



SERVICE INFORMATION LETTER

SERVICE INFORMATION LETTER (SIL) 0088

Revision 2

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DATE: November 13, 2019

1. SUBJECT: Special Inspection for Main and/or Tail Rotor Blade Strike/Sudden Stoppage
2. MODEL: F-28A, 280, F-28C, F-28C-2, F-28C-2R, and 280C
3. EFFECTIVITY: All serial numbers
4. BACKGROUND:

This letter is published as a guideline for performing the required inspections, by qualified maintenance personnel, after experiencing a main rotor blade and/or tail rotor strike/sudden stoppage. It should be emphasized that other parts and/or adjacent components not listed may also be damaged, depending on the severity of the incident. Therefore, this guide should not be considered absolute and should be expanded as required by the inspecting maintenance personnel.

For main rotor blade strikes and/or sudden stoppage, the following inspections are mandatory.

5. SPECIAL INSTRUCTIONS

- 5.1 General Information – Special Instruction

All aluminum and steel components must be inspected by the following processes after visual inspection has revealed a possible defect or as noted in the special inspections:

- 1) Aluminum machined or cast components are to be inspected by liquid penetrant inspection (ASTM E165 or equivalent).
- 2) Aluminum sheet metal components are to be inspected by liquid penetrant inspection (ASTM E165 or equivalent).
- 3) Steel components are to be inspected by magnetic particle inspection (ASTM E1444 or equivalent).

All parts and components that may be affected by the main rotor blade and/or tail rotor strike occurrence are to be given a complete inspection for possible damage.

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5.1 Main Rotor Blade Strike/Sudden Stoppage (Minor) – Special Instruction

NOTE

The following inspections are mandatory.

NOTE

For F-28/280/A/C operators, see Enstrom F-28F/280F Series Maintenance Manual (MM), latest revision, for all paragraph references to all component inspections and repairs.

- A. Blade damage does not exceed damage as defined in MM Paragraph 9-9, and shows no visible kinks, ripples in the skin or the trailing edge. Perform the following:
- 1) Repair the blade in accordance with MM Paragraph 9-10.
 - 2) Refer to the latest revision of Textron-Lycoming Service Bulletin 533 for the recommended engine inspection.
- B. Blade damage exceeds limits of MM Paragraph 9-9, but has not contacted the airframe or other rigid object and shows no visible kinks, ripples in the skin or trailing edge. Perform the following:
- 1) Replace the blade(s).
 - 2) Refer to the latest revision of Textron-Lycoming Service Bulletin 533 for the recommended engine inspection.
 - 3) Check the main rotor shaft run out. Maximum allowed is 0.012 inch/0.305 mm FIM.
 - 4) Inspect the tail rotor driveshaft taper pins and taper pin holes (MM Paragraph 10-6, H) and flex packs (MM Paragraph 10-6, C).

NOTE

If the main rotor shaft run out, taper pins, or flex packs do not meet inspection requirements, proceed to step 5.2.

5.2 Main Rotor Blade Strike/Sudden Stoppage (Major) – Special Instruction

- A. Obvious blade damage exceeding the limits of MM Paragraph 9-9. Perform the following:
- 1) Replace the damaged blade(s) and inspect the remaining blade(s).
 - 2) Remove the main rotor transmission including the upper pulley and tail rotor drive shaft hub and return to Enstrom Helicopter Corporation for inspection and overhaul/replacement.

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- 3) Remove the main rotor hub and inspect by liquid penetrant method (ASTM E165 or equivalent) and in accordance with the inspection tables in MM Paragraph 9-1, D, or return to Enstrom Helicopter Corporation for inspection and overhaul/replacement.
- 4) Inspect all flight control push-pull rods and torque tubes for sheared/damaged rivets at the fittings, damaged rod ends, or sheared/damaged roll pins.
- 5) Inspect all flight control bellcranks for buckling and elongated bolt holes.
- 6) Inspect the lower swashplate for warped or cracked casting and for bent or damaged guidetubes in the upper swashplate. Inspect the tie rod and universal rod for straightness. Inspect the bolt holes for elongation.
- 7) Replace all tail rotor driveshaft taper pins.
- 8) Inspect the tail rotor driveshaft for damage at the taper pin holes.
- 9) Magnetic particle inspect the tail rotor driveshaft (ASTM E1444 or equivalent).
- 10) Inspect the pylon structure at the gearbox mounting areas for broken or bent tubes. Check the trueness of the four gearbox attachment points.
- 11) Inspect all components of the drive system.
- 12) Refer to the latest revision of Textron-Lycoming Service Bulletin 533 for the recommended engine inspection.

5.3 Tail Rotor Blade Strike/Sudden Stoppage Special Instruction

A. Strike tab missing but no physical damage to the tail rotor blade(s):

- 1) Inspect the tail rotor driveshaft for damage at the forward and aft coupling taper pin locations.
- 2) Inspect the taper pins, flex packs, and drive shaft hubs at the forward and aft coupling locations (MM Paragraph 10-6, C).
- 3) If no damage is found, make a log book entry and notify Enstrom Helicopter Corporation to order replacement strike tabs.
- 4) If damage is found, proceed to the following paragraph for additional inspection procedures.

B. Obvious physical damage to the tail rotor blade. Perform the following:

- 1) Remove the tail rotor transmission with the tail rotor controls and the input drive hub and the tail rotor assembly.

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- a. Remove the tail rotor pitch controls and inspect in accordance with the inspection tables in MM Paragraph 10-4, C.
 - b. Return the tail rotor transmission to Enstrom Helicopter Corporation for inspection and overhaul/replacement.
 - c. Inspect the tail rotor assembly in accordance with the inspection tables in MM Paragraph 10-1, F.
- 2) Replace all tail rotor driveshaft taper pins.
 - 3) Inspect the tail rotor driveshaft for damage at the forward and aft taper pin holes.
 - 4) Inspect the taper pin hole in the main rotor transmission pinion for complete or partial failure. If damage is found, return the main rotor transmission to Enstrom Helicopter Corporation for overhaul/replacement.
 - 5) Inspect all coupling hubs and the pinion shaft by liquid penetrant method (ASTM E165 or equivalent).
 - 6) Magnetic particle inspect (ASTM E1444 or equivalent) the tail rotor driveshaft.
 - 7) Inspect the hangar bearing housings and attachments.
 - 8) Inspect the tail rotor control cables and pulley attachments.
 - 9) Inspect the tail rotor pedal push-pull rods and bellcranks.