



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2013-0490; Directorate Identifier 2008-SW-004-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Bell Helicopter Textron Canada Limited (Bell)**

**Helicopters**

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

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

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for certain Bell Model 407 helicopters. This proposed AD would require installing a placard beneath the NR/NP dual tachometer and revising the limitations section of the rotorcraft flight manual (RFM). This proposed AD is prompted by several incidents of third stage engine turbine wheel failures, which were caused by excessive vibrations at certain engine speeds during steady-state operations. The proposed actions are intended to alert pilots to avoid certain engine speeds during steady-state operations, prevent failure of the third stage engine turbine, engine power loss, 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 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:** Chinh Vuong, Aviation Safety Engineer, Safety Management Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email [chinh.vuong@faa.gov](mailto:chinh.vuong@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 TC AD No. CF-2004-09R1, dated July 4, 2005, to correct an unsafe condition for Model 407 helicopters. TC advises of several failures of third stage turbine wheels used in Rolls Royce 250-C30S and 250-C47B engines, and three of these failures have occurred to the 250-C47B engine used by Bell on the Model 407. According to TC, Rolls Royce has determined that detrimental vibrations can occur within a particular range of turbine

speeds, and may be a contributing factor to these failures. Bell has revised the operating limitations of the RFM and provided a corresponding decal on the instrument panel to inform pilots to avoid steady-state operations between 68.4% and 87.1% turbine speeds.

The TC AD requires amending the RFMs, advising pilots of the change, and installing a decal as described in Bell Alert Service Bulletin (ASB) No. 407-05-67, dated June 8, 2005 (ASB 407-05-67).

### **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, TC, 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 is likely to exist or develop on other helicopters of the same type design.

### **Related Service Information**

Bell has issued ASB 407-05-67, which contains procedures for installing a placard on the instrument panel below the main rotor RPM (Nr) / power turbine RPM (Np) dual tachometer and for inserting the RFM changes into the flight manual.

### **Proposed AD Requirements**

This proposed AD would require installing a placard on the instrument panel below the NR/NP dual tachometer and revising the Operating Limitations section of the Model 407 RFM to limit steady-state operations between speeds of 68.4% to 87.1%.

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

The TC AD requires compliance within 10 calendar days; the proposed AD requires compliance within 30 days.

### **Costs of Compliance**

We estimate that this proposed AD would affect 472 helicopters of U.S. Registry. Based on an average labor rate of \$85 per hour, we estimate that operators may incur the following costs in order to comply with this AD. Amending the RFM would require about 0.5 work-hours, for a cost per helicopter of about \$43 and a cost to U.S. operators of \$20,296. Installing the decal would require about 0.2 work-hours and required parts would cost \$20, for a cost per helicopter of \$37 and a cost to U.S. operators of \$17,464. Based on these estimates, the total cost of this proposed AD would be \$80 per helicopter and \$37,760 for the U.S. operator fleet.

### **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 (BELL):** Docket No. FAA-2013-0490; Directorate Identifier 2008-SW-004-AD.

#### **(a) Applicability.**

This AD applies to Bell Model 407 helicopters, serial numbers 53000 through 53644, certificated in any category.

#### **(b) Unsafe Condition.**

This AD defines the unsafe condition as a third stage turbine vibration, which could result in turbine failure, engine power loss, and subsequent loss of control of the helicopter.

#### **(c) Comments Due Date.**

We must receive comments by [INSERT DATE 60 DAYS AFTER PUBLICATION IN THE Federal Register].

#### **(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.**

Within 30 days:

(1) Revise the Operating Limitations section of the Model 407 Rotorcraft Flight Manual by inserting Section 1, Operating Limitations, pages 1-6 and 1-14, of Bell BHT-407-FM-1, revision 3, dated April 26, 2005.

(2) Remove placard part number (P/N) 230-075-213-105, if installed.

(3) Install placard P/N 230-075-213-111, or equivalent, directly below the NR/NP dual tachometer.

**(f) Alternative Methods of Compliance (AMOCs).**

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Chinh Vuong, Aviation Safety Engineer, Safety Management Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email [chinh.vuong@faa.gov](mailto:chinh.vuong@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.**

(1) Bell Alert Service Bulletin No. 407-05-67, dated June 8, 2005, which is not incorporated by reference, contains additional information about the subject of this AD. 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 a copy of the service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

(2) The subject of this AD is addressed in Transport Canada AD No. CF-2004-09R1, dated July 4, 2005.

**(h) Subject.**

Joint Aircraft Service Component (JASC) Code: 7250: Turbine Section.

Issued in Fort Worth, Texas, on May 29, 2013.

Kim Smith,

Directorate Manager, Rotorcraft Directorate,  
Aircraft Certification Service.

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