

NOTE

Do not exchange quills between different Gearboxes. Failure of either quill within a Gearbox renders that Gearbox unserviceable. Disassembly of the input and output quills is not required in order to perform the fluorescent penetrant inspection. Keep input and output quills from each Gearbox as a matched set.

(1) Remove input and output quills per disassembly instructions (TM 55-1520-210-23-1, paragraph 6-184.).

(2) Inspect Gearshaft as follows:

(a) Clean gear teeth using Class 2 solvent per TM 1-1500-335-23 to remove oil and grime. Apply solvent with a clean lint-free rag, being careful to avoid contaminating bearings. Wipe with isopropyl alcohol (TT-I-735, NSN 6810-00-983-8551) and a clean lint-free rag to achieve a dry surface for inspection.

NOTE

Gear teeth should be clean and free of residue prior to inspection.

(b) Visually inspect gear teeth for galling, nicks, scoring, or cracks at root radius. Visually inspect the case for active corrosion, especially on the O-ring sealing surface that might cause leaking.

CAUTION

Use brush-on application of penetrant when performing fluorescent penetrant inspection to prevent contamination of bearings.

CAUTION

Use of excess solvent in removing dye prior to applying developer may dilute or remove dye from crack, preventing crack detection.

(c) Mask bearings and perform fluorescent penetrant inspection per TM 1-1500-335-23, Type 1, Method C, and Sensitivity Level 3 or equivalent method on the gear teeth.

(3) Correction Procedures.

CAUTION

Do not exchange quills between different Gearboxes. Although TM 55-1520-210-23 currently allows swapping of quills between Gearboxes, a change is being processed to stop this practice. Failure of either quill within a Gearbox renders that Gearbox unserviceable. Reassemble Gearbox with original components and return to depot for overhaul.

(a) Gears found cracked as a result of FPI inspection are considered unserviceable.

(b) Gears that do not show indications of cracks are considered serviceable, and shall be reassembled using the procedure of TM 55-1520-210-23-1, paragraph 6-188.

(c) Install serviceable Gearbox IAW TM 55-1520-210-23-1.

(d) Perform the following after the initial and each recurring inspection:

1 Drain and refill Gearbox after 25 flight hours to remove any fluorescent penetrant residuals. Drain and refill should be performed within 1/2 hour of aircraft shutdown.

2 Annotate DA Form 2408-13-1 to drain and refill the 42-Degree Gearbox in 25 flight hours after each 150-hour recurring inspection.

6-187. Repair - Intermediate Gearbox.

a. Replace unserviceable filler cap assembly (26, figure 6-51) or vent cap (27).

b. (AVIM) Replace seals if leaking.

c. (AVIM) Replace packing during assembly.

CAUTION

DO NOT INTERMIX OIL LEVEL INDICATOR DISK P/N 204-040-508-1 WITH THE 90 DEGREE GEARBOX INDICATOR DISK P/N 204-040-508-9.

d. Replace oil level sight gage as follows: