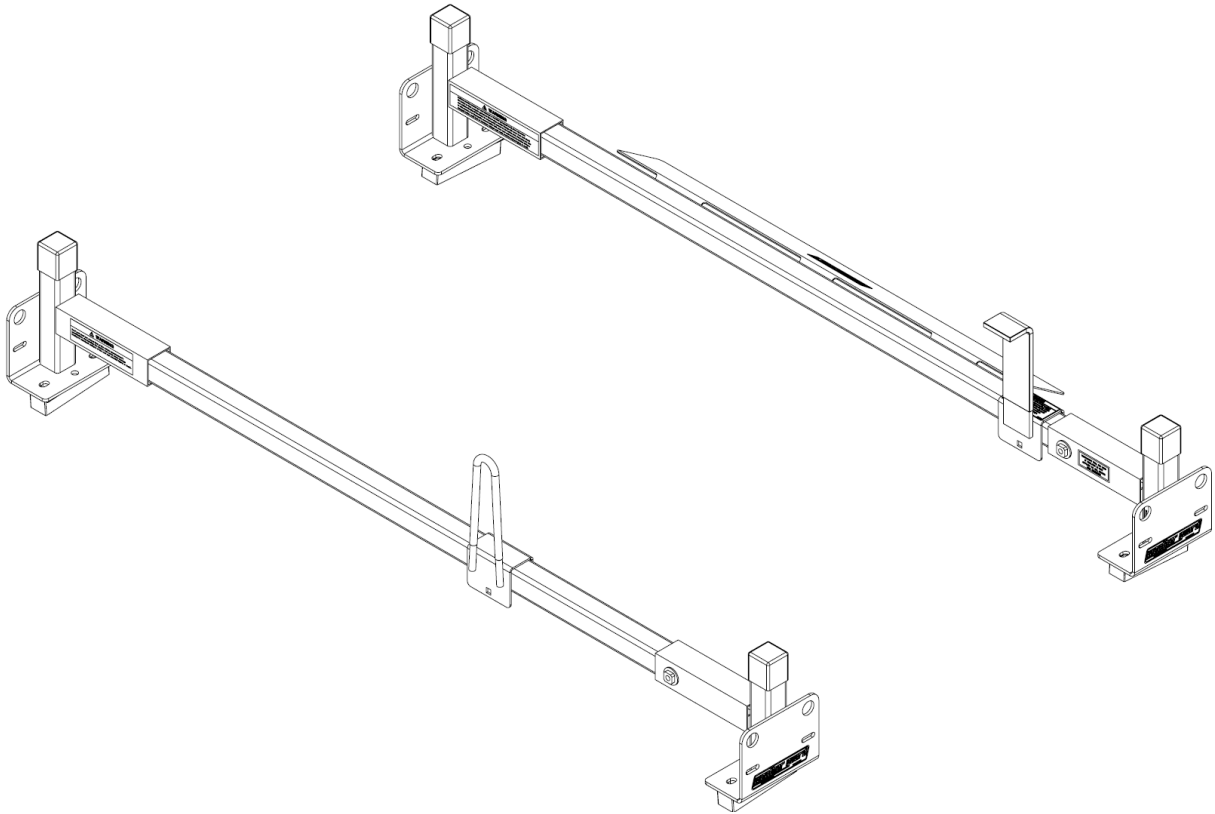




VAN STORAGE SOLUTIONS
FOR THE WAY YOU WORK™

INSTALLATION INSTRUCTIONS for METRIS STEEL VAN RACK & ACCESSORY CROSS MEMBER



MODELS 22002 AND 22102

ATTENTION: PLEASE READ AND UNDERSTAND ALL INSTRUCTIONS AND WARNINGS
BEFORE ASSEMBLING, INSTALLING OR USING THIS PRODUCT.

INSTALLATION GUIDELINES

- WEATHER GUARD® ladder racks are designed to work with OEM mounting points or with WEATHER GUARD® Mounting Channel kits to provide the best support for your ladders and to take advantage of OEM provided roof mounting points. If you intend to, but have not already installed the mounting channel kit to the van roof, install it now before proceeding.
- Review vehicle manufacturer's roof mount recommendation.
- Perform the installation on a level surface.
- Always wear protective eyewear to keep debris out of your eyes when installing WEATHER GUARD® Van Products.
- Tighten all 5/16" hardware to 17 ft-lb when ready.
- Tighten all M6 & 1/4" hardware to 76 in-lb when ready.
- Warranty will be void if sealant is not applied to all seams and crevices.
- **This product is designed and intended for use on the standard 126" wheelbase Mercedes Metris as well as the extended 135" wheelbase Mercedes Metris.**

OPERATION GUIDELINES

- Ladders transported on a vehicle should be properly supported and the overhang of the ladders beyond supporting points should be limited. Transporting a ladder with excessive overhang can result in reduced ladder life. Inspect your ladder before each use. Follow ANSI 14.2-2007 for direction on securing ladders to ladder racks.
- Load should be approximately centered front to rear and left to right on all vehicles. Failure to do this will cause damage to the rack and/or vehicle roof.
- Follow manufacturer's guidelines for maximum allowable roof load. **Do not overload the vehicle's roof.**
- It is the responsibility of the user to secure the load to the rack before transporting.
- Any modifications made to this product, or use of this product for any other purpose than its intended use, could create a hazardous condition that can cause serious personal injury or property damage.
- **At the end of the first week of use, check all of the fasteners for proper tightness and then check every three months thereafter.**
- For Vehicle Height Specifications with the rack installed, see page 9.

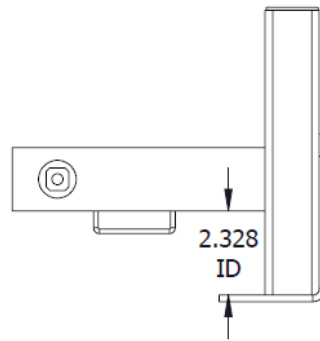
HARDWARE KIT

DESCRIPTION	22002	22102
1/4" Lock Washer	8	4
1/4"-14 x 3/4" Self-Drilling Screw	6	-
5/16" Lock Washer	2	1
5/16" Washer	26	13
5/16"-18 Knob	2	1
5/16"-18 Nylon Lock Nut	10	5
5/16"-18 x 1-1/4" Carriage Bolt	8	4
5/16"-18 x 1-3/4" Carriage Bolt	8	4
5/16"-18 x 2-1/4" Carriage Bolt	2	1
3/8"-16 x 3/4" Thread-Cutting Screw	4	2
M6-1 x 40mm Bolt	-	4
M6-1 x 50mm Bolt	8	-
Mounting Plate	8	4
1/4" Spacer	4	-

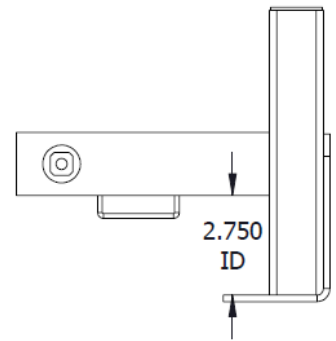
TOOLS REQUIRED

7/16" Wrench
1/2" Wrench
9/16" Wrench
10mm Wrench
Drill
1/8" Drill Bit
Measuring Tape or Ruler
Painter's or Masking Tape
Torque wrench

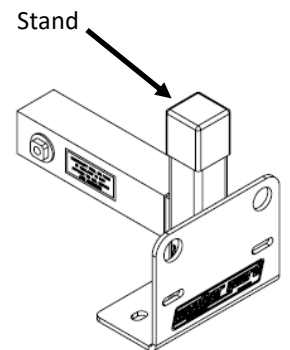
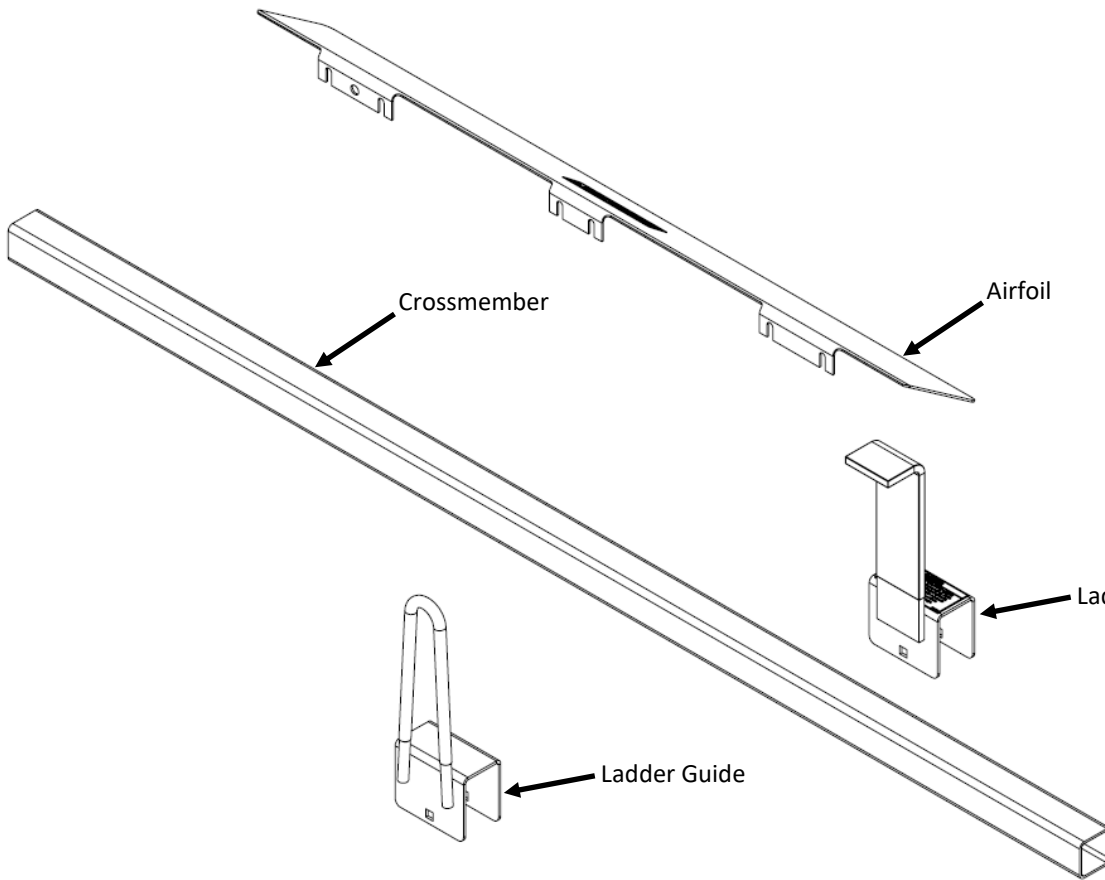
PARTS LIST



Center/Accessory Stand



Front/Rear Stand



Rubber Shim

Rubber Spacer

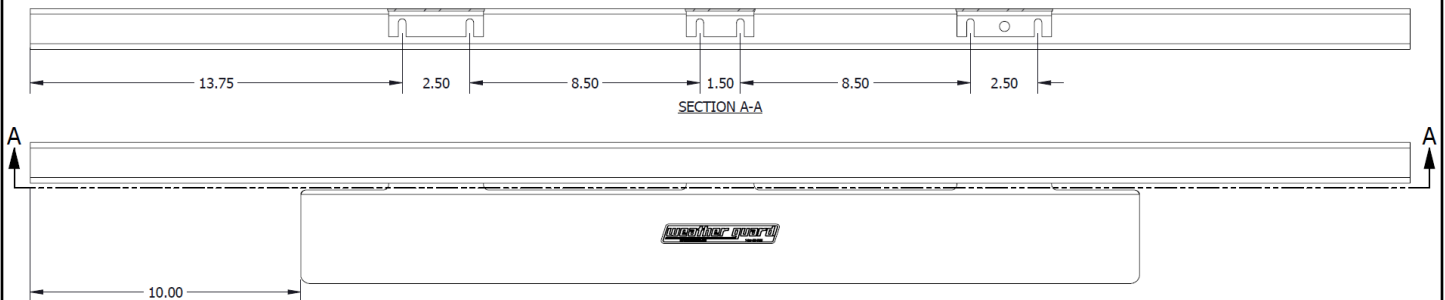
DESCRIPTION	22002	22102
Stand - Front/Rear	4	-
Stand - Center	-	2
Crossmember	2	1
Rubber Spacer	4	2
Rubber Shim	4	-
Ladder Guide	1	1
Ladder Stop	1	-
Airfoil	1	-
*Sealant	1	1
*Velcro Strap	2	-
*Rubber Tape (70")	2	1

*Item not shown

CROSSMEMBER PREPARATION INSTRUCTIONS

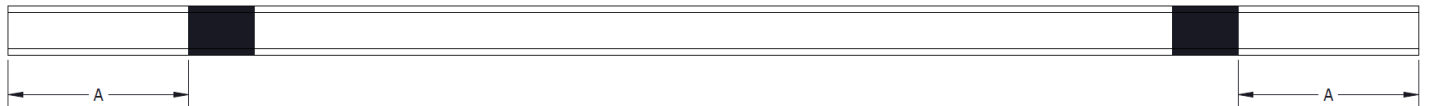
STEP 1. Mount Airfoil to front Crossmember

- Center Airfoil on a Crossmember tube as shown below and using it as a template, mark the centers of the open-ended slots (not the circular hole). Alternately, mark the tube at the corresponding dimensions shown below.
- Use a 1/8" drill bit to drill pilot holes through **one** side of the tube at the center of the tube face at each marked location.
- Drill a 1/4"-14 self-drilling screw into each hole, leaving a gap between the face of the tube and the head of the screw for the Airfoil to slip into.
- Apply a small amount of the provided Sealant at the face of the tube around each screw.
- Slip the Airfoil between the tube and the screws and use a wrench to tighten the screws.



STEP 2. Mark the Crossmember Width

- Use painter's or masking tape to mark the Stand overlap on each end of the Crossmembers as shown below. This will make it much easier to properly center the Crossmembers within the Stands later.
- Follow the table below to determine where to mark your Crossmembers. Be sure to measure to the outside edge of the tape, so that you are able to remove the tape later.
- Mark the tape with the word "Front" on the front Crossmember, "Center" on the center Crossmember, and "Rear" on the rear crossmember.



VEHICLE	TAPE DISTANCE		
	A		
	FRONT	CENTER	REAR
126" WB Mercedes Metris	6-1/8"	5-7/8"	5-5/8"
135" WB Mercedes Metris	6-1/8"	5-3/4"	5-5/8"



Proper taping of a rear Crossmember (5-5/8")

- For directly mounting to Mercedes Metris vans, proceed to page 5.
- For mounting to vans with Weather Guard Channels, proceed to page 7.

DIRECT-MOUNT INSTALLATION INSTRUCTIONS

STEP 1. Prepare Van Roof

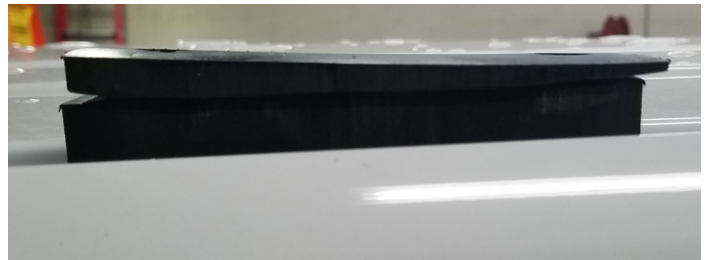
- Remove the circular caps in van roof mounting points. (see page 10 diagrams if locations below are unclear)
 - If installing a 2-bar rack (22002), remove the rear 4 caps and the 2nd pairs of caps from the front.
 - If installing a 3-bar rack (22002 & 22102), remove the 12 rear-most caps.
 - If adding an accessory crossmember (22102), remove the 2nd pairs of caps from the rear.
 - Note: Do not use the front pairs of mounting holes.



- Apply the provided Sealant around the now-exposed mounting holes. Ensure roof surface is clean before applying the Sealant.
- Place the Rubber Spacers on the van roof with the holes aligned to the mounting holes in the van roof.



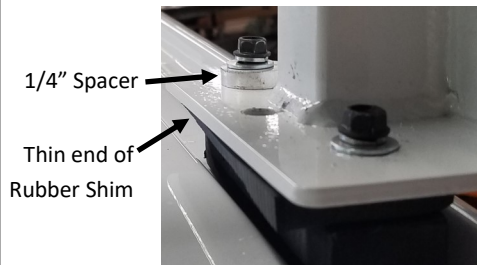
- Place the Rubber Shims on top of the front and rear Spacers with the thicker end of the Shim toward the outside of the van and centered on the Spacer.



DIRECT-MOUNT INSTALLATION INSTRUCTIONS (Continued)

STEP 2. Install Half of the Stands

- Loosely install front and rear Stands atop the Rubber Shims on one side of the van using (2) M6 x 50mm bolts, (2) 1/4" lock washers, and (2) 5/16" washers through the outer slots in the base of the Stand. A 1/4" Spacer will be used on the thin end of the Shim.
 - Note:** If also installing a center/accessory crossmember, ensure that the lower Center Stands are only used at the location for the accessory crossmember (see Parts List on page 3). Loosely install Center Stand on the same side of the van using (2) M6 x 40 mm bolts, (2) 1/4" lock washers, and (2) 5/16" washers.
- Do not install the Stands on the other side of the van yet.**



Install front & rear Stands using (2) M6 x 50 mm bolts, (2) 1/4" lock washers, and (2) 5/16" washers. A 1/4" Spacer will also be used between the stand and the flat washer on the thin end of the Shim.

Install Center Stand using (2) M6 x 40 mm bolts, (2) 1/4" lock washers, and (2) 5/16" washers.



STEP 3. Install Crossmember & Opposite Stand

- Insert a Crossmember into one of the previously-installed Stands. Note: The Airfoil is to be installed at the front of the van sloping downward.
- Place one of the remaining Stands over the remaining end of the Crossmember and loosely install it to the van roof using the same hardware used on the previous side of the van (see Step 2).
 - Note:** If also installing a center/accessory crossmember, ensure that the lower Center Stands are only used at the location for the accessory crossmember (see Parts List on page 3). Install to van roof using (2) M6 x 40 mm bolts, (2) 1/4" lock washers, and (2) 5/16" washers.
- Center the Crossmember between the two Stands using the tape applied earlier as a guide.
- Tighten the Crossmember in place within the Stands using a 3/8"-16 thread-cutting screw in the weldnut in the side of each Stand.
- Tighten the M6 bolts in the Stands.
- Remove the pieces of tape.
- Repeat this process for the remaining Crossmember(s) and then proceed to "Final Installation Instructions" on page 8.



WG CHANNEL-MOUNT INSTALLATION INSTRUCTIONS

STEP 1. Assemble & Place Mounting Plates

- Determine the rough locations where you would like your Crossmembers placed within the channels.
- Decide if you are using the two slots (recommended) in the Stands or the center hole.
 - If using the slots, assemble and insert two mounting plates per Stand as shown below.
 - If using the center hole, assemble and insert one mounting plate per Stand as shown below.
- When inserting the Mounting Plates into the channels at the desired locations, keep in mind that they will not be able to slide past the heads of the bolts that hold the channels to the roof.

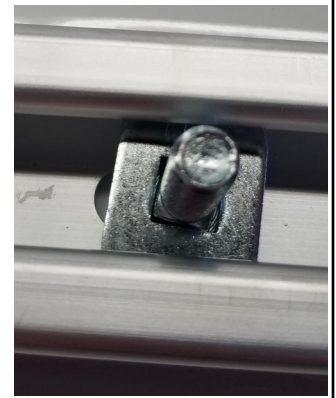
Insert a 5/16"-18 x 1-1/4" carriage bolt into each Mounting Plate with the word "TOP" facing the threads.



Insert the Mounting Plates and carriage bolts into the channels near the desired Crossmember locations.

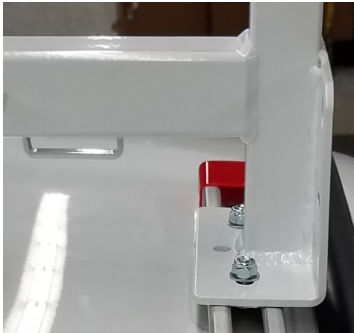


Rotate the Mounting Plates 90° clockwise.



STEP 2. Install Half of the Stands (left picture below)

- Loosely install Stands on one side of the van using a 5/16" washer and 5/16"-18 nylon lock nut per mounting plate. **Do not install the Stands on the other side of the van yet.** Note: It may also be necessary to place a Rubber Shim beneath the front and rear Stands to level out the Crossmembers.



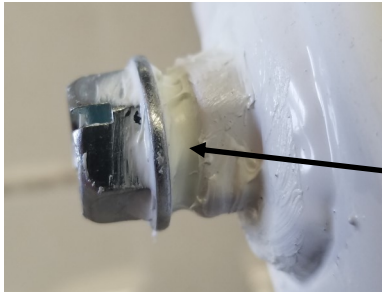
STEP 3. Install Crossmember & Opposite Stand (right picture above)

- Insert a Crossmember into one of the previously-installed Stands. Note: The Airfoil is to be installed at the front of the van sloping downward.
- Place one of the remaining Stands over the remaining end of the Crossmember and loosely install it to the channel with a 5/16" washer and 5/16"-18 nylon lock nut per mounting plate. Note: It may also be necessary to place a Rubber Shim beneath the front and rear Stands to level out the Crossmembers.
- Center the Crossmember between the two Stands using the tape applied earlier as a guide.
- Tighten the Crossmember in place within the stands using a 3/8"-16 thread-cutting screw in the weldnut in the side of each Stand.
- Finalize the desired location of the Crossmember and tighten the nuts on the Stands.
- Remove the pieces of tape.
- Repeat this process for the remaining Crossmember(s)

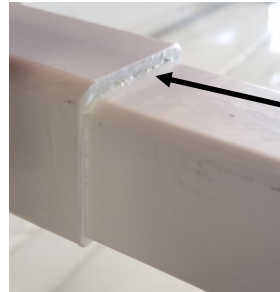
FINAL INSTALLATION INSTRUCTIONS

STEP 1. Apply Sealant

- Apply provided Sealant around the 3/8"-16 thread-cutting screws in the Stands.
- Apply provided Sealant around the Crossmembers where they meet the Stands.



Seal These
Crevices
All Around



Seal These
Joints All
Around

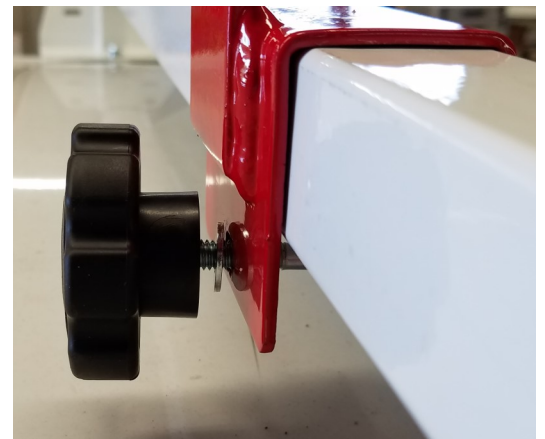
STEP 2. Apply Rubber Tape

- Cut two 6-3/4" pieces from each strip of Rubber Tape. Apply these pieces to the top of the crosspost of each Stand.
- Measure the distance on the Crossmember between the two Stand crossposts and cut a piece of Rubber Tape accordingly. Apply the piece of Rubber Tape to the top of the Crossmember. Repeat for remaining Crossmember(s).
- **Note: Ensure the tops of the crossposts and Crossmembers are clean before applying the Rubber Tape.**



STEP 3. Install Ladder Stop and Ladder Guide(s)

- Slip the Ladder Stop/Guide over the top of the Crossmember.
- Use a 5/16"-18 x 2-1/4" carriage bolt, 5/16" washer, and Knob to clamp the Stop/Guide in place in the location you desire. The Knob will allow you to adjust its position or remove it by hand later.
 - A lock washer is also provided in case the knob wants to loosen by itself over time.
 - Alternately, a 5/16"-18 nylon lock nut (provided) can be used in place of the Knob for a more permanent placement.



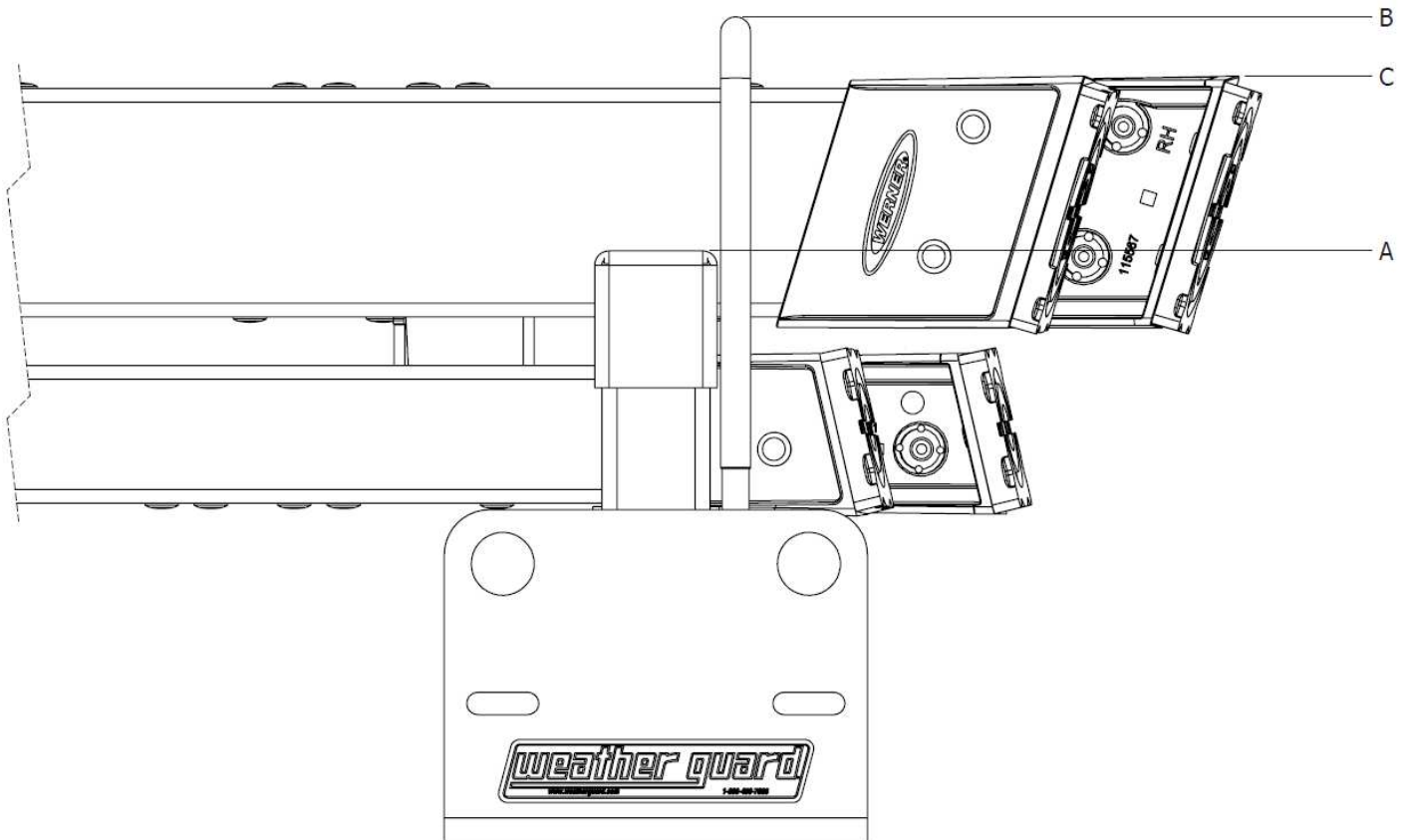
STEP 4. Attach Velcro Straps through the Stand loops

VEHICLE HEIGHT SPECIFICATIONS

Overall Vehicle Height Information

- The table below shows the overall height of a given vehicle with the rack installed.
- The values in the table are based on stock, unmodified suspension of an unloaded vehicle.
- The first column in the table shows the overall height if any and all ladder guides and ladder stops are removed and nothing is loaded above the top of the vertical posts of the Stands ("A" in diagram below).
- The second column in the table shows the overall height if a ladder guide or ladder stop is the highest point on the vehicle ("B" in diagram below).
- The third column in the table shows the overall height if any and all ladder guides and ladder stops are removed and a ladder of 5-7/8" thickness is loaded on the rack ("C" in diagram below).

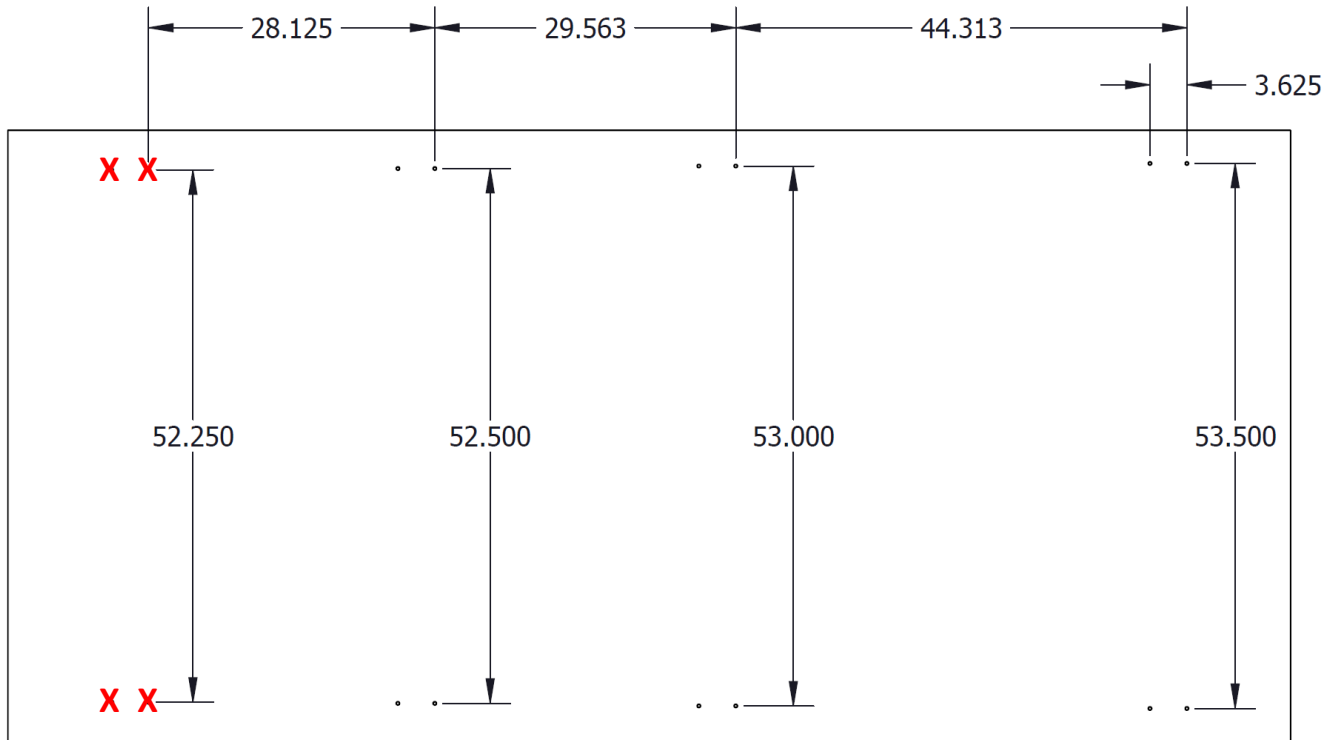
OVERALL VEHICLE HEIGHT			
Van	Rack Only (A)	w/Guide or Stop (B)	w/Ladder & No Guides or Stops (C)
126" WB Metris	82-7/8"	86-1/4"	85-3/8"
135" WB Metris	83"	86-3/8"	85.5"



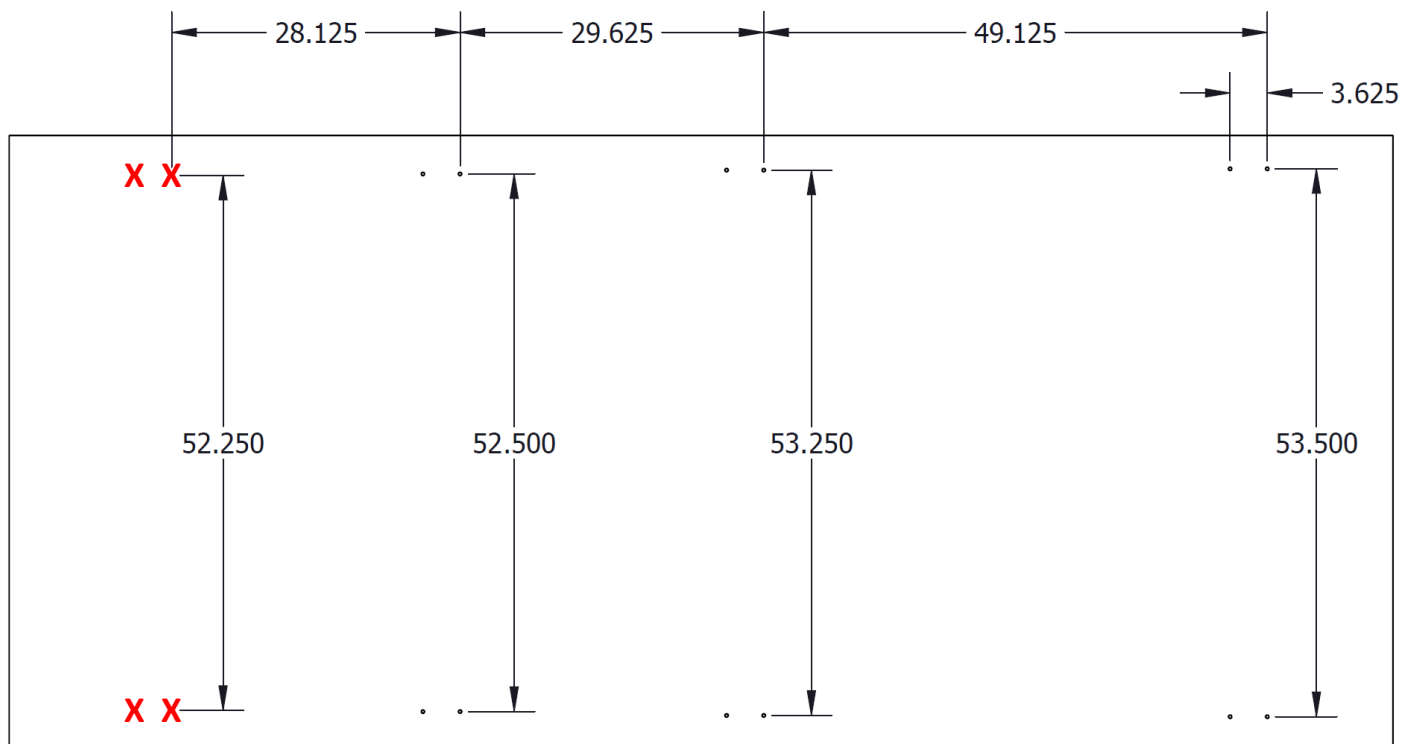
ROOF MOUNTING POINT REFERENCE DIAGRAMS

Shown with Rear of van to the right. All dimensions are for reference only and may vary slightly.

X—Do not use the front mounting points



126" Wheelbase Mercedes Metris



135" Wheelbase Mercedes Metris