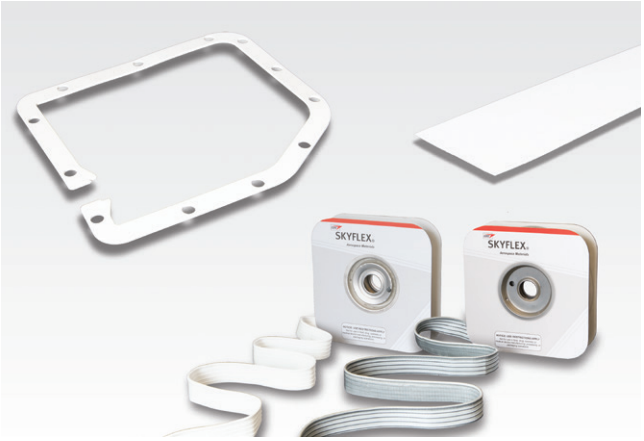
INSPECT, REUSE & REPAIR GUIDE

GORE® SKYFLEX® Aerospace Materials must be inspected for any damage or improper installation whenever the aircraft panel, fairing, or faying surface is removed. If the materials are damaged, then sealing ability may be degraded. The aircraft structure should also be inspected for any corrosion before the panel is reinstalled.

The following procedures are based on Gore's best practices for inspecting, reusing, and repairing GORE® SKYFLEX® Aerospace Materials. When replacing existing materials, refer to the aircraft maintenance manual for use/re-use cycles.

Installation guides and instructional videos are available at **www.gore.com/skyflex**.



Inspection

1. Gently wipe the surface of GORE® SKYFLEX® Aerospace Materials with a clean cloth or rag to remove any dirt, dust, or other foreign matter.
2. Inspect the materials and the quality of the installation for any damage to determine if the materials can be repaired or must be replaced (Table 1).
3. If GORE® SKYFLEX® Aerospace Tapes meet the criteria for repair, refer to the procedures outlined in this guide for repairing the flat tapes, ribbed tapes, and edge protection tape. If the tapes or gaskets must be replaced, refer to the appropriate technical manual and procedures outlined in the GORE® SKYFLEX® Aerospace Materials installation guides and videos.

Table 1: Criteria for Tapes and Gaskets

GORE® SKYFLEX® Aerospace Materials	Condition	Repair / Replacement Required	Repair / Replacement NOT Required
All tapes	Nicks, cuts, and gouges (Figures 1–2)	Damage is 6.4mm (0.25 in) or more in size, or if there is any damage at a fastener hole	Less than 6.4mm (0.25 in) in size
	Delamination and separation (Figures 1 and 4)	Tapes do not stay aligned on the panel surface, or if corrosion exists on the panel	Adhesive near delamination area still holds tapes over required surface
	Gaps, incomplete overlap, and missing tape (Figures 2–5)	Tapes are installed improperly, including gaps between tapes, poor or incomplete overlap of corners, or excessive missing tape around fastener holes	Materials are discolored due to compression stress around fasteners or other areas
	Discoloration (Figure 6)	Tapes are saturated with fuel or hydraulic oil and will not stay in place on the panel	Materials are discolored due to compression stress around fasteners or other areas
All gaskets	Nicks, cuts, gouges, delamination, and saturation	Replace gasket if damaged in any way	No damage to the gasket

Examples of Tapes requiring repair/replacement

Figure 1: Material torn along edge, torn away from fastener holes, excessively compressed (black), and separating from panel

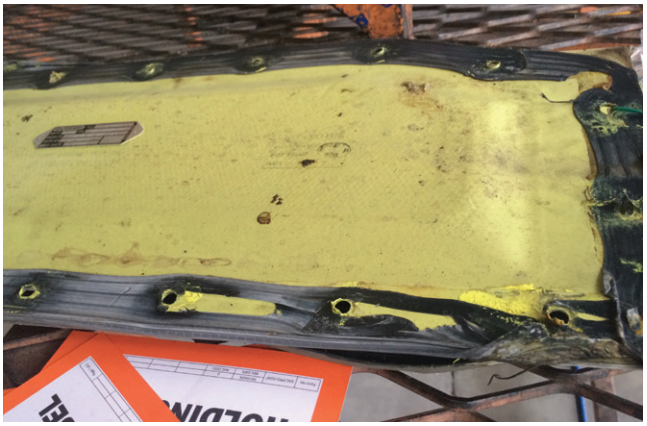


Figure 2: Material torn away from fastener holes and corners, excessively compressed (black), and separating from panel

Figure 3: Material excessively compressed and worn

Figure 4: Material torn away from fastener holes and corners, separating from panel, and gaps in sealant

Figure 5: Improper corner overlap and gap between materials

Figure 6: Material blackened and stiffened

Repairing the Tape

If GORE® SKYFLEX® Aerospace Tapes are damaged, you can repair the damaged area without having to replace the entire tape.

1. Check the aircraft panel to ensure all primers, paints, and coatings are intact prior to installing or repairing GORE® SKYFLEX® Aerospace Tapes.
2. Check the shelf life and part number of your material to ensure that it has not expired and that you are using the proper series of GORE® SKYFLEX® Aerospace Tapes (Figure 7).

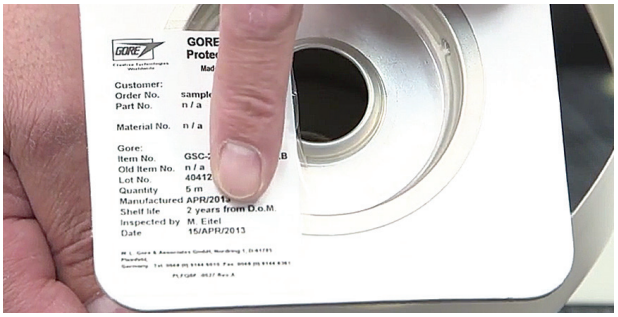


Figure 7: Verifying the shelf life and part number

3. Mark the damaged area, ensuring that the joints are not near fastener holes (Figure 8).

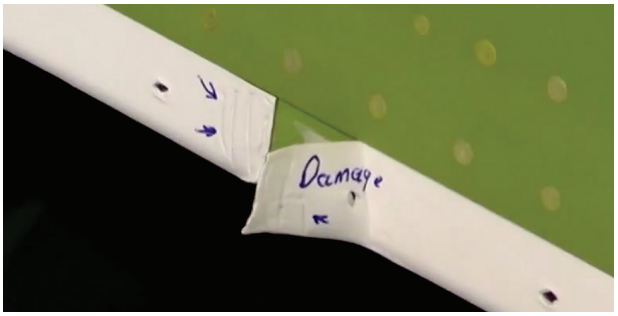


Figure 8: Identifying the damaged section

4. Using sharp scissors, slit the damaged section approximately 10 millimeters (mm) from the nearest fastener hole without damaging the aircraft or panel surface (Figure 9).

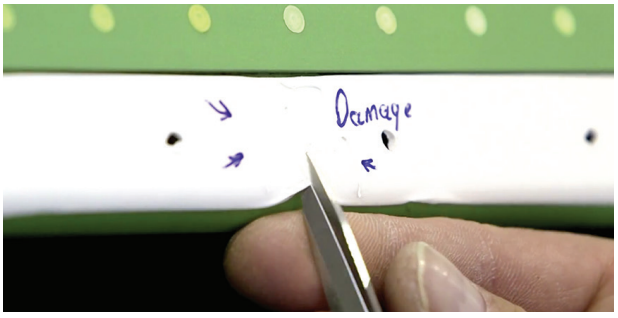


Figure 9: Slitting the damaged section

5. Gently pull up the tape without damaging the aircraft or panel surface (Figure 10).

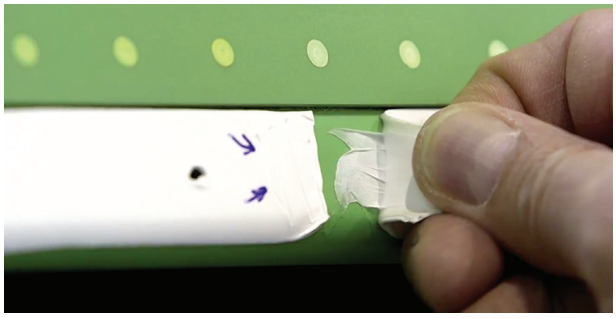


Figure 10: Pulling up the tape

6. Cut out the damaged tape (Figure 11), and remove the remaining adhesive with either isopropyl alcohol or adhesive tape. Apply light pressure to the existing tape, ensuring both edges of the tape are properly sealed.

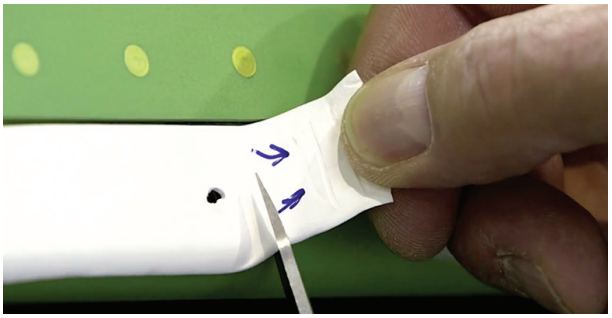


Figure 11: Removing the damaged section

7. To replace the damaged piece on the panel, measure and cut a replacement piece of tape, allowing for an overlap of 1–5 mm on both sides (Figure 12).

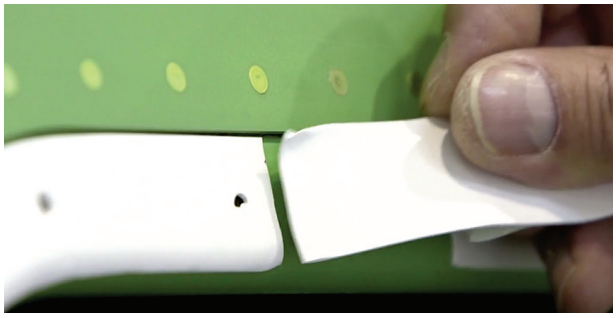


Figure 12: Cutting the replacement tape

8. Gently attach the replacement piece to the panel by laying it down flat, smooth, and without stretching it. Ensure the piece overlaps on both ends. Apply light pressure to the replacement piece, ensuring there are no creases and both edges are properly sealed. (Figures 13 and 14).

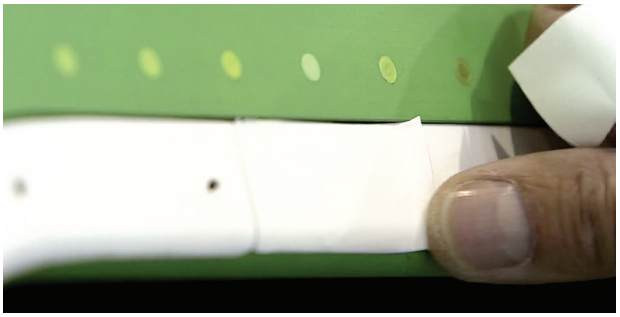


Figure 13: Adhering the replacement tape

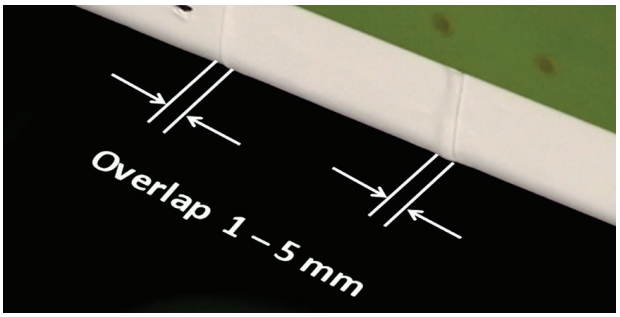


Figure 14: Overlap of replacement tape

9. Using an awl or scribe, gently punch a hole through the tape at each fastener hole of the panel. Be careful not to damage the aircraft surface (Figure 15).

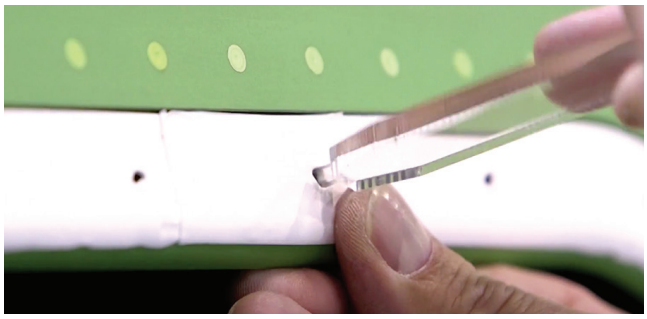


Figure 15: Punching a fastener opening

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