



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2018-0334; Product Identifier 2017-SW-133-AD; Amendment 39-21262; AD 2020-20-06]**

**RIN 2120-AA64**

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

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

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for Bell Helicopter Textron Canada Limited (BHTC) Model 429 helicopters. This AD requires repetitive inspections of certain cyclic and collective assembly bearings. This AD was prompted by reports that precipitation can lead to reduced effectiveness of the grease in the bearings. The actions of this AD are intended to address an unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, 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

<https://www.bellcustomer.com>. You may view the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0334; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the Transport Canada AD, any comments received, and other information. The street address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** David Hatfield, Aviation Safety Engineer, Safety Management Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy, Fort Worth, TX 76177; telephone 817-222-5110; email [david.hatfield@faa.gov](mailto:david.hatfield@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to BHTC Model 429 helicopters with a bellcrank assembly part number (P/N) 429-001-523-101, 429-001-523-103, 429-001-532-101 or 429-001-532-103 installed. The NPRM published in the *Federal Register* on March 20, 2020 (85 FR 16019). The NPRM proposed to require, at specified intervals, disconnecting the forward ends of the collective control tube, longitudinal stability and

control augmentation system (SCAS) actuator, and lateral SCAS actuator, and stowing the collective control tube and each SCAS actuator to prevent binding; and then inspecting for any roughness in the flight control system and any binding in any arm end bearing and on the longitudinal bellcrank assembly. If there is any roughness in the flight control system, the NPRM proposed to require replacing the six pivot bearings in the collective/lateral bellcrank assembly and the longitudinal bellcrank assembly. If there is any binding in any arm end bearing or on the longitudinal bellcrank assembly, the NPRM proposed to require replacing each arm end bearing before further flight.

Transport Canada, which is the aviation authority for Canada, has issued Canadian AD CF-2016-11R2, dated October 18, 2017, to correct an unsafe condition for BHTC Model 429 helicopters equipped with a bellcrank assembly P/N 429-001-523-101, 429-001-523-103, 429-001-532-101 or 429-001-532-103. Transport Canada advises that in-service reports show that bearings in the roof-mounted flight control bellcranks are adversely affected by precipitation. Pooling can occur at the forward portion of the roof, providing a source of contamination for bearings in the roof-mounted flight controls. Precipitation may reduce the effectiveness of the grease in the bearings, allowing corrosion to occur. This can result in intermittent restrictions, such as binding and roughness in the flight controls. Transport Canada also advises that an undetected corroded bearing could lead to restrictions in the collective, directional, or pitch control systems, resulting in difficulty controlling the helicopter.

Transport Canada consequently requires within 12 months after the helicopter was manufactured and thereafter at intervals not to exceed 6 months, inspecting the flight controls and replacing any discrepant bearings. If the helicopter's age exceeds 12 months,

Transport Canada requires the 12-month inspection within 30 days. Transport Canada also requires, within 30 days, performing a functional check and replacement, if applicable, of the bearings if the most recent functional check of the helicopter was performed with the alternate procedure of using a hydraulic test stand or if the inspection method is unknown.

### **Comments**

After the NPRM was published, the FAA received comments from two commenters. However, the comments addressed neither the proposed actions nor the determination of the cost to the public. Therefore, the FAA has made no changes based on those comments.

### **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 the FAA's bilateral agreement with Canada, Transport Canada, its technical representative, has notified the FAA of the unsafe condition described in the Transport Canada AD. The FAA is issuing this AD after evaluating all of the information provided by Transport Canada and determining the unsafe condition exists and is likely to exist or develop on other products of the same type design and that air safety and the public interest require adopting the AD requirements as proposed.

### **Interim Action**

The FAA considers this AD to be an interim action. If final action is later identified, the FAA might consider further rulemaking then.

## **Differences Between this AD and the Transport Canada AD**

Transport Canada provides requirements if the most recent functional procedure was performed using a hydraulic test stand as an alternate procedure. This AD provides no such alternate procedure.

### **Related Service Information**

The FAA reviewed Bell Helicopter Alert Service Bulletin 429-15-21, Revision B, dated May 11, 2017 (ASB), which specifies moving the cyclic stick fore, aft, and laterally, and the collective stick up and down from stop to stop to detect deteriorated pivot bearings. The ASB also specifies inspecting to determine whether the bearings in the collective, lateral, and longitudinal arm assemblies rotate freely. If discrepant arm bearings are found, the ASB specifies contacting BHTC Product Support Engineering to report the findings and replacing the discrepant parts with serviceable parts.

### **Costs of Compliance**

The FAA estimates that this AD affects 64 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates that operators may incur the following costs in order to comply with this AD.

Inspecting the cyclic and the collective for roughness takes about 3 work-hours for an estimated cost of \$255 per helicopter, and \$16,320 for the U.S. fleet, per inspection cycle.

Replacing six pivot bearings takes about 3 work-hours and parts cost about \$624 for an estimated cost of \$879 per helicopter.

Replacing three arm end bearings takes about 3 work-hours and parts cost about \$135 for an estimated cost of \$390 per helicopter.

## **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.

The FAA is 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) Will not affect intrastate aviation in Alaska, 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.

## **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):

**2020-20-06 Bell Helicopter Textron Canada:** Amendment 39-21262; Docket No. FAA-2018-0334; Product Identifier 2017-SW-133-AD.

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

This AD applies to Bell Helicopter Textron Canada Limited Model 429 helicopters with a bellcrank assembly part number (P/N) 429-001-523-101, 429-001-523-103, 429-001-532-101, or 429-001-532-103 installed, certificated in any category.

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

This AD defines the unsafe condition as precipitation in the forward portion of the roof structure that can lead to pooling at the bellcrank assembly and corrosion of the bearings. This condition could result in restrictions in the collective, directional or pitch control systems, and subsequent loss of helicopter control.

**(c) Effective Date**

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF 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 12 months after the helicopter was manufactured or 30 days after the effective date of this AD, whichever occurs later, and thereafter at intervals not to exceed 6 months:

(1) Disconnect the forward ends of the collective control tube, longitudinal stability and control augmentation system (SCAS) actuator, and lateral SCAS actuator. Stow the collective control tube and each SCAS actuator to prevent binding.

(2) Slowly move the cyclic stick fore/aft and laterally, and the collective stick up/down from stop to stop to determine if there is any roughness. If there is any roughness in the flight control system, before further flight, replace all six pivot bearings, P/N MS27646-41, in the collective lateral bellcrank assembly and the longitudinal bellcrank assembly.

(3) Inspect the collective arm assembly P/N 429-001-525-101, the lateral arm assembly P/N 429-001-527-101, and the longitudinal arm assembly P/N 429-001-530-101, by rotating each bearing and ensuring each bearing rotates freely. If there is any binding in any arm end bearing or on the longitudinal bellcrank assembly, before further flight, replace each arm end bearing.

**(f) Special Flight Permits**

Special flight permits are prohibited.

**(g) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Rotorcraft Standards Branch, FAA, may approve AMOCs for this AD. Send your proposal to: David Hatfield, Aviation Safety Engineer, Safety Management Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110; email 9-ASW-FTW-AMOC-Requests@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, the FAA suggests 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.

**(h) Additional Information**

(1) Bell Helicopter Alert Service Bulletin 429-15-21, Revision B, dated May 11, 2017, 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 <https://www.bellcustomer.com>. You may view the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

(2) The subject of this AD is addressed in Transport Canada Civil Aviation (Transport Canada) AD No. CF-2016-11R2, dated October 18, 2017. You may view the Transport Canada AD on the Internet at <https://www.regulations.gov> in Docket No. FAA-2018-0334.

**(i) Subject**

Joint Aircraft Service Component (JASC) Code: 2700, Flight Control System.

Issued on September 21, 2020.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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