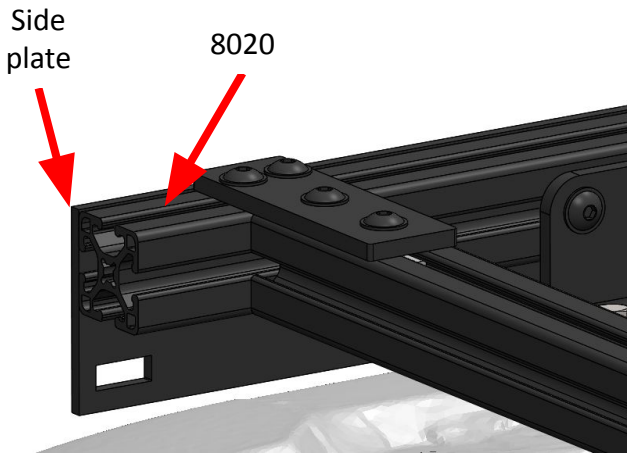
2 x & 2 x

- 3/16 Allen
- ½” Wrench & Socket

132 in-lbs

- Hardware should be pre-installed in side plates.
- Slide the front plate onto the 8020 from the front of the rack. Set the leading edge of the front plate to be flush with 8020 edge and snug up hardware.
- **PRO TIP**: If you encounter too much resistance to slide, loosen the t-nuts but do not fully unthread them.





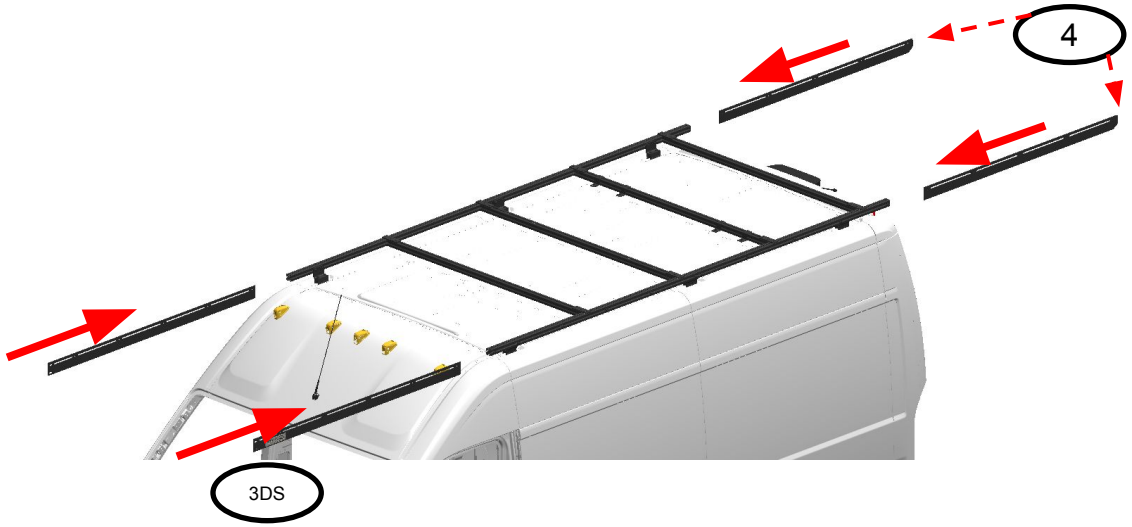
Install Side Plates Cont.

2 x & 2 x

- 3/16 Allen
- ½” Wrench & Socket

132 in-lbs

- Slide the middle & rear plate onto the 8020 from the back of the rack and snug up hardware.
- Position plates together as desired then torque bolts to 132 in-lbs.



Final Install of Wind Fairing

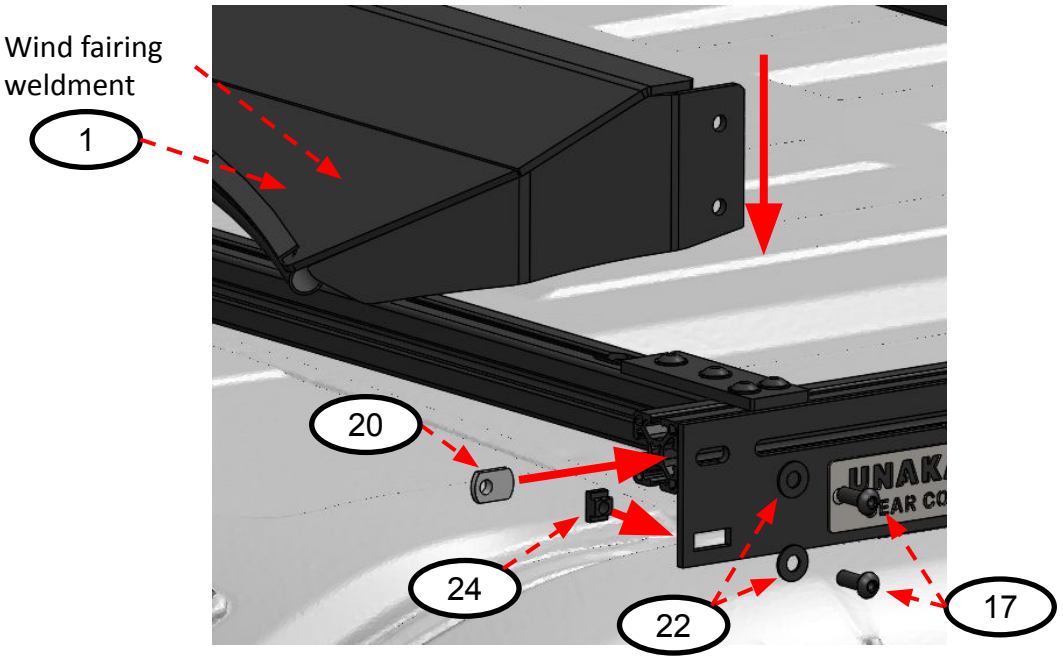
2 x & 2 x

- 3/16” Allen
- 1/2” Wrench or Socket

132 in-lbs

- Lower wind fairing weldment down on the outside of the side plates
- Insert and start the hardware to secure the wind fairing to the rack. Do not fully tighten.
- Position and angle the wind fairing as desired and snug up hardware.
- Tighten all hardware attaching wind fairing to side rail assemblies & Torque to 132 in-lbs.
- Note: The slots in the side plate allow for forward / backward adjustment of the wind fairing, as well as gives the ability to adjust the angle of the wind fairing.

- Warning: Take extra precautions to not drop the wind fairing onto the windshield or down the front of the van!
- **PRO TIP:** For Wind Fairing install, if you are not able to easily access the backside bottom nut to hold in place for tightening - you can tape it into place OR loosen the front side plates and slide the whole assembly forward (like a tray) to get the bolt threaded



Final Install of Cross Bar Assemblies

2 x & 2 x

- 3/16 Allen
- -

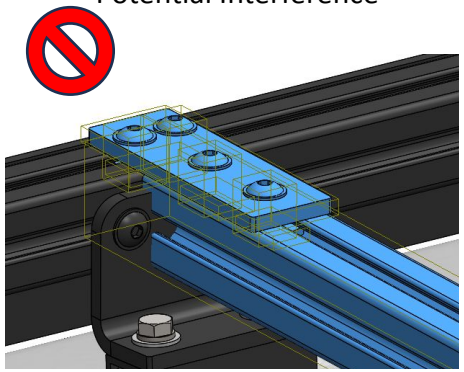
132 in-lbs

- Remove and reposition any cross bars that were not located in their final locations during the rail to rail spacing step.
- The final position of the cross-bar assemblies can now be set.
- **TIP:** Complete your solar panel installations which is covered in the following pages as part of this step.
- Once in position, torque hardware securing cross bars to side rails to 132 in-lbs.
  - See subsequent pages on solar panel layouts.
- **PRO TIP**: If you completely loosen or find your self loosening a bolt that already has Loctite on it several times, remove it and apply some more.

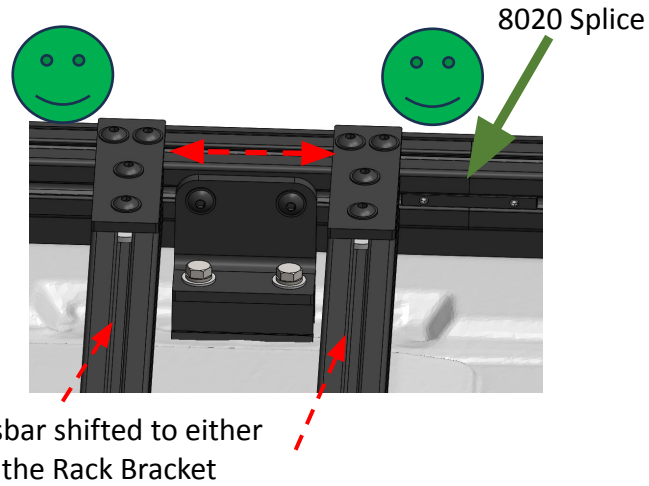
Potential Interference / Adjustments

- Depending on your layout, you may need to adjust the position of your cross bars to eliminate interferences.
- Slide the cross bar assemblies around the side rails, as the 8020 adapter brackets and inside splice plate assemblies are not relocatable.

Potential Interference



Solutions to splice plate interference



End Caps

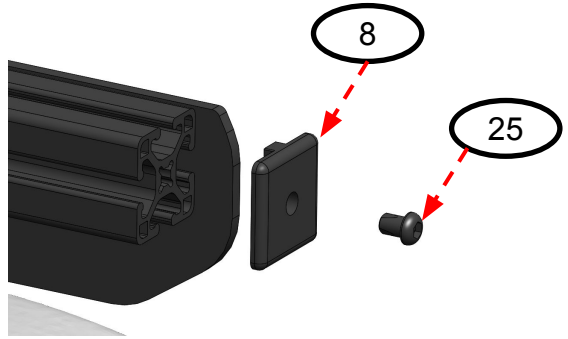
1 x & 1 x

- 5/32 Allen
- -

Snug

Hardware Sub: 8020 Style 15 Series End Caps

- End caps are used to cover the exposed 8020 at the back of the rack.
- Verify that all Item 20 T-nuts have been installed in your 8020 side rails.
- Place the end cap over the back of the 8020.
- Insert the Self tapping screw through the end cap and into the hole in the center of the 8020.
- Carefully tighten the self tapping screw until it is snug (Do Not Overtighten as these are easy to strip).
- Repeat for the other end cap.



Flush Mount Solar Panel Bracket Install

1 x & 0 x

- 7/16” Wrench & Socket
- 75.2 in-lbs

Hardware Sub: Flush Mount Solar Panel Bracket with 8020 Hardware

Flush Mount Solar Panel Brackets

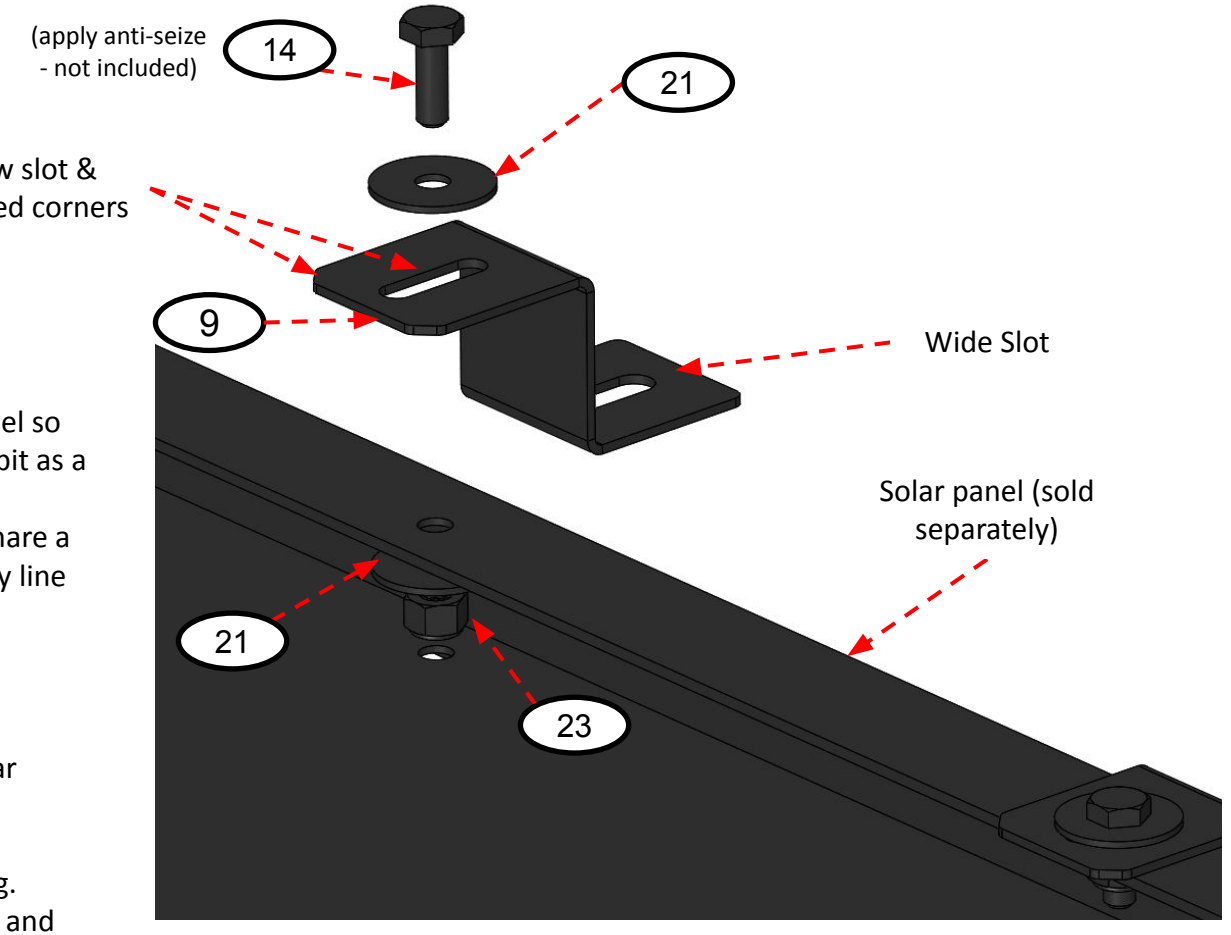
- If the solar panel manufacturer recommends more brackets, follow their requirements.
- 150W Solar Panel or Smaller: Minimum 4 Brackets.
- 150W to 250W Solar Panel: Minimum 8 Brackets.
- 300W and Larger: Minimum of 16 Brackets.

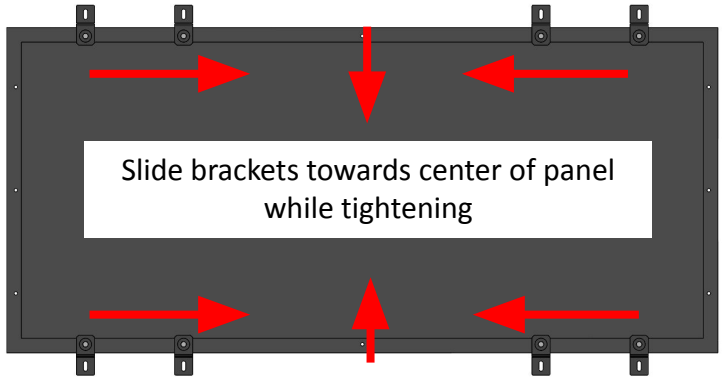
Prepare Solar Panel

- Locate existing mounting holes in the bottom of solar panels.
- If you are adding additional holes, place a ½” or ¾” backer board inside the panel so that you do not drill through the solar panel. Use a center punch, an 1/8” drill bit as a pilot, and 5/16” drill bit to finish if adding holes.
- **PRO TIP:** If you are adding holes to multiple panels, and you plan for them to share a t-nut during final install, take extra time while adding these holes to ensure they line up from one panel to the next for an easier and cleaner install.
- Clean up all drill shavings from panel.

Bolt solar panel brackets to the bottom of the solar panel

- Making sure you have the bracket oriented correctly (small slot goes to the solar panel, wider slot will go to the 8020).
- Apply anti-seize to the ¼-20 bolt during this step. (not included)
- Slide bracket all the way in and towards the center of the panel while tightening.
- Note: Slots can be used to compensate for installation variations, we specify in and towards the center for consistency from one panel to the next.





Top Mount Solar Panel Bracket Install

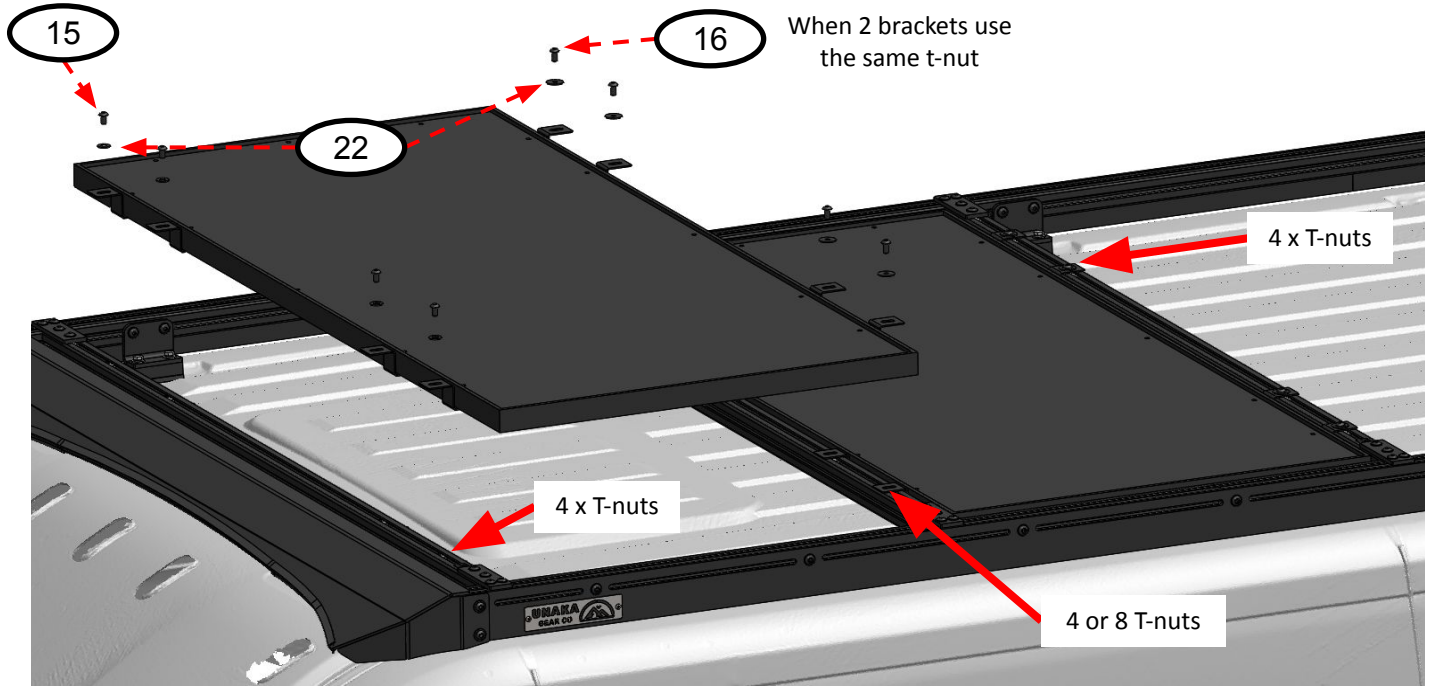
2 x & 2 x • 3/16” Allen

132 in-lbs

Hardware Sub: Flush Mount Solar Panel Bracket with 8020 Hardware

Install the solar panel to your roof rack / cross bar

- Cross bars should already be roughly positioned with t-nuts pre-installed.
  - Hardware kit includes 9/16” and 5/8” Long BHCS which look nearly identical. Make sure you use the correct bolt for the correct application.
  - Typical installs use 4 x 3678 T-nuts in each cross bar to support 1 x 200W panel. Use the 5/16-18 x 9/16” Long BHCS (Item 15) to secure the bracket to the 8020.
  - If 2 x 200W panels will share an adjacent cross bar, you can overlap the brackets so that two brackets use the same T-nut. If two solar panels are using the same T-nut, use the 5/16-18 x 5/8” Long BHCS (Item 16) to go through both brackets.
- Lay the solar panel in place, then final position secure rack cross bars (Final torque crossbar hardware once in position).
- **Pro Tip**: Prop one end of the solar panel up, and pre route or mange your solar panel cables.
- Lay the loose end back down and bolt your solar panel to your cross bars (Torque to 132 in-lbs).



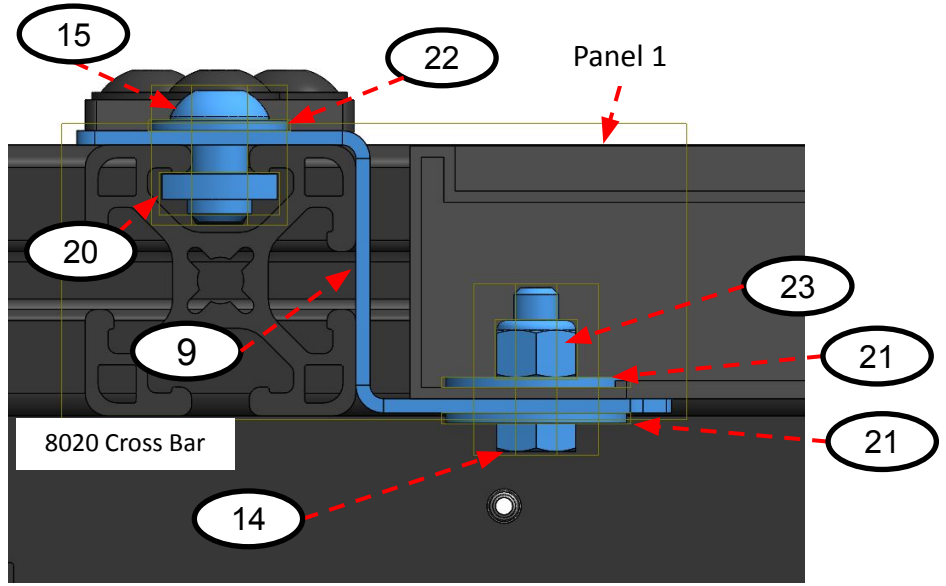


Image: 1 Panels using bracket & single T-nut

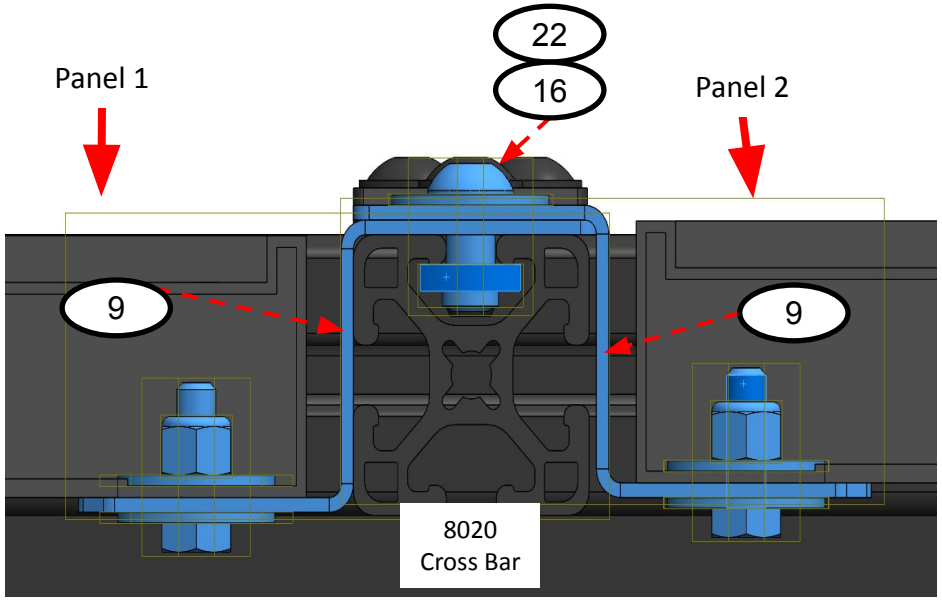


Image: 2 Panels Sharing Same T-Nut

Final Torque Checks

Once everything is installed, go back and check that all hardware is tight and torqued.