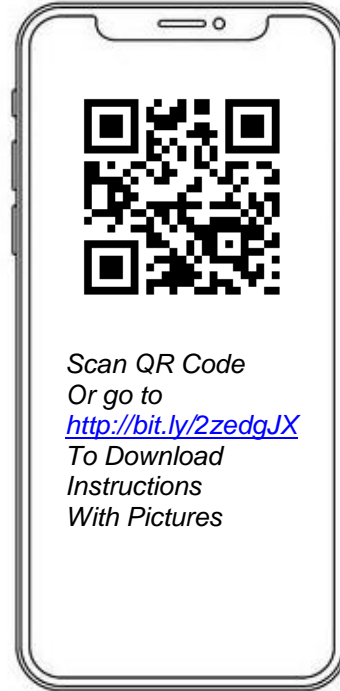


FRONT BUMPER INSTALLATION INSTRUCTIONS 2014-2018 DODGE / MERCEDES SPRINTER



Please read before beginning

- *Stainless steel hardware may bind together when tightening—It is recommended that you apply an anti-seize assembly lubricant to the threads of each bolt before assembly*
- *This installation requires two people*

Required Tools

- Standard Wrench Set
- Torx (6-Point Star Head) Wrench Set
- Flat Head Screwdriver
- Hammer
- Putty Knife
- Razor blade or Box cutter
- Drill, with 1/2" Drill Bit
- Shears or Tin Snips

Included hardware

Quantity

PRE-KIT 350453

• 70008 – 1/4"-20 Nut with nylon locking insert	17
• 70009 – Washer, Flat, SS, 1/4 ID x 5/8 OD (.03" Thick)	32
• 70020 – 5/16" ID x 3/4" OD Washer	8
• 70033 – 1/2"-13 Nut with nylon locking insert	4
• 70035 – 1/2" ID Flat washer	8
• 70039 – 1/4" SS Fender Washer	2
• 70056 – Nut, Nylock, Zinc, Grade 8, 7/16-14	2
• 70057 – Washer, Flat, Zinc, 7/16 ID	4
• 70060 – 1/4"-20 x 1" Button head socket cap screw	17
• 70080 – 1/2"-13 x 2" Hex head bolt	4
• 70101 – M8-1.25 Hex nut	8
• 70111 – 5/16" ID Split lock washer	8
• 70124 – Bolt, Hex Head, Zinc, M8-1.25 x 40mm 8.8 <u>FULL THREAD</u>	8
• 70185 – 7/16"-14 x 4 1/2" Hex head bolt	2
• 70207 – #6-32 x 1/2" Philips Bolt	2
• 70208 – #6-32 nut	2
• Antiseize Packet, 2g	2

Bumpers with Parking Assist Hardware

Quantity

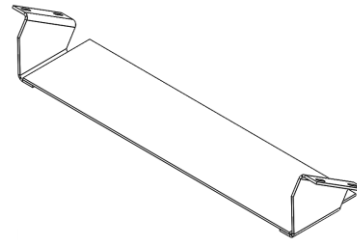
- 70001 - Nut, Nylock, 8-32, SS 12
- 70002 - Washer, SAE Flat, SS, #8 12
- 70039 - Washer, Fender, SS, 1/4 ID x 1" OD 12
- 70077 - Screw, Pan Head Phillips, SS, 8-32 x 3/4" 12

Misc. Parts

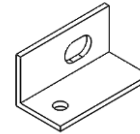
Quantity

- Zip-ties 2
- Keys for winch compartment 1 set

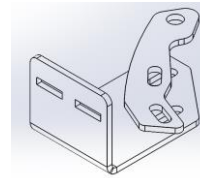
- Air Scoop 1



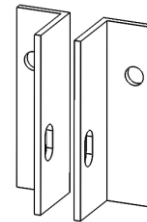
- Air Flow Sensor Bracket 1



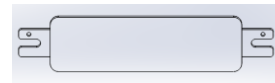
- DEF tank bracket 1



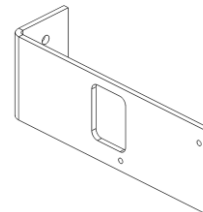
- Steel support brackets (Left and Right) 2 pairs



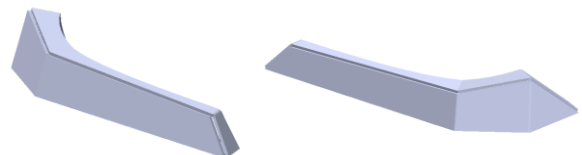
- Fairlead cover (pre-installed) 1



- Crash Sensor Bracket (if applicable) 1



- Headlight Trim Piece (Driver and Passenger) 1 per side (2 total)



Installation Instructions

1. To remove the stock bumper, begin by propping up the hood in order to access the grill
2. Remove the Two torx-head bolts and 4 Plastic Pop out clips holding the grill on (indicated by the arrows in **Figure 1**) – do not discard these, you will need them to put the grill back on
3. Once the bolts have been removed, the plastic clips holding the grill on must be released—pull the grill towards you gently to allow some space to put your hand behind it and reach the clips
 - To release the two large clips on the sides of the grill seen in **Figure 2**, squeeze the top and bottom together (indicated by arrows) and push down—be careful, these break easily
 - To release the three bottom clips holding the grill to the bumper cover as seen in **Figure 3**, push down on the tab sticking out from the grill while pulling the grill gently towards you—these
 - The use of gloves is strongly recommended here, as the metal heat exchanger tubes behind the grill are fairly sharp
4. Remove the plastic fasteners holding the bumper cover to the fender liners—there are three inside the fender and two underneath the front edge of the bumper cover on each side as seen in the photos below—in order to remove them, pry up on the center part of the fastener with a flat head screwdriver until it pops up, then the entire fastener may be removed by hand (see **Figure 4**, next page)



Figure 1: Stock grill hardware



Figure 2: Grill retaining clips

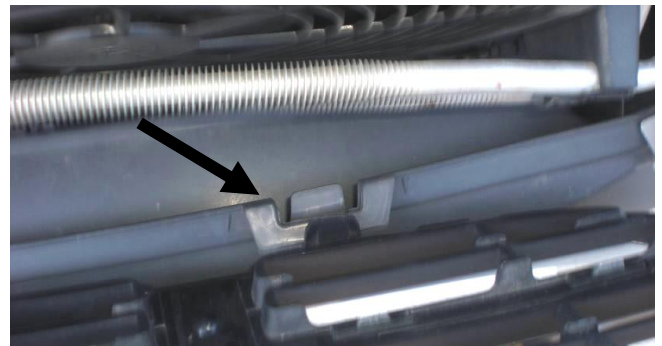


Figure 3: Lower grill retaining clips (top view)



Figure 4: (Clockwise from top left) Plastic fastener location in fender well; Plastic fastener locations under leading edge of bumper; Plastic fastener closed (left) and open (right)

5. Remove the 2 Torx-head bolts at the inner corners of the headlights (**Figure 5**)



Figure 5: Headlight trim piece torx bolts

6. Now remove the plate cover shown in **Figure 6**; there are four bolts holding it on—there may be a sensor attached to it; make sure to disconnect the wiring connector.

- Once the plate cover is removed, the two bumper cover mounting bolts are exposed (see **Figure 6**); these may be removed with a 13mm wrench—There are also two large torx-head bolts on top which must be removed, indicated by arrows below.

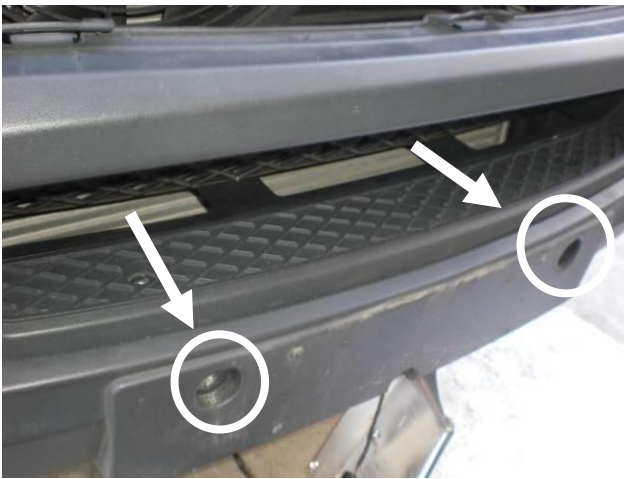


Figure 6. Plate cover (top) and plate cover removed (bottom) showing bumper cover fasteners

- Now simply slide the bumper cover forward to remove it—if resistance is encountered, stop and check for fasteners still attached; the bumper should slide off easily. Do not pull it completely off because you will have to remove sensors and fog light harnesses.
- Once you have the bumper pulled out slightly, disconnect the fog lights, collision sensor, and temperature sensor that are clipped into the backside of the bumper.
- If you have front park assist sensors and would like to install them on your Aluminess bumper follow steps 11 - 15. For customers without park assist sensors, skip to step 16.
- On the factory plastic bumper that has just been removed, number the sensor housings from driver to

passenger side as these will need to be installed in the bumper in the same order.

- Remove the factory sensor housing from the factory bumper. Tip: using a small drill to drill out the plastic glue might help.



Figure 7. Sensor housing in the factory bumper.

- With the housing removed, measure $\frac{1}{2}$ " from each side of the sensor opening and drill a $\frac{3}{16}$ " hole through the plastic.

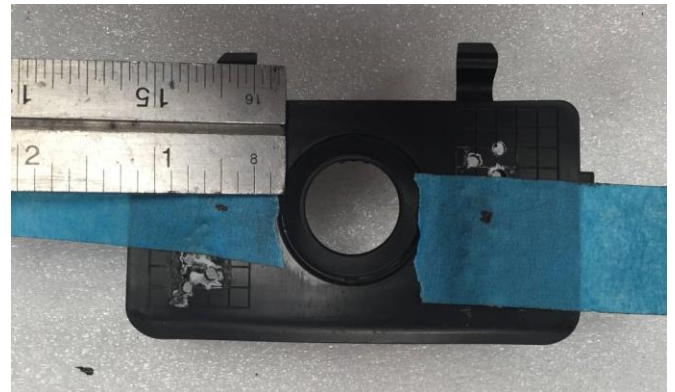


Figure 8. Sensor housing removed from bumper.

- In the similar fashion, mark on the bumper $\frac{1}{2}$ " hole from each edge of the sensor opening.



Figure 9. Measuring 0.5" out from each edge of sensor opening.

15. Using the provided 8-32 hardware, bolt the plastic sensors in the correct order and clip the sensors in place.
16. Now the bumper should be exposed (**Figure 10**); there are four bolts on each side which must be removed, use a 13mm wrench—There may be some frame sealant stuck on the bolt heads; Use a box cutter to scrape it off in order to fit a wrench on the head of the bolt



Figure 10: Stock bumper, passenger side

17. Once the bolts are removed, the bumper usually is stuck to the frame of the vehicle because of the frame sealant; In order to release the bumper, gently tap on the seam between the bumper and the frame using a putty knife and hammer as shown in **Figure 11** below—Make sure there is someone supporting the bumper as you do this so that it does not fall and cause injury once released; once the seal is broken between the bumper and frame, pull the bumper forward on that side—the leverage should release the seal on the opposite side as well.



Figure 11: Releasing stock bumper with hammer and putty knife

18. Remove the 2 plastic pieces that are located just inside the headlights. You can use a 3/8" socket to

remove the Star Shaped bolt if you do not have the correct socket to fit it.

19. Remove the plastic pieces that held the sides of the bumper located underneath the fender right in front of the wheel wells.
20. Remove plastic trim from next to the uni-body frame (both sided).

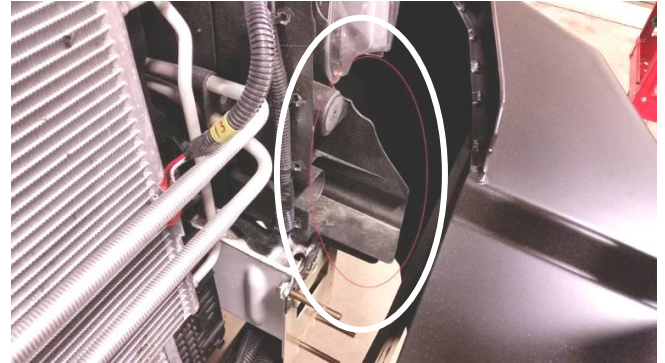


Figure 12. Trim adjacent to uni-body frame

21. Cut removed plastic trim in half (**Figure 13**) and bolt top half back on bumper. This is to retain the mounting attachment to front grill.



Figure 13. Plastic trim cut in half

22. Remove side trim from van.



Figure 14. Side trim

23. If your van has a flange extending out from the side of the frame horn (**Figure 15**), cut it off so that the edge runs perpendicular to the ground. The frame, after cutting off the flange, should look like the frame in **Figure 16**.

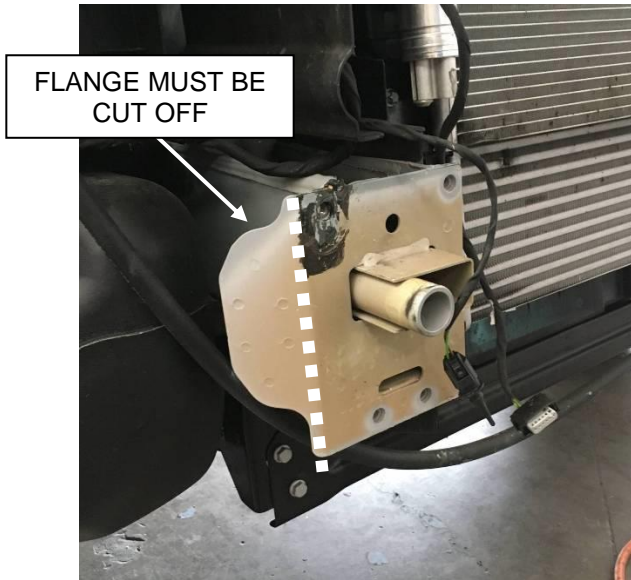


Figure 15. Frame with flange.

24. Take the supplied M8 bolts and thread them into the frame horns (see **Figure 16**); insert all 4 bolts through the frame horn on each side of the vehicle.



Figure 16: M8 bolts installed on passenger side frame horn

25. Install the driver and passenger headlight trim using the hardware provided through the pre-cut slots in the bumper and headlight trim pieces (Reference **Figure 17**). Do NOT tighten hardware yet.

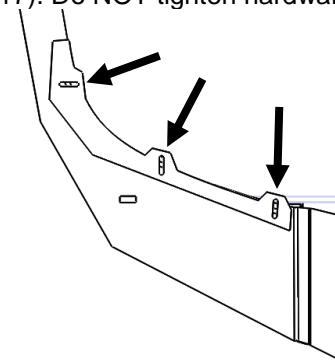


Figure 17: Top View of Pre-Cut Head Light Trim Holes

26. If you have a winch, install it now—you will be unable to do so after the following steps
27. Lift up the bumper and install it on the frame horns, aligning the holes in the rear of the bumper with the bolts which were just installed—it should slide on easily.
28. Check that the bumper is centered on the car and level.
29. Position the headlight trim pieces into the desired position. Once in position, mark location using painter's tape as shown in **Figure 18**.



Figure 18: Marked Location of Headlight Trim

30. Either fully or partially remove the bumper and tighten hardware for the headlight trim using the marked location as a guide for positioning.
31. With someone supporting the bumper, install the supplied M8 nuts with 5/16" washers on the bumper surface, then 5/16" split washers beneath the nut, then snug them down as shown in the image below—do not tighten down fully, as you may want to remove them for a later step.

32. With the bumper hardware secured, bolt on the steel support brackets as shown in **Figure 19** below using the supplied 1/2" hardware—the slotted hole aligns with the hole in the back surface of the Aluminess bumper, and the smaller hole should be against the vertical surface on the side of the frame. Do not tighten these bolts yet as you may need adjustment until the installation is complete.

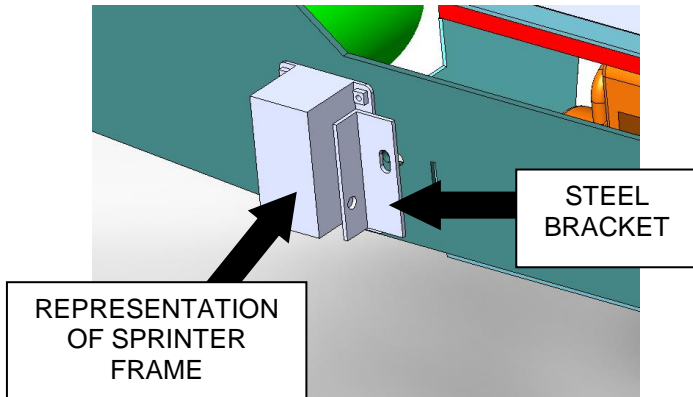


Figure 19: Drawing of steel support bracket installation



Figure 20: Steel support brackets bolted to frame

33. Using a 7/16" or 1/2" drill bit, drill through the lower holes, into the frame in order to create a through hole for the 7/16"-14 x 4 1/2" long bolt to pass through—a couple of ways to accomplish this are discussed below

- a. The simplest and most accurate method is to make sure the brackets are bolted securely to the bumper, and drill as straight as possible through the lower hole in the bracket and into the frame—once the hole has been made, pull the drill out and do the same to the other side of the frame—therefore, you will be drilling 4 separate holes; Slide the 7/16"-14 x 4 1/2" bolt through the holes to make sure they line up right—if they don't, take the drill and ream the holes out slightly larger. Once the holes are marked and/or started, it may be advantageous to remove the bumper temporarily to better reach with the drill.

- b. The second method is more time-consuming and less accurate, but is practical if you do not have a drill which is small enough to fit in this working space—First, with the brackets firmly secured, mark the lower hole locations on the frame using a center punch or scribe; make sure you mark the exact hole center—Then, remove the brackets and bumper and drill the holes out which were just marked—Reinstall the bumper and brackets and see if the bolt passes smoothly through all of the holes—If not, ream out the holes until the bolt is able to pass through the brackets and frame hole

34. Install the 7/16"-14 x 4 1/2" bolt through the steel brackets and frame using the supplied washers and nylon locking nut, then tighten down all of the 7/16" hardware.
35. Bolt the supplied angle bracket to the upper most passenger side mounting hole and arrange it as shown in **Figure 21**. Attach the air flow sensor to this bracket. A small amount of silicone may be needed to hold it in place so that it does not fall out.



Figure 21: Frame mounting bolts with lock washers and 5/16" washers installed



36. Tighten down the M8 hardware holding the bumper to the frame
37. If your sprinter is not equipped with a DEF tank in the front location, skip to step 38. Otherwise, assemble the DEF bracket as shown in the picture

below. You will then mount the piece that is in the shape of California to the tank. Once the bracket is attached to the tank you can hold the angle part of the bracket up against the back plate of the bumper. Use the holes in the angle as a guide to drill through the back plate of the bumper. Attach the bracket using the 1/4" hardware provided.

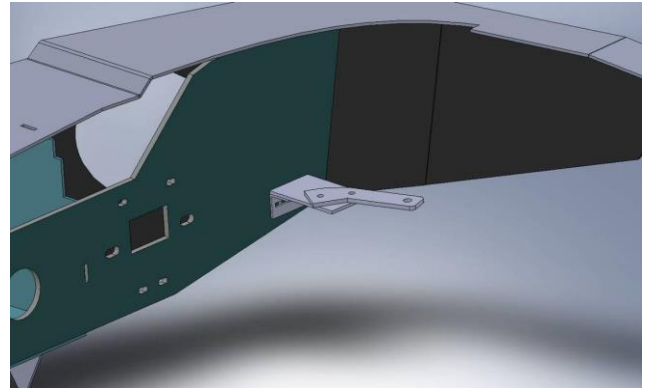


Figure 22. DEF Bracket installed.

38. If your vehicle is not equipped with a collision sensor, skip to step 40. Otherwise, install the collision sensor bracket inside the storage compartment as shown in **Figure 23**. Be sure the bracket is oriented perpendicular to the ground. Route the wiring through the large square hole and mount the sensor to the two screw holes on the bracket.



Figure 23. Install the crash sensor bracket in the orientation as shown.

39. Mount the collision sensor to the bracket behind the window in the front bumper using the #6-32 x 1/2" hardware. The sensor should be pointing straight forward. If you get any error codes while you are driving, adjust the sensor up or down.
40. Install the provided air scoop. Pre-insert four (4) 1/4"-20 x 1" bolt with washers through the bottom plate to provide studs for the air scoop to attach to. Line up the air scoop slotted holes with the pre-inserted bolts and fit air scoop up to the bumper. Using washers and 1/4"-20 nylon-locking nuts, tighten the air scoop to the bumper. Reference **Figure 24** for more detail.

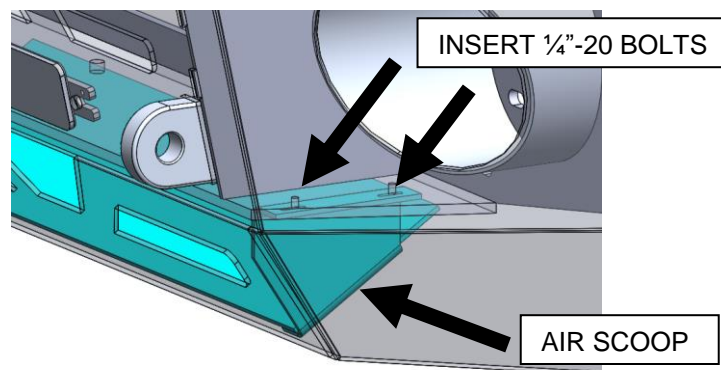


Figure 24. Install Air Scoop As Shown.

41. Re-install the grill, making sure the tabs facing upwards from the bumper are protruding up into the square slots in the lower part of the grill as shown in **Figure 25** below.
42. Mount the Horn to the open hole on the Passenger Side of the back of the bumper



Figure 25: Stock grill installed on Aluminess door tabs

43. At this point, you may wish to trim the inner plastic fender liners so that they do not hang down from behind the bumper—simply cut them with shears or tin snips and re-attach any fasteners to ensure that they do not hang loosely. Some plastic fenders can be fitted behind the new bumper as in the stock configuration.
44. If you are not running a winch, install the fairlead cover on the front face of the bumper using the supplied 1/4" hardware—there are two small 1/4" holes in the fairlead cover for mounting a license plate
45. Finally install the locking door to the top of the bumper, as shown in **Figure 26**, and any lights or accessories at this point—the bumper installation is complete.



Figure 26: Bumper door installed