



## Thor Motor Coach Technical Service Bulletin

TSB #	<b>TSB 21-03</b>		
Description/Title:	<b>Lippert Vela Pop-Up Roof System</b>		
Affected Product Line(s):	<b>Certain model year 2021 Sequence, Rize, Scope, and Tellaro</b>		
Service Campaign # :	<b>RC000224</b>	Released Date:	<b>5/25/2021</b>
Codes:	<b>TMCTS80267W</b>	Document Date:	<b>5/25/2021</b>
Time Allowed:	<b>2.50 hrs.</b>	Document Revision:	<b>A</b>

### **Purpose:**

This document refers to corrective actions for the repair and sealing of roof systems identified by the OEM.

### **Part(s) Required:**

#### **TMC Repair Kit # 0499294**

Includes: Lippert Pop-Up Roof Sealant Kit

### **Instructions:**

Please follow attached written instructions provided by Lippert.

A link to an instructional video has been included below—

[Vela Pop up Roof System Sealant and Waterproofing - YouTube](#)

# VELA POP-UP ROOF SYSTEM SEALANT AND WATERPROOFING ADDITIONS

TSB Number:	16-001-21		
Product:	Vela Pop-up Roof System Sealant and Waterproofing		
Date:	May 03, 2021	Labor:	2.5 hours per unit

## Purpose

This document refers to corrective actions for the repair and sealing of roof systems identified by the OEM.

**NOTE:** Enclosed green lines indicate a designated area.

## Safety

This document provides general instructions. Many variables can change the circumstances of any procedure, i.e. the degree of difficulty involved in the service operation and the ability level of the individual performing the operation. This document cannot begin to plot out procedures for every possibility, but will provide the general instructions for effectively installing, removing or servicing the system. In the event the skill level required is too advanced or the procedure too difficult, a certified technician should be consulted before performing the necessary operation. Failure to correctly install, remove or service the system may result in voiding the warranty, inflicting injury or even death.

### **WARNING**

The "WARNING" symbol above is a sign that a procedure has a safety risk involved and may cause death, serious personal injury, severe product and/or property damage if not performed safely and within the parameters set forth in this document.

### **CAUTION**

The "CAUTION" symbol above is a sign that a procedure has a safety risk involved and may cause personal injury, product and/or property damage if not performed safely and within the parameters set forth in this document.

## Resources Required

- Two people, depending on task
- Flexible 10mm socket driver
- Automotive body nylon pry bar (yellow)
- 8 1/2" padded wooden support
- 35"-36" padded wooden support
- Lint-free wipes

### Sealant kit to be supplied:

Pop Up Roof Sealant Kit - 2021018470		
Part No.	Qty.	Description
2021017938	18	Washer, Rubber, 1/4" x 5/8" x 3/32"
2021017944	18	Bolt, M6-1.0 x 20 mm HFLH YELZN C18.8 PTHD ST
2021018096	18	Washer, 1/4" x 1 1/16" FLW CAD SST
268806	180"	Foam Seal Tape
2021017925	1	KIWI® Camp Dry Water Repellent
2021017930	1	Coghlan's Seam Seal #9695
2021017935	1	Geocel® 2300® Vehicle Body Sealant

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## Preparation

Open top portion of pop up until the canvas is fully extended.

Place 35"-36" vertical padded wooden support (Fig. 1) near the front corner and an approximately 8 1/2" padded wooden support (Fig. 1B) at the rear corner (green area box) of the pop up during the waterproofing process.

**NOTE:** Only one vertical support is required, but should be used on the side where the lifting assembly has been unmounted and resting on the lip (edge) of the pop up's base.

Fig. 1



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## Instructions

With the pop up canvas fully open and supported, start on either the roadside or curbside of the camper. Waterproof the pop up canvas latch assemblies as follows:

1. Remove the latch assembly (Fig. 2). Discard bolts and washers. Do **NOT** reuse.

Fig. 2



2. Clean the pop up's mating surface with lint-free wipes. Make sure no dirt or debris is present before applying the foam tape.

### **⚠ WARNING**

**Keep sealant away from heat and flame.**

**Sealant may be harmful or fatal if swallowed. May cause lung damage, respiratory tract, skin and eye irritation. Always use in well ventilated areas. Wear appropriate personal protective equipment.**

3. Inject Geocel® 2300® Vehicle Body Sealant silicone caulk into each of the pop up base's mounting holes for the latch assembly.
4. Cut three strips of foam seal tape (Fig. 3); one strip long enough (approximately six inches) to match the length of the bottom of the latch assembly, and two strips each long enough (approximately two inches each) to cover the vertical side of latch assembly mounting holes.
5. Apply the strips of foam seal tape to the canvas pop up latch assembly mating surfaces. Make sure the bottom and side mounting holes—filled with silicone caulking—are completely covered by the foam seal tape.
6. Install the latch assembly in-place over the foam seal tape.
7. Insert a pointed tool into the latch assembly's mounting holes and puncture through the installed foam seal tape until contact is made with the pop up's base mounting holes.
8. Leverage the pointed tool within the mounting holes to properly align the latch assembly with the base.

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Fig. 3



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9. Inject Geocel 2300 Vehicle Body Sealant silicone caulk into each of the latch assembly's mounting holes.

Fig. 4

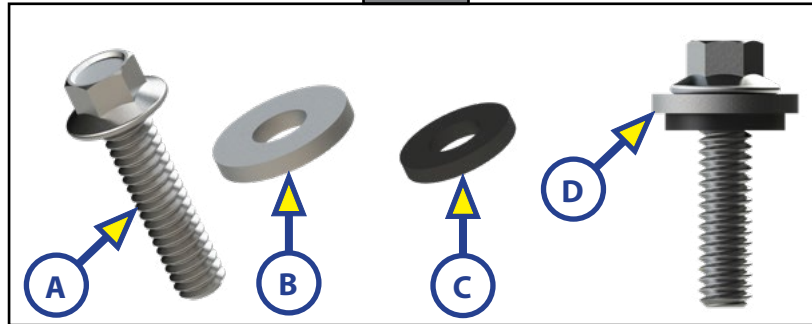


# VELA POP-UP ROOF SYSTEM SEALANT AND WATERPROOFING ADDITIONS

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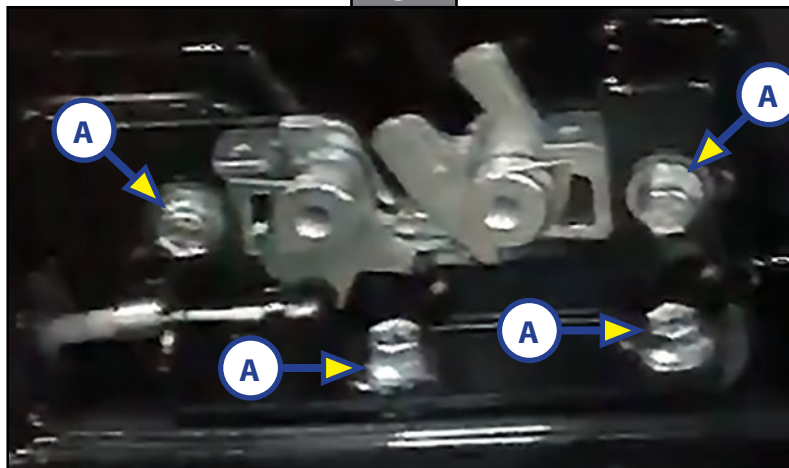
10. Obtain four M6-1.0 x 20 mm bolts (Fig. 5A).
11. Install one 1/4" stainless steel flat washer (Fig. 5B) over each M6-1.0 x 20 mm bolt.
12. Then, install one 1/4" rubber washer (Fig. 5C) over each bolt.

Fig. 5



13. Use a flexible 10 mm socket driver to install assembled bolts (Fig. 5D) into each of the latch assembly's mounting holes (Fig. 6A).

Fig. 6



14. Snug tight each bolt (Fig. 7A). Do **NOT** overtighten to prevent deformation of the rubber washer (Fig. 7B).

**NOTE:** Deformation of the rubber washer weakens its waterproofing effect.

Fig. 7



# VELA POP-UP ROOF SYSTEM SEALANT AND WATERPROOFING ADDITIONS

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15. Apply Geocel 2300 Vehicle Body Sealant silicone caulk around the grommet of the pop up latch cable (Fig. 8A).
16. Repeat steps 1-15 for the other latch assembly.

**Fig. 8**



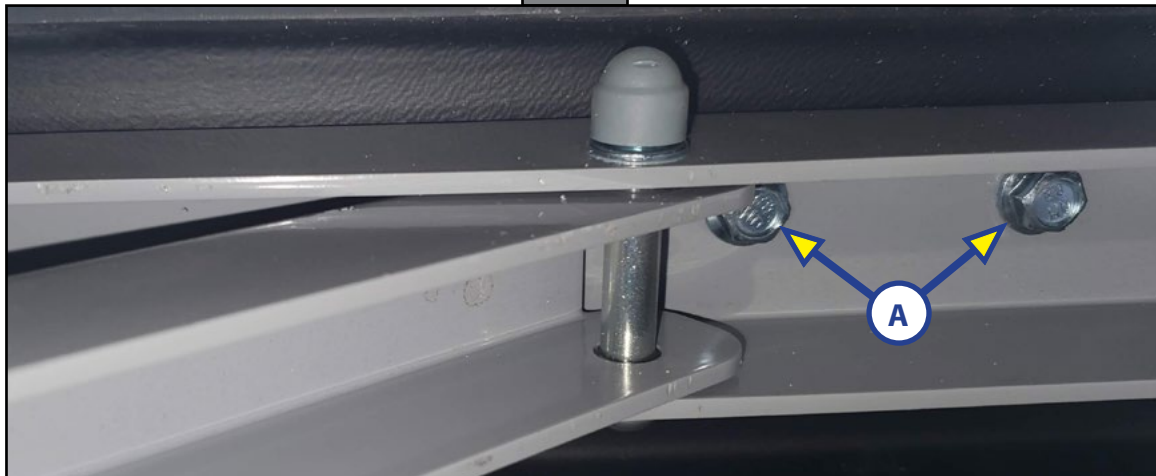
# VELA POP-UP ROOF SYSTEM SEALANT AND WATERPROOFING ADDITIONS

TSB Number:	16-001-21		
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Waterproof the pop up canvas pneumatically articulated lifting assemblies as follows:

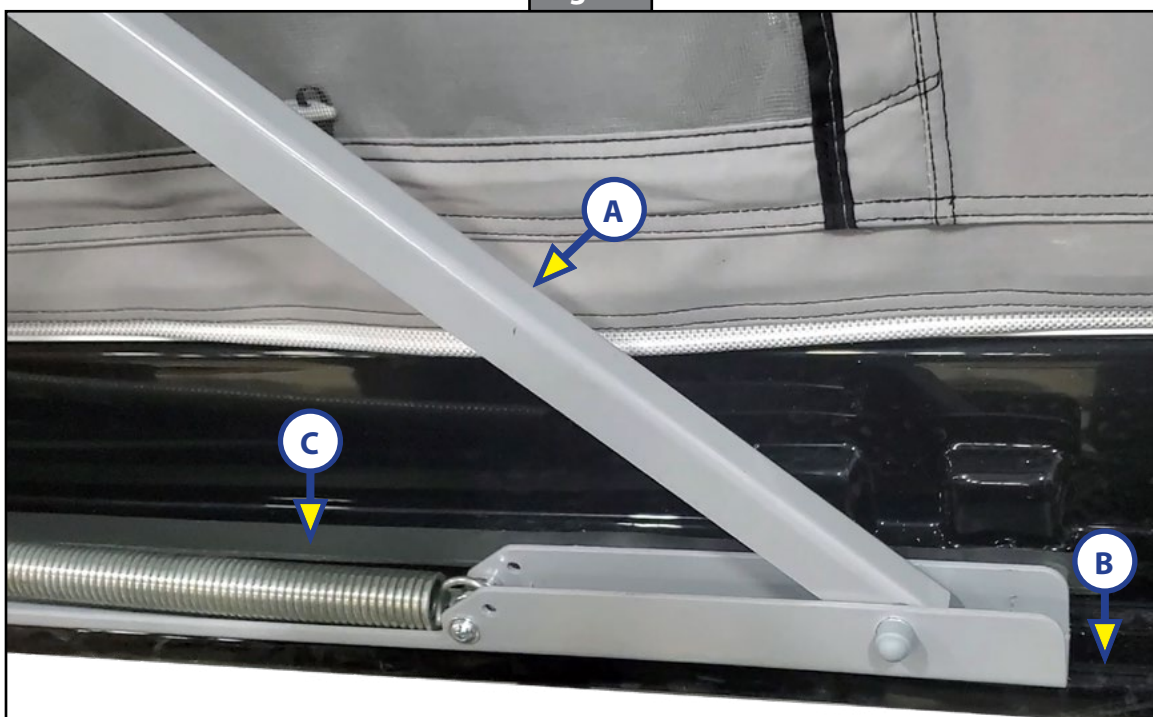
1. Remove the attaching bolts (Fig. 9A) from the pop up lifting assembly. Discard bolts and washers. Do **NOT** reuse.

Fig. 9



2. With help of another person, raise the lifting assembly (Fig. 10A) and slightly pull it outward to rest on the outer lip (edge) of the pop up's base (Fig. 10B).
3. Clean the pop up's mating surface for the lifting assembly with lint-free wipes. Make sure no dirt or debris is present before applying the foam seal tape.

Fig. 10



# VELA POP-UP ROOF SYSTEM SEALANT AND WATERPROOFING ADDITIONS

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4. Inject Geocel 2300 Vehicle Body Sealant silicone caulk into each of the base's mounting holes prior to applying foam seal tape.
5. Cut a strip of foam seal tape (Fig. 3) long enough (approximately 80 inches) to match the length of the bottom of the pop up lifting assembly.
6. Apply the foam seal tape to the canvas pop up base mating surface for the pop up lifting assembly (Fig. 10C).
7. From inside the pop up, use the nylon pry bar tool to push the canvas attachment cord out of the aluminum channel (Fig. 11) and outward to expose the channel's seam. Use care when dislodging canvas cord from extrusion to avoid damaging cord and/or extrusion.

Fig. 11



8. There are three channel seams which will need sealant applied.
  - A. One on both sides of the pop up, located above the tension spring (Fig. 12A).
  - B. One centered at the rear of the pop up Fig. 13A).

Fig. 12

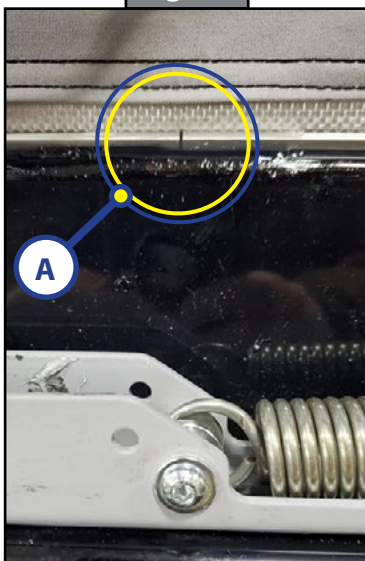
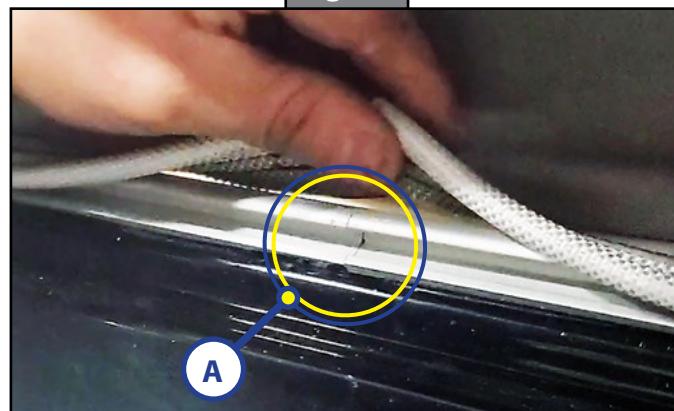


Fig. 13



# VELA POP-UP ROOF SYSTEM SEALANT AND WATERPROOFING ADDITIONS

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9. Applying sealant to the two side seams:

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- A. Apply a bead of Geocel 2300 Vehicle Body Sealant silicone caulk over each seam of the aluminum extrusion channel (Fig. 14).
- B. Use the nylon pry bar tool to push the canvas attachment cord back into the aluminum extrusion channel (Fig. 15).

**NOTE:** Use care when applying pressure against the cord to avoid slippage of the tool that could cause damage to the canvas material.

Fig. 14



Fig. 15



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## 10. Applying sealant to the rear seam:

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- A. Apply a bead of Geocel 2300 Vehicle Body Sealant silicone caulk over each seam of the aluminum extrusion channel (Fig. 14).
- B. Press one end of the cord seam into the silicone caulk and hold in-place (Fig. 16).
- C. Use the nylon pry bar tool to reinsert the end of the canvas attachment cord into the aluminum extrusion channel (Fig. 17).

**NOTE:** Use care when applying pressure against the cord to avoid slippage of the tool that could cause damage to the canvas material.

Fig. 16



Fig. 17



- D. Repeat steps A and B to reinsert the other end of the cord seam into the silicone caulk. Make sure the two ends of the cord are butted up against each other.

**NOTE:** Use care when applying pressure against the cord to avoid slippage of the tool that could cause damage to the canvas material.

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11. For ease of access, leave the lifting assembly resting on the pop up's outer lip (edge) (Fig. 10B).

## ⚠ WARNING

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- A. Starting at the middle of the front of the pop up, apply a continuous bead of Geocel 2300 Vehicle Body Sealant silicone caulk around the mating seam of the aluminum channel—housing the canvas attachment cord—and stopping in the middle of the rear of the pop up (Fig. 18).

Fig. 18



- B. Smooth out the silicone bead so it seals tightly into the mating seam.
- C. Inspect the full length of the smoothed out silicone seal to make sure there are no gaps. If gaps appear, apply silicone and smooth as needed.
12. Applying sealant and re-installing the lifting assembly as follows:
- A. With help of another person, carefully raise the lifting assembly off of the pop up's outer lip (edge) and place it onto the strip of foam seal tape (Fig. 10C).
- B. Insert a pointed tool into the latch assembly's mounting holes and puncture through the installed foam tape until contact is made with the pop up's base mounting holes.
- C. Leverage the pointed tool within the mounting holes to properly align the latch assembly with the base.
- D. Inject Geocel 2300 Vehicle Body Sealant silicone caulk into each of the pop up lifting assembly's mounting holes.
- E. Obtain M6-1.0 x 20 mm stainless steel hex washer head bolts (Fig. 4A).
- F. Install a 1/4" stainless steel flat washer (Fig. 4B) over each bolt.
- G. Then, install a 1/4" rubber washer (Fig. 4C) over each bolt.
- H. Use a flexible 10 mm socket driver to install the assembled bolts (Fig. 4D) into each of the pop up lifting assembly's mounting holes.
- I. Snug tight each bolt (Fig. 7A). Do **NOT** overtighten to prevent deformation of the rubber washer (Fig. 7B).

**NOTE:** Deformation of the rubber washer weakens its waterproofing effect.

13. Remove the vertical padded wooden support (Fig. 1).
14. Repeat steps 1-13 for the other pop up lifting assembly and other half of the canvas pop up.

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Waterproof the pop up canvas as follows:

1. From inside the canvas pop up:
  - A. Unzip all window coverings.

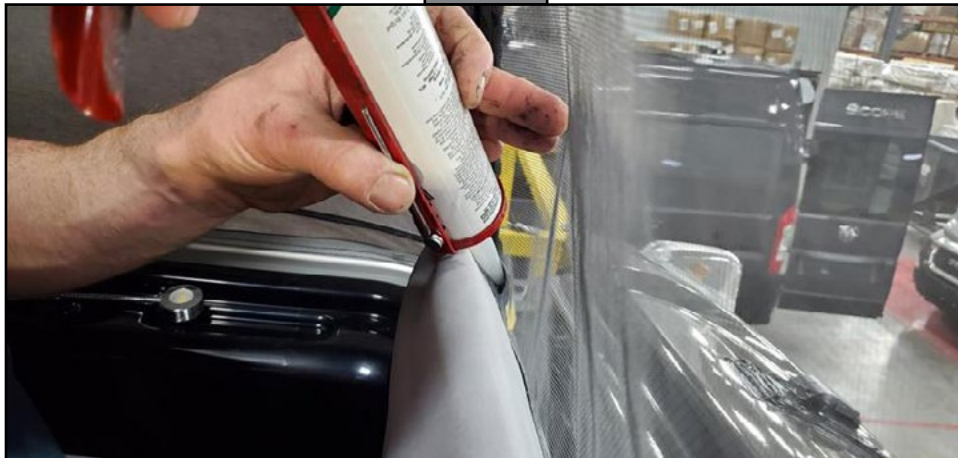
## ⚠ WARNING

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**Sealant may be harmful or fatal if swallowed. May cause lung damage, respiratory tract, skin and eye irritation. Always use in well ventilated areas. Wear appropriate personal protective equipment.**

- B. In each corner of a window, apply a bead of Geocel 2300 Vehicle Body Sealant silicone caulk into the horizontal and angled sewn (stitched) seam inside and outside of the clear plastic zipper protector (Fig. 19).

Fig. 19



- C. Apply a heavy spray of KIWI® Camp Dry water repellent along the inside of the windows zipper sewn (stitched) seam (Fig. 20). Include the area covered by the window's canvas flap.

Fig. 20



- D. Close all windows.

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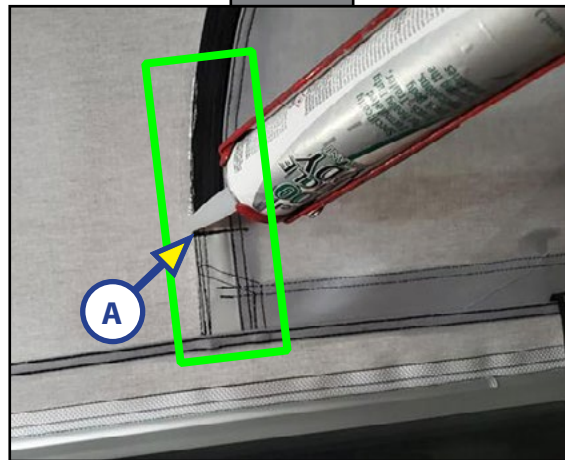
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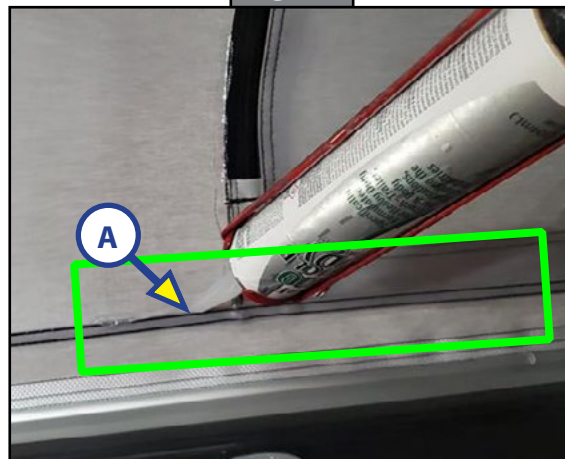
- E. Starting at approximately 2 1/2" inches above the window's horizontal sewn (stitched ) seam (Fig. 21A), apply a bead of Geocel 2300 Vehicle Body Sealant silicone caulk downward along the outer seam to the horizontal base sewn (stitched) seam (green area box).

Fig. 21



- F. Starting at approximately 2" inches from either side of the window's zippered seam (Fig. 22A), apply an approximately 5" bead of Geocel 2300 Vehicle Body Sealant silicone caulk along the top seam of the horizontal base sewn (stitched) seam (green area box).

Fig. 22



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## ⚠ WARNING

**Seam seal and repellent may be harmful if swallowed.  
May also cause respiratory tract, skin and eye irritation.**

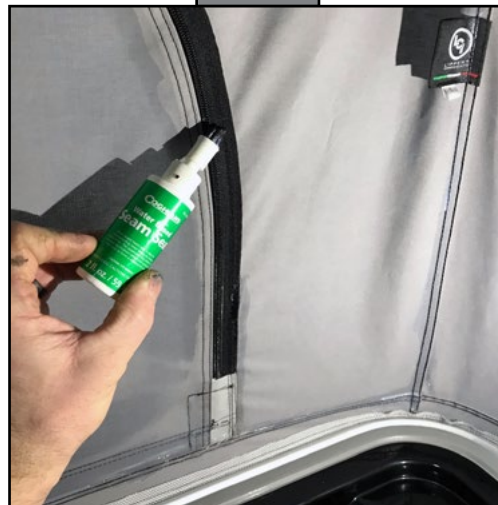
**Always use in well ventilated areas. Wear appropriate personal protective equipment.**

- G. Apply Coghlan's Seam Seal #9695 along all canvas sewn (stitched) seams. See figures 23 and 24 as examples of interior seams.

**Fig. 23**



**Fig. 24**



- H. Apply a heavy spray of KIWI Camp Dry water repellent along all sewn (stitched) seams. See figure 25 as an example.
- I. Apply a normal spray of KIWI Camp Dry water repellent to the remaining interior surface areas of the canvas. See figure 26 as an example.

**Fig. 25**



**Fig. 26**



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2. From outside the canvas pop up:
  - A. Apply a heavy spray of KIWI Camp Dry water repellent along all sewn (stitched) seams. See figures 27-30 as examples.

Fig. 27



Fig. 28



Fig. 29



Fig. 30



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- B.** Apply a normal spray of KIWI Camp Dry water repellent to the remaining surface areas of the canvas. See figures 31-33 as examples.

Allow all sealants to cure and sprays to completely dry.

**Fig. 31**



**Fig. 32**



**Fig. 33**



As a supplier of components to the RV industry, safety, education and customer satisfaction are our primary concerns. Should you have any questions, please do not hesitate to contact us at (574) 537-8900 or by email at [customerservice@lci1.com](mailto:customerservice@lci1.com). Self-help tips, technical documents, product videos and a training class schedule are available at [lippert.com](http://lippert.com) or by downloading the MyLCI app.