



SERVICE INFORMATION LETTER

Service Information Letter No. 0126
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Date: July 27, 1982
Subject: Inspection of Flapping Bearing Preload and Condition
Models: All Models
Effectivity: All Serial Numbers

Reports by field service and Enstrom tech reps have indicated that in isolated cases blade tracking or rotor roughness problems have been created by improper flapping bearing (P/N 28NBC2040YZP) preload adjustment or condition.

The flight characteristics of this problem will be exhibited by recurring rotor out-of-track condition in short service intervals, or a moderate one-to-one vertical shake during low power landings or autorotations. However, maintenance personnel should be cautioned that these described characteristics can also be caused by other mechanical problems in the rotor system. Therefore, this information should be incorporated as a part of normal blade tracking troubleshooting practices by maintenance personnel.

If any of the described characteristics or symptoms are shown in aircraft that are not responding to normal tracking procedures, the following check should be made.

The retention assembly of each blade should be checked for proper preload. This can be accomplished by first removing all three blades. Then each blade grip assembly should be lifted up against the up stop and carefully allowing it to lower, but still in the grasp of the mechanic, some slight resistance should be felt (see parenthesis in Step A 4). All three assemblies should feel the same amount of resistance in the downward motion. If no friction or resistance is felt, the flapping pins should be retorqued per Item (A). If any one assembly or more has excessive resistance or notchiness, it may indicate a brinelled flapping bearing.

If it has been determined that the assemblies do not have proper torque and show no evidence of binding, the retention assemblies should be retorqued to the required preload.



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(A) Procedure for retorque of flapping pin:

- A. Remove rotor blade.
- (2) Remove damper assembly.
- (3) Unlock tang washer.
- D. Retorque flapping pin nut with spanner or special tool T-0051 to obtain a flapping preload. (Assembly should remain in the up stop position with no more than 20 - 25 lbs. of force applied at the end of the grip to move it to the down stop.) Shims, P/N 2 8-14019, may be added to the inboard side of the DU washers to avoid excessive torque of more than 100 ft. /lbs. All three assemblies should have an equal preload or drag.

NOTE: Care should be taken so as not to shear the 23-194-0625 split pin on the head end of the flapping pin.

- E. Secure flapping pin nut with tang washer utilizing previously unused tangs. If proper preload cannot be attained, or if excessive resistance is encountered, the retention assembly should be dismantled.
(Ref. Maintenance Manual, pages MM 6-2 thru MM 6-7.)

(B) Procedure for disassembly:

- (1) Remove the main rotor retention assembly by removing the flapping hinge pin, noting any scoring or wear marks on the pin.

NOTE: Scoring or wear in excess of .0005 inch on pin diameter is cause for replacement. Longitudinal scratches may be buffed out locally.

- (2) Rotate flapping bearings by hand, noting any binding or roughness. Any binding or roughness indicates brinelling and bearing should be replaced.
- (3) Inspect the two DU washers, P/N 2 8-14236-1. If Teflon coat is rough, grooved or worn through to the copper, it should be replaced.



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- (4) Reinstall retention assembly, hinge pin, and retorque to obtain a flapping preload. (Assembly should remain in the up stop position with no more than 20 - 25 lbs. of force applied at the end of the grip to move it to the down stop.) Shims, P/N 2 8-14019, may be added to the inboard side of the DU washers to avoid excessive torque of more than 100 ft. /lbs. All three assemblies should have an equal preload or drag.
- (5) Secure flapping pin nut with tang washer utilizing previously unused tangs.

These inspection checks should be accomplished at the owner*s earliest convenience on any aircraft that exhibits these characteristics, and within the next 200 hours on all aircraft. Thereafter this inspection should be accomplished at 200-hour intervals or whenever the rotor head is removed.

Furthermore, all owners and maintenance personnel should review Enstrom Service Information Letter No. 0100 on proper servicing of the flapping pin bearings.