Keystone Fifth Wheel – Sidewall Crack Repair

Please watch this video prior to performing this repair.
https://youtu.be/ZzrpwGgAojs

The information and instructions in a Keystone Service Bulletin (KSB) are intended to inform RV dealership Service Managers/Technicians of situations that may occur with some Recreational vehicles so dealership personnel can perform proper and efficient service. KSB's are intended to be used by trained RV technicians with the knowledge, tools and equipment to do the job properly and safely, not "do-it-yourselfers".

- Information is not presented as a repair guaranteed to be covered by warranty.
- Keystone's P & P (Policy & Procedures) must be followed for any requested warranty work.
- Do not assume this repair is covered by warranty.
- Not every unit requires a repair.

This process describes the safe and proper procedure to repair any unit which experiences a crack at the bottom corner of a slideout at the gooseneck of a 5th wheel by opening the side wall to add reinforcement. This Keystone Service Bulletin explains how to perform the repair.

Model and Serial Numbers Included: 2020-2022 Avalanche and Alpine Fifth Wheel Units
2020-2023 Montana, High Country Montana and Fuzion Fifth Wheel Units

Parts Required per Unit: The adhesives noted below are the only acceptable adhesives for this repair. The parts listed below are for one side only. If both sides require repair, order more adhesives/parts.

- 4 ea. KRV # 207257 - Adhesive - Panel Bonding - Auto mix - 200ml – 2 Part Epoxy – 08115 - 3M - 2 application tips included with each tube.
- 1 ea. KRV # 699245 - Adhesive Applicator Gun 1:1 Ratio – 2:1 ratio
- 5 ea. KRV # 346665 - Adhesive-Sealant - Lavanture -10oz -High Performance – Manus - Bond 75-GP
- 1 **-** Trim – H-Divider Cover - [Expansion/Relief joint] KRV # 426646 - Ivory or KRV # 600813 - Black
- 1 ea. KRV Manual ID - Fiberglass/filon Skin, noting double layer of Lauan and Door Side or Off Door Side Sidewall
- Graphics/Decals – order as needed.

If reinforcement is added from the interior side you will need to order:

- 1 ea. [Interior Décor Panel] Order to match interior décor
- 1 ea. [Seam Tape] Order to match interior décor

Ground shipment only - Hazardous Material
Application Gun may be returned for full credit, submit on RGA.

Local parts: #14 x 5" screws, 3" wood screws, Pin-box jack, silicone sealant, putty tape, 2" x 4" and 2" x 6" lumber, ¼"-20 x 3" screws, non-sag roof sealant, scrap skirt metal, carpet remnants. 1 ¼" x 1 ¼" wood and 1 ¾" x 1 ¼" wood which can be ripped down out of more 2x4's or 2x6's

Tools Required: Hammer, Dead-blow mallet, Screw gun and drill, 6" x 3/16" and 7/32" Drill bits, Stapler, 4 ½" Wheel Grinder-80 grit disc, C-Clamps, Quick-Grip Clamps, Caulk gun, Flat Bar/Pry Bar, Floor Scraper, Squeegee, Dremel Tool, Framing Square

This KSB requires a Pre-Authorization & Photographs if being submitted for warranty coverage.

When performing this KSB, please make certain that appropriate Personal Protective Equipment (PPE) is used.

The remedy is to remove the filon, add reinforcement to the wall. Replace the filon and add expansion joints top and bottom at front of the slideout opening.

PLEASE WATCH THE VIDEO FIRST, THE LINK IS FOUND AT THE TOP OF THE PREVIOUS PAGE.

REPAIR INSTRUCTIONS

Step 1
Locate the trailer on a level, flat, hard surface. Chock the wheels.

Step 2
Use the front landing legs, lower the unit on to a tripod so that the front legs are just off the ground placing the weight of the unit on the tripod. Throughout this repair it is very important to not raise the unit. Leave the weight of the RV on the tripod during the repair. **See Figure 1**

Step 3
Extend the slideout and if necessary remove it from the sidewall including the side seals and tower on the side where the work is being performed.

Step 4
Now that the RV is ready disconnect 120VAC and12VDC power to the unit.

Step 5
Remove the pre-bent trim from the bottom and both sides of the front cap. **See Figure 2**

DO NOT remove the screws from the top roof line where the cap attaches. See Figure 3

Fig 1

Fig 2

Fig 3

Step 6
Remove the bulkhead moldings and if applicable remove the drip rail from above the slideout.

Step 7
Loosen the roof line gutter rail approximately 3 feet back and use a wedge to hold it away from the wall. Carefully fold rubber roof back and tape it down and out of the way.

Step 8
Extend the bottom of the cap approximately 1 foot and brace to hold the cap back out of the way. **See Figure 4**

Fig 4

Step 9
Use the framing square to mark the wall and use the Dremel tool to cut the upper expansion joint even with the slideout opening all the way to the roof line. The cut should only leave a 1/16” gap for the t-molding to tightly fit into. **See Figure 5 and Figure 6**

Fig 5

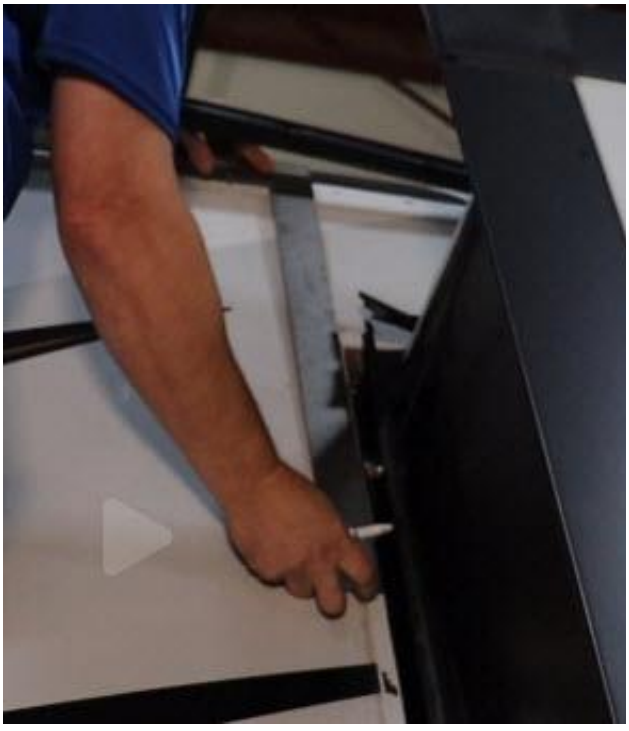


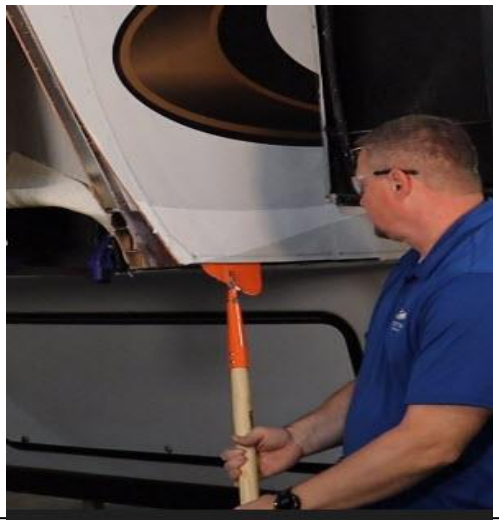
Fig 6

Step 10
If the unit already has a lower expansion joint remove the t-molding and make sure the joint is cut all the way through, use the Dremel tool to fully cut through top to bottom. If the unit does not have a lower expansion joint cut one even with the slideout opening all the way to the bottom of the filon. Again, the cut should only leave a 1/16” gap for the t-molding to tightly fit into.
See Figures 7 and 17A

Step 11
Peel back the forward portion of filon to the corner of the slideout top and bottom using a pry bar and flat scraper to release the lauan from the aluminum frame and foam. Remove the filon in one piece to use as a template for the new piece. **See Figure 8**

Fig 7

Fig 8



Step 12
Remove the Bulkhead cover to access and remove the screws from the sidewall straps that hold the sidewalls in place on both sides of the RV. **Figure 9** Check for screws on the backside of the steel frame tube, if screws are found remove them. **See Figure 10** Inspect the sidewall straps for cracks **Figure 9** - if cracked contact LCI to perform repairs to sidewall straps first.

Fig 9

Fig 10

Step 13

Inspect the 3 sidewall tubes for missing wood. If wood is missing stuff the tubes on both sides of the RV using 1 ¼" x 1 ¼" wood and 1 ¾" x 1 ¼" wood which can be ripped down out of 2x4's or 2x6's Typical length of the wood is 53". If the cap is in the way just release the quick clamp holding the cap out to allow room to insert the wood. **(See Video/Link Top of Front page)** Use a hammer if necessary to drive them in. **See Figure 11** After all tubes have wood installed, pull the sidewall tight to the frame with a clamp and use a 3/16th drill bit to predrill up through the exiting screw holes in the sidewall strap through the wood stuffed tubes, then install #14 X 5" screws. **See Figure 12**

Fig 11

Fig 12

Step 14

Secure the sidewall to the chassis frame. If wires are present in that tube be sure to install a stop on the drill bit to avoid damaging the wires. **See Figure 13** Using a 7/32" drill bit pre-drill holes through the sidewall and through the 2X6 LCI steel tube. Then add (4) 1/4"-20X3" screws horizontal through the wood stuffed tubes into the center of the steel tube. **See Figure 14**

Fig 13

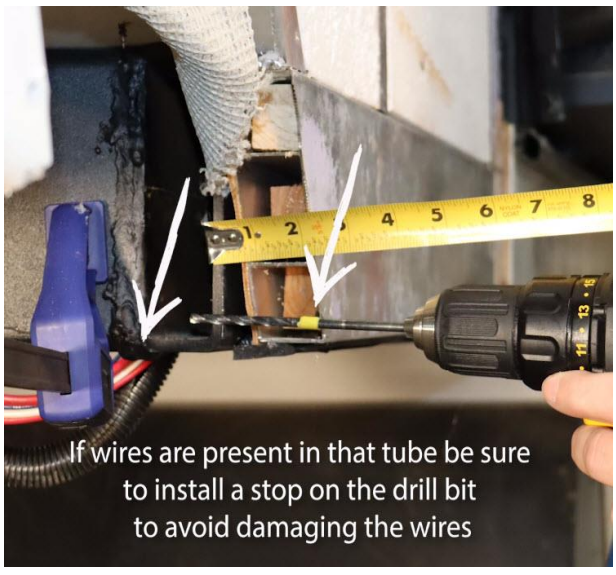


Fig 14

Step 15
Prep the wall for reinforcement. Cut the 2x6 wood for the area and use them as a template to mark where you will cut the Styrofoam. Remove the Styrofoam insulation from between the studs, cut off any exposed screws. If you find any broken welds on the sidewall tubes do not worry, this will be remedied once all is glued and screwed together with the wood and metal. Now dry-fit the 2x6's to make sure they fit. **See Figure 15**

Step 16
Cut the aluminum skirt metal to fit from the slideout opening to the front of the sidewall and down to the bottom of the sidewall tube. Be sure the metal will cover the 2x6 boards that will go in for the repair. **See Figure 16**

- **Remember we're still prepping, do not glue or screw anything down yet.**

Fig 15

Fig 16

Step 17
Pocket drill each 2 x 6 and sand both sides of the skirt metal and all aluminum studs with 80 grit sand paper. Using a grinder, remove previously used adhesive from the remaining aluminum framing in preparation for a clean surface to re-adhere to. **See Figure 17**

Fig 17

Fig 17A

Step 17A
After the expansion joint is cut inspect the wall for solid backing. **See Figure 17A**, If Styrofoam is found on either side of the joint, it is necessary to remove the interior décor panel to remove the Styrofoam and add a 2" x 6" to the area, glue in with 2 part epoxy and pocket screw in place as described in Step 18. This will aid in the install of the expansion joint cover and give it a solid foundation. Don't forget to order new paneling and seam tape.

Step 18
Prep the area using the adhesive the 2 Part Epoxy KRV # 207257 and cover the area with a 1/8" thick layer, then install the 2"x 6"studs and pocket screw in place with 3" screws. **See Figure 18**

NOTE: Be sure to follow the directions of the adhesives. Work time and cure time are different for each. Once the new filon is installed it is recommended to let it cure overnight.

Fig 18

Step 19
Use the 2 part epoxy again on the aluminum studs and the wood, spread this out in an even layer 1/8" thick and lay the sheet-metal on top of this press firmly and we recommend to staple to hold in place. If you use screws for this step, unless you countersink them you will have to remove them once the epoxy has cured. **See Figure 19 and Figure 20**

Fig 19

Step 20
Dry-fit the new filon and make sure it's going to fit. To make this easier at the top remove the door side clamp for the front cap to make enough room for the filon to slip past the top corner of the cap.

NOTE: After the filon is ready, peel the protective plastic cover from the filon and set the filon off to the side while you prep the sidewall with adhesive.

Step 21
Use the 2 part epoxy again on the aluminum studs, spread this out in an even layer 1/8" thick. **See Figure 21** Then use the Lavanture adhesive KRV# 346665 on the Styrofoam, spread this out in an even layer 1/8" thick. **See Figure 22** Install the new filon in place and add screws to front filon perimeter, the slideout opening perimeter and at the top, the bottom will have to be clamped. Clean off any glue now so it does not dry on the filon. Brace from top to bottom using 2x4's and carpet and allow to dry overnight. **See Figure 23 and Figure 24**

NOTE: Follow the directions of the adhesives. Work time and cure time are different for each. After the new filon is installed it is recommended to let it cure overnight.

Fig 20

Fig 21

Fig 22

Fig 23

Fig 24

Step 22
The next day remove the bracing. Remove all the screws used on the edges. Inspect the filon at the edges and trim any excess sidewall skin if necessary. Recut the expansion joints to have the room to then install both top and bottom expansion joint covers with silicone. **See Figure 25 and Figure 26**

Fig 25

Fig 26

Step 23
Clean all components removed and to be reinstalled by removing any old putty or sealants. This includes inspecting all the sealants on the slideout box. Prep the components and attachment points with alcohol for a good clean mating surface. Reinstall cap, moldings, decals, and slideout. **Note:** When installing the bottom and top bulb seals of the slideout **DO NOT** install a screw within 2” of each corner. Seal all components using silicone except the roof membrane. Use appropriate roof sealant on membrane.

Step 24
Test the repair by alternating hitch weight between pin and landing jacks and verify skin is unaffected by weight transfer. Take it for a test drive if possible. Re-inspect and if all is well the repair is complete.

WARRANTY REIMBURSEMENT

This KSB is for repair purposes only. If this is a warranty repair, the flat rate code is **7301342A**

No part return required.

If you have questions, please contact the appropriate Team:

Team Luxury – 866-273-1450 Team Toy Hauler – 866-273-1452

Team Premium – 866-273-1454 Team Crossroads – 844-361-8455