



[4910-13]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2012-0084; Directorate Identifier 2010-SW-089-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Bell Helicopter Textron Canada Limited Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for the Bell Helicopter Textron Canada Limited (BHTC) Model 427 helicopters. This proposed AD is 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 proposed 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:** We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- **Federal eRulemaking Docket:** Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.
- **Fax:** 202-493-2251.

- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.

- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

**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 proposed AD, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this proposed 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 copies of the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

**FOR FURTHER INFORMATION CONTACT:** Sharon Miles, Aerospace Engineer, FAA, Regulations and Policy Group, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone: (817) 222-5122; e-mail [sharon.y.miles@faa.gov](mailto:sharon.y.miles@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, we will consider all comments we receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

### **Discussion**

Transport Canada (TC), which is the aviation authority for Canada, has issued 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.

### **FAA's Determination**

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 bilateral agreement, TC has kept the FAA informed of the situation described above. We are issuing this AD because we evaluated all information provided by TC and determined the unsafe condition is likely to exist or develop on other helicopters of these same type designs.

### **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.

### **Proposed AD Requirements**

This proposed AD would 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. Any bolt and nut used must have a minimum tare

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 no 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 actions would be required to be accomplished by following specified portions of the service bulletin described previously.

#### **Differences between this Proposed AD and the TC AD**

The differences between this proposed 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 proposed 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.

#### **Costs of Compliance**

We estimate that this proposed AD would affect 28 helicopters of U.S. registry. We estimate it would 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 would cost about \$488 per helicopter. Based on these figures, we estimate for the first year the 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 products identified in this rulemaking action.

## **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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, I certify this proposed regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the 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 proposed 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.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

**BELL HELICOPTER TEXTRON CANADA LIMITED (BHTC):** 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) **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.

(d) **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 (d)(1)(ii) through (d)(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 preventative compound to seal the joint.

**(e) Alternative Methods of Compliance (AMOC).**

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Sharon Miles, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone: (817) 222-5122; fax: (817) 222-5961, e-mail [sharon.y.miles@faa.gov](mailto:sharon.y.miles@faa.gov).

(2) For operations conducted under a Part 119 operating certificate or under 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.

**(f) Additional Information.** The subject of this AD is addressed in Transport Canada AD CF-2010-32, dated September 30, 2010.

**(g) Subject.** Joint Aircraft Service Component (JASC) Code: 5302: Rotorcraft Tailboom.

Issued in Fort Worth, Texas, on January 23, 2012.  
Kim Smith,  
Manager, Rotorcraft Directorate,  
Aircraft Certification Service.

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