

MANDATORY SERVICE BULLETIN #21

Date: June 1, 1982

To: All Owners and Operators of R22 Helicopters

Subject: Replacement of Tail Rotor Driveshaft & Aft Flex Plate

Rotorcraft Affected: R22 Serial No. 0002 thru 0282

Time for Compliance: Within the next 100 flight hours or by 31 August 1982, whichever comes first.

Background: There have been several instances of the long tail rotor drive shaft whipping as a result of inadvertent overspeeds. Also, several of the small aft flex plates (A193-3) have cracked in service due to fretting at the edge of the washers.

Corrective Action:

RHC has completed an intensive R&D program to eliminate these problem areas. A new, higher frequency, tail rotor drive shaft which increases the overspeed margin by more than 10 percent in rotor speed and a new bonded flex plate which eliminates fretting have been developed and approved by the FAA. These new components must be installed within the compliance period given above.

Required Procedure:

Replace the following obsolete parts with the new components indicated below. Removal and installation instructions are given in Section 7.300 of the new R22 Maintenance Manual (Issued 7 May 82).

	<u>Obsolete Design</u>	<u>New Design</u>
T/R Drive Shaft Assy	A197-*thru Rev P	A197-*Rev Q & on
Damper Assy	A041-1 thru Rev H	A041-1 Rev I & on
Plate, Flex Coupling	A193-3	A947-3
Spacer (Nickel plated)	A559-1 thru Rev F	A559-1 Rev G & on
Spacer (Nickel plated washer)	A559-2	Not Required

*The dash number of the new A197 shaft must be the same as the one replaced to obtain the correct length.

THE DESIGN CHANGES REQUIRED BY THIS SERVICE BULLETIN ARE FAA APPROVED.