

ROBINSON
HELICOPTER COMPANY

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MANDATORY SERVICE BULLETIN #20

Date: May 3, 1982

To: All Owners and Operators of R22 Helicopters

Subject: Inspection of Long Tail Rotor Drive Shaft and Damper

Rotorcraft Affected: R22 Serial No. 0002 through 0290

Time for Compliance: Within the next five hours of flight, at each 100 hour inspection thereafter, and after any suspected overspeed or hard landing.

Background: There has been one or more recent cases involving whipping of the long tail rotor drive shaft. Shaft whipping results from a bent shaft and/or overspeeding of the rotor. Whipping of the shaft causes substantial damage to the aircraft, loss of tail rotor control, and can result in a serious accident.

Inspection Procedure:

1. Remove five inspection plug covers from sides of tailcone.
2. Visually inspect shaft for marks indicating contact with tailcone bulkheads.
3. Visually inspect damper arms for cracks or bending.
4. Using Gates vee belt tension tester, measure force required to move shaft from side-to-side at damper location. Force required must be between one and two pounds.
5. Using dial indicator with suitable extension (reference Service Letter #14), measure shaft runout at each inspection hole. If runout exceeds .025 inches at any location, shaft must be returned to factory for straightening.
6. With mechanic observing shaft through inspection holes, slowly vary RPM from 95% to 106%. If excessive or unstable vibration is observed, contact factory.