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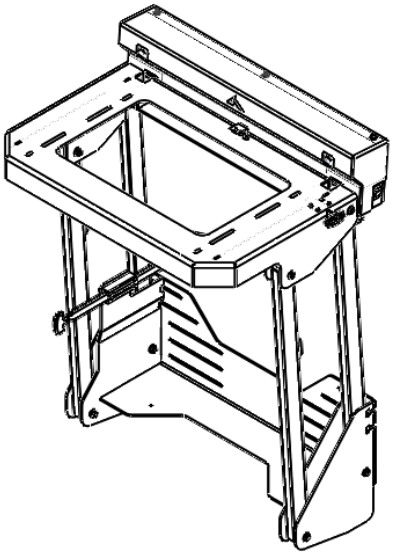
Power Lift Bike Rack Installation Instructions

P/N 210775: Mercedes Sprinter 19+ Power Lift Bike 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 Upper Tray load capacity is 155 lbs***
- ***Maximum Box Tray load capacity is 100 lbs***
- *Unless otherwise specified, refer to the general torque value at the end of the instructions for specified torque values*

Required Tools:

- Standard and metric wrench set
- Standard and metric socket set
- Clean Rag
- Tin Snips or Dremel Cut-Off Wheel
- Painter's Tape (optional)
- Spray Bottle (optional)

Included Hardware:

P/N	*Description*	*Quantity*
70369	Bolt, Grade 5 Square Neck Carriage, 5/16-18 x 1", SS Black Oxide	22
70277	Bolt, Grade 5 Square Neck Carriage, 5/16-18 x 1.5", SS Black Oxide	4
70345	5/16" ID Washer, BLACK OXIDE, SS	26
70346	5/16"-18 Nylon-Locking Nut, BLACK OXIDE, SS	26
70013	Bolt, Flat Head Countersunk Soc Cap, SS, 1/4-20 x 1"	6
70365	Nut, Nylock, 1/4-20, SS Black Oxide	2
70366	Washer, 1/4", SS Black Oxide	2
401193	Sticker, Reflective Stripe, Red/White, 1"	18"
401096	2" x 1/8" Foam Strip	9"
70246	Antiseize	1
70027	Washer, Flat, SS, 3/8 ID x 1 OD x 1/8 Thick	4
70024	Nut, Nylock, SS, 3/8-16	4
70492	Cushioning Rubber Washer, 5/16" ID, 1.25" OD	6

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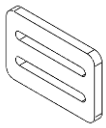
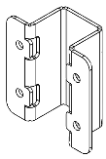
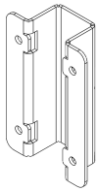
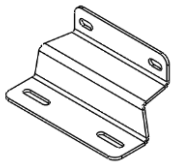
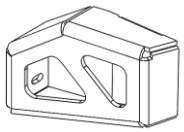
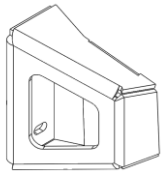
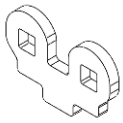
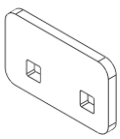
Additional Parts:

Part Number:	*Description:*	*Quantity:*	*Picture:*
301836	PLBR, webbing anchor plate	2 ea.	
351567	PLBR, Mounting Bracket, Medium	2 ea.	
351568	PLBR, Mounting Bracket, Large	1 ea.	
351569	PLBR, Mounting Bracket, Sprinter VSK	1 ea.	
351930	PLBR, Slide Handle	1 ea.	
351560	PLBR, Handle Adapter, Sprinter	1 ea.	
351571	Rear Door Lower Hinge Bracket, Heavy Duty	1 ea.	
351570	Rear Door Upper Hinge Bracket, Heavy Duty	1 ea.	
351572	Rear Door Upper Hinge Bracket, Upper Retaining Plate	1 ea.	
351573	Rear Door Lower Hinge Bracket, Lower Retaining Plate	1 ea.	

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Lower Tray Installation:

1. Remove your Aluminess Base Unit (210760) from vehicle if applicable. Remove any and all products from Base Unit. Place your Base Unit on two sawhorses.
2. Loosely place the Power Lift lower assembly on the Base Unit as shown in Figure 1.

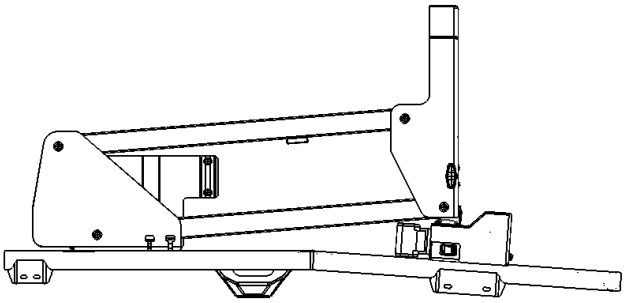

Figure 1: Power Lift Placed on Base Unit

3. Use 2x 5/16" Carriage bolts (70369), 2x 5/16" washers (70345), and 2x Nylock nuts (70346) to secure the Power Lift lower assembly to the Base Unit. Route the Carriage bolts through the holes in the lower gusset of the Base Unit. Assemble as shown in Figure 2. Note the orientation of the bolts MUST be installed exactly as shown. DO NOT TIGHTEN THESE YET.

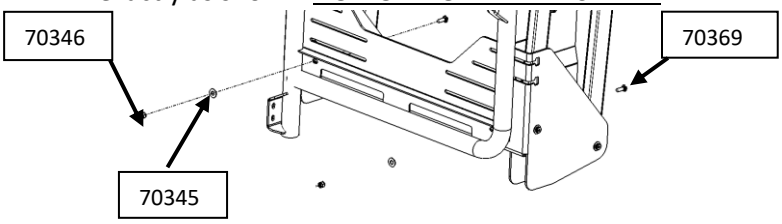

Figure 2: Lower Tray Installation Gusset Bolts

4. Insert the slide handle (351930) into the pre-installed slide on the side of the lower tray. Before tightening hardware, adjust the horizontal position of the Power Lift until the slide handle just clears the inside pipe of the Base Unit on the left side as shown in Figure 3 and Figure 4. Check for squareness between the handle and the Base Unit.

Figure 3: Slide Handle Alignment

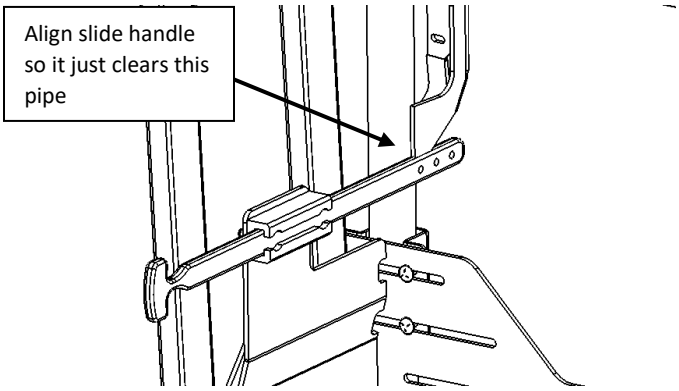

Figure 4: Slide Handle Alignment Image 2

5. Once aligned, tighten the 2 bolts installed in step 3 then use 2x Medium Mounting Brackets (351567), 8x 5/16" Carriage bolts (70369), 8x 5/16" washers (70345), and 8x Nylock nuts (70346) to secure the Power Lift lower assembly to the Base Unit. Route the Carriage bolts through the slots in the lower tray using the side cutouts. Assemble as shown in Figure 5. Note the orientation of the bolts MUST be installed exactly as shown.

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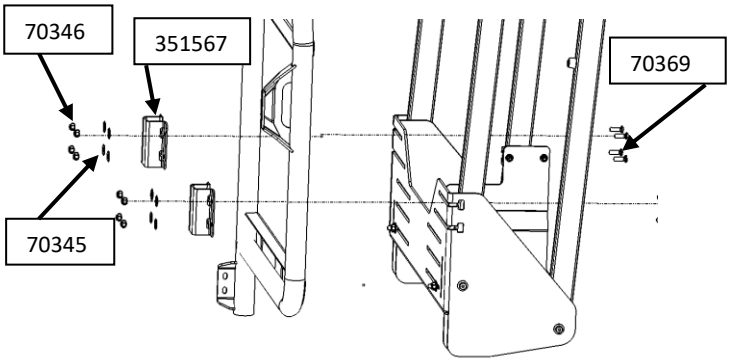

Figure 5: Lower Tray Installation Bracket Bolts

6. Tighten all hardware and remove slide handle, it will be installed after the Power Lift is mounted. Confirm the Medium Mounting Brackets are wrapped around the base unit pipe and are clamping the Power Lift lower tray to the Base Unit.

Power Box Installation:

7. Unbolt Power Box Enclosure cover and insert 6x 5/16" carriage bolts (70369) through slots in the back of the Power Box as shown in Figure 6.

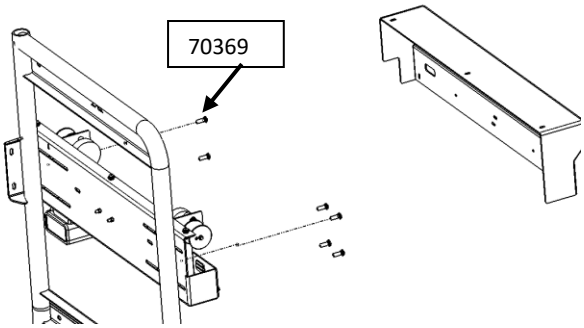

Figure 6: Power Box Carriage Bolt Routing

8. Thread webbing through window in the cover as shown in Figure 7. Loosely bolt the cover on the Power Box using the same hardware.

Figure 7: Threading Webbing Through Power Box Cover

9. Place the Power Box on the top of the Base Unit and align the latch pin with the latch on the upper tray of the Power Lift as shown in Figure 8. Check for squareness between the Base Unit, the Power Box, and the Upper Tray.

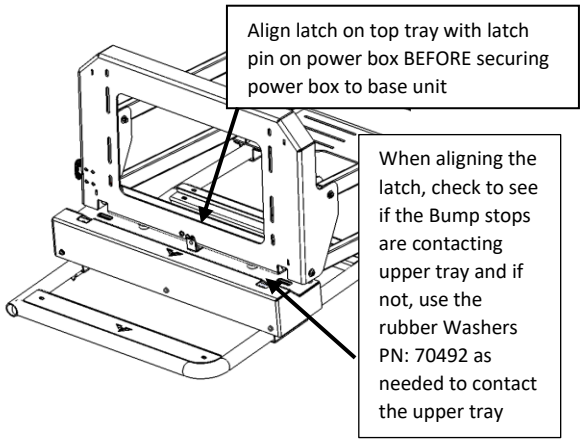

Figure 8: Latch Alignment

10. Thread the webbing through the top of the pulleys, then through the bottom on the Upper Tray of the Power Lift and back to the Power Box as shown in Figure 9 and Figure 10.

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Figure 9: Threading Webbing Through Upper Tray Pulleys

Figure 10: Bringing Webbing Back to Power Box

11. Thread webbing through and double back through webbing anchors as shown in Figure 11, Figure 12 and Figure 13.

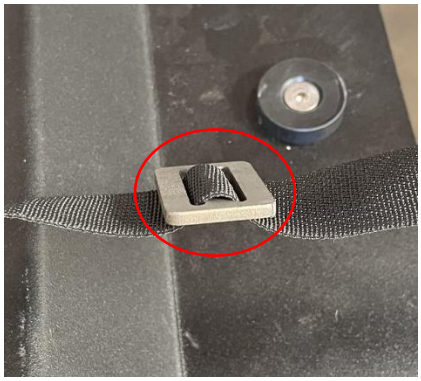

Figure 11: Threading Webbing Through Webbing Anchors

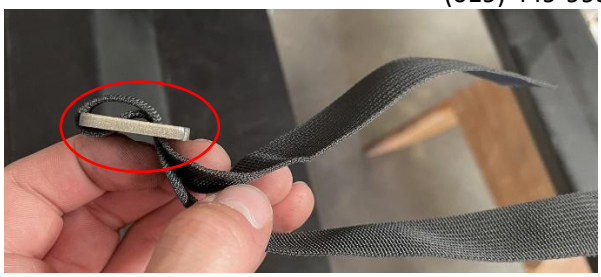

Figure 12: Doubling Back Webbing in Webbing Anchor

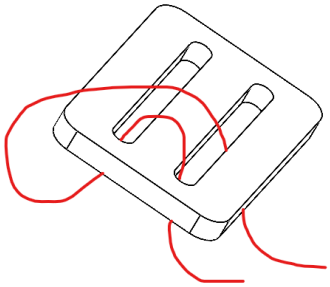

Figure 13: Webbing Anchor Webbing Routing

12. Insert webbing anchors with webbing threaded through into slits in the Power Box as shown in Figure 14. Ensure both straps are equal in length.

Figure 14: Webbing Anchor Installed Through Power Box Slit

13. Using 1x Sprinter VSK mounting bracket (351569), 1x Large Mounting Bracket (351568), the previously installed 6x 5/16” Carriage bolts (70369), 6x 5/16” washers (70345), and 6x Nylock nuts (70346), secure the Power Box to the Base Unit as shown in Figure 15. Use Carriage bolts through the slots in the back of the Power Box as shown. Take off cover if

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necessary to keep carriage bolts from falling out. Note there will be an extra 1x 5/16" Carriage bolt (70369), 1x 5/16" washer (70345), and 1x Nylock nut (70346).

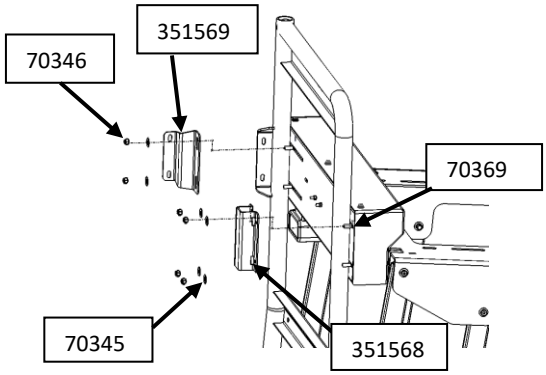

Figure 15: Power Box Installation

14. Once the Power Box is secure to the Base Unit, tighten bolts securing the cover to the Power Box. Check for squareness between the Power Box and the Base Unit.

Heavy Duty Mounting Bracket Installation:

15. Using 1x Heavy Duty Lower Hinge Bracket (351571), 1x Heavy Duty Upper Hinge Bracket (351570), 4x 5/16" Carriage bolts (70369), 4x washers (70345), and 4x Nylock nuts (70346), secure the brackets to the base unit as shown in Figure 16 and Figure 17. Do NOT tighten hardware.

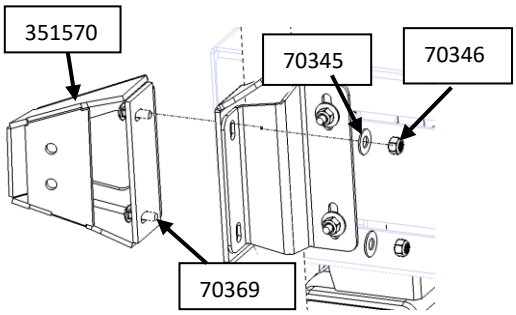

Figure 16: Heavy Duty Upper Hinge Bracket Installation

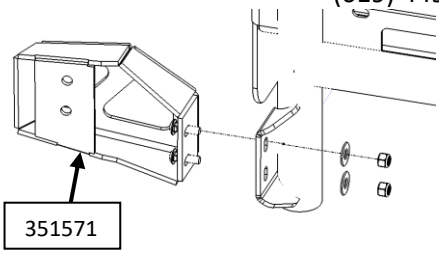

Figure 17: Heavy Duty Lower Hinge Bracket Installation

Mounting Power Lift and Base Unit Assembly to Van:

16. Cut foam stripping (401096) into one 4" section for the Lower Heavy-Duty Bracket (351571) and one 4.5" section for the Upper Heavy-Duty Bracket (351570). Put over the outside face of the Heavy Duty door hinge brackets and cut holes out for the bolts as shown in Figure 18 and Figure 19. Cut excess foam off as needed.

Figure 18: HD Upper Bracket with Foam Tape

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Figure 19: HD Lower Bracket with Foam Tape

17. Insert 2x 5/16” Long Carriage bolts (70277) into the upper retaining plate (351572) and lower retaining plate (351573) as shown in Figure 20 and Figure 21.

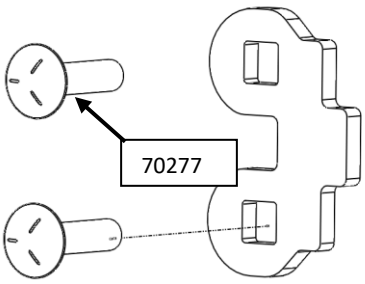

Figure 20: HD Upper Backing Plate Hardware Routing

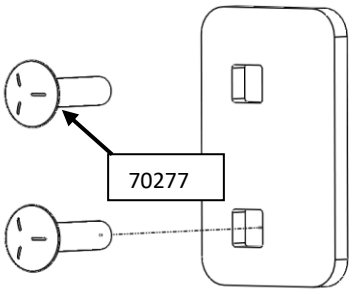

Figure 21: HD Lower Backing Plate Hardware Routing

18. Insert the backing plates into their respective hinges with the carriage bolts inserted, as shown in Figure 22 and Figure 23. Note the orientation of the Backing Plates MUST be exactly as shown. If the bolt holes do not align perfectly, try flipping the Backing Plate around.

Figure 22: Lower Backing Plate Insertion

Figure 23: Upper Backing Plate Insertion

19. Close the door to keep the hardware in place and sticking out as shown in Figure 24 and Figure 25.

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Figure 24: Lower Hinge Bolt Routing

Figure 25: Upper Hinge Bolt Routing

20. If the hardware is not sticking out, or is falling back into the hinge, fill the void with a piece of cardboard as shown in Figure 26 and Figure 27.

Figure 26: Cardboard to Push Bolts Out on Lower Hinge

Figure 27: Cardboard to Push Bolts Out on Upper Hinge

21. With the help of at least 2 other persons, lift the Power Lift and Base Unit assembly against the door of the van. Mount to the upper and lower hinges through the Heavy-Duty Brackets using the preinstalled 4x 5/16 Long carriage bolts (70277) sticking out of the door, 4x washers (70345), and 4x Nylock nuts (70346). Refer to Figure 28 and Figure 29.

Figure 28: Heavy Duty Lower Bracket Mounting

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Figure 29: Heavy Duty Upper Bracket Mounting

22. Reuse the separately provided hardware for the Emblem Replacement plate mounting location (refer to Install Instructions for Sprinter Rear Door Base unit, 210760). Refer to Figure 30.

Figure 30: Base Unit Logo Plate Mounting

23. Tighten **ALL** hardware including the bolts securing the Heavy-Duty Brackets to the Base Unit. Refer to the torque spec table at the end of these instructions for bolt torque values.

Door Handle Adapter Installation:

24. Using 1x Sprinter Handle Adapter Assembly (351931), 1x Slide Handle (351930), 2x Countersunk ¼" bolts (70013), 2x Nylock nuts (70365), and 2x ¼" washers (70366), slide the slide handle through the plastic slide housing on the lower tray as shown in Figure 3. Hook the aluminum spacer under the vehicle door handle and attach the bracket to the slide handle as shown in Figure 31.

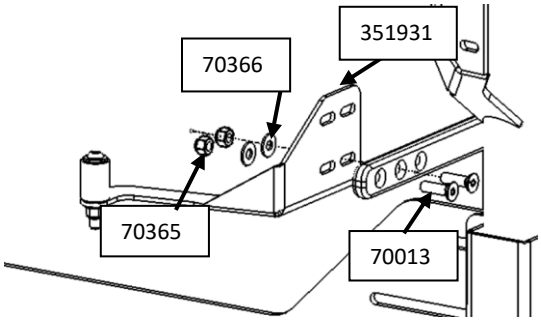

Figure 31: Door Handle Adapter Installation

Reflective Sticker Installation:

25. Using the provided reflective red/white stickers (401193), cut the 18" strip into four 4" sections. place them on four outer corners of the bike trays that are or will be mounted to the Upper Tray of the Power Lift. Refer to Figure 32 and Figure 33.

Figure 32: Reflective Tape Installation

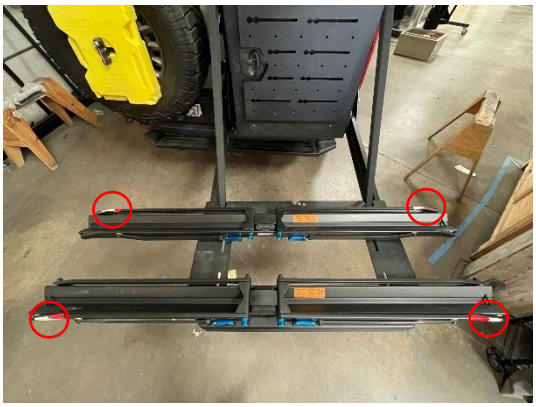

Figure 33: Reflective Tape Layout

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Box Installation:

26. Follow the separately provided instructions on installation of storage box.
27. For your convenience, four (4) shorter bolts (PN 70013 – ¼" x 20 x 1" Flathead) have been provided to mount the storage box to the PowerLift Unit.

Switching the Power Lift from a 2:1 System to a 1:1 System (Fast Raise and Lower Mode):

NOTE: Switching the lift ratio on your Power Lift will REDUCE the weight capacity to <u>100 lbs</u>.

1. Fully lower the Power Lift so the webbing spools are completely unspooled as shown in Figure 34.

Figure 34: Power Lift Fully Lowered

2. Have one person lift the Power Lift upper tray to provide slack in the webbing.
3. Grab the webbing anchors from the pulley holes in the Power Box as shown in Figure 35.

Figure 35: Webbing Anchor Pulled Through Pulley Holes

4. Remove the webbing from the anchors, thread the webbing over the pulleys in the upper tray and through the slots as shown in Figure 36.

Figure 36: Webbing Threaded Over Pulley and Through Upper Tray Slot

5. Thread the webbing back through the webbing anchors with the white stitch in the webbing lying in the middle of each webbing anchor as shown in Figure 37. Double them back as shown in Figure 12. Check that straps are even.

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Figure 37: White Stitching Position on Webbing Anchors

6. Store excess strap with a ziptie.

TORQUE SPECIFICATIONS			
SIZE (SAE)	18-8 SS	GRADE 5 ZINC PLATED	GRADE 8 ZINC PLATED
6-32 (IN-LBS)	9.6	15.3	21.5
8-32 (IN-LBS)	19.8	29.5	41.7
10-24 (IN-LBS)	22.8	47.0	62.9
10-32 (IN-LBS)	31.7	48.0	68.0
1/4-20 (IN-LBS)	75.2	91	129
5/16-18 (IN-LBS)	132	188	265
3/8-16 (FT-LBS)	20	28	39
7/16-14 (FT-LBS)	31	44	63
1/2-13 (FT-LBS)	43	68	96
9/16-12 (FT-LBS)	57	109	226
SIZE (Metric)	18-8 SS	CLASS 8.8 ZINC PLATED	CLASS 10.9 ZINC PLATED
M5 X 0.8 (IN-LBS)	38.4	46.8	66.0
M6 X 1.0 (IN-LBS)	57.6	79.2	112.8
M8 X 1.25 (IN-LBS)	99.6	192.0	274.8
M10 X 1.5 (FT-LBS)	13.8	31.6	45.2
M12 X 1.75 (FT-LBS)	21.0	55.1	78.9
M14 X 2.0 (FT-LBS)	29.4	88.1	126.1

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Aluminess Products, Inc. (Aluminess) Warranty

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.

3. Modification. Aluminess products are designed to be mounted to factory equipped vehicles. Aftermarket additions to such vehicle may or may not require modification of an Aluminess product. The Aluminess warranty does not extend to any Aluminess products that are modified to fit around other otherwise accommodate or be compatible with any aftermarket vehicle accessories or alterations. Aluminess does not guarantee fitment with any other aftermarket accessories or modified vehicle, and it is up to purchaser to determine fitment prior to purchasing any Aluminess product.

4. Damage. Damage to Aluminess products due to normal wear and tear, including, but not limited to, cosmetic issues and superficial scratches, or structural damage to an Aluminess product in connection with any vehicle collisions or other structural degradation in connection with the use of such vehicle (on road or off road) will not be covered by the Aluminess warranty. Additionally, any product user's misuse, neglect, overloading, improper maintenance or improper installation or repair of any Aluminess products are not covered under the Aluminess warranty.

5. Use of the Products. Aluminess products are designed for off road vehicle use. Installing Aluminess products on a vehicle may exceed the factory designed capabilities of such vehicle and could potentially lead to vehicle damage. Aluminess will not be responsible for any damage caused to a purchaser or user's vehicle or any vehicle accessories caused by the use of any Aluminess products. It is to the sole responsibility of purchaser to inspect and ensure that the intended vehicle and Aluminess products are suitable and compatible for travel on road and off road. No seller nor any manufacturer of Aluminess products will be liable for any loss, damage or injury directly or indirectly arising from the use of any Aluminess products. Before using any Aluminess products, the purchaser or user will determine the suitability of the product(s) for their intended use(s) and the purchaser or user shall assume all responsibility and risk in connection therewith.

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