

M A N D A T O R Y
SERVICE BULLETIN # 43

DATE: 24 August 1984

TO: All R22 Owners and Operators

SUBJECT: Inspection and Modification of M.R. Gearbox Ring Gear Bolts

ROTORCRAFT AFFECTED: Helicopter Serial No. 0002 through 0433
having main rotor gear boxes serial no. 0002
through 0434 installed (A006, Rev A thru V).

TIME OF COMPLIANCE: Part A Inspection must be within the next 15 flight
hours and a recheck each 50 flight hours thereafter,
or whenever a main rotor chip light occurs, until
Part B modification is accomplished.

Part B Modification must be accomplished within
the next 200 flight hours.

BACKGROUND: Ring gear bolt head failures have been found in
the main gearboxes of three R22 helicopters. None
of the bolt failures resulted in an accident or
failure of the gearbox to transmit power to the
main rotor. However, continued operation of the
helicopter after a bolt head failure could result
in failure of the gearbox.

COMPLIANCE PROCEDURE:

Part A Inspection/Recheck Procedure:

1. Elevate right skid or drain sufficient oil from the main gearbox so the sight glass can be removed without oil loss.
2. Manually rotate drive and visually inspect all twelve bolt heads located on underside of gear using a pen light.
3. If any indication of bolt head failure is found, gearbox must be removed and returned to RHC for disassembly.
4. If no indication of bolt failure is found, reinstall sight gage and refill gearbox to proper level.
5. Torque filler plug and sight gage to 150 in-lb and safety wire.

(Part A recheck may be performed by pilot after receiving instruction and demonstration by factory-trained mechanic.)

Part B Modification Procedure:

Compliance with this part will require removal of the gearbox from the helicopter and installation of modification Kit No. KI-37. The kit must be installed at an approved R22 service center by a factory-trained mechanic. Instructions included with kit.

KI-37 Kit: Price \$65.00 Approximate Installation Labor: 16 Man Hours