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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0084; Directorate Identifier 2010-SW-089-AD; Amendment 39-17050; AD 2012-10-01]

RIN 2120-AA64

Airworthiness Directives; Bell Helicopter Textron Canada Limited Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for Bell Helicopter Textron Canada Limited (BHTC) Model 427 helicopters which requires replacing certain tailboom attachment hardware and at certain intervals thereafter, determining the torque of that tailboom attachment hardware. This AD was prompted by a review of the tailboom attachment installation, which revealed that the torque value of the bolts specified in the BHTC Model 427 Maintenance Manual and applied during manufacturing was incorrect and exceeded the torque range recommended for the bolts. The actions are intended to prevent an over-torque of the tailboom attachment bolt (bolt), bolt failure, loss of the tailboom, and subsequent loss of control of the helicopter.

DATES: This AD is effective June 29, 2012.

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of June 29, 2012.

ADDRESSES: For service information identified in this AD, contact Bell Helicopter Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4; telephone (450) 437-2862 or (800) 363-8023; fax (450) 433-0272; or at <http://www.bellcustomer.com/files/>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

Examining the AD Docket: You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, any incorporated-by-reference service information, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (phone: 800-647-5527) is U.S. Department of Transportation, Docket Operations Office, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Sharon Miles, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email sharon.y.miles@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On February 3, 2012, at 77 FR 5425, the Federal Register published our Notice of Proposed Rulemaking (NPRM), which proposed to amend 14 CFR part 39 to include an AD that would apply to BHTC Model 427 helicopters, serial numbers 56001 through 56084. That NPRM proposed to require within 150 hours time-in-service (TIS) or 90 days, whichever occurs first, the following actions:

- Remove the left upper bolt, washers, and nut. Install the new bolt, part number (P/N) NAS627-27; washers, P/N 140-007-29S25E6 and P/N NAS1149G0732P; and new nut, P/N 42FLW-720. Run the nut onto the threads of the mating bolt with a torque wrench and measure the existing tare torque. Any bolt and nut used must have a minimum tare torque value of 14 inch/lbs. Torque the nut and coat the bolt head, nut, and washers with appropriate corrosion preventive compound to seal the joint. Repeat these actions at the three remaining bolt locations.
- After installation of the new attachment hardware, at intervals of not less than 1 hour TIS but not exceeding 5 hours TIS, determine the torque of each nut until torque stabilizes at each attachment location. Thereafter, determine the torque of each nut at intervals not to exceed 300 hours TIS.

The proposed requirements were intended to prevent an over-torque of the bolt, bolt failure, loss of the tailboom, and subsequent loss of control of the helicopter.

Transport Canada (TC), which is the aviation authority for Canada, issued Canadian AD CF-2010-32, dated September 30, 2010 (AD CF-2010-32), to correct an unsafe condition for the BHTC Model 427 helicopters, serial numbers (S/Ns) 56001 through 56084, and S/Ns 58001 and 58002. TC advises that a review of the tailboom attachment installation determined that the torque value of the bolts specified in the BHTC Model 427 Maintenance Manual and applied during manufacturing exceeded the torque range recommended for the bolts. They state that this situation, if not corrected, could lead to a bolt failure, detachment of the tailboom, and loss of control of the helicopter.

Comments

We gave the public the opportunity to participate in developing this AD, but we did not receive any comments on the NPRM.

FAA's Determination

This helicopter model has been approved by the aviation authority of Canada and is approved for operation in the United States. Pursuant to our bilateral agreement with Canada, TC, its technical representative, has notified us of the unsafe condition described in the TC AD. We are issuing this AD because we evaluated all information provided by TC and determined the unsafe condition exists and is likely to exist or develop on other helicopters of this same type design and that air safety and the public interest require adopting the AD requirements as proposed.

Differences Between This AD and the TC AD

The differences between this AD and the TC AD are as follows:

- The TC AD applies to the BHTC Model 427 helicopter, serial numbers 58001 and 58002; however, this AD is not applicable to the BHTC Model 427 helicopters with these serial numbers because they are not eligible for an FAA Certificate of Airworthiness.

Related Service Information

BHTC has issued Alert Service Bulletin No. 427-10-31, dated March 1, 2010 (ASB), which specifies installing new attachment hardware with a reduced torque value. This ASB specifies determining the torque of the newly installed bolts and nuts every 1 to 5 flight hours until torque stabilizes at all locations, and thereafter at intervals not to exceed 300 flight hours. TC classified this ASB as mandatory and issued AD CF-2010-32 to ensure the continued airworthiness of these helicopters.

Costs of Compliance

We estimate that this AD will affect 28 helicopters of U.S. Registry.

We estimate that operators may incur the following costs in order to comply with this AD. It will take about 2.0 work-hours per helicopter to replace the hardware and 1.0 work-hour per helicopter to determine the recurring torque value at an average labor rate of \$85 per work-hour. Required parts will cost about \$488 per helicopter. Based on these figures, we estimate the first year total cost per helicopter to be \$913, and the total cost impact on U.S. operators to be \$25,564. This estimated total cost assumes attachment hardware will be replaced on all affected helicopters, the torque will be considered stabilized after one torquing, and the recurring 300 hour TIS torque determination will be accomplished twice a year.

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 helicopters identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD 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.

For the reasons discussed above, I certify that this AD:

- (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);
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and
- (4) 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.

We prepared an economic evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 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. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):



2012-10-01 Bell Helicopter Textron Canada Limited (BHTC): Amendment 39-17050; Docket No. FAA-2012-0084; Directorate Identifier 2010-SW-089-AD.

(a) Applicability

This AD applies to Model 427 helicopters, serial numbers 56001 through 56084, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as an over-torque of the tailboom attachment bolt (bolt). This condition could result in bolt failure, loss of the tailboom, and subsequent loss of control of the helicopter.

(c) Effective Date

This AD becomes effective June 29, 2012.

(d) Compliance

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(e) Required Actions

(1) Within 150 hours time-in-service (TIS) or 90 days, whichever occurs first, replace the tailboom attachment hardware (attachment hardware) as follows:

(i) Remove the left upper bolt, washers, and nut.

(ii) Install a new bolt, part number (P/N) NAS627-27; washer, P/N 140-007-29S25E6; washer(s), P/N NAS1149G0732P; and new nut, P/N 42FLW-720 in accordance with paragraphs 5.a) through 5.d) of the Accomplishment Instructions in BHTC Alert Service Bulletin No. 427-10-31, dated March 1, 2010 (ASB).

(iii) Run the nut onto the threads of the mating bolt with a torque wrench and measure the existing tare torque. Any bolt and nut used must have a minimum tare torque value of 14 inch/lbs.

(iv) Torque the nut in accordance with paragraphs 5.f) and 5.g) of the ASB.

(v) Coat the bolt head, nut, and washers with appropriate corrosion preventive compound to seal the joint.

(vi) At each remaining attachment location, remove the bolt, washers, and nut, and install the attachment hardware in accordance with paragraphs (e)(1)(ii) through (e)(1)(v) of this AD.

(2) After installation of the new attachment hardware, at intervals of not less than 1 hour TIS but not exceeding 5 hours TIS, determine the torque of each nut until the torque stabilizes at each attachment location. Thereafter, at intervals not to exceed 300 hours TIS, determine the torque of each nut. When determining the torque, it is acceptable to use the minimum tare torque of 14 inch/lbs (1.58 Nm) added to the minimum torque range of 550-560 inch/lbs (62.1 to 63.3 Nm). If you remove

corrosion preventative compound during the torquing, recoat the bolt head, nut, and washers with appropriate corrosion preventive compound to seal the joint.

(f) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Sharon Miles, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email sharon.y.miles@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

(g) Additional Information

The subject of this AD is addressed in Transport Canada AD CF-2010-32, dated September 30, 2010.

(h) Subject

Joint Aircraft Service Component (JASC) Code: 5302, Rotorcraft Tailboom.

(i) Material Incorporated by Reference

(1) You must use the specified portions of BHTC Alert Service Bulletin No. 427-10-31, dated March 1, 2010, to do the specified actions required by this AD. The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Bell Helicopter Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4; telephone (450) 437-2862 or (800) 363-8023; fax (450) 433-0272; or at <http://www.bellcustomer.com/files/>.

(3) You may review a copy of the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137 or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Fort Worth, Texas, on May 10, 2012.

Kim Smith,
Manager, Rotorcraft Directorate,
Aircraft Certification Service.