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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2004-SW-07-AD; Amendment 39-13963; AD 2005-03-07]

RIN 2120-AA64

Airworthiness Directives; Bell Helicopter Textron Canada Model 407 Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD) for Bell Helicopter Textron Canada (Bell) Model 407 helicopters that requires creating a component history card or equivalent record for each crosstube assembly, converting accumulated run-on landings to an accumulated Retirement Index Number (RIN) count, and establishing a maximum accumulated RIN for certain crosstube assemblies. This amendment is prompted by fatigue testing, analysis, and evaluation by the manufacturer that determined that run-on landings impose a high stress on landing gear or crosstubes and may cause cracking in the area above the skid tube saddle. The actions specified by this AD are intended to prevent fatigue failure in a crosstube assembly due to excessive stress during run-on landings and subsequent loss of control of the helicopter.

DATES: Effective March 17, 2005.

FOR FURTHER INFORMATION CONTACT: Sharon Miles, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Regulations and Policy Group, Fort Worth, Texas 76193-0111, telephone (817) 222-5122, fax (817) 222-5961.

SUPPLEMENTARY INFORMATION: A proposal to amend 14 CFR part 39 to include an AD for the Bell Model 407 helicopters was published in the Federal Register on August 4, 2004 (69 FR 47041). That action proposed to require, before further flight, creating a component history card or equivalent record for each crosstube assembly, converting accumulated run-on landings to an accumulated RIN count, and establishing a retirement life of 5,000 accumulated RIN for the affected crosstube assemblies.

Transport Canada, the airworthiness authority for Canada, notified the FAA that an unsafe condition may exist on Bell Model 407 helicopters. Transport Canada advises that run-on landings impose high stress on landing gear crosstubes, and to prevent possible crosstube failure, the manufacturer has introduced the life limitation of 5,000 RIN. Further evaluation has confirmed the

possibility that an extensive training environment with run-on landings may impose high stress on crosstubes. The same condition may result from repetitive landings with forward travel with rotorcraft weight on the skids.

Bell has issued Alert Service Bulletin No. 407-03-59, dated October 15, 2003, which specifies assigning a RIN count to forward and aft crosstube assemblies on Model 407 helicopters. Transport Canada classified this alert service bulletin as mandatory and issued AD No. CF-2004-03, dated February 11, 2004, to ensure the continued airworthiness of these helicopters in Canada.

This helicopter model is manufactured in Canada and is type certificated for operation in the United States under the provisions of 14 CFR 21.29 and the applicable bilateral agreement. Pursuant to the applicable bilateral agreement, Transport Canada has kept the FAA informed of the situation described above. The FAA has examined the findings of Transport Canada reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received on the proposal or the FAA's determination of the cost to the public. The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

The FAA estimates that this AD will affect 319 helicopters of U.S. registry and it will take approximately 4 work hours per helicopter to replace the forward and aft crosstube assemblies at an average labor rate of \$65 per work hour. Required parts will cost approximately \$6,670 per helicopter for both forward and aft low gear crosstube assemblies, or \$8,450 per helicopter for both forward and aft high gear crosstube assemblies. Based on these figures, the total cost impact of this AD on U.S. operators is estimated to be \$2,210,670 to replace the low gear crosstube assemblies on the entire fleet or \$2,778,490 to replace the high-gear crosstube assemblies on the entire fleet and assuming the costs associated with creating and updating the historical component card are negligible.

Regulatory Findings

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final economic evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This

regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2005-03-07 Bell Helicopter Textron Canada (Bell): Amendment 39-13963. Docket No. 2004-SW-07-AD.

Applicability: Model 407 helicopters, with landing gear crosstube assemblies, part number (P/N) 407-050-101-101 and -103; P/N 407-050-102-101 and -103; P/N 407-050-201-101 and -103; P/N 407-050-202-101 and -103; P/N 407-704-007-119; P/N 407-722-101; P/N 407-723-104; P/N 407-724-101; or P/N 407-725-104, installed, certificated in any category.

Note 1: This AD applicability includes both Bell crosstube assemblies and Bell's approved production and spare alternate crosstube assemblies from Aeronautical Accessories Incorporated (AAI).

Compliance: Required as indicated, unless accomplished previously.

To prevent fatigue failure of the crosstube assembly and subsequent loss of control of the helicopter, accomplish the following:

(a) Before further flight, create a component history card or equivalent record for each crosstube assembly.

(b) Before further flight, determine and record the accumulated Retirement Index Number (RIN) for each crosstube assembly as follows:

(1) For each crosstube assembly, record one (1) RIN for every run-on landing.

(2) For any crosstube assembly with an unknown number of run-on landings, assume and record ten (10) RINs for each 100 hours TIS since the crosstube assembly was installed (for example, 5,000 hours of time-in-service equals 500 RIN).

(c) Replace any crosstube assembly on or before reaching 5,000 RIN.

Note 2: Bell Helicopter Textron Alert Service Bulletin No. 407-03-59, dated October 15, 2003, pertains to the subject of this AD.

(d) This AD revises the Airworthiness Limitations section of the maintenance manual by establishing a retirement life of 5,000 RIN for the affected crosstube assemblies.

(e) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Contact the Regulations and Policy Group, Rotorcraft Directorate, FAA, for information about previously approved alternative methods of compliance.

(f) This amendment becomes effective on March 17, 2005.

Note 3: The subject of this AD is addressed in Transport Canada (Canada) AD No. CF-2004-03, dated February 11, 2004.

Issued in Fort Worth, Texas, on January 24, 2005.

Mark R. Schilling,

Acting Manager, Rotorcraft Directorate, Aircraft Certification Service.

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