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SERVICE INFORMATION LETTER

SERVICE INFORMATION LETTER (SIL) NO. 0074
Revision 3

DATE: November 21, 2023

1. SUBJECT: Drive Belt Inspection Requirements

2. MODEL: F-28A, F-28C, F-28C-2, F-28C-2R, F-28F, 280, 280C, 280F, and 280FX

3. EFFECTIVITY: All Serial Numbers

4. BACKGROUND:

The intent of this letter is to provide an inspection procedure to identify damage and provide acceptability criteria for maintenance evaluation of the flight worthiness of the drive belt, P/N 28-13321-1/-13/-15/-17 (F-28A/F/280/F/FX) or P/N 28-13302-1/-11/-13 (F-28C Series/280C).

(Revision 3 of this SIL updates previously published information and adds references to SDB 0117 where applicable. In addition, the Model applicability was expanded to include Enstrom F-28F, 280F, and 280FX helicopters.)

Drive belt conditions that could be identified during an inspection are described as follows:

- Belt rib surface – rib cracking or missing rib section
    - Rib cracking is a normal occurrence on this belt. The cracks normally extend to the base of the rib and go no further. Numerous cracks of this type are not significant. The belt should be examined for cracks which have extended below the base of the ribs and, if this has occurred, the belt should be removed. This is very important if the cracks extend to the cord line and the cord is exposed when the crack is opened.
    - Loss of small pieces or rib section may accompany the rib cracking. This is normally a random occurrence. The belt should be replaced if there is a loss of three or more adjacent ribs for a length of two inches or more. The belt should be replaced if there is any piece of rib missing which is of sufficient depth to leave the cord exposed. A missing belt rib piece can eventually cause the belt to slip. Usually, the belt will cause vibrations because it becomes unbalanced, and these vibrations are noticed a long time before the belt starts to slip.

- Back of belt – cuts, damage, blisters, peeling, or cracks

    - The back of the belt should be examined for cuts or damage and blisters which may indicate separation of the fabric plies. The belt should be replaced if there is any damage which appears to penetrate the fabric cover or if any blisters are present. A small crack in the back of the belt at the fabric splice is not significant, and often this is the fabric overlap created during manufacture of the belt. The belt should be replaced, however, if there is any loosening or peeling of the fabric in the splice area. The backing will take a long time to peel and, if this happens, it will cause vibrations, make a mess, and probably cause a “burning rubber” odor. The vibrations and the flapping backing material might damage some of the surrounding parts but normally not to the point where they will fail. This will also happen a long time before the belt fails completely.

- Edge of belt – fabric and/or cord fraying, emerging cord, damaged cord, or rubber separation

    - The edge of the belt should be examined for signs of wear. There may be some fraying of the fabric backing or slight fraying of the edge cord and this is not significant.

    - The edge of the belt should be examined for emerging cord, cord damage or damage that extends beyond the first "V" groove. Also, the belt edge should be examined for signs of rubber separation. The belt should be replaced if there is any sign of emerging cord, cord damage, damage beyond the first “V” groove, or rubber separation from the cord. If any of these conditions are present, the cord can get torn and pulled out at the sides. When this happens, the belt will start to “unwind.” The cord will normally break before it unwinds very far, the pilot will smell “burning rubber” and he will feel a vibration. He will normally have ample time to make a precautionary landing. This is the most serious of the possible failure modes.

5. COMPLIANCE:

Perform the belt inspection at every 100 hour/annual inspection in accordance with paragraph 6. The belt inspection should also be included as part of a routine preflight inspection.

Consult SDB 0117 (latest revision) where instructed in this SIL and for other relevant inspection requirements pertaining to the drive belt.

6. INSPECTION:

CAUTION: **Do not invert the belt to perform inspections. Unnecessary damage may result.**

A. Belt Rib Surface:

1. Examine the belt for cracks which have extended below the base of the ribs. If this has occurred, and the cords are exposed, the belt should be removed. Examples of rib cracks are depicted in Figure 1. Photographs A, B, and C are examples of serviceable belts.

    a. Replace the belt if rib cracks extend below the base of the ribs.

b. Replace the belt if it has been determined that cord failure exists.

2. Examine the belt for loss of pieces of rib section that may accompany the rib cracking. Examples of loss of pieces of rib section are depicted in Figure 1. Photographs D, E, and F are examples of unserviceable belts which should be replaced.

a. Replace the belt if there is a loss of three or more adjacent ribs for a length of two inches or more.

b. Replace the belt if there is any piece of rib missing which is of sufficient depth to leave the cord exposed.

c. Replace the belt when the area of missing ribs becomes large enough to cause vibration in the drive system.

d. Replace the belt if it has been determined that cord failure exists.

B. Back of Belt:

1. Examine the back of the belt for cuts or damage and blisters. Replace the belt if there is any damage which appears to penetrate the fabric cover or if any blisters are present.

2. Examine the back of the belt at the fabric splice. The belt should be removed if there is any loosening or peeling of the fabric in the splice areas. Examples of fabric splices are depicted in Figure 2. Photograph G and Photograph H are examples of a serviceable belt. Photograph I is an example of an unserviceable belt.

C. Edge of Belt:

1. Examine the edge of the belt for signs of wear. This does not affect the belt directly but would indicate that there is a tracking or interference problem. An example of light wear (cord fraying) is depicted in Figure 3.

a. Replace the belt whenever the operator deems it necessary.

b. Refer to SDB 0117 for inspecting possible interference areas.

2. Examine the belt edge for signs of separation. The belt should be removed if there is any sign of separation of rubber from the cord. An example of slight rib separation is depicted in Figure 3.

a. Replace the belt if edge damage goes beyond the first “V” groove.

b. Refer to SDB 0117 if the separation is the result of a deterioration of a sealed belt edge. Repair the belt in accordance with SDB 0117.

3. Examine the belt edge for exposed or emerging cord. An example of exposed cord is depicted in Figure 4. The belt should be removed if an entire cord is beginning to emerge from the belt.

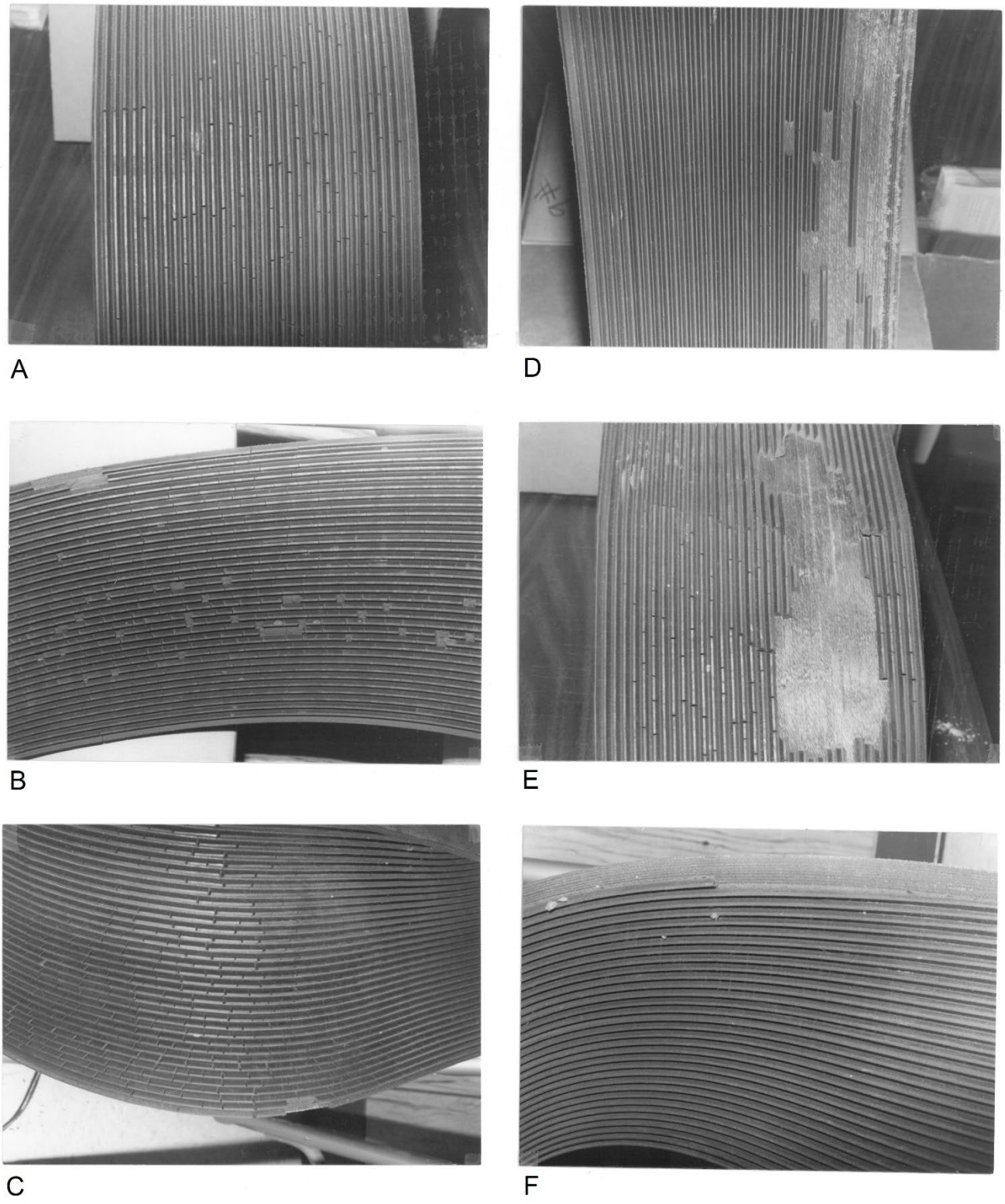
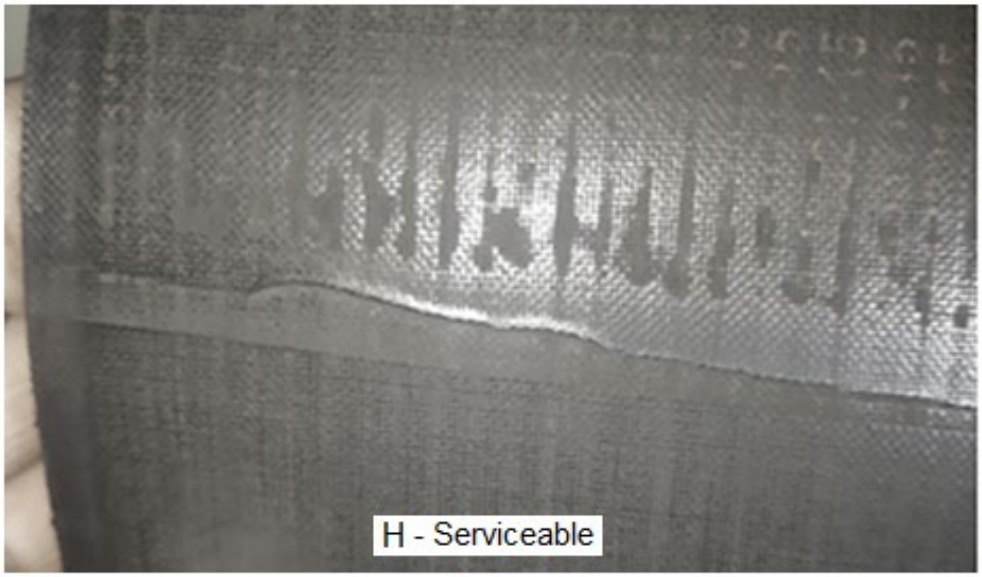


Figure 1. Belt Rib Surface



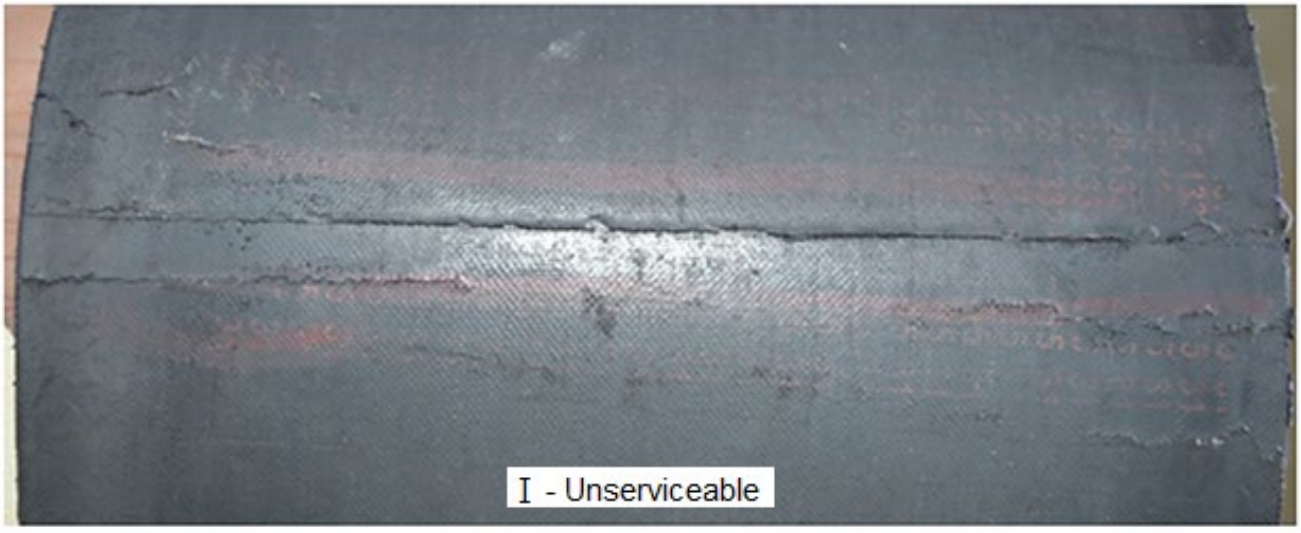


Figure 2. Back of Belt

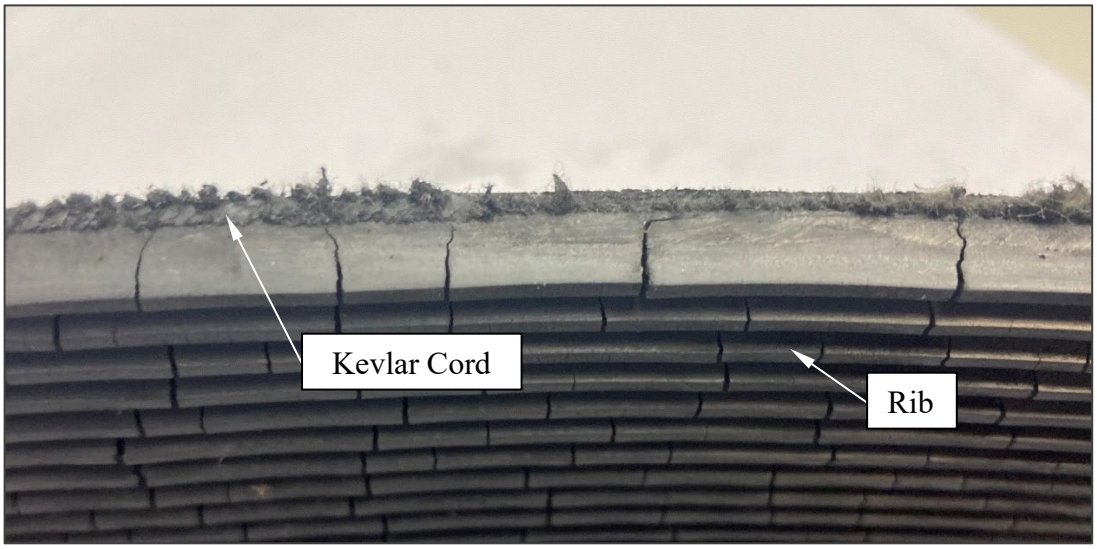
a. Replace the belt if it has been determined that cord failure exists.

b. Refer to SDB 0117 for exposed cord limits. Remove the belt if exposed cord exceeds the limits and seal the edge in accordance with SDB 0117.

c. An example of a sealed edge is depicted in Figure 6.

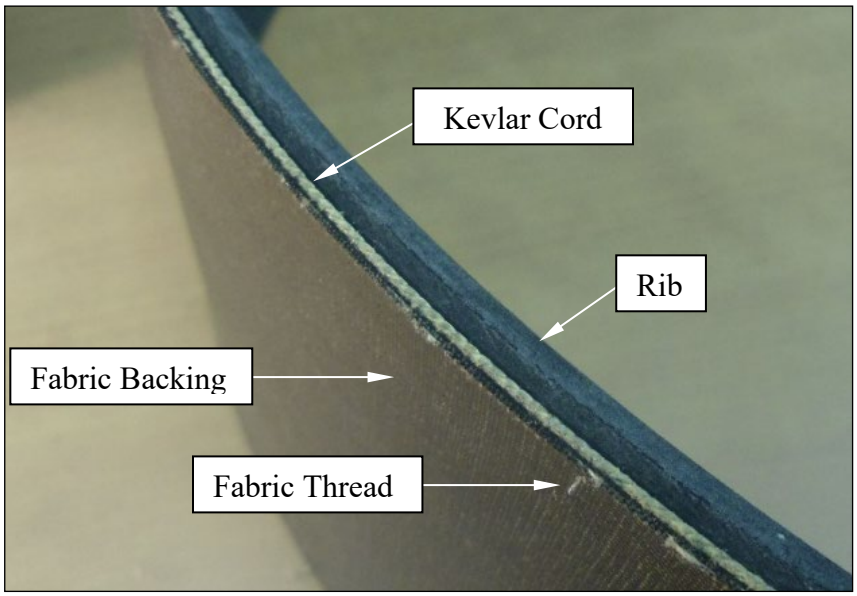
4. Examine the belt edge for a cord tail. An example of a cord tail is depicted in Figure 5.

a. Remove the belt if it has cord tail. Trim the cord tail and repair the belt in accordance with SDB 0117.



Unserviceable

Figure 3. Edge of Belt – Frayed Cord and Cracked Ribs



Serviceable if sealed in accordance with SDB 0117

Figure 4. Edge of Belt – Frayed Fabric and Exposed Cord

Serviceable if trimmed in accordance with SDB 0117

Figure 5. Edge of Belt – Cord Tail

Figure 6. Edge of Belt – Sealed Edge