



2022 Exhaust Fan Sealant Repair

Rev07052022

Overview:

This document provides instructions for repairing the seal between the exhaust fan and the van roof. After seeing an increasing trend in warranty calls regarding leaks, we launched an investigation into the source of the leaks and found the exhaust fan seal to be the culprit. The repair procedure outlined below has been successfully tested and incorporated into our current production process. Please contact Storyteller should you have any questions or need any assistance with these instructions.

Safety Alert:

This procedure requires the use of flammable materials and thus we advise only performing this procedure in a well vented area, away from heat/sparks/open flames/hot surfaces, and without smoking. Only complete this process if you feel comfortable doing so.

Applicable Models: All 2022 MODEs

Repair Time: 1.5 Hours labor with additional sealant curing time

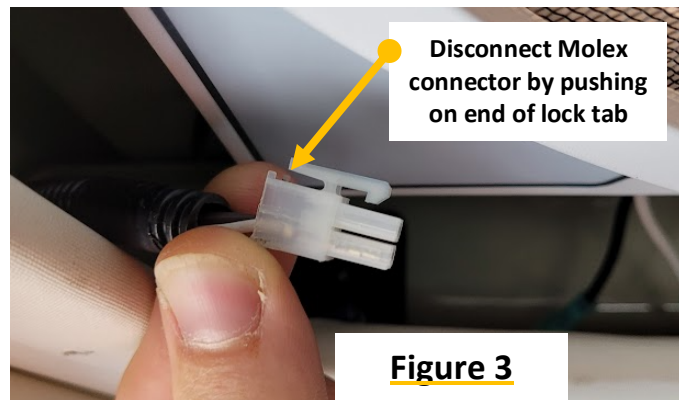
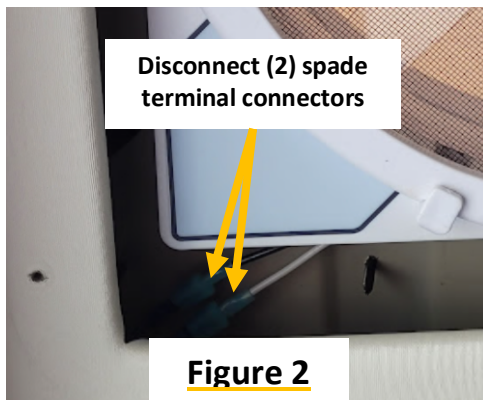
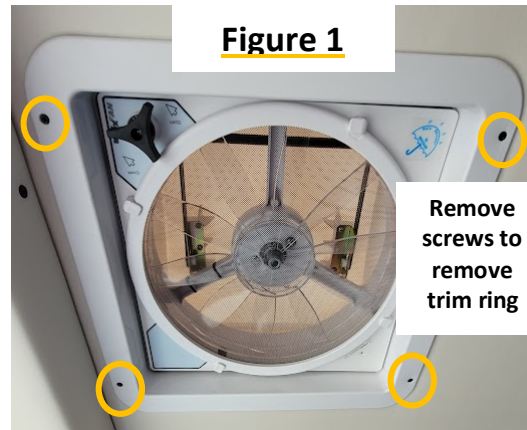
Tools and Supplies Needed:

- Impact Driver with #2 Phillips Bit
- Plastic Putty Knife/Scraper
- Lint Free Rag/Towel
- Denatured Alcohol
- Marker
- Utility Knife or Scissors
- Caulk Gun
- Self-Etching Primer (as needed)
- 1/2" Wide Double-sided Foam Tape (60" Length)*
- Replacement Maxxfan Gasket*
- Permatex Ultra Black Gasket Maker 82180 (3.35 oz.)*
- Replacement #8 x 1.25" Wafer Head Stinger Screws (qty 16)*
- Dicor 501LSB Self-Leveling Lap Sealant (10.3 oz. Tube)*

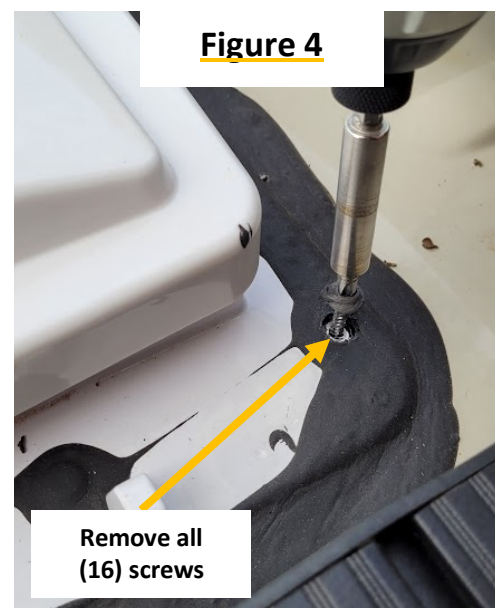
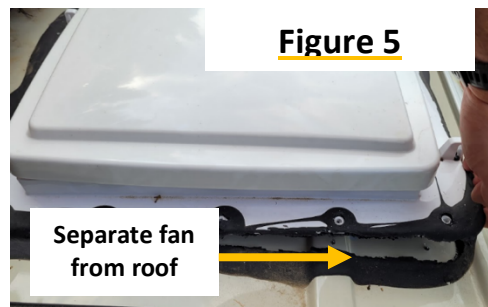
* Indicates items provided by Storyteller Overland

Repair Procedure:

1. Use an impact driver with a #2 Phillips bit to remove the (4) screws securing the trim ring to the ceiling. Set trim ring and screws aside. See figure 1. **NOTE: Beast MODE vans will also have a metal plate positioned above the trim ring flange.**
2. Disconnect fan wiring
 - a. Disconnect the (2) spade terminal connectors located at the rear passenger side corner of the fan. See figure 2.



- b. Disconnect the Molex connector from the fan circuit board located along the passenger side toward the rear corner of the fan. The release tab is located on top of the connector and must be pushed to release the lock. See figure 3. Note: If you are unable to release the connector with the fan installed, you can disconnect the connector once the fan is lifted up slightly in the next step. Just be careful to not tug on the wires.
3. Remove fan from roof of van
 - a. Start by carefully removing the (16) original screws that secured the fan to the roof. See figure 4.
 - b. Carefully pull up on 1 corner of the fan's flange to start breaking the sealant as shown in figure 5. Set fan aside.



4. Clean off van roof and fan

- a. Using a plastic putty knife or scraper, peel away the large sections of sealant from the roof of the van. **See figure 6.**
- b. Once the big clumps of sealant have been removed, use a rag and denatured alcohol to clean around the roof cutout. **See figure 7.** NOTE: Be very careful while working around the cutout in the roof. the cut edges are very sharp.

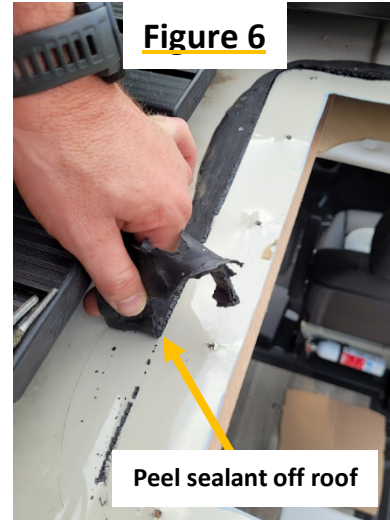
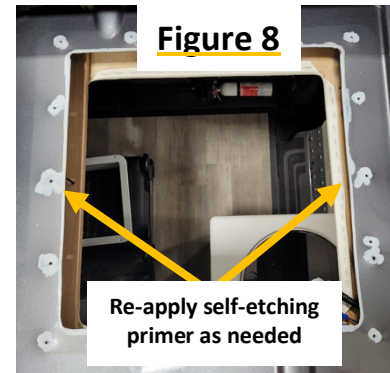
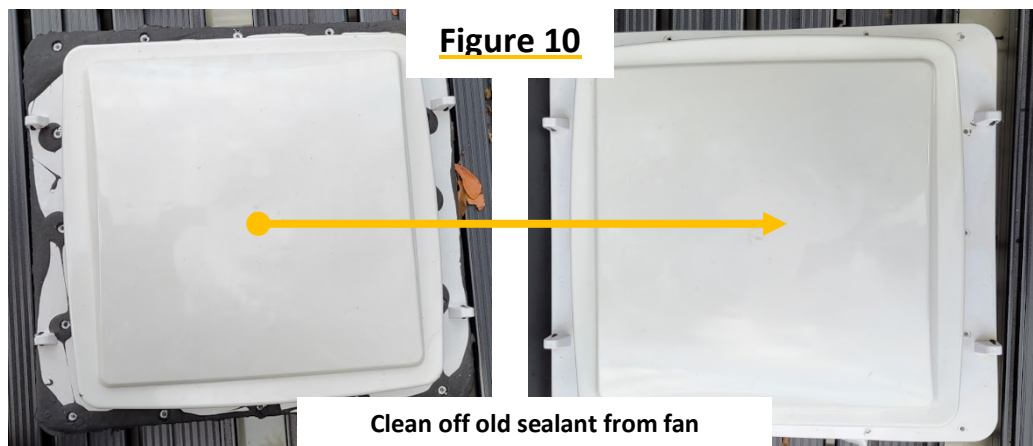
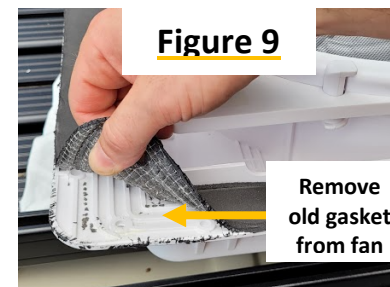


Figure 7

Clean off remaining sealant



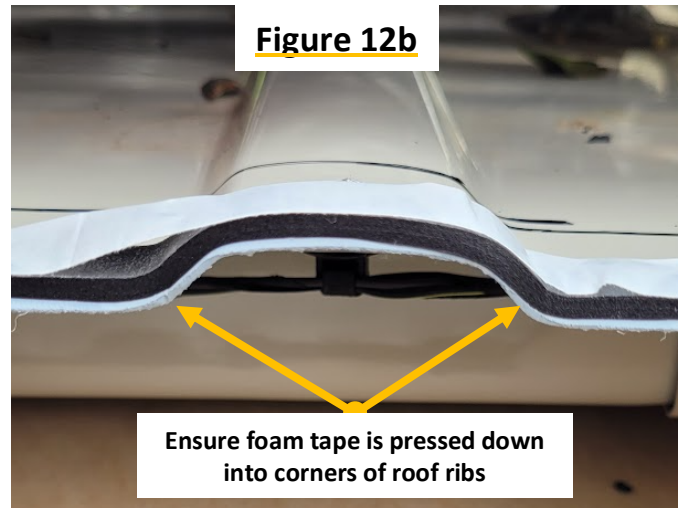
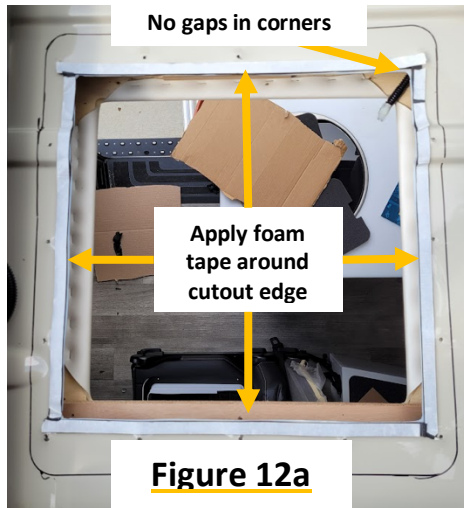
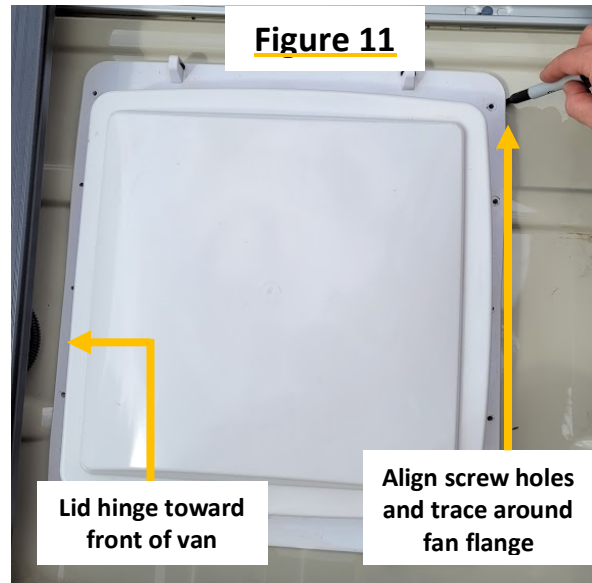
- c. As needed, wipe and let dry any rust spots on or around the cutout and screw holes and reapply self-etching primer if necessary. **See figure 8.**
- d. Peel off the old gasket from the bottom of the fan's mounting flange as shown in **figure 9.**
- e. Repeat steps 4a-4b for the fan. **See figure 10.**



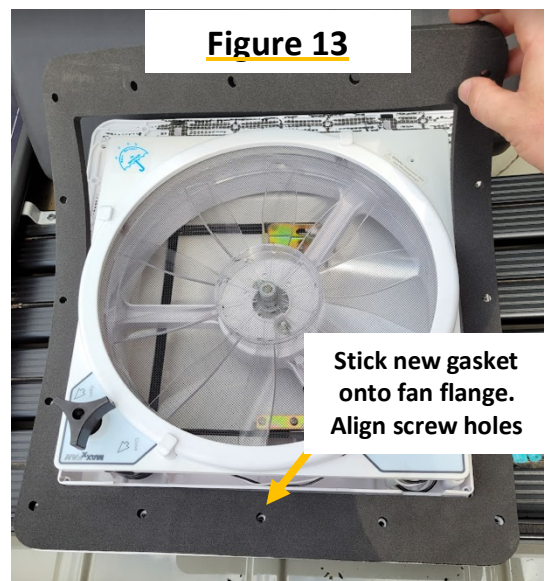
5. Prep for Reinstalling fan

- a. Place the fan back into the roof cutout, ensuring the lid's hinge is on the front side. Use a marker to closely trace around the fan's mounting flange onto the van roof. **See figure 11.**

- b. Set the fan aside and apply the 1/2" wide double-sided foam tape along the cut edge in the roof. Cut the tape as needed to align the corners. The tape must form a closed border around the cutout with no gaps. It is also critical that the tape sits flat on the roof and follows the contour of the roof ribs so that no gaps are left. This tape will act as a barrier to prevent sealant from seeping into the van. **See figures 12a and 12b.**



- c. Peel the plastic backing off the replacement fan gasket then stick the gasket onto the bottom side of the fan's mounting flange by aligning the thick sides of the gasket with the thick sides of the fan and aligning the pre-punched holes over the fan's screw holes. **See figure 13.**



- d. Using the supplied Permatex Ultra Black Gasket Maker apply a continuous 1/4" bead to the van roof on the inside of the traced border. Make sure there are no gaps in the sealant. **See figure 14.**

- e. Peel the top plastic layer off the double-sided foam tape.

6. Reinstall fan to roof

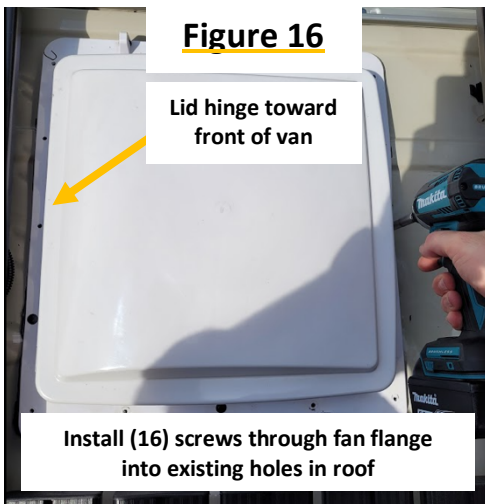
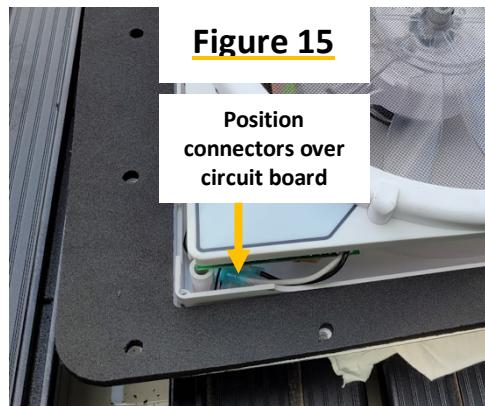
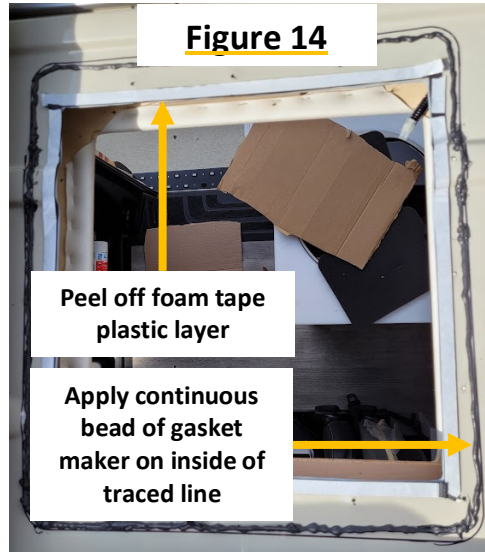
- a. Ensure the spade terminal connectors are tucked away above the circuit board as shown in **figure 15.**
- b. Position the hinge side of the fan lid along the front of the cutout, align the screw holes in the fan with the original holes in the roof and carefully set the fan back down into the cutout. **See figure 16.**

- c. Using the provided replacement screws, slowly fasten the fan down to the roof. Install each screw about 70% of the way and then go back over them to snug fully. **See figure 16. NOTE: Be very careful to not strip out the screws/holes. The screws do not need to be very tight; they just need to compress the gasket.**

- d. Allow the sealant to cure for at least 1 hour from this point before completing step 8. (applying Dicor sealant).

7. Reassemble fan components inside van

- a. Check to ensure there is no sealant that leaked through to the Inside of the van during the previous step. Clean up any drips with a rag as needed. **NOTE: Be very careful to not get sealant onto the ceiling material as it will be very difficult to clean off.**



- b. Reconnect the spade terminal connectors as follows: White fan wire to black harness wire; Black fan wire to blue harness wire. **See figure 17.**

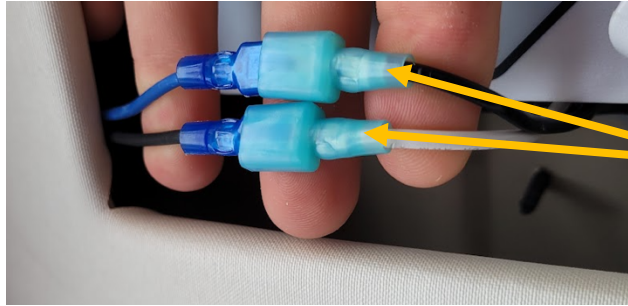


Figure 17

Reconnect spade terminals between harness and fan

- c. Reconnect the Molex connector to the circuit board. Ensure the locking tab is positioned to the top. **See figure 18.**

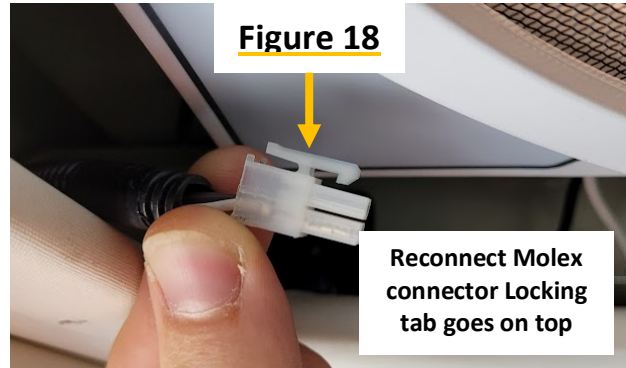


Figure 18

Reconnect Molex connector Locking tab goes on top

- d. Reinstall the trim ring to the ceiling using the original (4) screws. The cutout corner goes to the rear passenger side corner of the fan. **See figure 19. NOTE: Beast**

MODE vans will also have a metal

plate positioned above the trim ring flange that will need to be installed with the trim ring.

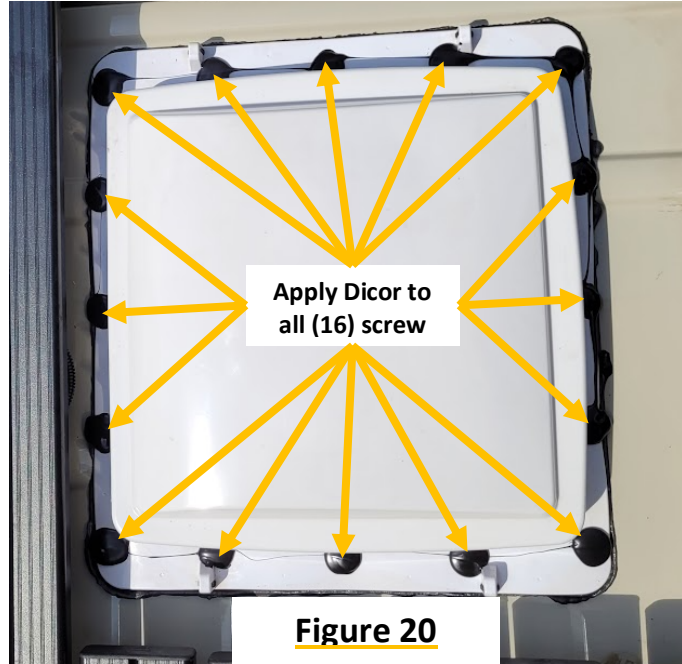
Figure 19

Cutout corner positioned at passenger rear corner of fan

Metal ring only present on Beast MODE vans



8. Once at least 1 hour has elapsed since completing step 6, apply Dicor sealant around the top of the fan
- Using a caulk gun loaded with the supplied Dicor sealant, apply a Hershey's Kiss size blob of sealant to each of the (16) screwheads. Ensure the sealant makes a good seal around the screwheads. **See figure 20.**



- Apply a continuous bead of sealant along the seam between the outside edge of the fan's flange and the van roof. Ensure the sealant fully bridges from the top of the flange to the van roof. Once the first pass is made around the fan, apply the rest of the tube to spots as needed to ensure a full seal. **See figure 21.**
- Allow the sealant to cure for at least 48 hours before driving the van.



Apply continuous bead of sealant around fan edge seam