



AIRWORTHINESS DIRECTIVE

This Airworthiness Directive (AD) is issued pursuant to Canadian Aviation Regulation (CAR) 521.427. No person shall conduct a take-off or permit a take-off to be conducted in an aircraft that is in their legal custody and control, unless the requirements of CAR 605.84 pertaining to ADs are met. Standard 625 - Aircraft Equipment and Maintenance Standards Appendix H provides information concerning alternative means of compliance (AMOC) with ADs.

Number:

CF-2021-15

Effective Date:

28 April 2021

ATA:

53

Type Certificate:

H-107

Subject:

Fuselage – Tail Rotor Gearbox Support Assembly to Tailboom Attachment Discrepant Rivets

Applicability:

Bell Textron Canada Limited (Bell) model 429 helicopters, serial numbers 57001 and subsequent.

Compliance:

As indicated below, unless already accomplished.

Background:

Transport Canada and Bell received multiple in-service reports of failed rivets at the joint between the tailboom skin and the tail rotor gearbox support assembly part number (P/N) 429-034-701-101 or P/N 429-035-705-101. In-service reports also revealed that a quality escape resulted in a gapping condition between the tailboom skin and the tail rotor gearbox support fitting at some locations around the joint, and that rivets of inadequate grip length have been installed at the affected joint.

Investigations are ongoing to determine the root cause of the failed rivets.

Failed rivets at the affected joint, if not detected and corrected, could lead to progressive deterioration of the joint structural integrity, potentially resulting in the detachment of the tail rotor gearbox support assembly and consequent loss of control of the helicopter.

Bell published Alert Service Bulletin (ASB) 429-19-47, Revision B, dated 27 January 2021 providing accomplishment instructions for the initial and repetitive general visual inspection (GVI) and detailed inspection (DET) of the affected rivets at the joint between the tailboom skin and the tail rotor gearbox support assembly, and replacement of the discrepant rivets, as required. The ASB also requires repair if an excessive gap is found during inspection.

To address this unsafe condition, this AD mandates the corrective action of the above-mentioned ASB.

This AD is considered an interim action and further AD action may follow.

Corrective Actions:

For the purpose of this AD, the following definitions apply:

The ASB: Bell ASB 429-19-47, Revision B, dated 27 January 2021

The ASB revision A: Bell ASB 429-19-47, Revision A, dated 2 November 2020

The ASB initial release: Bell ASB 429-19-47, Basic Issue, dated 28 August 2019

Part I – Applicable to Model 429 Helicopters, Serial Numbers 57002 through 57210, 57212 and Subsequent - Initial Inspection

1. Perform a GVI and DET of the rivets at the tail rotor gearbox support assembly to tailboom joint for signs of failed rivets or rivets of inadequate grip length in accordance with the Accomplishment

Instructions of the ASB and the following schedule:

- a. For helicopters that have accumulated less than 300 hours air time, as of the effective date of this AD: within 100 hours air time or 6 months upon reaching 300 hours air time, whichever occurs first;
 - b. For helicopters that have accumulated 300 hours air time or more, as of the effective date of this AD: within 100 hours air time or 6 months from the effective date of this AD, whichever occurs first;
 - c. For helicopters that have replaced the tail rotor gearbox support assembly P/N 429-034-701-101 or P/N 429-035-705-101 and have accumulated, as of the effective date of this AD, 300 hours air time or more since the replacement: within 100 hours air time or 6 months from the effective date of this AD, whichever occurs first;
 - d. For helicopters that have replaced the tail rotor gearbox support assembly P/N 429-034-701-101 or P/N 429-035-705-101 and have accumulated, as of the effective date of this AD, less than 300 hours air time since the replacement: within 100 hours air time or 6 months upon reaching 300 hours air time since the replacement, whichever occurs first.
2. If discrepant rivets are detected as specified in Part I Paragraph 5, 6 or 7 of the ASB, before further flight, replace or repair the affected parts in accordance with the Accomplishment Instructions of the ASB.

Part II – Applicable to Model 429 Helicopters, Serial Numbers 57001 and Subsequent – Repetitive Inspection

After the initial inspection, repeat the inspection required by Part I of this AD at intervals not to exceed 400 hours air time or 12 months, whichever occurs first.

Helicopters that have been inspected in accordance with the requirements of the ASB initial release or Part I of the ASB revision A, satisfy the initial inspection requirements of Part I of this AD. For those helicopters that have accumulated more than 400 hours air time or more than 12 months since the last inspection, the next repetitive inspection must be performed in accordance with Part II of this AD, no later than 100 hours air time or 6 months from the effective date of this AD, whichever occurs first.

Later revisions of the ASB approved by the Chief, Continuing Airworthiness, Transport Canada, are acceptable for compliance with the requirements of this AD.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 14 April 2021

Contact:

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