

Date: April 25, 2019

SERVICE BULLETIN

Service Bulletin No.: 2019-0031

Product Models Affected:

Goshen Impulse 2016MY and prior

FORM Rev 2017-0323

Purpose:

Eliminate water in steel tube and remove bulges in sidewall due to steel tube expansion.

Tool(s) / Equipment Required:

Drill
Drill bit, 1/4-inch diameter
Hammer
Scrap piece of 2X4X12-inch long lumber
Dremel tool with ball-type sanding bit
Tape measure
Grease pencil
Magnet
Paint gun
Paint brush
Utility knife
Putty knife
Saw
C-clamps
Cut-off grinder

Part(s) / Material Required:

<u>Description</u>	<u>Part Number</u>	<u>Quantity</u>
Fiberglass primer	N/A	A/R
Fiberglass resin - Fibral Glass Fibre Repair Paste, Sandable (U-Pol)	N/A	A/R
Fiberglass resin – Everglass Short Strand Fiberglass reinforced Body Filler	N/A	A/R
Gelcoat, X97	E54349	A/R
Fiberglass panel	N/A	A/R
Sand paper, 120 – 600 grit	N/A	A/R
Safety Glasses (PPE)	N/A	A/R
Dust Mask (PPE)	N/A	A/R
Rubber gloves (PPE)	N/A	A/R
Gloves, cut resistance	N/A	A/R
Isopropyl alcohol	N/A	A/R
Chopped strand matt – Fiberglass 1.5 oz/sq ft mat x .045"		A/R
3M Extreme Sealing Tape White 2"	E55084	A/R
3M Primer	E54713	A/R

General

1. Ensure that the product use date is not greater than one (1) year from the manufacturing date for all adhesives and sealants. Ensure product handling and storage processes meet manufacturer requirements.
2. Protect adjacent areas from fiberglass resins & paste, and paint overspray during paint to match operations.
3. Park the vehicle on a flat level surface.
4. Chock wheels of the vehicle.
5. Disconnect battery(ies), PC/ECM/Modules, and other electrical device connections as described in the Ford Service Manual for welding on the chassis.
6. Reconnect battery(ies), PC/ECM/Modules, and other electrical device connections as described in the Ford Service Manual for welding on the chassis only after completing all weld process operations.
7. Wear appropriate PPE during rework process operations.
8. Ensure a fire extinguisher or other fire control apparatus are available during hot work operations.

Procedure(s):

Drain Water from the Tube

1. Locate bulging area(s) on exterior sidewall.
2. Using a magnet, locate the vertical tube in the area where the wall bulges.
3. Using a grease pencil, mark the outer edges of the 2.00 inch tube. Reference Photo #1.



Photo #1

4. Place a piece of 4.00 inch long masking tape on the exterior of the sidewall marking the location of the 2.00 inch wide tube, beginning just above the sidewall rub rail.
5. Mark an "X" on the centerline of the 2.00 inch wide tube, $\frac{3}{4}$ -inch above the top of the rub rail on the masking tape attached to the exterior surface of the sidewall. Reference Photo #1 and Photo #2.

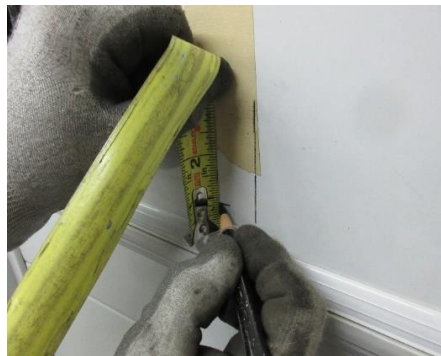


Photo #2

6. Drill a $\frac{1}{4}$ -inch hole on the 'mark' through the outer skin of the wall and the outward wall of the steel tube.

NOTE:

Do not drill through the inner wall of the steel tube.

7. Allow any water that is in the tube to drain out.
8. Repeat Step 1 thru Step 7 for all locations that show a bulge in the sidewall.
9. Proceed to **Removing Bulge from Sidewall**.

Removing Bulge from Sidewall

1. Use the piece of 2X4 lumber and a hammer to reshape the bulged tube back to a flat state.



Photo #3

2. If reshaping the bulge in the sidewall to a flat state is accomplished, inspect the fiberglass sidewall for stress cracks, then proceed to **Repairing Hole in Sidewall**.
3. At the completion of the reshaping of the bulging sidewall, inspect the fiberglass sidewall for a measurable crack in the exterior surface of the sidewall.
4. If there is a measurable crack present in the fiberglass sidewall panel, proceed to **Fiberglass Sidewall Crack Repair**, or contact your local body shop to complete repair operation.

Repairing Hole in Sidewall

1. Use a Dremel tool with ball-type sanding bit to taper the hole. Reference Photo #4.



Photo #4

2. Fiberglass in the hole or back face.
3. Fill the larger hole with fiberglass resin soaked glass mat, then apply fiberglass mat to fill large hole. Reference Photo #5.

NOTE:

Apply tape over filled hole to prevent resin from dripping down the exterior surface of the side wall.



Photo #5

4. Everglass fill the hole. Reference Photo #6.

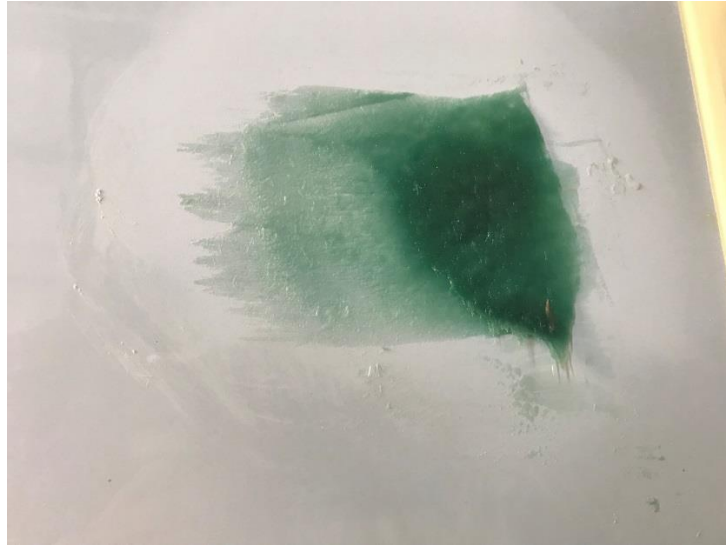


Photo #6

5. Sand the Everglass using 180 grit sandpaper.



Photo #7

6. Gel Coat the area of the bodywork.



Photo #8

7. Sand down Gel using 400 grit sandpaper in preparation for body paint. Reference Photo #9.

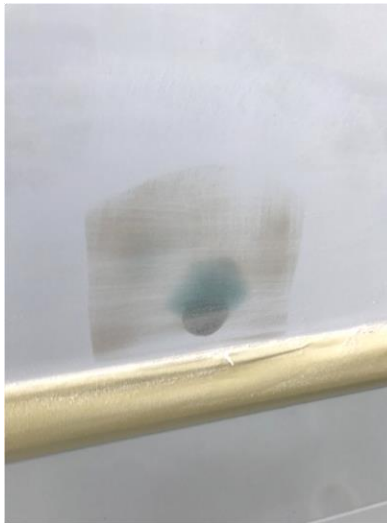


Photo #9

8. Proceed to **Body Paint**.

Fiberglass Sidewall Crack Repair

1. Remove the window directly above the fiberglass sidewall panel area to be cutout and removed.
2. Remove fender flare, as necessary, that is attached to the fiberglass sidewall panel area to be cutout and removed.
3. Removed the rub rail that is attached to the fiberglass sidewall panel area to be cutout and removed.
4. Place a mark on either side of the bulge approximately 7.00 inches from the centerline of the 2.00 inch tube. Reference Photo #10.



Photo #10

5. Using cut-off tool, cut the sidewall and remove the fiberglass panel. Reference Photo #11.

CAUTION:

Do not cut the steel tubing in the sidewall structure.

NOTE:

Do not discard the removed fiberglass panel.

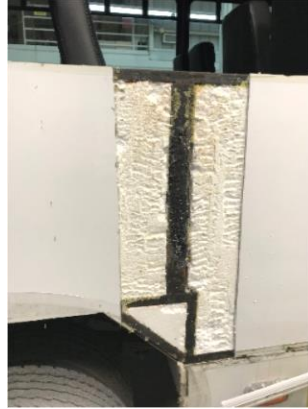


Photo #11

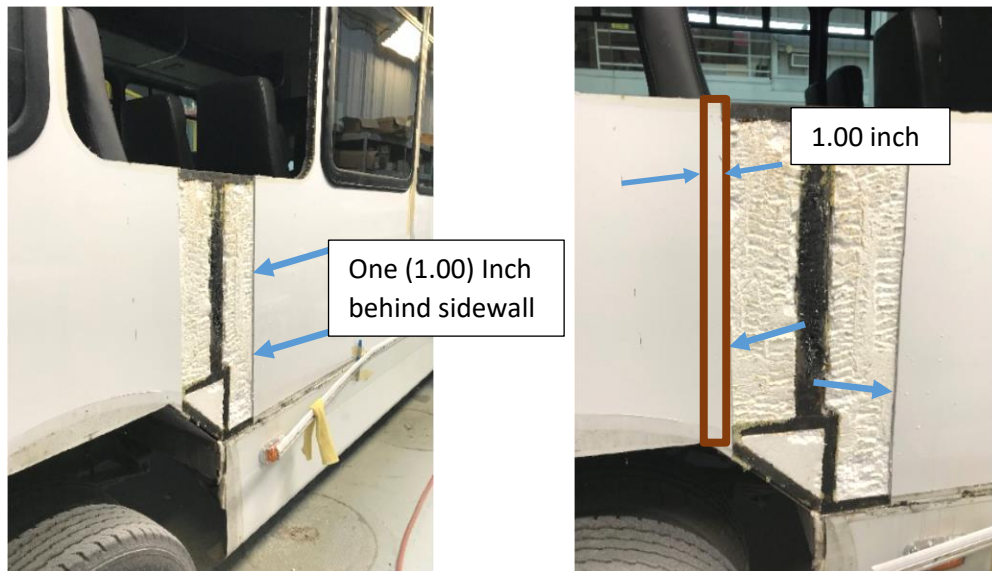
5. Use the piece of 2X4 lumber and a hammer to reshape the bulged tube back to a flat state. Reference Photo #12.



Photo #12

6. Inspect the tubes in the sidewall structure for any fractures in the welded areas, and repair as necessary.

7. Prep the area to be welded to prevent damage to the sidewall assembly construction.
8. Ensure to protect the surrounding area from weld spatter and potential burns of the fiberglass or foam by using a fire-retardant spray designed for use during welding operations.
9. Use appropriate PPE for the welding operation.
10. Using a die grinder and utility knife, remove foam behind the fiberglass wall 1.00 inch from the cut edge, approximately 1/8-inch deep, on both sides of exposed-foam area. Ensure all foam has been removed from the backside of the sidewall fiberglass. Reference Photos #13-A & 13-B.



Photos 13-A & 13-B

11. Sand the areas where the foam was removed from the backside of the fiberglass wall using 80 Grit sandpaper.
12. Cut the removed fiberglass panel into two (2) pieces approximately 4.00 wide x "X" inch length. Reference Photo #14, highlighted in blue.
13. Sand one side of the 4.00 x "X" inch panels using 80 Grit sandpaper.

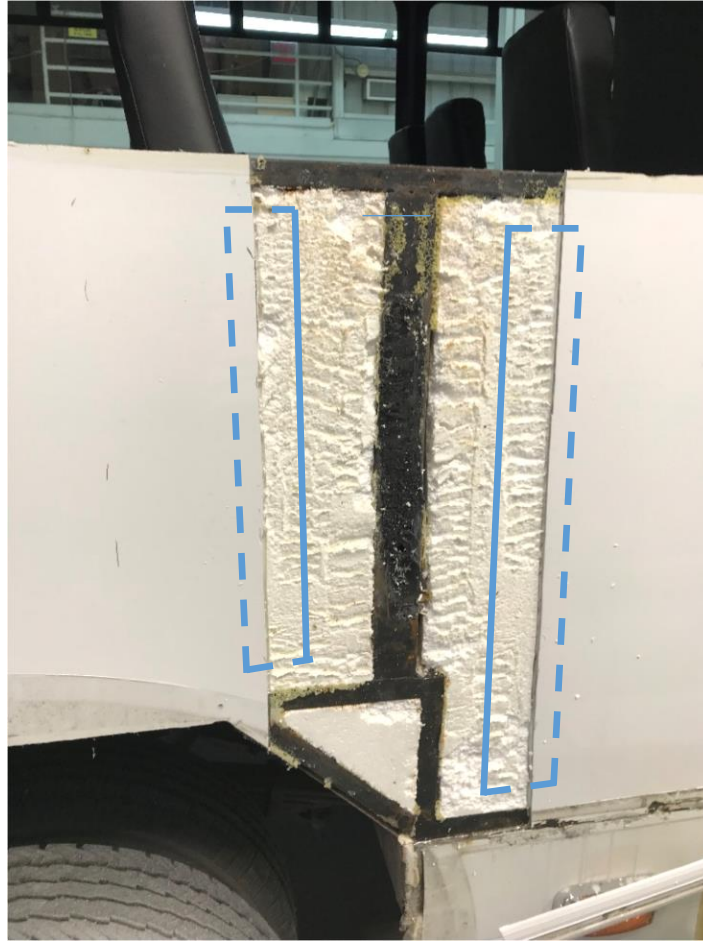


Photo #14

14. Apply Loctite H8100 Adhesive to the sanded side, and to the outside 1.00 inch portion of the 4.00 x "X" inch cut panel.
15. Adhere to the back side of the sidewall fiberglass. Reference Photo #14.
16. Allow adhesive to cure.
17. Removed all foam, glue, and other contaminants from the exposed steel tubing. Wire brush as necessary.
18. Cut to shape a new piece of fiberglass that fits the shape of the exposed area, matching the shape of the panel that was removed. Reference Photo #15.



Photo #15

19. Apply Loctite H8100 Adhesive to the wood board exposed area and the exposed steel tubing.
20. Apply the cut-to-shape new fiberglass panel, pressing firmly into place.
21. Secure the panel in place and allow the adhesive time to cure.
22. Bevel the two vertical edges of the new panel and the adjacent sidewall fiberglass edges, approximately half the wall material thickness. Reference Photo #16.



Photo #16

23. Apply Fibral Glass Fibre Repair Paste to the beveled areas. Reference Photo #17.



Photo #17

24. Sand smooth using 120 Grit sandpaper. Reference Photo #17.

25. Apply Gel Coat to the repaired area of the bodywork. Reference Photo #18.



Photo #18

26. Sand down gel using 400 grit sandpaper in preparation for body paint. Reference Photo #18.

27. Repeat Steps 22 & 23 until the surface is filled and smooth.

28. Proceed to **Body Paint**.

Body Paint

1. Ensure fiberglass areas being painted have been appropriately prepped for painting, ensuring the area stays clear of debris and any contaminants.
2. Apply paint to the fiberglass areas to match surrounding area, allowing adequate time to dry prior to any subsequent coats of paint being applied.

NOTE:

Ensure to protect surrounding area from paint overspray.
Reference Photo #19.



Photo #19

3. Apply additional coats of paint as desired.
4. If the vehicle has graphics applied to the sidewall exterior, repair graphics as necessary.
5. Proceed to **Drip Rail Repair**.

Drip Rail Repair

1. Wipe down the drip rail and the vehicle sidewall 2 inches above the drip rail using Isopropyl Alcohol.
2. Apply 3m Primer 94 to the drop rail over the screw and approximately 1.00 inch above the drip rail on the sidewall.
3. Cut and apply 3M Sealing Tape to drip rail and sidewall, covering the screw heads with the Tape. Reference Photo #20.

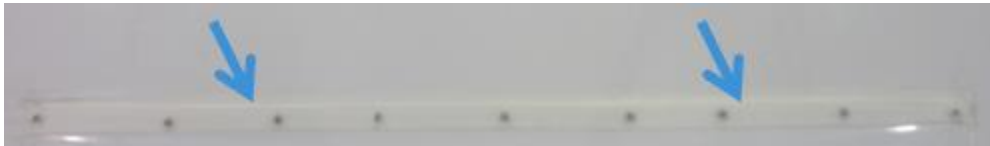


Photo #20

4. Press tape firmly into place.

Contact Information:

Contact ElDorado Customer Service, 1655 Wall Street, Salina, KS 67401; or by calling (785) 827-1033 / (800) 955-9086; or by Email: bussupport@eldorado-bus.com; or by Fax: (785) 827-3017.