



GORE™ SKYFLEX™

AEROSPACE MATERIALS

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. 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: INSPECTION CRITERIA FOR TAPES AND GASKETS

GORE™ SKYFLEX™ AEROSPACE MATERIALS	CONDITION	REPAIR / REPLACEMENT REQUIRED	REPAIR / REPLACEMENT NOT REQUIRED
All tapes	Nicks, cuts, and gouges (Figure 1)	Damage is 6.4mm (0.25 in) or more in size, or any damage at a fastener hole	Less than 6.4mm (0.25 in) in size
	Delamination and separation (Figures 3, 4, and 6)	Tapes do not stay aligned on the panel surface, or corrosion exists on the panel	Adhesive near delamination area still holds tapes over required surface
	Gaps, incomplete overlap, and missing tape (Figures 1 – 5)	Tapes installed improperly, including gaps between tapes, poor or incomplete overlap of corners, or excessive missing tape around fastener holes	Tapes installed properly and there is no damage.
	Discoloration (Figure 2)	Tapes saturated with fuel or hydraulic oil and will not stay in place on the panel	Materials 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



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EXAMPLES OF TAPES REQUIRING REPAIR/REPLACEMENT

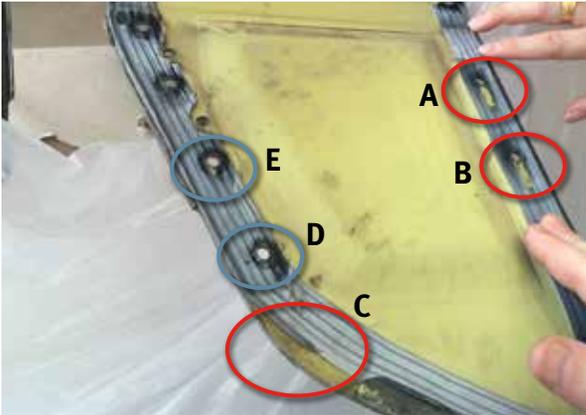


Figure 1: Repair required for damaged tape at fastener holes (A and B), and damaged tape > 6.4 mm (C). No repair required to tape discolored from compressive stress (D and E).

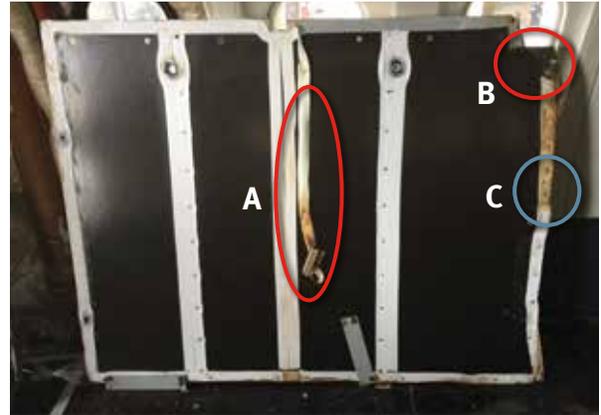


Figure 4: Repair required for separated tape (A), and missing tape (B). No repair required to discolored tape not separated from the panel (C).

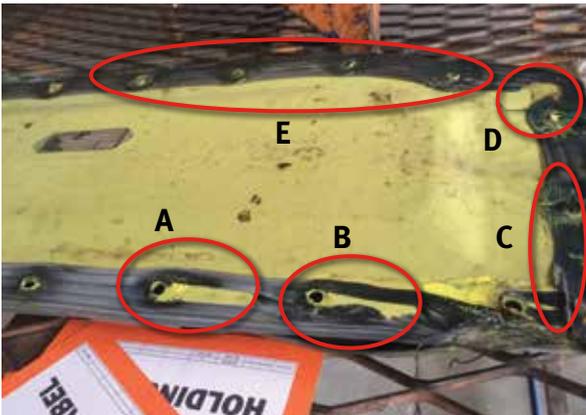


Figure 2: Repair required for torn/missing tape at fastener holes (A and B), and saturated tape from oil and not staying in place (C–E).

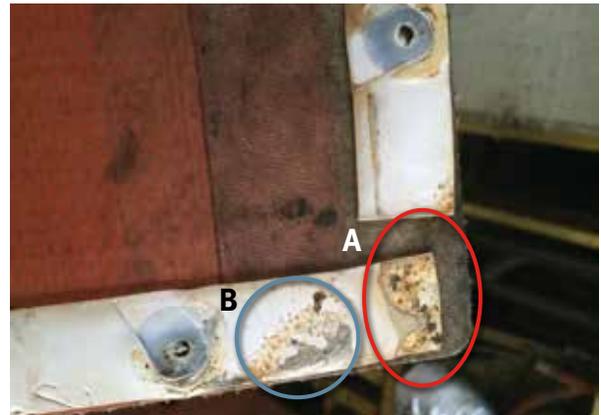


Figure 5: Repair required for gaps between tapes and panel edge, and incomplete overlap of tape (A). No repair required to discolored tape not separated from the panel (B).

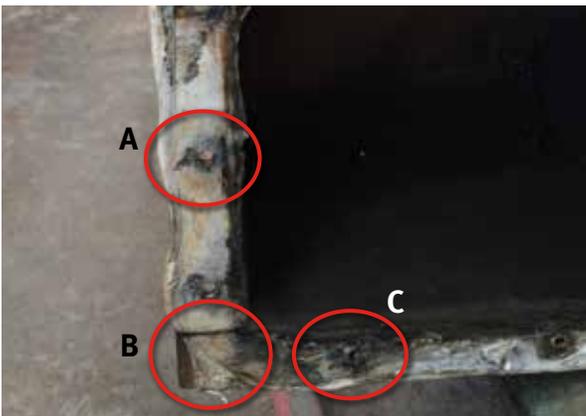


Figure 3: Repair required for delaminated tape separated from the panel (A), gaps between tapes (B), and missing tape (C).



Figure 6: Repair required for delaminated tape separated from the panel.

Inspect, Reuse & Repair Guide

PROCEDURES FOR 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 surface 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).

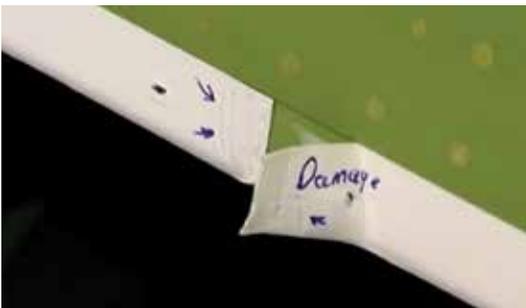


Figure 8: Identifying the damaged section

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 remaining 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 between 3–5 mm on both sides (Figure 12).

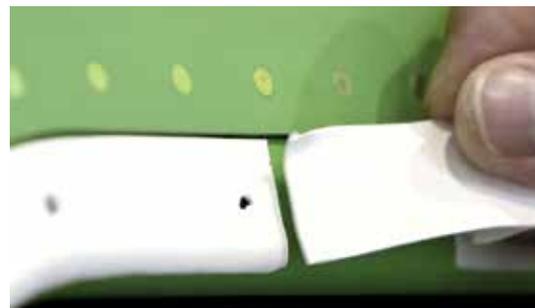


Figure 12: Cutting the replacement tape



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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 (Figure 13).



Figure 13: Adhering the 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 14).



Figure 14: Punching a fastener opening