

**R22**

**SERVICE BULLETIN SB-76**

**DATE:** 22 December 1994

**TO:** All R22 Owners, Operators, and Service Centers

**SUBJECT:** Main Rotor Shaft Retaining Nuts

**ROTORCRAFT AFFECTED:** R22 helicopters S/N 0002 thru 2177 or any helicopters with A006-1 Rev Z and prior gearboxes manufactured or overhauled prior to 15 June 1992 installed. (Gearbox Rev letter may be found on the data plate next to the sight glass.)

**TIME OF COMPLIANCE:** Within the next 25 flight hours or by 15 March 1995, whichever occurs first.

**BACKGROUND:** RHC has reports of main rotor gearboxes in which the two nuts retaining the main rotor shaft had come loose. Fortunately, in each case, the failure occurred on the ground. However, an in-flight failure would be catastrophic. In June 1992, the assembly procedure was revised. The following procedure is required for gearboxes manufactured prior to June 1992.

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The following procedure must be performed at an approved R22 Service Center by a factory-trained mechanic.

**COMPLIANCE PROCEDURE:**

- 1) Service Centers must order one MT124-1 spanner nut socket. Instructions for performing the gearbox modification per this Service Bulletin are given in R22 SB-76 Appendix A. Appendix A is available at R22 Service Centers or may be obtained from RHC upon request.
- 2) For each R22 to be modified, reference the aircraft serial number and order the following:
  - 1 ea A269-1 lock washer
  - 1 ea A269-2 lock washer
  - 1 ea A215-271 O-ring
  - 1 liter bottle A257-2 oil
  - 2 6oz bottles A257-2 oil
- 3) Remove main rotor gearbox per R22 Maintenance Manual (MM) Section 7.110.
- 4) Drain gearbox by removing chip detector housing.
- 5) Perform inspection and torquing of main rotor shaft retaining nuts per R22 SB-76 Appendix A.
- 6) Reinstall gearbox per R22 MM Section 7.120.
- 7) Fill gearbox with A257-2 oil to middle of sight glass.
- 8) Check main rotor balance per R22 MM Section 10.

**Approximate Cost:**

Labor: 16 manhours

Parts: \$22 for lock washers and O-ring (include helicopter serial number).  
\$71.25 for MT124-1 socket.

THE DESIGN ENGINEERING ASPECTS OF THIS BULLETIN HAVE BEEN SHOWN TO COMPLY WITH THE APPLICABLE FEDERAL AVIATION REGULATIONS, AND ARE FAA APPROVED.