



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0729; Project Identifier MCAI-2021-00364-R]

RIN 2120-AA64

Airworthiness Directives; Bell Textron Canada Limited Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive (AD) 2021-06-06, which applies to certain Bell Textron Canada Limited Model 505 helicopters. AD 2021-06-06 requires repetitive fluorescent penetrant inspections (FPIs) of the pilot collective stick and grip assembly and revising the existing Rotorcraft Flight Manual (RFM) for your helicopter. Since the FAA issued AD 2021-06-06, the pilot collective stick and grip assembly has been redesigned. This proposed AD would retain certain requirements of AD 2021-06-06, require modifying your helicopter to include the improved pilot collective stick tube and would add a terminating action for the repetitive FPIs. This proposed AD would also prohibit installing any pilot collective stick and grip assembly unless certain requirements of this proposed AD were met. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: (202) 493-2251.

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

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

For service information identified in this NPRM, contact Bell Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4; 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-2021-0729; 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 NPRM, the Transport Canada AD, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Hal Jensen, Aerospace Engineer, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 950 L'Enfant Plaza N SW, Washington, DC 20024; telephone (202) 267-9167; email hal.jensen@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include

“Docket No. FAA-2021-0729; Project Identifier MCAI-2021-00364-R” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Hal Jensen, Aerospace Engineer, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 950 L'Enfant Plaza N SW, Washington, DC 20024; telephone (202) 267-9167; email hal.jensen@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA issued AD 2021-06-06, Amendment 39-21473 (86 FR 14366, March 16, 2021) (AD 2021-06-06), for Bell Textron Canada Limited Model 505 helicopters, serial number (S/N) 65011 and subsequent. AD 2021-06-06 requires, before further flight, revising the Limitations section of the existing RFM for your helicopter to prohibit single pilot operations from the right crew seat, require the pilot in command to occupy the left crew seat for dual pilot operations, and depending on configuration, prohibit the use of SPLIT-COM mode. AD 2021-06-06 also requires, before further flight and thereafter at intervals not to exceed 25 hours time-in-service (TIS), removing and cleaning the pilot collective stick and grip assembly and performing an FPI for a crack as specified in the manufacturers service information. AD 2021-06-06 also requires removing any cracked pilot collective stick and grip assembly from service before further flight, and within 10 days after the discovery of any crack, reporting certain information to Bell Product Support Engineering. AD 2021-06-06 also prohibits installing any pilot collective stick and grip assembly on any helicopter unless it has successfully passed the FPI requirements of AD 2021-06-06. Lastly, AD 2021-06-06 prohibits relief under any Master Minimum Equipment List or Minimum Equipment List for the Audio Panel when the aircraft is operated with a single pilot.

AD 2021-06-06 was prompted by Canadian Emergency AD CF-2021-05R2, dated March 4, 2021 (Transport Canada Emergency AD CF-2021-05R2), issued by Transport Canada, which is the aviation authority for Canada, to correct an unsafe condition for Bell Textron Canada Limited Model 505 helicopters, S/Ns 65011 and subsequent. Transport Canada advised that FPIs findings showed that cracking of the pilot collective stick and grip assembly could occur at very low flight hours. Transport Canada also specified that Bell Textron Canada Limited revised its service information to introduce a temporary revision to the RFM prohibiting single pilot operations from the right crew

seat. This condition, if not addressed, could result in failure of the pilot collective stick and grip assembly and subsequent loss of control of the helicopter.

Accordingly, Transport Canada Emergency AD CF-2021-05R2 prohibited single pilot operations from the right crew seat in accordance with the manufacturers service information. Transport Canada considered its AD an interim action and stated that further AD action may follow.

Actions Since AD 2021-06-06 Was Issued

Since the FAA issued AD 2021-06-06, Transport Canada issued AD CF-2021-05R3, dated March 19, 2021 (Transport Canada AD CF-2021-05R3), which supersedes Transport Canada Emergency AD CF-2021-05R2. Transport Canada advises that since Transport Canada Emergency AD CF-2021-05R2 was issued, the pilot collective stick and grip assembly has been redesigned to address the root cause of the cracking. Accordingly, Transport Canada AD CF-2021-05-R3 retains the requirements of Transport Canada Emergency AD CF-2021-05R2 and requires installing the newly designed pilot collective stick and grip assembly, which is a terminating action for the requirements of Transport Canada Emergency AD CF-2021-05R2. Transport Canada AD CF-2021-05R3 also revises the applicability to include only helicopters that have not incorporated the redesigned pilot collective stick and grip assembly during production.

Finally, the FAA received one comment on AD 2021-06-06 from one commenter. Advanced Helicopter Services requested additional information about AD 2021-06-06, specifically whether performing certain actions specified in Bell Alert Service Bulletin 505-21-20, Revision C, dated March 11, 2021 (ASB 505-21-20 Rev C) would be considered a terminating action for the inspections required by AD 2021-06-06.

The FAA has determined that it is necessary to supersede AD 2021-06-06. The proposed required actions, including required actions performed in accordance with

portions of ASB 505-21-20 Rev C, would include a terminating action for the repetitive FPI inspections.

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 its AD. The FAA is proposing this AD after evaluating all known relevant information and determining that the unsafe condition described previously is likely to exist or develop on other helicopters of the same type design.

Related Service Information Under 1 CFR Part 51

The FAA reviewed ASB 505-21-20 Rev C, which provides instructions for an initial and recurring FPIs for cracks in the pilot collective stick and grip assembly part number (P/N) M207-20M478-041/-043/-047 on Bell Textron Canada Limited Model 505 helicopters, serial numbers 65011 through 65347. ASB 505-21-20 Rev C also specifies inserting a temporary revision into the RFM that prohibits single pilot operations from the right crew seat until further notice, and specifies that if the right crew seat pilot collective stick and grip assembly was previously confirmed serviceable following an FPI then the 25 flight hour recurring FPI of the right crew seat pilot collective stick and grip assembly is no longer required provided that the helicopter is only operated single pilot in command (PIC) from the left crew seat.

The FAA also reviewed Bell 505 RFM TR for Pilot Collective (ASB 505-21-20), BHT-505-FM-1, Temporary Revision (TR-6) (BHT-505-FM-1, TR-6) and Bell 505 RFM TR for Pilot Collective (ASB 505-21-20), BHT-505-FM-2, Temporary Revision (TR-1), each dated March 3, 2021. These temporary revisions specify changes to Section 1 of the RFM Limitations Section that the minimum flight crew consists of one pilot that shall operate from the left crew seat and that dual operation is approved provide that the PIC

occupies the left crew seat. BHT-505-FM-1, TR-6 also prohibits use of SPLIT-COM mode.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Proposed AD Requirements in this NPRM

This proposed AD would retain certain requirements from AD 2021-06-06. This proposed AD would require, before further flight, revising Section 1, the Limitations section of the existing RFM for your helicopter to prohibit single pilot operations from the right crew seat, require the PIC to occupy the left crew seat for dual pilot operations, and depending on configuration, prohibit the use of SPLIT-COM mode. This proposed AD would also require, before further flight after the effective date of this AD, and thereafter at intervals not to exceed 25 hours TIS, removing the pilot collective stick and grip assembly and performing an FPI for a crack and depending on the inspection results, removing a certain part from service. This proposed AD would also require within 12 months after the effective date of this AD, removing a certain part-numbered pilot collective stick tube from service and installing an improved pilot collective stick tube in accordance with the manufacturers service information and thereafter, removing a certain part-numbered pilot collective stick tube from service before it accumulates 300 total hours TIS. Additionally, this proposed AD would consider certain proposed actions to be a terminating action for other proposed actions. This proposed AD would also prohibit installing any pilot collective stick and grip assembly unless certain proposed actions are accomplished.

This proposed AD would require revising the Limitations section of the existing RFM for your helicopter. An owner/operator (pilot) may incorporate the RFM revisions, and the owner/operator must enter compliance with the applicable paragraphs of the AD

into the aircraft records in accordance with 14 CFR 43.9(a)(1) through (4) and 14 CFR 91.417(a)(2)(v). This is an exception to the FAA's standard maintenance regulations.

Differences Between this Proposed AD and the Transport Canada AD

This proposed AD would prohibit relief under any Master Minimum Equipment List or Minimum Equipment List for the Audio Panel when the aircraft is operated with a single pilot, whereas Transport Canada AD CF-2021-05R3 does not. Transport Canada AD CF-2021-05R3 requires the repetitive FPIs if the aircraft is not flown solely from the left crew seat whereas this proposed AD requires FPIs regardless.

Transport Canada AD CF-2021-05R3 requires operators to "advise all flight crews" of changes to the RFM, and thereafter to "operate the helicopter accordingly." However, this AD would not specifically require those actions. 14 CFR 91.9 requires that no person may operate a civil aircraft without complying with the operating limitations specified in the RFM. Therefore, including a requirement in this proposed AD to operate the helicopter according to the revised RFM would be redundant and unnecessary. Further, compliance with such a requirement in an AD would be impracticable to demonstrate or track on an ongoing basis; therefore, a requirement to operate the helicopter in such a manner would be unenforceable.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 98 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 proposed AD.

Revising the existing RFM for your helicopter would take about 0.5 work-hour for an estimated cost of \$43 per helicopter.

Removing, cleaning, and performing an FPI of the pilot collective stick and grip assembly would take about 3 work-hours for an estimated cost of \$255 per helicopter and \$24,990 for the U.S. fleet per inspection cycle.

Installing an improved pilot collective stick tube would take about 5 work-hours and parts would cost about \$1,256 for an estimated cost of \$1,681 per helicopter.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected operators.

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 products identified in this rulemaking action.

Regulatory Findings

The FAA 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) Would not affect intrastate aviation in Alaska, and

(3) Would 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 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:

a. Removing Airworthiness Directive 2021-06-06, Amendment 39-21473 (86 FR 14366, March 16, 2021); and

b. Adding the following new airworthiness directive:

Bell Textron Canada Limited: Docket No. FAA-2021-0729; Project Identifier MCAI-2021-00364-R.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) action by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2021-06-06, Amendment 39-21473 (86 FR 14366, March 16, 2021) (AD 2021-06-06).

(c) Applicability

This AD applies to Bell Textron Canada Limited Model 505 helicopters, serial number (S/N) 65011 through 65347 inclusive, certificated in any category.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 6710, Main Rotor Control.

(e) Unsafe Condition

This AD was prompted by a report of a cracked pilot collective stick and grip assembly. The FAA is issuing this AD to detect a cracked pilot collective stick and grip assembly. The unsafe condition, if not addressed, could result in failure of the pilot collective stick and grip assembly and subsequent 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, revise the Limitations section of the existing Rotorcraft Flight Manual (RFM) for your helicopter by inserting Bell 505 RFM Temporary Revision (TR) for Pilot Collective (ASB 505-21-20), BHT-505-FM-1, Temporary Revision (TR-6) or Bell 505 RFM TR for Pilot Collective (ASB 505-21-20), BHT-505-FM-2, Temporary Revision (TR-1), each dated March 3, 2021, as applicable to your helicopter. Using a different document with information identical to the information for the “Flight Crew” and “Configuration,” as applicable to your helicopter, in the RFM TR specified in this paragraph for your helicopter is acceptable for compliance with the requirements of this paragraph. This action 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 § 43.9(a)(1) through (4) and § 91.417(a)(2)(v). The record must be maintained as required by § 91.417, § 121.380, or § 135.439.

(2) Before further flight after the effective date of this AD, and thereafter at intervals not to exceed 25 hours time-in-service (TIS):

(i) Remove the pilot collective stick and grip assembly from the jackshaft assembly and clean the areas specified in Figure 2 of Bell Alert Service Bulletin 505-21-20, Revision C, dated March 11, 2021 (ASB 505-21-20 Rev C) with a clean cloth C-516C or equivalent moistened with dry cleaning solvent C-304 or equivalent.

(ii) Perform a fluorescent penetrant inspection (FPI) for a crack by following the Accomplishment Instructions, Part I, paragraph 5. (but not paragraphs 5.a. and b.) of ASB 505-21-20 Rev C. Perform this FPI in the areas specified in Figure 2 of ASB 505-21-20 Rev C. If there is a crack, before further flight, remove the pilot collective stick and grip assembly from service.

(3) Within 12 months after the effective date of this AD, remove the pilot collective stick tube from service and install pilot collective stick tube part number (P/N) M207-20M301-043 by following the Accomplishment Instructions, Part II, paragraphs 3. through 4. of ASB 505-21-20 Rev C except where this service information specifies discarding parts, you are required to remove those parts from service instead. Thereafter, remove from service pilot collective stick tube P/N M207-20M301-043 before it accumulates 300 total hours TIS

(4) Completing the actions required in paragraph (g)(3) of this AD constitutes a terminating action for the requirements in paragraphs (g)(1) and (2) of this AD.

(5) As of the effective date of this AD, do not install any pilot collective stick and grip assembly on any helicopter unless the actions required by paragraphs (g)(2) and (g)(3) of this AD have been accomplished.

(6) As of the effective date of this AD, relief under any Master Minimum Equipment List or Minimum Equipment List for the Audio Panel is prohibited when the aircraft is operated with a single pilot.

(h) Credit for Previous Actions

If you performed an FPI of the pilot collective stick and grip assembly before the effective date of this AD using Bell Alert Service Bulletin 505-21-20, dated February 20, 2021, Bell Alert Service Bulletin 505-21-20, Revision A, dated February 26, 2021, or Bell Alert Service Bulletin 505-21-20, Revision B, dated March 3, 2021, you met the before further flight FPI requirement of paragraph (g)(2) of this AD.

(i) Special Flight Permits

A special flight permit to a maintenance facility may be granted provided that:

- (1) There are no passengers on-board,
- (2) The helicopter is flown from the copilot seat only, and
- (3) The GMA (intercom) is operative.

(j) 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 (k)(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.

(k) Related Information

(1) For more information about this AD, contact Hal Jensen, Aerospace Engineer, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 950 L'Enfant

Plaza N SW, Washington, DC 20024; telephone (202) 267-9167; email

hal.jensen@faa.gov.

(2) For service information identified in this AD, contact Bell Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4; 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-2021-05R3, dated March 19, 2021. You may view the Transport Canada AD on the Internet at <https://www.regulations.gov> in Docket No. FAA-2021-0729.

Issued on September 2, 2021.

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

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