



INSTRUCTION TO SERVICE

ITS: 58612_A		March 27, 2019
SECTION:	420 – Exterior Applied Parts	
WRITTEN BY:	Devin Draward	
SUBJECT:	Emergency Hatch Glass Lid Replacement	
ISSUE:	The 3.7mm thick Emergency Hatch Glass Panel is subject to micro-fractures and stress cracking.	
SUMMARY:	Install an improved 4.8mm thick Emergency Hatch Glass Panel	

ITS58612

THIS ITS DOCUMENT SHOULD BE RETAINED AND REFERRED TO FOR FUTURE MAINTENANCE UNTIL THE NEW FLYER PARTS AND/OR SERVICE MANUAL IS UPDATED TO REFLECT WORK DONE AS A RESULT OF THIS DOCUMENT. ENSURE THAT THIS DOCUMENT IS AVAILABLE FOR PARTS AND MAINTENANCE STAFF GOING FORWARD.

PROCEDURE:

1) Installation of Window Tint Film and Decals

1. Set park brake and chock wheels.
2. Turn the main battery disconnect switch to the “OFF” position.

⚠ WARNING: When working with primers and adhesives, wear gloves and safety glasses to avoid contact with skin. Wash with soap and water after skin contact. It is recommended that one wear a respirator when mixing and applying adhesives in an enclosed space.

👉 NOTE: The tint film is to be installed first, onto the interior side of the Hatch Glazing. The Exit Decal and the Push to Ventilate Decals are to be installed onto the tint film. This process should be conducted in a clean, well lit, well-ventilated area so that the potential for surface contamination is minimized.

3. Confirm that a new, thicker glass lid, is in hand. On the new, thicker glass lid, the identification markings are located closer to the edge, are read from the EXTERIOR if the glass, and DOES NOT feature the Guardian logo (G). See detailed comparison in Figure 1.



Figure 1: Original glass lid identification (left) versus new, thicker glass lid identification (right).

- Before installing the tint film, clean the bonding surface with a clean, lint-free cloth, and isopropyl alcohol. Refer to Figure 2 below.

NOTE: Allow the isopropyl alcohol to fully evaporate prior to applying tint film.



Figure 2: Clean the interior surface of the glass with a clean, lint-free cloth and isopropyl alcohol.

- Apply a thin, uniform coating of #94 PRIMER – PN 356274 (use brush) to the outer edges of the bonding surface (interior side) as illustrated by Figure 3. **Do not apply primer around the white hinges as this will entrap any air under the tint film.** Allow primer to flash-off (typically 5 minutes at room temperature) before applying the tint film.

NOTE: Shake #94 Primer well before use



Figure 3: Apply #94 Primer - PN 356274 on the interior side of the glass panel, as denoted by the arrows.

6. Spray a thin layer of soap and water solution onto the glass surface per Figure 4 below. Quickly position the FILM-PERF WINDOW TINT – PN 427333 on the glass before the water can evaporate.
- ☞ **NOTE:** Using a squeegee, start at the center of the tint film, gently move the squeegee outwards to remove any air bubbles from under the tint film. Watch for air bubbles that may re-appear for 5-10 mins.



Figure 4: Apply a soap and water solution to the interior surface of the glass and place the tint film.

7. Use masking tape to mark the locations for the three additional decals per the reference dimensions in Figure 6 and **Error! Reference source not found.** Location for the DECAL-EMERGENCY EXIT – PN 426159 is illustrated in Figure 5 below.
- ☞ **NOTE:** Measure from inside edge of weather seal. Confirm all dimensions prior to decal placement.



Figure 5: Mark decal location on the tint film using masking tape.

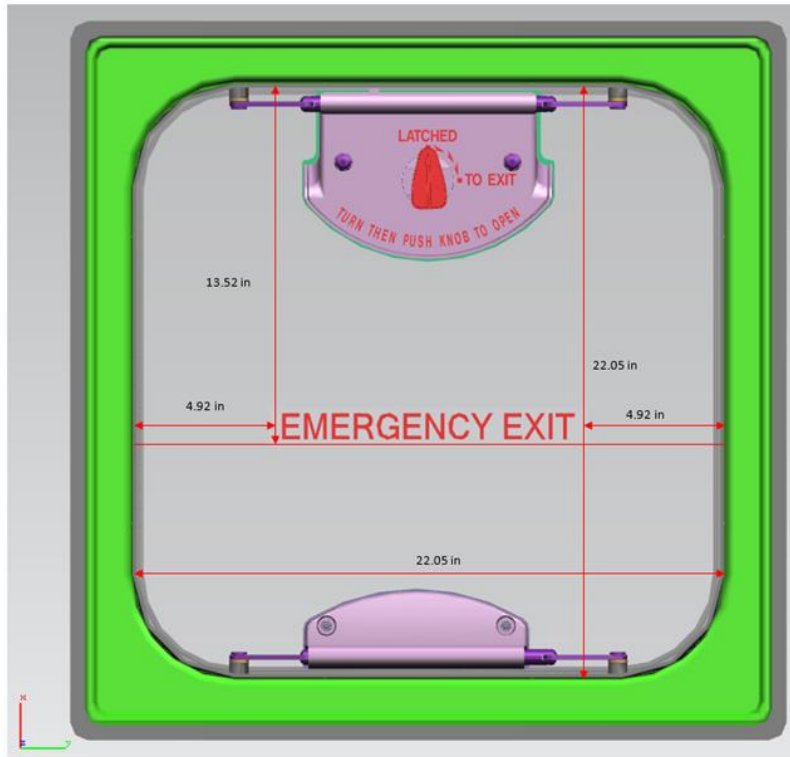


Figure 6: DECAL-EMERGENCY EXIT - PN 426159 Placement – see page 14 for print-out.

8. Spray a thin layer of soap and water solution onto the surface of the tint film. Quickly position EMERGENCY EXIT DECAL – PN 426159 on the tint film before the soap and water can evaporate. See Figure 7 below.

NOTE: Using a squeegee, start at the center of the decals, gently move the squeegee outwards to remove any air bubbles from under the tint film. Watch for air bubbles that may re-appear for 5-10 mins.

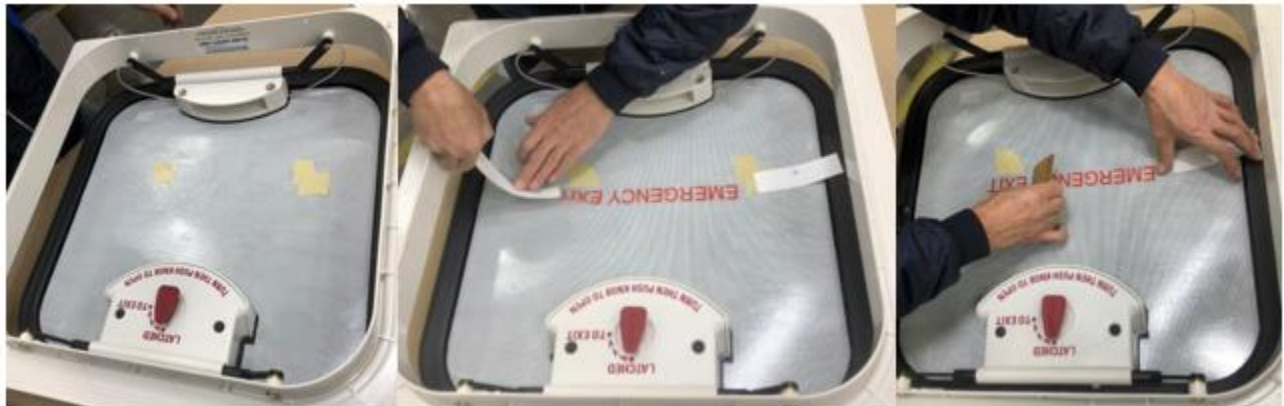


Figure 7: Decal placement (only the EMERGENCY EXIT DECAL is noted).

PROCEDURE:

2) Installation of New Emergency Hatch Glass Lid

1. From the interior of the bus, rotate the red release knob to the unlatched position and push knob into the shield. This will disengage the lid from the frame. See Figure 8 for reference. If required, use a step ladder.

NOTE: This procedure was developed using a hatch that was not installed on a bus, however lid replacement in the field will have to be performed from the interior of the bus.



Figure 8: Rotate red release knob to the unlatched position.

2. . With a Phillips head screw driver, remove the two screws holding the retention cables identified in Figure 9.

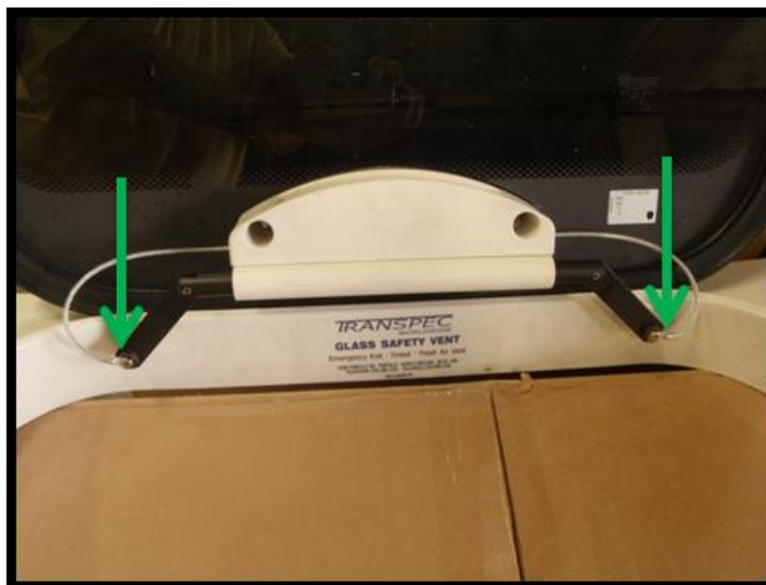


Figure 9: Remove the two Phillips head screws (green arrows, do not discard).

3. With the ½" socket, remove and retain one of the hex bolts holding the linkages in place. The left is chosen for Figure 10, but the right bolt would work also.



Figure 10: Remove and retain one hex bolt securing hatch linkage (green arrow, do not discard).

4. Slide the unsecured linkage out of the plastic fixed hinge as illustrated in Figure 11. This linkage will be reused.

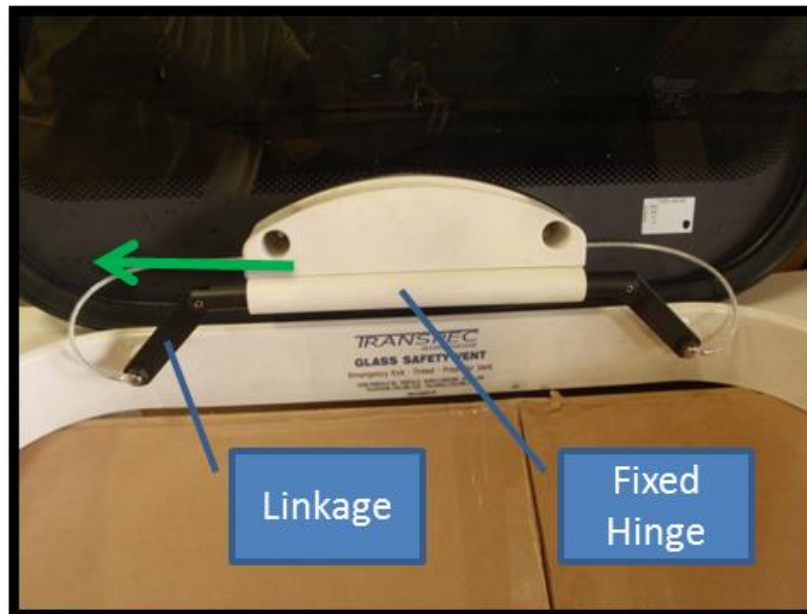


Figure 11: Remove and retain the linkage from the plastic fixed hinge.

5. Slide the lid off the remaining secured linkage as illustrated in Figure 12.

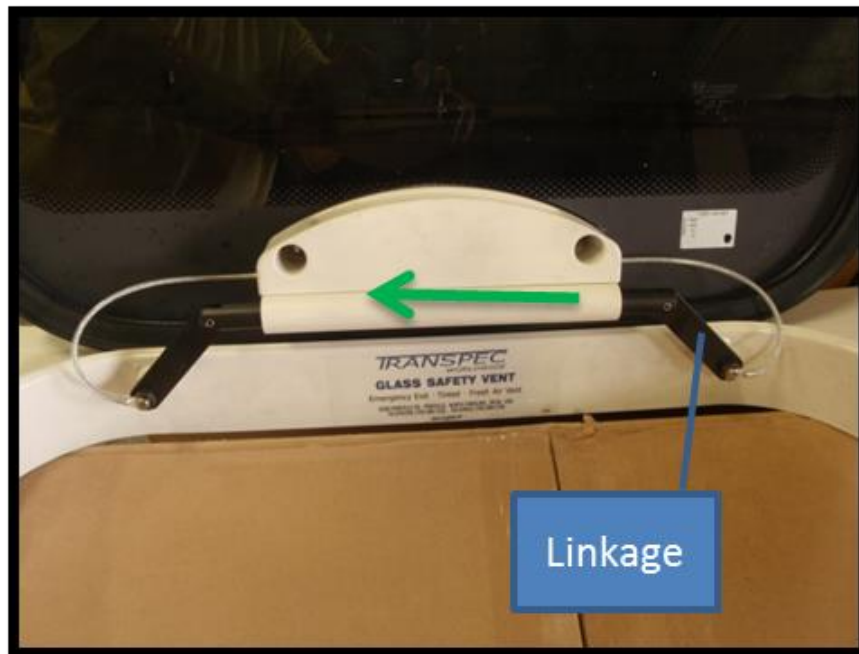


Figure 12: Right linkage remains fastened to the hatch frame (left linkage removed during the previous step).

6. Tilt the lid to allow the springs to slide out of the fixed hinge (2 total) and place lid to the side.
👉 **NOTE:** The two springs shown in Figure 15 will be reused to install the new lid.



Figure 13: Retain the two springs held captive within the fixed hinge.



7. Insert the springs into the fixed hinge of the NEW lid.

NOTE: The glass lid shown in Figure 14 DOES NOT have the tint film installed or the correct decals installed, and was only used for illustrative purposes for developing this rework procedure.



Figure 14: Install the two springs into the fixed hinge of the NEW lid, ensure all required decals have been installed.

8. From the interior of the bus, slide the new lid onto the linkage secured to the frame as depicted in Figure 15.

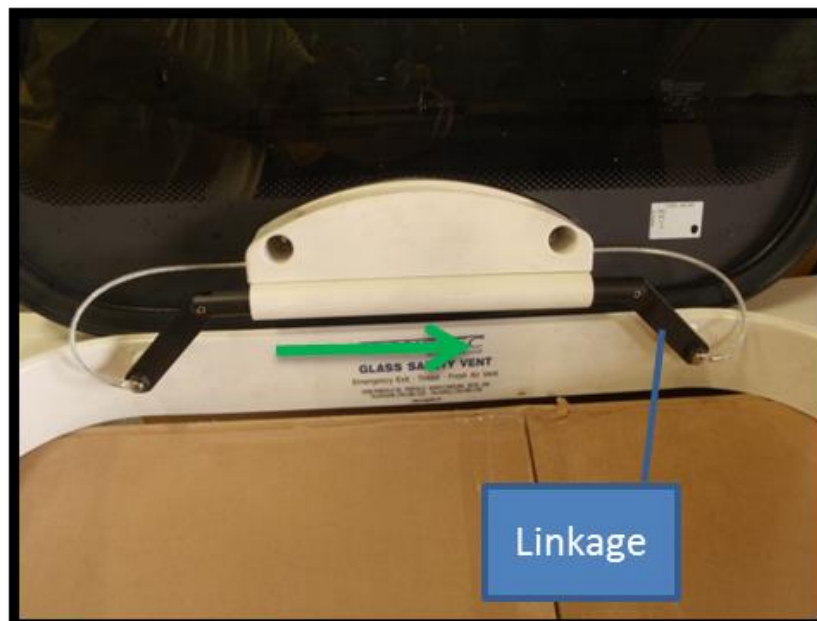


Figure 15: Slide the new lid onto the linkage, ensure that the two springs remain in the hinge.

9. Insert the second linkage into the fixed hinge as seen in Figure 16 below.



Figure 16: Re-install the left-hand linkage, ensure that the left spring is in the hinge.

10. Secure the second linkage with the hex shoulder bolt. Torque the fastener in Figure 17 (green arrow) to 55 in-lb.

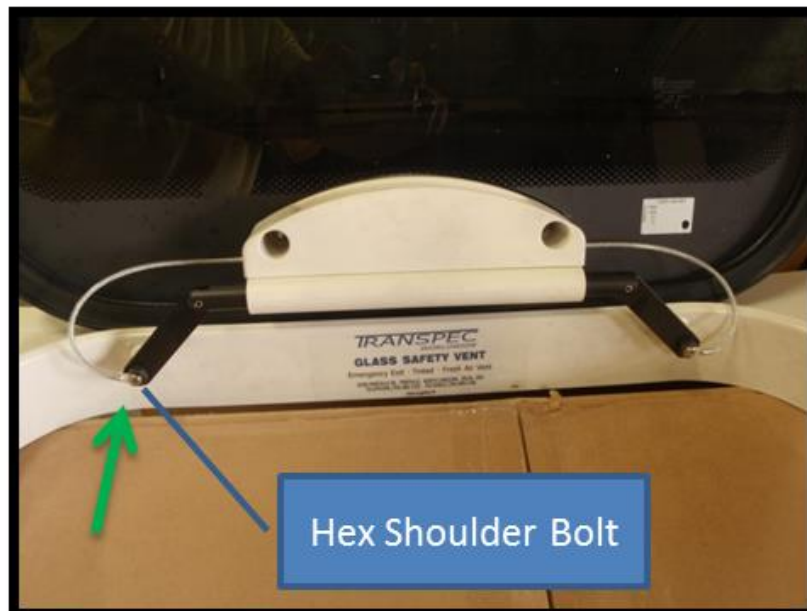


Figure 17: Torque fastener to 55 in-lb.

11. Reattach the retainer cables with the Phillips head screws.

NOTE: The lugs of the cables should be oriented as shown in Figure 18. This will allow the cable to bend correctly when the lid is closed.

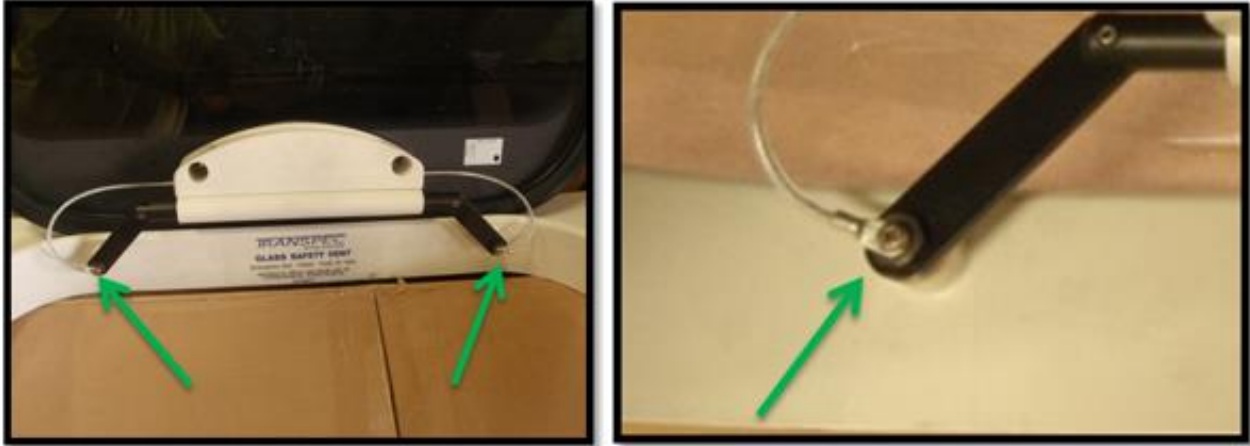


Figure 18: Ensure cable lugs are oriented to the outside of the hinge linkages.

12. Gently, rotate the lid down on the release hinge. Guide the release hinge into the handle base on the lid and push together. You will hear a click as the handle properly engages the release hinge. Rotate the red knob from the EXIT position back to the LATCHED position, denoted by the arrows in Figure 19.



Figure 19: Rotate the red knob back to the LATCHED position.

13. Pull downwards on the hinges to close and seat the lid.

14. Clean up tools and prepare bus for service.

15. Record bus as COMPLETED on the tracker provided on page 16. Fax back to New Flyer (daily).

16. Turn the main battery disconnect switch to the "ON" position.

17. Remove wheel chocks.



LABOUR ESTIMATE				
	Operation	Number of Technician(s)	Hours	Labor Time T X HR
1	DECAL INSTALLATION	1	0.25	0.25
2	IMPROVED HATCH LID INSTALLATION	1	0.25	0.25

PARTS REQUIRED					
Item	Part Number	Description	Qty. per Lid	Units	Notes
1	426159	DECAL – ‘EMERGENCY EXIT’ ENG	1	EA	Parts coordinated by TSS
2	427333	FILM-PERF WINDOW TINT	1	EA	Parts coordinated by TSS
4	713306	DECAL - PUSH TO OPEN VENTILATION	2	EA	Parts coordinated by TSS
5	356274	PRIMER – VHB TAPE #94 / 285 ml	0.010	ML	Parts coordinated by TSS
6	NPN	IMPROVED HATCH LID	1	EA	Provided by Safe Fleet (T2813)

SPECIAL TOOLS REQUIRED					
Item	Part Number	Description	Qty.	Units	Notes
1	NPN	Soap and Water Spray	AR	EA	Source Locally
2	NPN	Isopropyl	AR	QT	Source Locally
3	NPN	Lint-Free Cloth	AR	EA	Source Locally
4	NPN	Step Ladder	1	EA	Source Locally
5	NPN	SQUEEGEE	1	EA	Source Locally
6	NPN	Application Brush	AR	EA	Source Locally



NEW FLYER®

Emergency Exit Decal Placement - PN 426159

