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I M M E D I A T E A C T I O N R E Q U I R E D

SERVICE BULLETIN #31

Date: 14 April 1983

To: R22 Owners and Operators

Subject: Lower Actuator Bearing A181-1

Rotorcraft Affected: R22 Helicopters S/N 0196 thru S/N 0341 and any rebuilt, overhauled, or repaired R22 helicopters having new A181-1 Bearing Assemblies installed between August 1981 and April 14, 1983. (Aircraft with A181-1 Rev. G or subsequent Bearing Assemblies installed are not included.)

Time for Compliance: Hourly check of bearing by pilot - prior to next flight. Bearing replacement - within the next 25 flight hours or prior to May 31, 1983, whichever occurs first.

Background: The inspection procedure for the A181-1 Lower Actuator Bearing described in SB-28 has not proven adequate to preclude an in-flight bearing failure. On one aircraft, a failure occurred 1.6 hours after the Telatemps were checked okay by the pilot. The pilot detected the failure by an increase in vibration followed by the clutch light illuminating and a smell of smoke. A precautionary landing was made immediately and the Telatemps read 190°F and 170°F on the left and right sides of the lower bearing housing. Grease was also observed coming out from the front bearing seal.

Compliance Procedure:

A. Inform Pilots

Require each pilot to read and be familiar with this service bulletin prior to his next flight in the aircraft.

B. Hourly Check of Bearing By Pilot

The pilot must visually check the Telatemps on both sides of the lower actuator bearing housing at intervals not to exceed one flight hour. A visual check of the bearing for possible seal

damage shall also be performed. If the temperature has exceeded 160°F on either side of the bearing or, if seal damage is found, the aircraft must be grounded until the bearing assembly is replaced with an A181-1 Rev. G or subsequent Bearing Assembly. Replacement of the bearing will eliminate this requirement for an hourly check by the pilot.

C. Required Bearing Replacement

Regardless of condition, all A181-1 Bearing Assemblies installed in the affected rotorcraft must be replaced with A181-1 Rev. G, or subsequent, Bearing Assemblies within the next 25 flight hours, or, prior to May 31, 1983, whichever occurs first. Refer to SB-28 for replacement procedure.

D. Ordering Instructions for Replacement Bearing Assemblies

Replacement bearing assemblies may be obtained directly from the factory. A 60% discount will be applied to the A181-1 Bearing Assembly in place of the regular spares discount, reducing the price to \$97.00. The entire A007-3 Shaft & Bearing Assembly must be replaced. The A642-1 Shafts will be reused on an exchange basis. To insure prompt return of the reusable shaft and the non-reusable bearing assembly, each order for a replacement bearing assembly requires a prepayment of \$350.00. If the old shaft and bearing assembly is returned to RHC within ten (10) days, after the replacement parts are received, there will be a refund of \$253.00 for the reusable shaft. If the shaft is not returned within ten days it will be of no use to RHC and no refund will be made.

Bearing assemblies still within the RHC warranty period as of this date, 14 April 1983, will be replaced without charge, however, the prepayment of \$350.00 must still accompany the order to insure prompt return of the shaft. A written request for warranty credit must be sent to RHC with the old parts for credit to be given.