

Tire/Box Rack Installation

Instructions

P/N 210713: 2019+ Mercedes Sprinter Rear Door Tire/Box Rack

Before you begin:



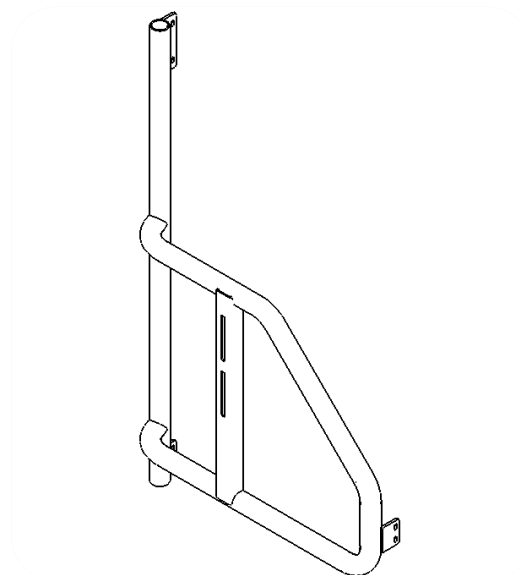
- *Stainless steel (SS) hardware may bind together when tightening — apply an anti-seize assembly lubricant to the threads of each SS bolt before assembly.*
- *Do NOT use an impact gun if this symbol is shown – doing so may strip or cross-thread bolts.*
- **Maximum load capacity is 100 lbs on rack while travelling**

Required Tools:

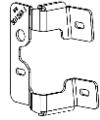
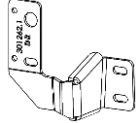
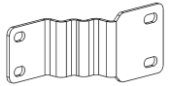
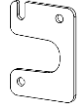



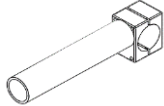
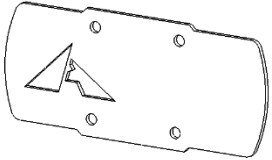
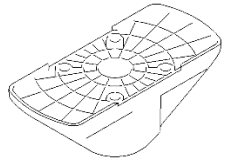
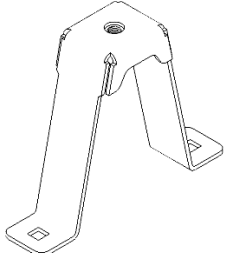
- Standard and metric wrench set
- Standard and metric socket set
- Torx bit set
- Isopropyl Alcohol
- Baby Soap or Dish Soap
- Clean Rag
- Tin Snips or Dremel Cut-Off Wheel
- Painter's Tape (optional)
- Spray Bottle (optional)
- Heat Gun or Blow Dryer (optional)

Included Hardware:

P/N	Description	Quantity
70344	5/16"-18 x 1" Button Head Bolt, BLACK OXIDE, SS	4
70446	5/16"-18 x 1-1/4" Button Head Bolt, BLACK OXIDE, SS	2
70345	5/16" ID Washer, BLACK OXIDE, SS	12
70346	5/16"-18 Nylon-Locking Nut, BLACK OXIDE, SS	6
70448	5/16" ID Washer, .125" THK, BLACK OXIDE SS	4
70124	M8-1.5 x 40 mm	6
70111	5/16" ID Split Washer	6
70028	3/8" Washer	3
70024	3/8"-16 Nylock Locking Nut	2
70348	3/8"-16 x 1.25" Carriage Bolt, SS	2
70477	M8-1.25 x 30mm, Countersunk, flat head, torx bolt, Zinc	2
70480	3/8"-16 x 5" Hex Head Bolt, Fully Threaded, Zinc	1
70271	3/8 Internal Tooth Lock Washer, Zinc	1
70079	#10-32 x 1/2" Philips head bolt, SS	4
70004	#10-32 Nylon-Locking Nut, SS	4
70246	Antiseize Bolt Lubricant Packet, 2g	1
301311.1	Impact Resistant Tape, Upper Hinge	1
301311.2	Impact Resistant Tape, Lower Hinge	1
301311.3	Impact Resistant Tape, Center	1
401021	Door Limiting Strap	1
401022	Webbing Anchor, 1" Webbing	1
70478	Bolt, 1/4"-20 x 1/2", Tamper-Resistant, SS	4
70479	Bit, 5/32" hex, tamper-resistant	1



Additional Parts:

Part Number:	Description:	Quantity:	Picture:
301263.1 / 350649	Upper Hinge Bracket, Driver	1 ea.	
301262.1 / 350651	Lower Hinge Bracket, Driver	1 ea.	
301264 / 350653	Inner Driver Door Bracket	1 ea.	
301265 / 350625	Latch Spacer (<i>Rubber</i>)	1 ea.	
301257 / 350638	Hard Stop, Strap Bracket	1 ea.	
301278 / 350676	Hard Stop, Strap Clamp	1 ea.	
301258	M8 Machined Spacer	3 ea.	
350662	Bolt-On Tire/Box Support (preassembled)	2 ea.	
301620	Universal Tire Mount, Wheel Wedge Cover	1 ea	
301629	Universal Tire Mount, Wheel Wedge	1 ea	
301634	Universal Tire Mount, Bracket	1 ea	

Rear Door Rack Installation:

1. Clean the area around the center inside latch and each door hinge with soap/water first, and then with isopropyl alcohol.
2. Remove weather-stripping from the inside of the driver's side door.
3. Take a picture of the center, inside latch for later re-alignment (see Figure 1).

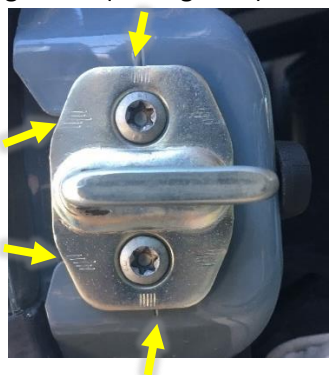


Figure 1: Factory Latch Alignment

4. Remove the center latch pin on the inside of the door as shown in Figure 2.

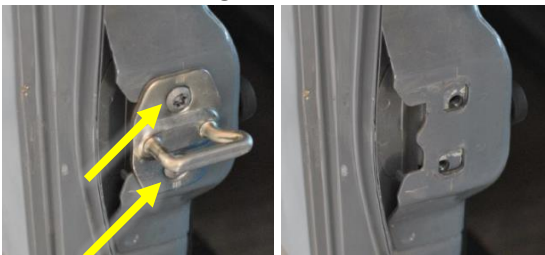


Figure 2: Driver's Side Inside Latch Pin Removal

Protective Tape Application:

5. Cut the supplied protective tape into shape using the templates at the end of the installation instructions to provide additional protection for the door. Each bracket is designed to contact only at the door edges, but enough protective tape is provided to cover the entire overlapping area. Make sure that the sticky side is oriented correctly while cutting and applying (white backing towards vehicle). Reference Figure 3 & 4.
6. Dry-fit the corresponding brackets around the door in each location to find the desired position for the protective tape on the vehicle.

Use painter's tape to outline application area of protective tape if desired.



Figure 3: Protective Tape Locations on Door

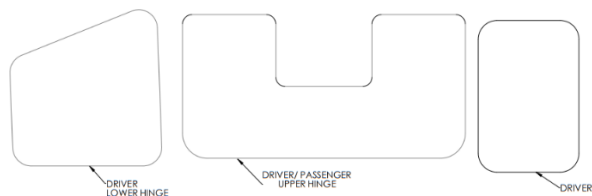


Figure 4: Template Examples (See End of Instructions for 1:1)

7. Apply the protective tape to each location, one at a time, using the method described below (wet application technique).
8. Prepare the surface for protective film application:
 - a. Clean the area around each hinge with isopropyl alcohol and rag.
 - b. Wash your hands thoroughly.
 - c. Do not apply in direct sunlight
 - d. Apply in temperatures above 60°F.
9. Spray the surface thoroughly with water and do not wipe down the surface.
10. Remove the liner from the protective tape while spraying the adhesive side with water.
11. Apply the protective tape to the outside of the door at either the upper hinge, lower hinge, or center latching location. On the hinge side of the door, leave approximately ½" of tape overhanging to be wrapped around the edge of

the door (contact zone). Leave the tape overhanging for now.

12. Squeegee all air bubbles out starting at adhered edge. Press with your fingers first, and squeegee only if needed.
13. Wrap remaining protective tape around the door edge.
14. The adhesion process can be speed up by creating a 3:1 water-alcohol solution (3-parts water, 1-part alcohol) and spraying between the door and tape (lift section up and spray adhesive side).
15. If desired, use a heat gun or blow dryer to conform the tape to curved areas further.

Bracket Installation:

16. Install the inner driver door bracket while re-aligning latch pin as close as possible to factory position (use previously taken picture as a guide, reference Figures 1 & 5).

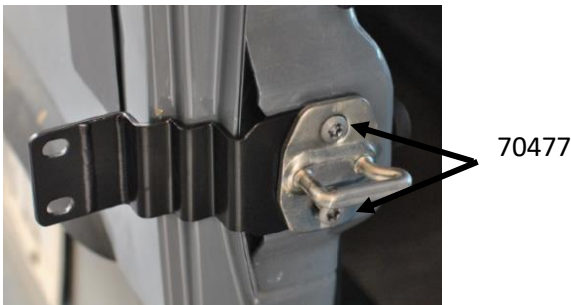


Figure 5: Driver's Inside Door Latch Bracket Installed

PRO TIP: Before tightening the included flat head bolts [70477], slowly bringing your passenger door *near the closed position (not fully closed)* and verify vertical alignment of latch pin (driver door) to latch (passenger door). Only close door once product is fully installed.

17. Install the latch spacer on the passenger's side door by completing the following:

- a. Remove all the torx bolts from passenger side door latch. Note: The latch should remain within reach and not fall into door.



- b. Insert the upper part of the latch spacer between the door and the latch. Re-install the top right bolt through the spacer– **failure to reinstall this bolt now may allow the spacer to drop into door!**



- c. Fold the bottom into the door and rotate into place to align all bolt holes.



- d. Re-install the remaining factory bolts.



- e. Now the latch should not protrude past the sheet metal of the door.

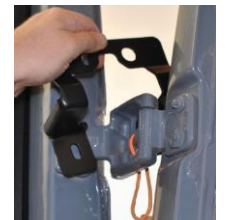


18. Install the upper hinge bracket by:

- a. Remove only the lower torx bolt, *on the door*.



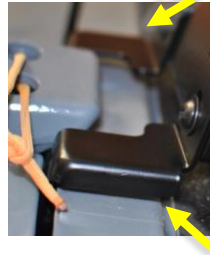
- b. Fit the upper hinge bracket over the hinge.



c. Rotate into place.



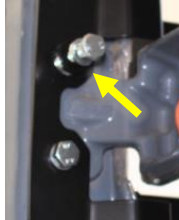
d. Fit the bracket over the upper torx bolt and rotate into desired position. Make sure the bracket is not contacting the sheet metal on the other side of the door, at either the top or the bottom of the bracket.



e. Install a M8 bolt and 5/16" split washer into the bottom hole. Tighten the bolt to ~17 ft-lbs (23 Nm).



f. Remove upper torx bolt and install a M8 bolt, 5/16" split washer, and **M8 machined spacer**.



g. Tighten down second bolt to ~17 ft-lbs (23 Nm)



19. Install the lower hinge bracket following the same procedure detailed in Step 18 and by installing over the hinge from the bottom up. Reference Figure 6.

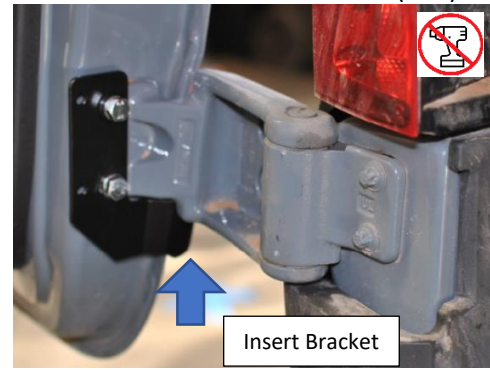


Figure 6: Lower Bracket Installed

Tire Rack Installation:

20. Install the rack using the provided black 5/16" bolts, washers, and nuts.
 - a. Loosely install all bolts through bracket and rack
 - b. before tightening. Use the 1" bolts for the upper and lower hinge brackets and the 1-1/4" bolts for the center.
 - c. Tighten the upper and lower **hinge** brackets first.
 - d. There should be a small gap at the center bracket before tightening (0-1/8"). If the gap is larger than 1/8", use the provided 1/8" washers as shims (PN 70448) to close the gap to $\leq 1/8"$ (See Figure 7).

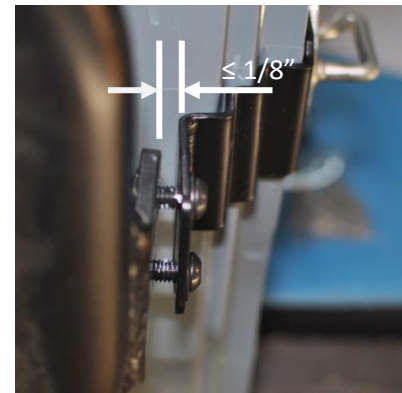


Figure 7: Gap Between Bracket and Product

21. With all bolts tightened, verify the hinge brackets and inner door brackets have appropriate clearances with the body while slowly opening and closing both rear doors. Adjust as needed.

22. Reinstall the weather stripping on the inside seam of the door.
23. Mark and cut the weather-stripping to fit around the inner driver door bracket. On the weather-stripping, cut the channel (attachment to the folded sheet metal) and not the bulb (hollow tube); (Reference Figure 8 & 9). Tin snips work best for cutting through the weather-stripping, but a cut-off wheel can also be used.

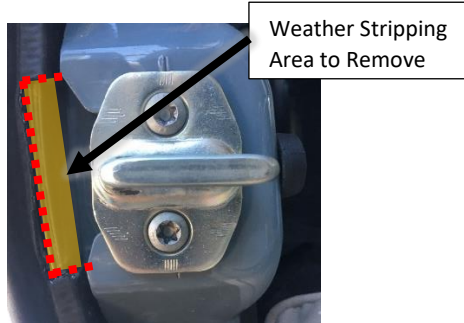


Figure 8: Area to Cut on Weather-Stripping (Bracket Removed for Visualization)

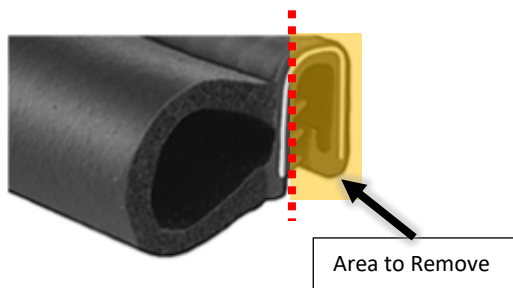


Figure 9: Cross-Section of Weather-Stripping

24. Reinstall weather-stripping over the bracket ensuring cut section lines up with bracket. Fully re-seat the weather-stripping.

Limiting Strap Installation (Optional):

25. Install the hard stop strap bracket onto the lower hinge by completing the following:

- a. Remove only the lower torx bolt, *on the vehicle*.



NOTE: A 8mm – 12 point socket may provide enough ‘bite’ to remove the two torx bolts. HOWEVER, do so at your own risk – using the improper tool for the job may result in stripping the bolts. Do NOT use an impact gun to remove these bolts.

- b. Install the bracket over the upper torx bolt with the provided M8 bolt and 5/16" split washer through the bottom hole. The larger hole must be on top. Tighten M8 bolt to ~17 ft-lbs (23 Nm).



- c. Remove the upper torx bolt and install a M8 bolt, 5/16" split washer, and **M8 machined spacer**.



- d. Tighten down second bolt to ~17 ft-lbs (23 Nm).

26. Install the door strap onto the hard stop bracket using the strap clamp to secure it. Feed the strap clamp through the largest eyelet in the strap and bolt it to the hard stop bracket. Direct the strap towards the lower hinge when tightening down the clamp. Reference Figure 10 and 11.

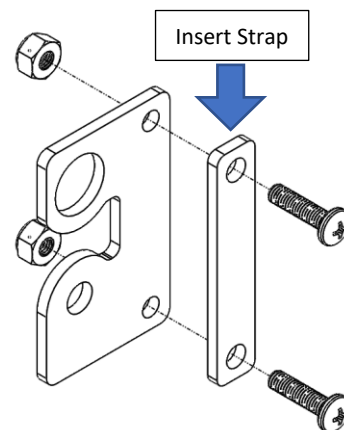


Figure 10: Strap Clamp Assembly

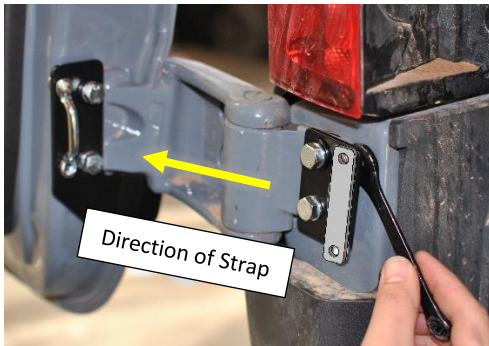


Figure 11: Strap Clamp Install onto Hard Stop Bracket

27. Open the door to the desired 'stopped' position, looking for clearance between the installed rear door product and the side of the van. Keep in mind additional tires/boxes/window flares that may be placed later.
28. Determine the closest available sewn loop on the strap – move to shorten the strap if in-between loops.
29. Install the webbing anchor onto the lower hinge bracket. Be sure to first thread the anchor through the desired position on the strap (reference Figure 12 - 13).

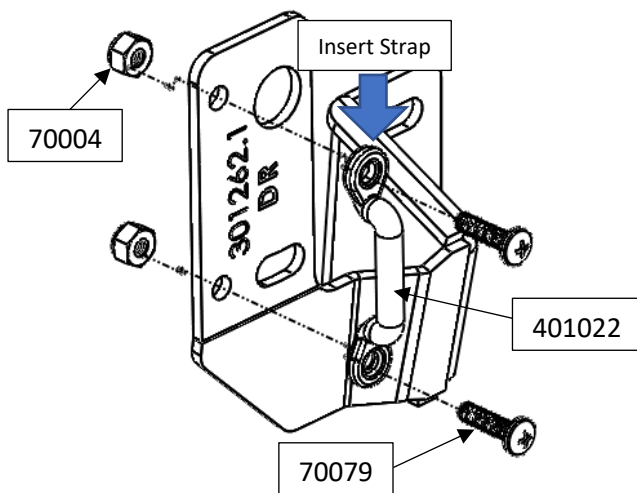


Figure 12: Installation of Webbing Anchor onto Bracket



Figure 13: Limiting Strap Installed

30. With the strap fully installed, verify clearances at the fully opened position between the product and the side of the van. Also verify clearances at the lower hinge as the door is slowly closed. Adjust strap as needed.

Tire Rack Installation:

31. Install your vans Aluminess Rear Door Ladder per the separately provided installation instructions.
32. Loosely install the bolt-on tire/box supports onto the bottom crossmember of the rack as shown in Figure 1.



Figure 14: Bolt-On Supports Loosely Bolted to Lower Crossmember

33. Starting with support closest to tail light – sliding support as close to the tail light as possible and then rotate into desired position and tighten.

PRO TIP: Reference Figure 2 for suggested mounting orientation.

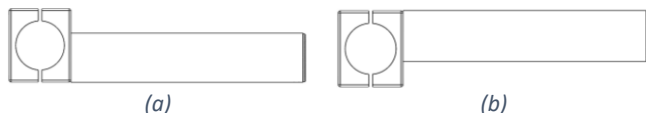


Figure 15: Suggested Orientation for Tire (a) and Box (b)

34. Repeat for the support opposite the center post, being sure that the spacing is equal from the center post, and the orientation is the same for both supports.
35. Loosely fasten the Tire Mount Bracket to the slotted channel using the 3/8" carriage head bolts, washer, and nuts to mount. Reference Figure 3.

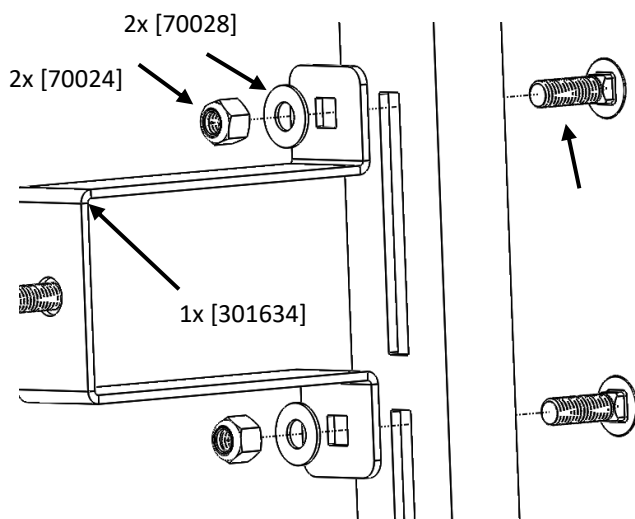


Figure 16: Mounting Tire Bracket

36. Place the mounting bracket in the correct location by placing your tire on the tire supports and then adjusting the bracket vertically until the center hub aligns with the center of the bracket.
37. Once the bracket is in place remove the tire and tighten the hardware holding the bracket in place.
38. Place the tire on the support stands and mount the wheel wedge, using the 5" hex head bolt, washer and star washer. Reference Figure 4 and 5.
39. **NOTE: Tighten down bolt until snug with wedge (it should be very hard/near impossible**

to rotate the wedge by hand. Once at this point tighten 2 more full rotations.

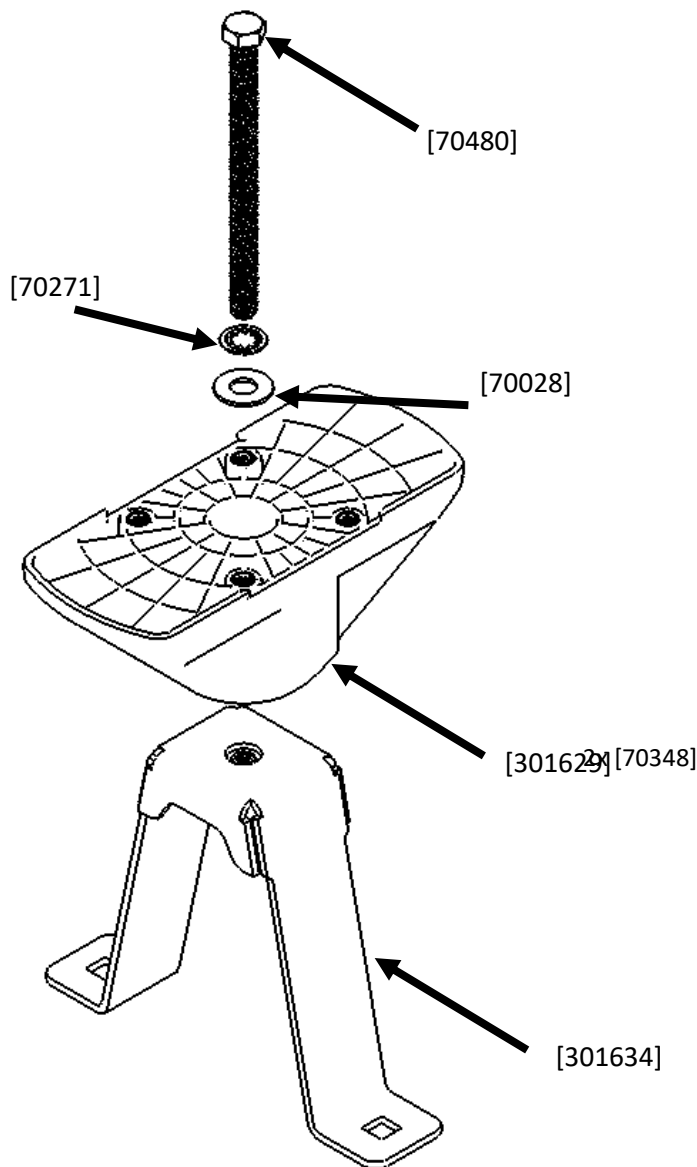


Figure 4: Wheel Wedge Assembly



Figure 5: Tire Mount Assembled

40. [Optional] If desired, you can mount a Rotopax to the wheel wedge. Before installing the cover [Step 10] first, bolt the rotopax mount to the wheel wedge using the security bolts [70478], as shown below in figure 6. Then simply install the rotopax onto the mount. The cover will not be used if using the rotopax mount.



Figure 6: Rotopax Mount

41. Once everything is securely fastened, bolt the cover to the wheel wedge using the included special bit [70479], and bolts [70478] . Reference Figure 6.

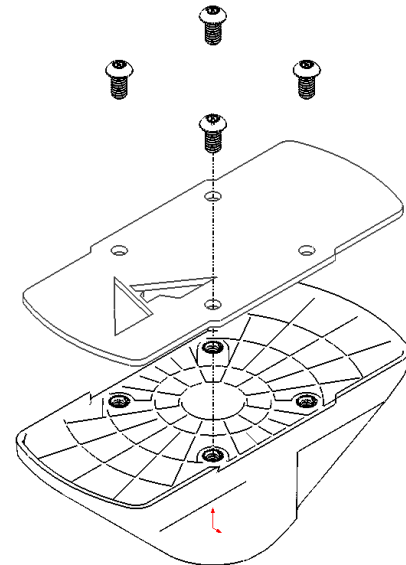


Figure 6: Wheel Wedge Cover Mounting

Figure 7: Step Mounting Locations

42. Check mounting hardware after first 100 miles of driving and periodically after to verify hardware has not become loose from vibration.
43. Your new Aluminess tire rack is now installed, enjoy!

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