



# Ladder Installation Instructions

P/N 210567, 210567.1: 2013+ Dodge Promaster Rear Door Ladder,  
Driver's Side

## **Before you begin:**

- *Stainless steel hardware may bind together when tightening — apply an anti-seize assembly lubricant to the threads of each bolt before assembly*
- *This installation requires two or more people*
- *This installation requires the license plate and license plate light to be relocated. Electrical connections must be made — Professional Installation Required*
- *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
- Standard/Metric Allen Keys or Hex Sockets
- Torx bit set
- Breaker bar (*Strongly advised not to use an impact gun*)
- Tin-snips or Heavy Duty Cutting Pliers (*For cutting weather stripping*)
- Isopropyl Alcohol
- Baby Soap or Dish Soap
- Spray Bottle
- Clean Rag
- Squeegee (or old credit card)
- Vice grips
- Door panel plastic rivet puller or Flat Head Screw Driver
- Scissor/Floor Jack (Optional, for supporting door)



## **Included Hardware:**

<b>P/N</b>	<b>Description</b>	<b>Quantity</b>
70344	5/16"-18 x 1" Button Head Bolt, BLACK OXIDE	6
70345	5/16" ID Washer, BLACK OXIDE	12
70346	5/16"-18 Nylon-Locking Nut, BLACK OXIDE	6
400999	Impact Resistant Protective Tape	14.5"
70448	Washer, 5/16" ID x 3/4 OD, 125 thk	2
70462	Bolt, 6-32 x 1", Full Thread, Socket Cap, Black Oxide	2
70002	Washer, SAE Flat, SS, #8	2
70461	Nut, Nylock, 6-32, SS	2
70733	1-3/4" ID Conduit Clamp EPMD	2
70060	Bolt, Button Head, Socket Cap, SS, 1/4-20 x 1"	4
70009	Washer, 1/4" ID x 5/8" OD, Flat, SS	4
70008	Nut, 1/4"-20, Nylock, SS	5
401022	Webbing Anchor ( <i>For door stop strap mounting</i> )	1
70079	Screw, Pan Head Phillips, SS, 10-32 x 1/2"	2



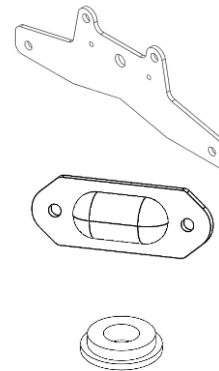
70005	Washer, #10, SAE Flat, SS	2
70004	Nut, Nylock, 10-32, SS	2
70041	Nut, Hex, Zinc, Steel, 1/4-20	2
70011	Bolt, 1/4"-20 x 3/4", Hex Head, SS	1
70447	Bolt, Hex, 1/4-20 X 3 1/4", Full Thread, Zinc	1
70477	Bolt, CS Flat Head, M8-1.25 X 30mm, SS	1
70437	Bolt, Button Head, M6-1.0 X 16mm, SS	4
70246	Antiseize Bolt Lubricant Packet, 2g	1
70400	LSHCS, M8 X 1.25 X 25, 316 SS	1

**Additional Parts:**

<u><b>PN</b></u>	<u><b>Description</b></u>	<u><b>Quantity</b></u>	<u><b>Picture</b></u>
350682	Upper Hinge Bracket	1 ea	<p>Notch here Indicates DS</p>
350684	Lower Hinge Bracket	1 ea	<p>Notch here Indicates DS</p>
350686	Inner Driver Door Bracket, Driver	1 ea	
350688	Door Stop Channel	1 ea	
401035	Door Strap	1 ea	<p>Length 12-3/8"</p>



350749	License Plate Mount	1 ea
400508	LED Light	1 ea
301258	M8 Machined Spacer	1 ea.



## **Ladder Installation:**

### **Pre-install Prep:**

1. Cut the supplied protective tape into one – 4.5” section, one - 3” section, and one -7” section. Round all corners.
2. Apply the protective tape to each location, one at a time, using the following wet application technique described below.
3. Prepare the surface for protective film application (wet application technique):
  - 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.
  - e. Create two separate wetting solutions:
    - i. Soap/water: ~95% water / ~5% soap
    - ii. Alcohol/water: ~75% water, ~25% isopropyl alcohol
4. Spray the surface thoroughly with soap/water solution and do not wipe down surface.
5. Remove the liner from the protective tape while spraying the adhesive side with soap/water solution.
6. Apply the protective tape to the outside of the door (Figure 1). At the upper and lower hinge location, leaving approximately ½” of tape overhanging to be wrapped around the edge of the door. Leave the tape overhanging for now.



*Figure 1: Locations of Protective Film Application*

7. Use a squeegee to press all air bubbles out starting at adhered edge.
8. Use the alcohol/water solution to speed up adhesion at one edge (lift section up and spray adhesive side) as needed.
9. Wrap remaining protective tape around the door underneath hinge if possible.

### **Upper Bracket Installation:**

10. Install the upper hinge bracket by:
  - a. Support the weight of the door by using a floor/scissor jack/piece of wood or recruit a helper to assist. (Figure 2)



Figure 2: Support Door Prior to Installation

- b. Remove the two bolts connecting the upper hinge to the door. (Figure 3)

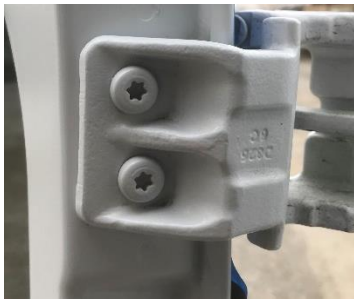


Figure 3: Top Hinge View

- c. Rotate hinge to allow the bracket to be installed around the hinge (Figure 4).



Figure 4: Upper Hinge Rotated Away from Door

- d. Install the bracket around the hinge in the correct orientation (Figure 5).



Figure 5: Bracket Installed Over Factory Hinge

- e. Swing hinge and bracket back into position against the door. (Figure 6)



Figure 6: Bracket Installed Over Factory Hinge

- f. Confirm that bracket clears the rear door glass (if applicable) and use the factory hardware to reinstall the hinge/bracket (Figure 7).

**PRO TIP:** Be sure to center the bracket around the hinge and verify clearances around the hinge while slowly opening and closing the door.



Figure 7: Inside View of Installed Upper Hinge Bracket



Figure 9: Bracket Installed Over Factory Hinge

### **Lower Bracket Installation:**

11. Unbolt the two bolts closer to the outside of the door (Figure 8)

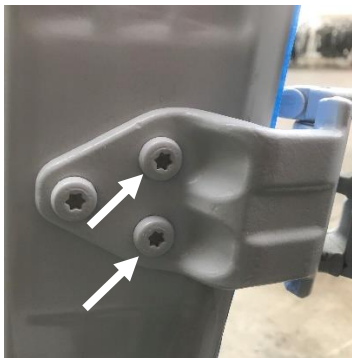


Figure 8: Inside View of Lower Hinge

12. Rotate hinge outwards to allow the bracket to be installed around the hinge.

13. Install the bracket around the hinge in the correct orientation. Reinstall the two bolts closer to the outside of the door through the hinge bracket, while leaving the third bolt tightened (Figure 9).

14. After tightening the two bolts closer to the outside of the door, remove the third bolt, place in the Machined Spacer (301258) and install the bolt (70400) through the spacer and bracket (Figure 10). Tighten hardware.

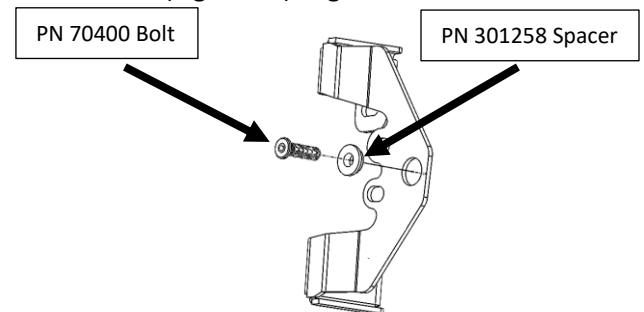


Figure 10: Bracket Installed with Machined Spacer

15. Slowly close the door to confirm that bracket is clear from any obstructions during closure use.





**Inner Bracket Installation:**

16. Loosen the weather-stripping on the inside of the driver's side door starting from the top and peel towards bottom of the door.
17. Remove the driver's side inside handle by removing the factory socket head bolt (See Figure 11).



*Figure 11: Driver's Side Inside Handle*

18. Hold lever mounting post with clamp or vice during the installation to prevent the latch falling into the door (Figure 12). Once clamped remove the two factory torx screws.



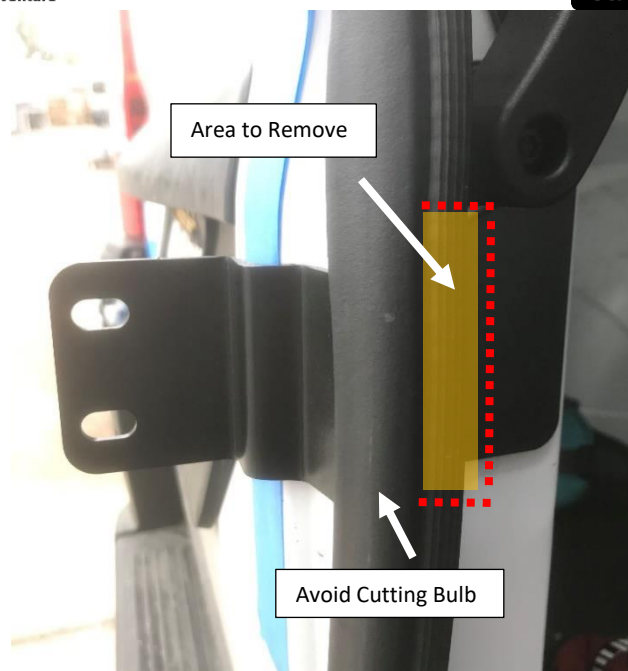
*Figure 12: Clamp Lever Mounting Post*

19. Install the inner driver door bracket using the supplied M6-1X16mm hardware. (See Figure 13).



*Figure 13: Inner Driver Door Bracket Installed*

20. Reinstall the inside door handle over the bracket using the factory bolt.
21. Verify the inside door handle operates as desired. Repeat Steps 20-21 as needed.
22. Reinstall weather stripping over installed inner bracket and mark where strip overlaps bracket. Peel back weather-stripping again and proceed to cut marked region to fit around inner door bracket. (Refer to figure 14 and 15) On the weather-stripping, cut the channel (attachment to the folded sheet metal) and not the bulb (hollow tube).



*Figure 14: Weather-Stripping Cut to Shape*



*Figure 15: Cut Weather-Stripping*

23. Reinstall weather-stripping over the bracket ensuring cut section lines up with bracket as shown in figure 16.



*Figure 16: Installed Weather Stripping After Modification*



24. Loosely install the rack onto the upper, lower, and inner brackets using the provided 5/16"-18 bolts, washers, and nuts.

- Tighten the upper and lower hinge brackets first.
- 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 17).

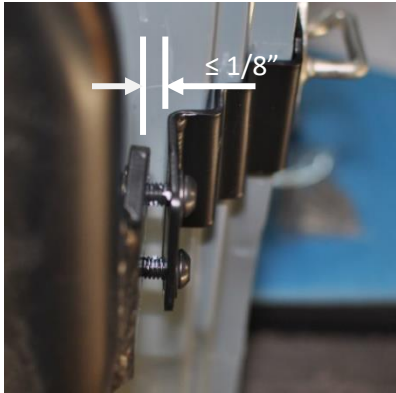


Figure 17: Installed Weather Stripping After Modification

Verify the hinge brackets and inner door brackets have appropriate clearances while slowly opening and closing both rear doors.

### Door Stop Installation:

25. Install Door Stop Channel Bracket [PN 350688] into factory threaded holes on the inside of the rear door trim using two M6-1X16mm Button Head screws. (Figure 18 and Parts List)



Figure 18: Factory Threaded Holes

26. Remove plug grommet on door (if applicable) to expose mounting point. (Figure 19)



Figure 19: Remove Rubber Door Grommet

27. Partially remove door panel cover by carefully prying out push fasteners. This will give you access to the back of the mounting point. (See Figure 20)



Figure 20: Remove Plastic Door Rivets

**PRO TIP:** A door panel rivet puller like the one shown in Figure 21 makes this part of the install a breeze. A flathead screwdriver with some protective tape wrapped around the blade will work also.





Figure 20: Door panel plastic rivet puller

28. Thread webbing anchor into door strap and mount webbing anchor as shown in figure 22 and 23.



Figure 22: Backside View of Door Stop Mounting

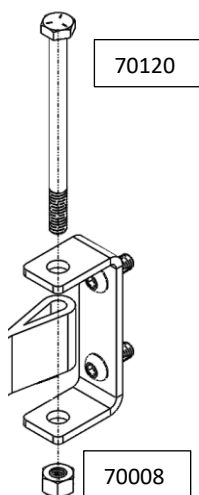


Figure 23: Door Stop Anchor Hardware

29. Thread other side of door stop strap into bracket installed on STEP 21 using  $\frac{1}{4}$ -20 x 3" bolt and  $\frac{1}{4}$ -20 Nylock nut. Refer to Figure 24 and Figure 25 for completed door stop install.

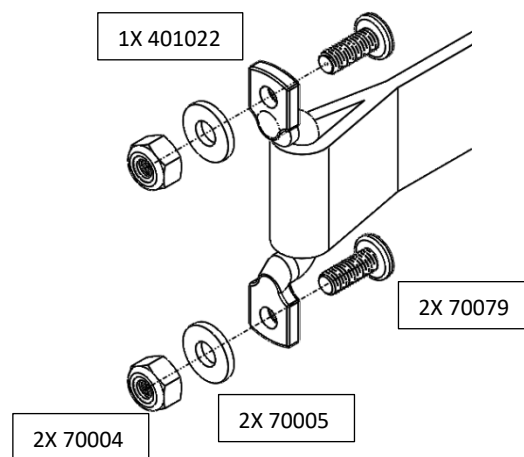


Figure 24: Door Stop Strap Mount Install

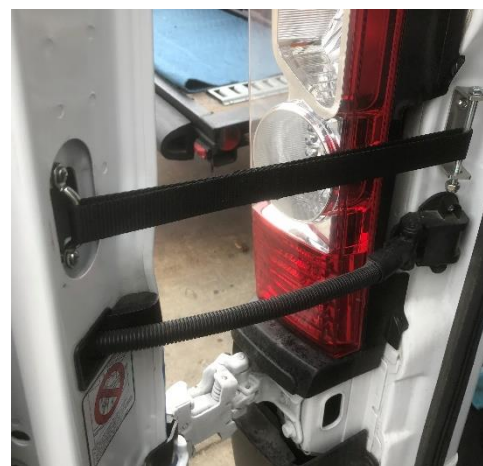


Figure 24: Completed Door Stop Install

30. Reinstall plastic door panel from Step 27.



### License Plate Mount Installation:

31. Gather hardware to mount license plate mount.  
Remove license plate from vehicle and set aside. (Refer to Figure 26 and parts list)

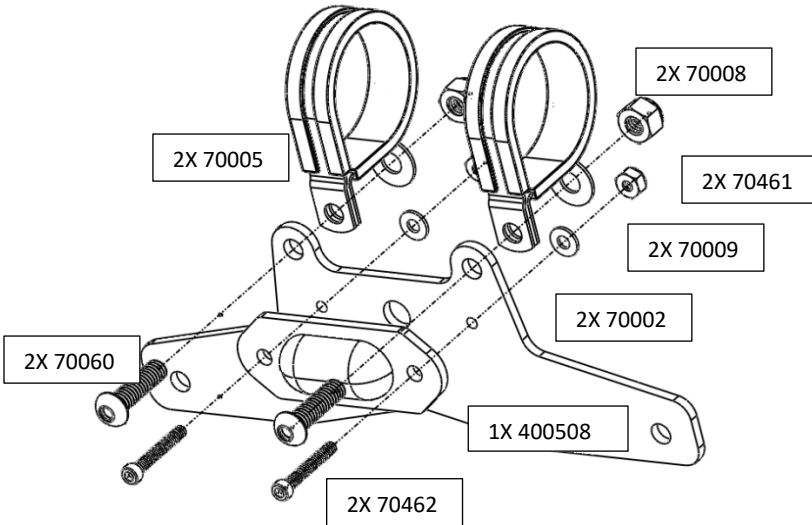


Figure 26: [350689] License Plate Mounting Hardware

32. Proceed to install license plate holder assembly.  
Reference Figure 27. Verify that position is correct. Proceed to tighten nuts.

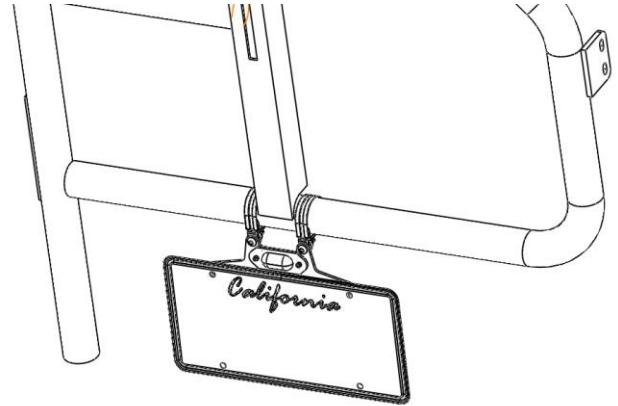


Figure 27: [350689] License Plate Holder Assembly

33. Install license plate onto mount using ¼-20 bolts (2X 70060) and ¼-20 Nylock nuts (2X 70008).
34. For bolt-on LED wiring (400508), please consult a certified automotive electrician to perform installation.
35. Congratulations! You have completed the installation of your new Aluminess Ladder Rack. Check mounting hardware on entire ladder assembly after the first 100 miles of driving and periodically after.



General Torque Values			
Size	Stainless Steel	Zinc	Grade 8
#6-32	10 lb-ft	--	--
#8-32	18.4 lb-ft	--	--
#10-32	26.6 lb-ft	--	--
1/4"-20	5.3 lb-ft	7.8 lb-ft	9 lb-ft
5/16"-18	10.9 lb-ft	16 lb-ft	18 lb-ft
3/8"-16	19.4 lb-ft	28.3 lb-ft	33 lb-ft
7/16"-14	31 lb-ft	45 lb-ft	52 lb-ft
1/2"-13	47 lb-ft	69 lb-ft	80 lb-ft
M6	4.7 lb-ft	5.8 lb-ft	--
M8	11.3 lb-ft	14.1 lb-ft	--
M10	22.3 lb-ft	27.9 lb-ft	--
M12	38.9 lb-ft	48.7 lb-ft	--



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