



No.	CF-2003-27	1/2
Issue Date	17 November 2003	

AIRWORTHINESS DIRECTIVE

The following airworthiness directive (AD) may be applicable to an aircraft which our records indicate is registered in your name. ADs are issued pursuant to **Canadian Aviation Regulation (CAR) 593**. Pursuant to **CAR 605.84** and the further details of **CAR Standard 625, Appendix H**, the continuing airworthiness of a Canadian registered aircraft is contingent upon compliance with all applicable ADs. Failure to comply with the requirements of an AD may invalidate the flight authorization of the aircraft. Alternative means of compliance shall be applied for in accordance with **CAR 605.84** and the above-referenced **Standard**.

This AD has been issued by the Continuing Airworthiness Division (AARDG), Aircraft Certification Branch, Transport Canada, Ottawa, telephone (613) 952-4357.

Number: CF-2003-27

Subject: Bell 222, 222B, 222U and 230 - Main Rotor Yoke

Effective: 31 December 2003

Applicability: Bell Helicopter Textron Canada (BHTC) helicopters:

Model 222	serial numbers	47006 through 47089,
Model 222B	serial numbers	47131 through 47156,
Model 222U	serial numbers	47501 through 47574,
Model 230	serial numbers	23001 through 23038.

Compliance: As indicated, unless already accomplished.

Background: Transport Canada has been advised of fatigue crack being found in a main rotor yoke, P/N 222-011-102-105, in the area of the flapping bearing bushing. It was determined that the buffer pad installed under the bushing flange during manufacture had deteriorated to the point that there was metal-to-metal contact resulting in heavy fretting which led to crack initiation.

Corrective Actions: **Part 1. 25-hour Visual Inspection**

Within the next 50 air time hours and at every 25 air time hours of operation thereafter, perform a visual inspection of the main rotor yoke as per inspection procedure listed in Part I of the applicable Alert Service Bulletin listed in accompanying table, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Any evidence of fretting is cause for main rotor hub assembly teardown for further inspection in accordance with applicable components Repair and Overhaul Manual. If a crack is found, the main rotor yoke must be removed from the helicopter.

Helicopter Model	Alert Service Bulletin
222, 222B	222-03-97
222U	222U-03-68
230	230-03-28

Part 2. 50-hour Torque Inspection

Within the next 50 air time hours and at every 50 air time hours inspection thereafter, verify torque of main rotor flapping bearing(s) retaining bolts/nuts as per instruction provided in Part II of the applicable Alert Service Bulletin listed in accompanying table above, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

If any nut moves before reaching 100 foot-pounds (135 NM) of torque is reached, remove the flapping bearing(s) from the main rotor hub assembly. Inspect flapping bearing and main rotor yoke assemblies for damage. Repair or replace all affected parts in accordance with applicable component Repair and Overhaul Manual.

Authorization: For Minister of Transport



R. William Taylor
Acting Chief, Continuing Airworthiness

Contact: Mr. Bogdan Gajewski, Continuing Airworthiness, Ottawa, telephone (613) 952-4450, facsimile (613) 996-9178 or e-mail gajewsb@tc.gc.ca, or any Transport Canada Centre.