AD/BELL 212/59 Tail Rotor Yoke 8/98 DM

Applicability: Model 212 helicopters with tail rotor yoke assembly, part number (P/N) 212-011-702-all dash numbers, or P/N 212-010-704-all dash numbers, or P/N 212-010-744- all dash numbers installed.

Requirement:

1. Review all historical records of the helicopter and the tail rotor yoke assembly for any static or dynamic incident history that could have imposed an excessive bending load on the yoke. If such a history exists, comply with Requirement 2 before further flight.

Note 1: Examples of excessive bending loads include exposure to high wind gusts (such as those from rotor wash or prop blast), improper ground handling (in which the tail rotor blade has been used as a hand hold), improper feathering bearing removal (in which the yoke is not properly supported when pressing out bearings), a static ground strike of some type (such as being struck by a vehicle), or an incident in which a damaged tail rotor blade was replaced due to a blade strike. An overload may also occur dynamically during a power-on or power-off sudden stoppage incident or hard landing.

2. Remove the yoke assembly and replace it with a serviceable yoke assembly having zero hours time in service, or with a serviceable yoke assembly (regardless of time in service) that has passed an x-ray diffraction inspection in accordance with Bell Helicopter Textron, Inc. Alert Service Bulletin (ASB) 212-96-100, Revision A, dated 18 May 1998, or ASB 212-96-101 dated 3 September 1996, whichever is applicable. When the yoke assembly is replaced, for helicopters with a yoke assembly , P/N 212-011-702-all dash numbers, install a serviceable tail rotor flapping stop, P/N 212-011-713-103, and for helicopters with yoke assemblies, P/N 212-010-704-all dash numbers or P/N 212-010-744-all dash numbers, install an airworthy trunnion assembly, P/N 212-010-738-001. If any incident as described in Requirement 1 of this Directive occurs after 10 June 1998 and before compliance with this requirement, then compliance with Requirement 2 is required before further flight.

Note 2: Yoke assemblies that have passed an x-ray diffraction inspection at BHTI will have the letters FM vibro-etched on them following the serial number.

3. Inspect the trunnion assembly, and replace the yoke assembly and trunnion assembly, if required, in accordance with Part III, Paragraph 1, of ASB 212-96-100, Revision A; or inspect the tail rotor flapping stop and replace the yoke assembly and flapping stop, if required, in accordance with Part III, Paragraphs 1, 2, and 3, of ASB 212-96-100, whichever is applicable.

Note 3: FAA Priority Letter AD 98-11-15 refers.

Compliance:

1. Before further flight after 10 June 1998.

2. Before 10 December 1998.

3. After accomplishing the requirements of Requirement 2, thereafter at intervals not to exceed 25 hours time in service, or before further flight after any incident as described in Requirement 1.

This airworthiness directive becomes effective on 10 June 1998.

Background: This Directive reflects the issue of a Priority Letter AD by the FAA, which was prompted by an accident involving a BTHI Model 205A-1 helicopter in which the tail rotor yoke failed during flight. The Model 205A-1 helicopter is similar in design to the Model 212 helicopter. Investigation of the accident revealed that the tail rotor yoke assembly service life may be reduced due to unforeseen static and dynamic loading of the tail rotor. This condition, if not corrected, could lead to failure of the yoke, loss of the tail rotor, and subsequent loss of control of the helicopter.