

Tire/Box Rack Installation Instructions

P/N 210570: 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**
- This Product is **NOT** compatible with a Sprinter Dually

Required Tools:

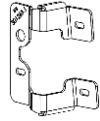
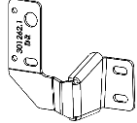
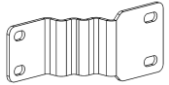
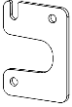




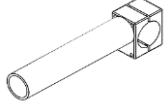
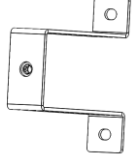


- Standard and metric wrench set
- Standard and metric socket set
- Torx bit set
- Isopropyl Alcohol
- Baby Soap or Dish Soap
- Clean Rag
- Tin Snips or Dremel Cut-Off Wheel
- Painter's Tape (optional)
- Spray Bottle (optional)
- Heat Gun or Blow Dryer (optional)

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	2
70024	3/8"-16 Nylock Locking Nut	2
70348	3/8"-16 x 1.25" Carriage Bolt, SS	2
70464	3/8"-16 x 4 1/2" Socket 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	Adjustable Door Limiting Strap	1
401022	Webbing Anchor, 1" Webbing	1
401006	5/16" Allen Key	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.	
301506	Universal Tire Mount, Wedge Mount	1 ea.	
350662	Bolt-On Tire/Box Support (preassembled)	2 ea.	
301500 / 350616	Universal Tire Mount, Bracket	1 ea.	
401004	Universal Tire Mount, Wheel Wedge	1 ea.	
401005	Polyethylene Plastic Snap-in Round Plug	1 ea.	

Tire 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.

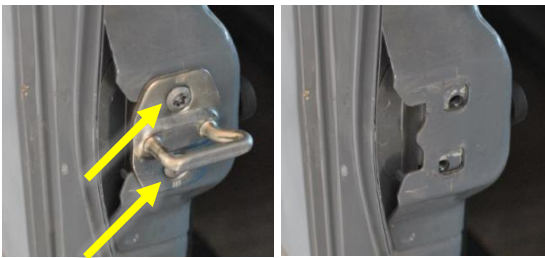


Figure 2: Driver's Side Inside Latch Pin Removal

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

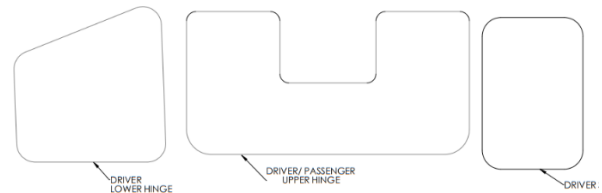


Figure 4: Template Examples (See End of Instructions for 1:1)

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 factory torx bolts, 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.

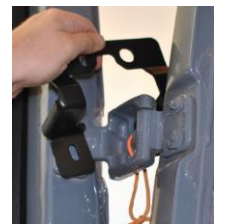


18. Install the upper hinge bracket by:

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



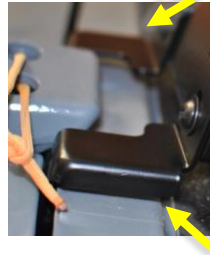
- b. Fit the upper hinge bracket over the hinge.



c. Rotate into place.



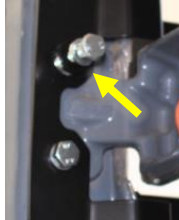
d. Fit the bracket over the upper torx bolt and rotate into desired position. Make sure the bracket is not contacting the sheet metal on the other side of the door, at either the top or the bottom of the bracket.



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.

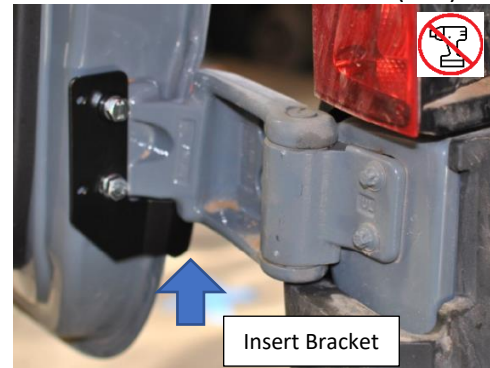


Figure 6: Lower Bracket Installed

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).

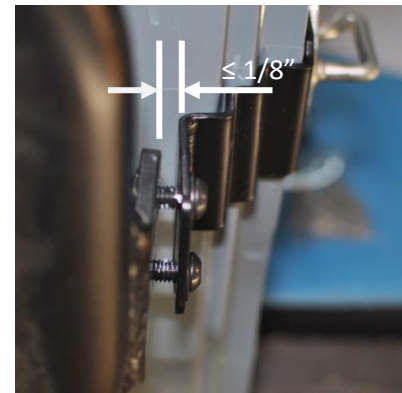


Figure 7: Gap Between Bracket and Product

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.

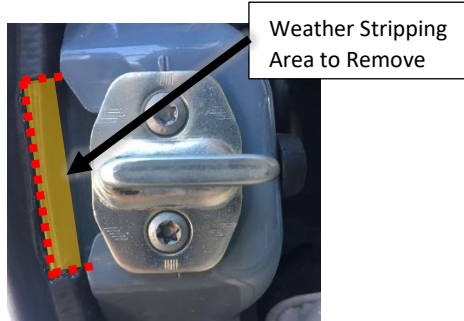


Figure 8: Area to Cut on Weather-Stripping (Bracket Removed for Visualization)

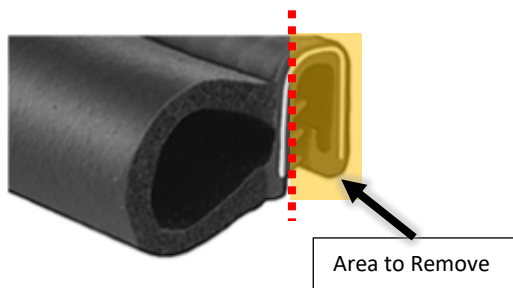


Figure 9: Cross-Section of Weather-Stripping

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 adjustable 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.

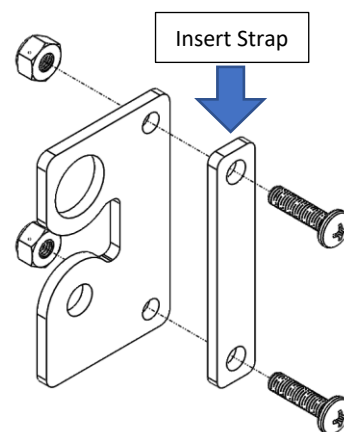


Figure 10: Adjustable Strap Clamp Assembly

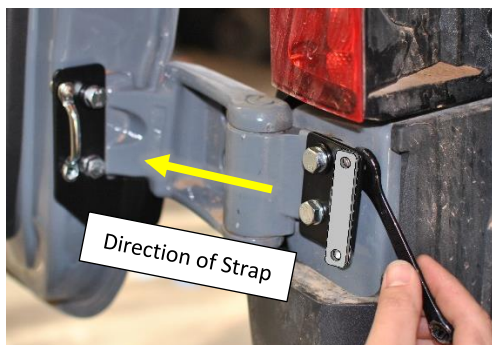


Figure 11: Strap Clamp Install onto Hard Stop Bracket

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 adjustable 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 adjustable strap (reference Figure 12 - 13).

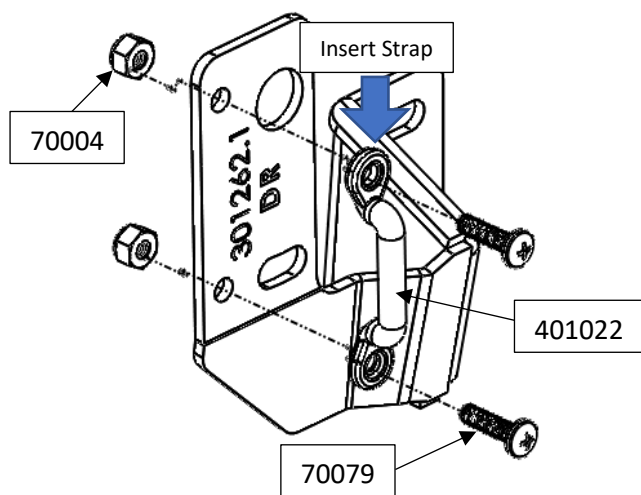


Figure 12: Installation of Webbing Anchor onto Bracket

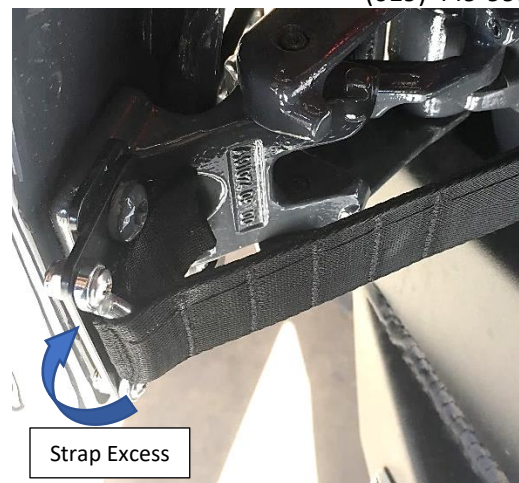


Figure 13: Adjustable Limiting Strap Installed

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 Installation:

31. Loosely install the bolt-on tire/box supports onto the bottom crossmember of the rack as shown in Figure 14.



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

PRO TIP: Start with support closest to tail light – sliding support as close to the tail light as possible. Use the distance between the center post and the bolt-on support to install the second support equal distance from the center.

PRO TIP: Reference Figure 15 for suggested mounting orientation.

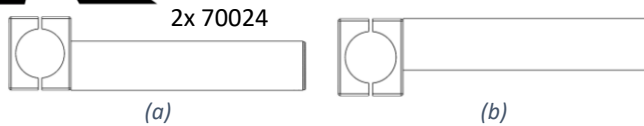


Figure 15: Suggested Orientation for Tire (a) and Box (b)

32. Rotate into desired position (level with ground) and tighten.
33. Repeat for the side opposite of the center post being sure that the spacing is equal from the center post, and the orientation is the same for both supports.
34. Loosely fasten the Tire Mounting Bracket to the slotted channel using the 3/8" carriage head bolts, washer, and nuts to mount. Reference Figure 16.

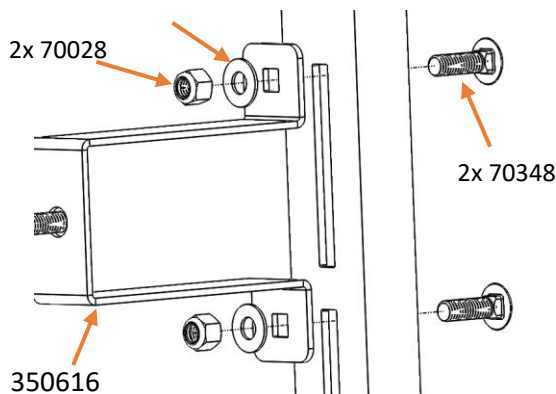


Figure 16: Tire Mounting Bracket Installation

35. Rest the tire onto the tire supports as shown in Figure 17. Tire **must** be resting on **both** supports.



Figure 17: Tire Resting on Tire Supports

36. With the tire placed on the tire supports, adjust the bracket vertically until the threaded center hole on the bracket is centered within the center bore of the wheel.

37. With the bracket in place, tighten the tire mounting bracket hardware.
38. Install the wheel wedge, wheel wedge mount, 5" socket head bolt, and locking washer to secure the wheel into place with the provided Allen key. Reference Figure 18 and 19.

NOTE: For *Sprinter dually wheels*, ensure all four fins of the wheel wedge engage the wheel hub and do **NOT** overtighten the wedge. Misalignment or overtightening of the wedge can lead to issues securing the wheel properly

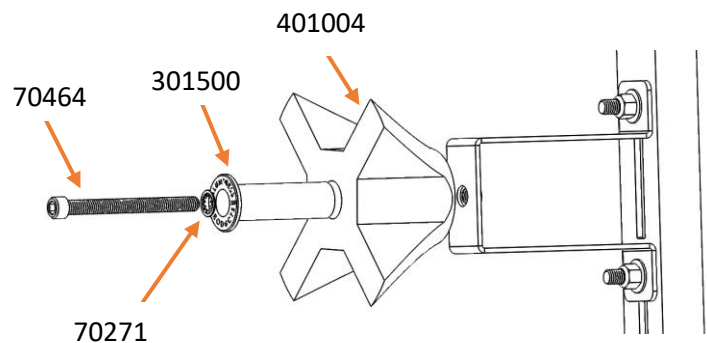


Figure 18: Wheel Wedge Assembly



Figure 19: Tire Mount Installed

39. Once everything is securely fastened insert the snap in plug into the wedge mount. Reference Figure 20.

Note: A rubber hammer may be needed to snap it into place.

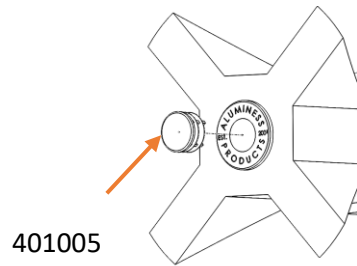


Figure 20: Snap-In Round Plug

40. Check mounting hardware after first 100 miles of driving and periodically thereafter.

41. Your new Aluminess tire rack is now installed, enjoy!



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1. Lifetime Warranty. Aluminess provides a lifetime warranty of its products to the original retail purchaser provided such products are installed correctly according to the official Aluminess installation instructions. Any modification to the original product design, function or use of any Aluminess products will void the Aluminess warranty. Aluminess will have sole discretion to determine warranty eligibility for any and all Aluminess products sold to any purchaser.
2. Limited Remedies. Subject to any limitations and exclusions described herein, and subject to Aluminess' determination of warranty eligibility, Aluminess will remedy defects in product materials and/or workmanship of any product by repairing or replacing such defective product, which shall be within Aluminess' sole discretion, without charge for parts or labor. Aluminess may elect in its sole discretion not to replace a defective product and issue the purchaser a refund equal to the purchase price of any defective product or purchaser may elect to receive a credit (equal to such refund) toward the purchase of new Aluminess products. Repair or replacement of a defective product or providing a refund or credit to purchaser will be purchaser's exclusive remedy under this warranty. Damage to a purchaser's vehicle, cargo and/or any other person or property is expressly excluded from the Aluminess warranty.
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