[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0728; Project Identifier MCAI-2020-00656-R]

RIN 2120-AA64

Airworthiness Directives; Bell Textron Canada Limited

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Bell Textron Canada Limited Model 206, 206A, 206A-1, 206B, 206B-1, 206L, 206L-1, 206L-3, and 206L-4 helicopters. This proposed AD was prompted by reports of cracked or missing nuts on the tail rotor drive shaft (TRDS) disc pack (Thomas) couplings. This proposed AD would require removing certain nuts from service, installing newly designed nuts, and applying a specific torque and a torque stripe to each newly installed nut. This proposed AD would then require, after the installation of each newly designed nut, inspecting the torque and, depending on the inspection results, either applying a torque stripe or performing further inspections and removing certain parts from service. Finally, this proposed AD would prohibit installing any affected nut on any TRDS Thomas coupling.

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 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 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 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.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0728; 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: 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:

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-2021-0728; Project Identifier MCAI-2020-00656-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 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. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

Transport Canada, which is the aviation authority for Canada, has issued Canadian AD CF-2019-34, dated September 25, 2019 (Transport Canada AD CF-2019-34), to correct an unsafe condition for Bell Helicopter Textron Canada Limited (now Bell Textron Canada Limited) Model 206, 206A, 206A-1, 206B, 206B-1 206L, 206L-1, 206L-3, and 206L-4 helicopters, all serial numbers. Transport Canada AD CF-2019-34 advised of reports of cracked or missing nuts at the TRDS Thomas couplings, which could have been caused by improper torque or hydrogen embrittlement. This condition, if not addressed, could result in loss of the tail rotor and subsequent loss of control of the helicopter.

After Transport Canada issued Transport Canada AD CF-2019-34, it was determined that helicopters modified in accordance with Supplemental Type Certificate (STC) SH2750NM or Transport Canada STC SH99-202, were not able to comply with AD CF-2019-34. Accordingly, Transport Canada issued AD CF-2020-15, dated May 13, 2020 (Transport Canada AD CF-2020-15) which supersedes Transport Canada AD CF-2019-34, and contains a new requirement for helicopters with STC SH2750NM or Transport Canada STC SH99-202 installed or models that have been modified per Bell Service Instruction BHT-206-SI-2052, Revision 1, dated October 14, 2010 (BHT-206-SI-2052). Transport Canada advises for certain model helicopters, the newly designed nuts cannot be installed because STC SH2750NM and Transport Canada STC SH99-202 install a pulley at the Thomas coupling location causing insufficient clearance. Transport Canada further advises for certain model helicopters with STC SH2750NM or Transport Canada STC SH99-202 installed, different part-numbered nuts may be installed which

were not identified in the applicable service information and are now required to be replaced with a new part-numbered nut that is not vulnerable to the unsafe condition. Accordingly, Air Comm Corporation, the STC holder for STC SH2750NM, issued new service information to address these additional issues and provide newly developed instructions which apply to certain model helicopters with STC SH2750NM or Transport Canada STC SH99-202 installed.

Additionally, Transport Canada advises that BHT-206-SI-2052 which is optional, specifies procedures for Model 206L-1 and 206L-3 helicopters to upgrade the airframe and systems and also includes installation of the Model 206L-4 TRDS Thomas coupling. According to Transport Canada, models that have incorporated BHT-206-SI-2052, with STC SH2750NM or Transport Canada STC SH99-202 installed, will have the Model 206L-4 helicopter pulley configuration and are subject to the Air Comm Corporation service information.

Accordingly, Transport Canada AD CF-2020-15 requires the replacement of the affected nuts with the newly designed nuts at each TRDS Thomas coupling.

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 proposing this AD after evaluating all known relevant information and determining that an unsafe condition 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 Bell Alert Service Bulletin 206-19-136, dated August 27, 2019, and Bell Alert Service Bulletin 206L-19-181, Revision A, dated August 29, 2019. This service information specifies procedures for replacing the affected nuts with the

newly designed corrosion-resistant nuts.

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.

Other Related Service Information

The FAA reviewed Air Comm Corporation Service Bulletin SB 206EC-092619, Revision NC, dated September 26, 2019, which also specifies procedures for replacing the affected nuts with the newly designed corrosion-resistant nuts, but explains that affected helicopters equipped with Air Comm Corporation air conditioning systems installed under STC SH2750NM use the affected nut to attach a pulley onto the TRDS, which causes clearance issues for the nuts to be installed at the coupling. Therefore, this service bulletin specifies replacing the nut with a lower profile nut.

The FAA also reviewed BHT-206-SI-2052. This service information specifies procedures to upgrade Model 206L-1 and 206L-3 helicopters to allow operations at an increased internal gross weight.

Proposed AD Requirements in this NPRM

This proposed AD would require within 600 hours time-in-service (TIS) after the effective date of this AD, removing from service each affected nut, and installing a newly designed nut. This proposed AD would also require applying a specific torque and a torque stripe to each newly installed nut. This proposed AD would also require, within 25 hours TIS after installation of each newly designed nut, inspecting the torque of each nut, and depending on the results of the inspection, this proposed AD would require further inspections and removing certain parts from service. Finally, this proposed AD would prohibit installing any affected nut on any on any TRDS Thomas coupling.

Differences between this Proposed AD and the Transport Canada AD

The Transport Canada AD requires compliance within 600 hours air time or within the next 24-months, whichever occurs first, whereas this proposed AD would require compliance within 600 hours TIS and an additional inspection at 25 hours TIS after installation of certain nuts.

Costs of Compliance

The FAA estimates that this proposed AD would affect 1439 helicopters of U.S. Registry. The FAA estimates that operators may incur the following costs in order to comply with this proposed AD. Labor costs are estimated at $85 per work-hour.

Replacing each affected nut with the newly designed nut and applying torque and a torque stripe would take about 4 work-hours, and parts would cost about $75 for an estimated cost of $415 per nut replacement and $597,185 per nut replacement for the U.S. fleet.

Replacing each TRDS Thomas coupling would take about 4 work-hours, and parts would cost about $4,000 for an estimated cost of $4,340 per TRDS Thomas coupling replacement.

If required, inspecting the torque of each newly installed nut, and inspecting each TRDS Thomas coupling, each bolt, nut and washer for elongated holes and fretting on the fasteners would take about 0.5 work-hours for an estimated cost of $43 per inspection.

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 adding the following new airworthiness directive:

Bell Textron Canada Limited: Docket No. FAA-2021-0728; Project Identifier MCAI-2020-00656-R.

(a) Comments Due Date

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

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bell Textron Canada Limited Model 206, 206A, 206A-1, 206B, 206B-1, 206L, 206L-1, 206L-3, and 206L-4 helicopters, certificated in any category, with nut part number (P/N) MS21042L4 or P/N MS21042L5 installed on the tail rotor drive shaft (TRDS) disc pack (Thomas) couplings.

Note 1 to paragraph (c): Helicopters with an OH-58A designation are Model 206A-1 helicopters.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 6510, Tail Rotor Drive Shaft.

(e) Unsafe Condition

This AD was prompted by reports of cracked or missing nuts installed on the TRDS Thomas couplings. The FAA is issuing this AD to prevent failure or loss of a nut on the TRDS Thomas couplings. The unsafe condition, if not addressed, could result in loss of the tail rotor 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) Within 600 hours time-in-service (TIS) after the effective date of this AD:

(i) For helicopters that have not been modified by installing Supplemental Type Certificate (STC) SH2750NM:

(A) Remove each nut P/N MS21042L4 installed on each TRDS Thomas coupling from service, and replace with nut P/N NAS9926-4L. The location of nut P/N NAS9926-4L is depicted in Detail A Figure 1 of Bell Alert Service Bulletin (ASB) 206-19-136, dated August 27, 2019 (ASB 206-19-136) or Bell ASB 206L-19-181, Revision A, dated August 29, 2019 (ASB 206L-19-181), as applicable to your model helicopter.

(B) Apply a torque of 5.65 Nm (50 in lb) to each nut installed as required by paragraph (g)(1)(i)(A) of this AD, and apply a torque stripe using torque seal lacquer (C-049) or equivalent lacquer, as shown in Figure 2 of ASB 206-19-136 or ASB 206L-19-181, as applicable to your model helicopter.

Note 2 to paragraph (g)(1)(i)(B): Torque stripes are referred to as witness marks in ASB 206-19-136 and ASB 206L-19-181.

(ii) For Bell Textron Canada Limited Model 206, 206A, 206A-1, 206B, 206B-1, and 206L helicopters that have been modified by installing STC SH2750NM and Model 206L-1, and 206L-3 helicopters that have been modified by installing STC SH2750NM but have not been modified by accomplishing Bell Service Instruction BHT-206-SI-2052, Revision 1, dated October 14, 2010 (BHT-206-SI-2052):

(A) Remove each nut P/N MS21042L4 installed on each TRDS Thomas coupling from service, except for nuts P/N MS21042L4 installed on the forward short TRDS Thomas coupling, and replace with nut P/N NAS9926-4L. The location of nut P/N NAS9926-4L is depicted in Detail A Figure 1 of ASB 206-19-136 or ASB 206L-19-181 as applicable to your model helicopter.

(B) Remove each nut P/N MS21042L4 installed on the forward short TRDS Thomas coupling from service and replace with nut P/N 90-132L4.

(C) For each nut installed as required by paragraphs (g)(1)(ii)(A) and (B) of this AD, apply a torque of 5.65 Nm (50 in lb) to each nut and apply a torque stripe using

torque seal lacquer (C-049) or equivalent lacquer, as shown in Figure 2 of ASB 206-19-136 or ASB 206L-19-181, as applicable to your model helicopter.

(iii) For Bell Textron Canada Limited Model 206L-1, and 206L-3 helicopters that have been modified by installing STC SH2750NM and have been modified by accomplishing BHT-206-SI-2052:

(A) Remove each nut P/N MS21042L4 installed on each TRDS Thomas coupling from service, except for nuts P/N MS21042L4 installed on the forward short TRDS Thomas coupling, and replace with nut P/N NAS9926-4L. The location of nut P/N NAS9926-4L is depicted in Detail A Figure 1 of ASB 206L-19-181.

(B) Remove each nut P/N MS21042L4 installed on the forward short TRDS Thomas coupling from service and replace with nut P/N 90-132L4.

(C) For each nut installed as required by paragraphs (g)(1)(iii)(A) and (B) of this AD, apply a torque of 5.65 Nm (50 in lb) to each nut, and apply a torque stripe using torque seal lacquer (C-049) or equivalent lacquer, as shown in Figure 2 of ASB 206L-19-181.

(iv) For Bell Textron Canada Limited Model 206L-4 helicopters that have been modified by installing STC SH2750NM:

(A) Remove each nut P/N MS21042L4 installed on each TRDS Thomas coupling from service, except for nuts P/N MS21042L4 installed on the forward short TRDS Thomas coupling, and replace with nut P/N NAS9926-4L. The location of nut P/N NAS9926-4L is depicted in Detail A Figure 1 of ASB 206L-19-181.

(B) Remove from service each nut P/N MS21042L5 installed on the forward short TRDS Thomas coupling and replace with nut P/N 90-132L5.

(C) For each nut installed as required by paragraphs (g)(1)(iv)(A) and (B) of this AD, apply a torque of 5.65 Nm (50 in lb) to each nut, and apply a torque stripe using

torque seal lacquer (C-049) or equivalent lacquer, as shown in Figure 2 of ASB 206L-19-181.

(2) Within 25 hours TIS after installation of any nut P/N NAS9926-4L, P/N 90-132L4, or P/N 90-132L5, as required by paragraphs (g)(1)(i)(A), (ii)(A) and (B), (iii)(A) and (B), or (iv)(A) and (B) of this AD, apply a torque of 5.65 Nm (50 in lb) to each nut.

(i) If the nut does not move, apply a torque stripe using torque seal lacquer (C-049) or equivalent lacquer, as shown in Figure 2 of ASB 206-19-136 or ASB 206L-19-181, as applicable to your model helicopter.

(ii) If any nut moves, inspect each TRDS Thomas coupling and each bolt, nut, and washer for elongated holes and fretting on the fasteners. If any TRDS Thomas coupling has an elongated hole, remove the TRDS Thomas coupling from service. If any bolt, nut, or washer has any fretting, remove the affected part from service.

(3) As of the effective date of this AD, do not install nut P/N MS21042L4 or MS21042L5 on any TRDS Thomas coupling.

(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) 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-2020-15, dated May 13, 2020. You may view the Transport Canada AD on the Internet at https://www.regulations.gov in the AD Docket.

Issued on September 2, 2021.

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

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