

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. FAA-2013-0019; Directorate Identifier 2010-SW-051-AD]

RIN 2120-AA64

Airworthiness Directives; Bell Helicopter Textron Canada Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for Bell Helicopter Textron Canada (BHTC) Model 407 helicopters with certain tailboom assemblies installed. This proposed AD would require, at specified intervals, inspecting the tailboom assembly for a crack, loose rivet, or other damage. This proposed AD is prompted by a stress analysis of the tailboom skin that revealed high-stress-concentration areas are susceptible to skin cracking. This condition, if not detected, could result in a crack in the tailboom assembly, failure of the tailboom, and subsequent loss of control of the helicopter.

DATES: We must receive comments on this proposed AD by April 2, 2013.

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 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.

FOR FURTHER INFORMATION CONTACT: Sharon Miles, Aerospace Engineer, FAA, Regulations and Policy Group, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; fax (817) 222-5961; email 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, which is the aviation authority for Canada, has issued AD CF-2009-07, dated March 6, 2009 (AD CF-2009-07), to correct an unsafe condition for the BHTC Model 407 helicopters with a tailboom assembly, part number (P/N) 407-030-801-201, -203, or -205. Transport Canada states that a stress analysis of the chemically milled tailboom skin "revealed a possibility of skin cracking due to high stress concentration areas."

Transport Canada advises that this condition, if not detected, could result in "serious damage to the tailboom."

FAA's Determination

These helicopters have been approved by the aviation authority of Canada and are approved for operation in the United States. Pursuant to our bilateral agreement with Canada, Transport Canada, its technical representative, has notified us of the unsafe condition described in its AD. We are proposing this AD because we evaluated all known relevant information and determined that an unsafe condition exists and is likely to exist or develop on other products of the same type design.

Related Service Information

BHTC has issued Alert Service Bulletin No. 407-08-84, dated August 18, 2008 (ASB), which specifies a new inspection schedule for the tailboom assemblies. BHTC states it has not received any field reports indicating cracked skin in service on the tailboom assemblies. However, in the interest of safety, BHTC states it has elected to introduce a new inspection schedule for the tailboom assemblies. The ASB specifies the new inspection schedule. Transport Canada classified this ASB as mandatory and issued AD CF-2009-07 to ensure the continued airworthiness of these helicopters.

Proposed AD Requirements

Unless accomplished previously, this proposed AD would require:

- Within 100 hours time-in-service (TIS) or at the next tailboom inspection, whichever comes first, and thereafter at intervals not to exceed 300 hours TIS, cleaning and inspecting the tailboom assembly for a loose rivet, a crack, or other damage. If there is a crack in the tailboom assembly, this proposed AD would require replacing it with an airworthy tailboom assembly before further flight.

- For helicopters with a tailboom assembly that has 6,900 or more hours TIS, this proposed AD would also require, within 25 hours TIS or 30 days, whichever occurs first, cleaning and inspecting the tailboom assembly for a crack, either by using a 10X or higher power magnifying glass (and thereafter repeating the 10X or higher power magnifying glass inspection at intervals not to exceed 150 hours TIS), or by eddy current inspection (and thereafter at intervals not to exceed 500 hours TIS).

- For helicopters with a tailboom assembly that has 8,600 or more hours TIS, or an unknown number of hours TIS, this proposed AD would also require either visually checking for a

crack before the first flight of each day, or cleaning and inspecting around each fastener and just above the edge of the upper stabilizer support within 25 hours TIS, or 30 days, whichever comes first, and thereafter at intervals not to exceed 50 hours TIS. The visual check may be performed by the owner/operator (pilot) holding at least a private pilot certificate, and must be entered into the aircraft records showing compliance with this AD. This authorization is an exception to our standard maintenance regulations.

Differences Between This Proposed AD and the Transport Canada AD

The Transport Canada AD states to perform the inspections of the tailboom "in accordance with inspection procedures as per applicable part" of the ASB. This proposed AD references only specific sections of the ASB for accomplishing the requirements.

Costs of Compliance

We estimate that this proposed AD would affect 551 helicopters of U.S. registry, and estimate the cost of compliance for the first year as follows:

- We assume 1 initial 100-hour TIS inspection and 2 recurring inspections, which would each take about 2.5 hours. At an average labor rate of \$85 per hour, this would result in a cost of about \$213 per inspection per helicopter or a total annual inspection cost for 3 recurring inspections of about \$639 per helicopter.
- We assume 1 initial inspection and thereafter 4 recurring inspections per year for helicopters with a tailboom assembly that has 6,900 or more hours TIS, which would each take 3 hours at the average labor rate of \$85 per hour or \$255 per helicopter. Multiplying this \$255 times the 5 recurring inspections, the total annual cost would be \$1,275 per helicopter.
- We assume 1 initial inspection and 12 recurring inspections per year for helicopters with a tailboom assembly that has 8,600 or more hours TIS. If each inspection takes 3.25 hours, at the average labor rate of \$85 per hour, each inspection would cost about \$276. Multiply \$276 times the 13 recurring inspections would result in a total annual inspection cost of \$3,588 per helicopter. We expect the cost of pilot checks to be minimal.
- Replacing the tailboom would take 10 work hours at an average labor rate

of \$85 per hour for a total labor cost of \$850 per helicopter. Parts would cost \$82,850 for a total cost per helicopter of \$83,700. Assuming that 5 helicopters per year would need a replacement tailboom, the fleet replacement cost would total \$418,500.

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 (BHTC):

Docket No. FAA-2013-0019; Directorate Identifier 2010-SW-051-AD.

(a) Applicability

This AD applies to BHTC Model 407 helicopters, with tailboom assembly part number (P/N) 407-030-801-201, 407-030-801-203, or 407-030-801-205, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as high-stress-concentration areas in the tailboom skin that are at risk of cracking. This condition could result in a crack in the tailboom assembly, failure of the tailboom, and subsequent loss of helicopter control.

(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) For helicopters with a tailboom assembly that has 8,600 or more hours time-in-service (TIS):
 - (i) Comply with either paragraph (d)(1)(i)(A) or (d)(1)(i)(B):
 - (A) Before the first flight of each day, visually check for a crack in the "C" and "D" areas depicted in Figures 1 and 2 to Paragraph (d) of this AD. The actions required by this paragraph may be performed by the owner/operator (pilot) holding at least a private pilot certificate, and must be entered into the aircraft records showing compliance with this AD in accordance with 14 CFR 43.9 (a)(1)-(4) and 14 CFR 91.417(a)(2)(v). The record must be maintained as required by 14 CFR 91.417, 121.380, or 135.439; or

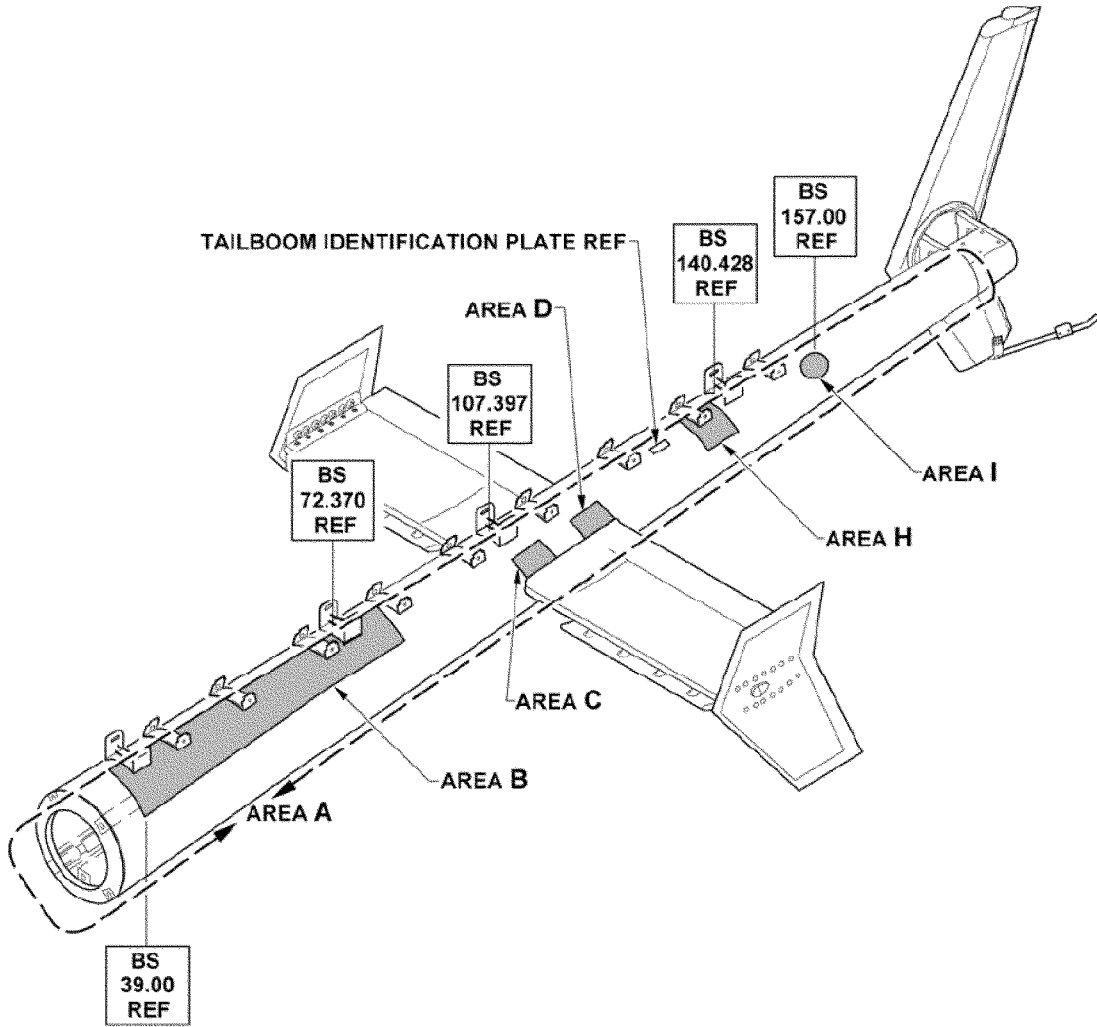


Figure 1 to Paragraph (d)

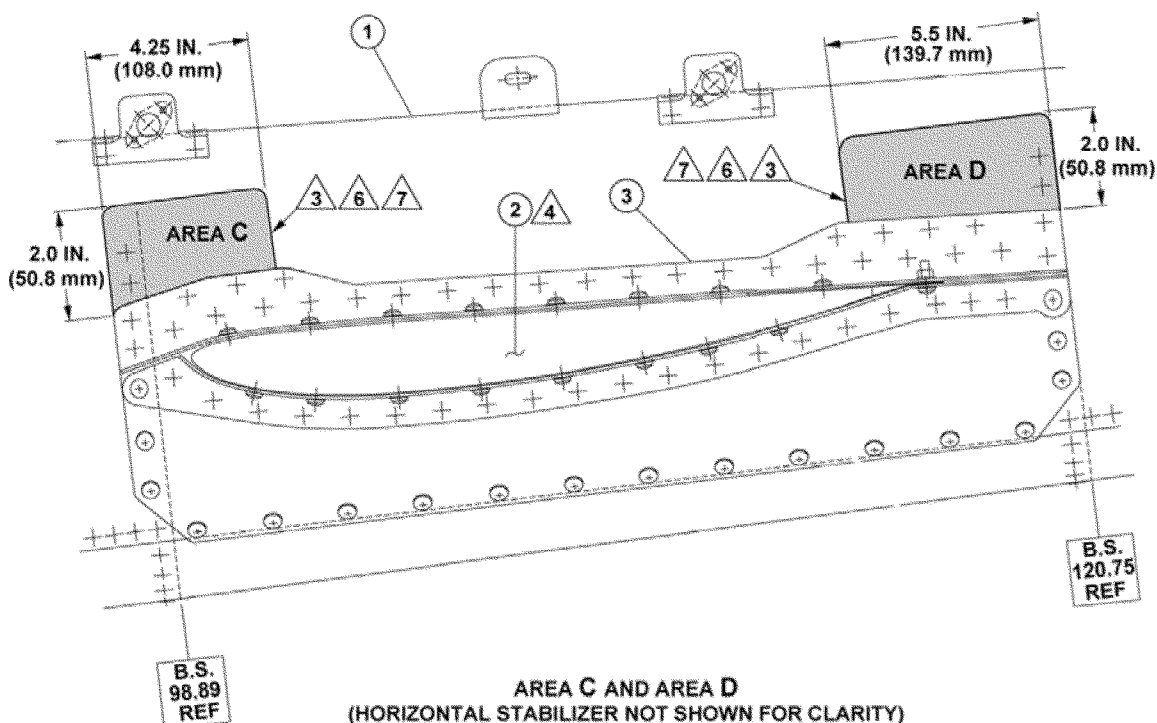


Figure 2 to Paragraph (d)

(B) Within 25 hours TIS, or 30 days, whichever comes first, and thereafter at intervals not to exceed 50 hours TIS, clean and inspect for a crack around each fastener and just above the edge of the upper stabilizer support in the "C" and "D" areas on the left side of the tailboom assembly, as depicted in Figure 2 to Paragraph (d) of this AD, using a 10X or higher power magnifying glass.

(ii) Comply with the requirements of paragraph (d)(2)(i)(A) or (d)(2)(i)(B), and paragraph (d)(3) of this AD.

(2) For helicopters with a tailboom assembly that has 6,900 or more hours TIS:

(i) Within 25 hours TIS or 30 days, whichever occurs first, clean and inspect the tailboom assembly for a crack in the "H" and "I" areas depicted in Figure 2, Sheet 5, of the BHTC Alert Service Bulletin No. 407-08-84, dated August 18, 2008, (ASB), by using one of the two following methods.

(A) Use a 10X or higher power magnifying glass; thereafter, repeat the 10X or higher power magnifying glass inspection at intervals not to exceed 150 hours TIS; or

(B) Eddy current inspect for a crack in accordance with Appendix A and Table 1, and by referencing Figures 3 through 7 of the ASB; thereafter, repeat the eddy current inspection at intervals not to exceed 500 hours TIS. Use a person qualified to Level II or Level III per the National Aerospace Standard (NAS) 410 or equivalent requirements to perform the eddy current inspection.

(ii) Comply with the requirements of paragraph (d)(3) of this AD.

(3) Within 100 hours TIS or at the next tailboom inspection, whichever comes first, and thereafter at intervals not to exceed 300 hours TIS:

(i) Clean and inspect the tailboom assembly for a loose rivet, a crack, or other damage in accordance with Part II, paragraphs 2 and 3, of the ASB; and

(ii) Using a 10X or higher power magnifying glass, inspect the tailboom assembly for a loose rivet or a crack in accordance with Part II, paragraphs 4 through 6, of the ASB.

(4) If the total accumulated hours TIS on the tailboom assembly is unknown, assume the tailboom assembly has 8,600 or more hours TIS and clean and inspect in accordance with paragraph (d)(1) of this AD.

(5) If there is a crack in the tailboom assembly, before further flight, replace it with an airworthy tailboom assembly.

(e) Special Flight Permit

Special flight permits may be issued in accordance with 14 CFR 21.197 and 21.199 to operate the helicopter to a location where the requirements of this AD can be accomplished, provided no passenger is on board and any crack or damage is temporarily repaired using FAA-approved procedures.

(f) Alternative Methods of Compliance (AMOC)

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Sharon Miles, Aerospace Engineer, FAA, Regulations and Policy Group, 2601 Meacham Blvd., Fort

Worth, Texas 76137; telephone (817) 222-5110; fax (817) 222-5961; 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 Civil Aviation (TCCA) AD CF-2009-07, dated March 6, 2009.

(h) Subject

Joint Aircraft Service Component (JASC)
Code: 5302, rotorcraft tailboom.

Issued in Fort Worth, Texas, on January 9, 2013.

Kim Smith,

*Directorate Manager, Rotorcraft Directorate,
Aircraft Certification Service.*

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