

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0267; Project Identifier 2017-SW-110-AD; Amendment 39-21620; AD 2021-13-15]

RIN 2120-AA64

Airworthiness Directives; Bell Textron Canada Limited (Type Certificate Previously Held by 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 Textron Canada Limited (type certificate previously held by Bell Helicopter Textron Canada Limited) (Bell) Model 429 helicopters. This AD was prompted by the identification of certain parts needing life limits and certification maintenance requirement (CMR) tasks. This AD requires establishing life limits and CMR tasks for various parts. Depending on the results of the CMR tasks, this AD requires corrective action. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective July 29, 2021.

ADDRESSES: For service information identified in this final rule, contact Bell Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J 1R4, Canada; telephone 1-450-437-2862 or 1-800-363-8023; fax 1-450-433-0272; email productsupport@bellflight.com; or at <https://www.bellflight.com/support/contact-support>. 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 at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0267; 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 final rule, 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: Matt Fuller, AD Program Manager, General Aviation & Rotorcraft Unit, Airworthiness Products Section, Operational Safety Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email matthew.fuller@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to Bell Model 429 helicopters, serial numbers 57001 and subsequent. The NPRM published in the Federal Register on April 8, 2021 (86 FR 18218). In the NPRM, the FAA proposed to require establishing a life limit for certain part-numbered tail rotor outboard flapping bearings and a certain part-numbered hoist kit cable cutter cartridge. The NPRM also proposed to require establishing recurring CMR tasks for a certain part-numbered wheeled landing gear system, float/life raft kit, and hoist kit, and depending on the results of the CMR tasks, corrective action. The NPRM was prompted by Canadian AD CF-2017-16, dated May 17, 2017, issued by Transport Canada, which is the aviation authority of Canada, to correct an unsafe condition for Bell Model 429 helicopters, serial numbers 57001 and subsequent. Transport Canada advises that Bell has established life limits and CMR tasks for various parts and accordingly revised Chapter 4—Airworthiness Limitations Schedule of Bell Helicopter 429 Maintenance Manual BHT-429-MM-1 to Revision 26, dated September 9, 2016 (BHT-429-MM-1). Transport Canada states that failure to replace life-limited parts or perform CMR tasks as specified could result in an unsafe condition.

Accordingly, the Transport Canada AD requires updating the maintenance schedule for the parts affected with the airworthiness life limits and CMR tasks in Revision 26 of BHT-429-MM-1.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from one commenter. The commenter was Bell. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request To Change the Compliance Time of the Hoist Cable Anti-Foul Assembly Operational Check

Bell requested changing the compliance time of the hoist cable anti-foul assembly operational check from before the first flight of the day involving a hoist operation to after the last flight of the day. Bell requested this change to avoid the potential to suspend critical operations in order to accomplish the check and any required corrective maintenance because according to Bell, hoist equipment serves an essential service and may be required for critical missions with minimal notice. Bell further stated that this task was established based on the system safety assessment for the Bell Model 429 helicopter hoist installation and exposure based on a daily check after the last flight was considered in that assessment to conservatively meet acceptable reliability targets for its Major hazard classification.

The FAA disagrees with the request to change the compliance time to after the last flight of the day. The compliance time of before the first flight of the day is standard practice in rotorcraft AD actions for enforceability purposes. However, this wording does not imply that the operational check and corrective action must be done on the same calendar day as the first flight of the day involving a hoist operation. In light of this, the FAA has made no changes based on this request.

Conclusion

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 has notified the FAA about the unsafe condition described in its AD. The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these helicopters. Except, since issuance of the NPRM, Bell has updated its contact information to obtain service documentation by changing its website address and adding an email address. This final rule reflects those changes and this AD is otherwise adopted as proposed in the NPRM. None of the changes increase the economic burden on any operator.

Related Service Information

The FAA reviewed Chapter 4–Airworthiness Limitations Schedule of BHT-429-MM-1. This service information specifies airworthiness life limits, inspection intervals, and CMR requirements for parts installed on Model 429 helicopters. Revision 26 of this service information establishes life limits for a certain part-numbered tail rotor flapping outboard bearing and hoist kit cartridge cable cutter and CMR requirements for a certain part-numbered wheeled landing gear system, float/life raft kit, and hoist kit.

Additionally, the FAA reviewed Chapter 96-47–600-Pound External Hoist Electrical System–Operational Check, of Bell 429 Maintenance Manual Supplement For 600-Pound External Hoist Kit, BHT-429-MMS-4, Revision 1, dated March 14, 2014. This service information specifies inspection procedures and corrective action for various components of the hoist system.

Lastly, the FAA reviewed Testing and Fault Isolation, pages 101-117/118, Cleaning, pages 401-405/406, and Scheduled Maintenance, pages 609-611/612, of Goodrich Rescue Hoist System Component Maintenance Manual 25-00-38-1, dated July 15, 2009, for rescue hoist assembly part number 44316-12-102. This service information specifies maintenance procedures and lists replacement parts for this part-numbered Goodrich rescue hoist assembly.

Differences Between This AD and the Transport Canada AD

This AD requires corrective action for failed CMR tasks, whereas the Transport Canada AD does not. The Transport Canada AD requires accomplishing an operational check of the hoist cable anti-foul assembly daily after the last flight, whereas this AD requires this action before the first flight of the day involving a hoist operation instead.

Costs of Compliance

The FAA estimates that this AD affects 110 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Replacing a tail rotor outboard flapping bearing takes about 4 work-hours and parts cost about \$7,500 for an estimated cost of \$7,840 per helicopter and \$862,400 for the U.S. fleet, per replacement cycle. Replacing a hoist kit cable cutter cartridge takes about 3 work-hours and parts cost about \$5,200 for an estimated cost of \$5,455 per helicopter and \$600,050 for the U.S. fleet, per replacement cycle.

Performing a functional check of the wheeled landing gear system takes about 4 work-hours for an estimated cost of \$340 per helicopter and \$37,400 for the U.S. fleet, per cycle. Performing a functional check of the float/life raft kit takes about 2 work-hours for an estimated cost of \$170 per helicopter and \$18,700 for the U.S. fleet, per cycle.

Performing an operational check of the hoist kit cable anti-foul assembly takes about 2 work-hours for an estimated cost of \$170 per helicopter and \$18,700 for the U.S. fleet, per cycle. Cleaning, visually inspecting, and lubricating the rescue hoist cable takes about 2 work-hours for an estimated cost of \$170 per helicopter and \$18,700 for the U.S. fleet, per cycle. Performing an operational check of the hoist kit speed limit switches and the electrical system takes about 0.5 work-hour for an estimated cost of \$43 per helicopter and \$4,730 for the U.S. fleet, per cycle. Performing a functional check of the cable cutter cartridge electrical system takes about 3 work-hours for an estimated cost of \$255 per helicopter and \$28,050 for the U.S. fleet, per cycle.

The FAA has no way of determining the estimated costs to do allowable repairs based on the results of the CMR tasks. If required, replacing the float/life raft takes about 2 work-hours and parts cost about \$5,000 for an estimated cost of \$5,170 per float/life raft. Replacing the anti-foul assembly takes about 3 work-hours and parts cost about \$1,500 for an estimated cost of \$1,755 per anti-foul assembly. Replacing a rescue hoist cable takes about 3 work-hours and parts cost about \$3,150 for an estimated cost of \$3,405 per rescue hoist cable. Overhauling a rescue hoist assembly costs about \$83,000 and it takes about 8 work-hours to remove and reinstall the hoist for a labor cost of \$680, for a total estimated cost of \$83,680 per helicopter, per overhaul cycle. Alternatively, replacing a hoist takes about 8 work-hours and parts cost about \$200,000 for an estimated cost of \$200,680 per helicopter, per replacement cycle.

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.

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:



FAA
Aviation Safety

AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/
www.gpoaccess.gov/fr/advanced.html

2021-13-15 Bell Textron Canada Limited (Type Certificate Previously Held by Bell Helicopter Textron Canada Limited): Amendment 39-21620; Docket No. FAA-2021-0267; Project Identifier 2017-SW-110-AD.

(a) Effective Date

This airworthiness directive (AD) is effective July 29, 2021.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bell Textron Canada Limited (type certificate previously held by Bell Helicopter Textron Canada Limited) Model 429 helicopters, certificated in any category, serial numbers 57001 and subsequent.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 3200, Landing Gear Systems, and 2560, Emergency Equipment.

(e) Unsafe Condition

This AD was prompted by parts remaining in service beyond their fatigue life or beyond maintenance intervals required by the certification maintenance requirements (CMRs) of the Instructions for Continued Airworthiness. The FAA is issuing this AD to prevent failure of a part, which could result in loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Before further flight after the effective date of this AD, remove from service any part that has reached or exceeded its life limit as follows. Thereafter, remove from service each part on or before reaching its life limit as follows:

(i) Tail rotor outboard flapping bearing part number (P/N) 429-312-103-117 and 429-312-103-119: 15,000 total hours time-in-service (TIS).

(ii) Hoist kit cable cutter cartridge P/N 42315-281: 5 years since date of manufacture.

(2) Before further flight after the effective date of this AD, perform the following CMR tasks for any part that has reached or exceeded its CMR interval as follows. Thereafter, perform the following CMR tasks for each part on or before reaching its CMR interval as follows:

Note 1 to paragraph (g)(2): Chapter 4—Airworthiness Limitations Schedule of Bell Helicopter 429 Maintenance Manual BHT-429-MM-1 to Revision 26, dated September 9, 2016, contains additional information about the CMR tasks.

(i) Wheeled Landing Gear System P/N 429-705-001-101: 800 hours TIS or 1 year, whichever occurs first, perform a functional check of the Emergency Gear Release. If the functional check fails, before further flight, repair in accordance with FAA-approved procedures.

(ii) Float/Life Raft Kit P/N 429-706-069-101: 1,600 hours TIS, perform a functional check of the float/life raft kit electrical system to determine if there are any dormant failures including: Manual inflation switch, water immersion switch, auto-activation relay, manual activation relay, raft activation relay, test activation relay, and the fuse disc elements. If there is a failure, before next flight over water, replace the float/life raft.

(iii) Hoist Kit P/N 429-706-001-101:

(A) Before the first flight of the day involving a hoist operation, perform an operational check of the hoist cable anti-foul assembly. If the operational check fails, before next flight involving a hoist operation, repair or replace the anti-foul assembly.

(B) 3 hoist operating hours, clean, visually inspect the rescue hoist cable for damage, which may be indicated by a broken wire, kink, bird caging, flattened area, abrasion, or necking. If there is any damage, before further flight, replace the rescue hoist cable. If there is no damage, before further flight, lubricate the rescue hoist cable. For purposes of this AD, hoist operating hours are counted anytime the hoist motor is operating.

Note 2 to paragraph (g)(2)(iii)(B): Bell Helicopter service information refers to hoist operating hours as hoisting hours.

(C) 800 hours TIS or 1 year, whichever occurs first, perform an operational check of the speed limit switches and perform an operational check of the 600-pound external hoist electrical system to inspect operation of the HOIST HOT caution light. If an operational check fails, before next flight involving a hoist operation, repair in accordance with FAA-approved procedures or replace the hoist.

(D) 2,200 hours TIS or 111 hoist operating hours, whichever occurs first, perform a functional check of the cable cutter cartridge electrical system to inspect for correct functioning of the cable cutter switches (hoist pendant, pilot cyclic, and copilot cyclic) and associated wiring. If a functional check fails, before next flight involving a hoist operation, repair in accordance with FAA-approved procedures or replace the hoist.

(E) 111 hoist operating hours, overhaul or replace the hoist.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (i)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

(1) For more information about this AD, contact Matt Fuller, AD Program Manager, General Aviation & Rotorcraft Unit, Airworthiness Products Section, Operational Safety Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email matthew.fuller@faa.gov.

(2) Chapter 4–Airworthiness Limitations Schedule of Bell Helicopter 429 Maintenance Manual BHT-429-MM-1 to Revision 26, dated September 9, 2016, which is not incorporated by reference, contains additional information about the subject of this AD. For service information identified in this AD, contact Bell Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J 1R4, Canada; telephone 1-450-437-2862 or 1-800-363-8023; fax 1-450-433-0272; email productsupport@bellflight.com; or at <https://www.bellflight.com/support/contact-support>. You may view this referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(3) The subject of this AD is addressed in Transport Canada AD CF-2017-16, dated May 17, 2017. You may view the Transport Canada AD at <https://www.regulations.gov> in Docket No. FAA-2021-0267.

Issued on June 17, 2021.

Gaetano A. Sciortino,
Deputy Director for Strategic Initiatives, Compliance & Airworthiness Division, Aircraft Certification Service.

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