



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-2020-21R1

Effective Date:

2 September 2020

ATA:

25

Type Certificate:

H-107

Subject:

Equipment / Furnishings – Incorrectly Manufactured Emergency Flotation System (EFS) Supply Hoses

Revision:

Supersedes AD CF-2020-21, issued 2 June 2020.

Applicability:

Bell Textron Canada Limited (Bell) model 429 helicopters, all serial numbers.

Compliance:

As indicated below, unless already accomplished.

Background:

During maintenance on a Safran Aerosystems (SAO) Emergency Flotation System (EFS), the third compartment of the left forward float did not inflate. An investigation revealed that the supply hose for the gas flow from the pressurized cylinder to the float compartment was blocked because of a manufacturing defect. Bell was notified that similar supply hoses are installed on various EFS part numbers (P/Ns) on different helicopter type designs, including Bell model 429 helicopters.

This condition, if not detected and corrected, could result in a partial inflation of the floats during an emergency landing on water thus preventing a timely egress from the helicopter and consequent injury to helicopter occupants.

Bell issued Alert Service Bulletin (ASB) 429-20-52, Basic Issue, dated 30 March 2020 (referred to as “the ASB” in this AD) that refers to SAO Service Bulletin (SB) 025-69-21 (referred to as “the SB” in this AD) providing Accomplishment Instructions for identification of the affected parts, inspection of the supply hoses and replacement, as required.

To detect and correct improperly manufactured EFS supply hoses, this AD mandates a one-time special detailed inspection (SDI) of affected system to verify that there is no blockage through the EFS supply hoses and, replacement, as required, of the affected supply hoses. This AD also renders any affected EFS supply hoses not eligible as a replacement part on Bell model 429 helicopters.

This AD revision, CF-2020-21R1, corrects the SAO SB number referenced in the Background section.

Corrective Actions:

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

Affected EFS: Bell EFS kit P/N 429-706-069-101/-103/-105/-121/-123/-125/-139/-141/-143/-157 manufactured before July 2019, except those with EFS P/N, float P/N and serial number (S/N) identified in Table 1 and the Appendix of the SB.

Non-affected EFS: EFS other than an affected EFS.

Affected EFS supply hose: Float supply hose manufactured before January 2014 and not marked with a

visible, indelible green “dot” on the base of all the banjos (or outlet fittings), in accordance with the Accomplishment Instructions of the SB.

Non-affected EFS supply hose: Float supply hose other than an affected EFS supply hose.

Affected system: Either 1) an affected EFS or 2) a non-affected EFS installed with an affected EFS supply hose.

Part I – Special Detailed Inspection and Replacement

For Bell model 429 helicopters, serial numbers 57001 through 57389, within 600 hours air time or at the next 24-month inspection of the EFS, whichever occurs first, from the effective date of AD CF-2020-21, 16 June 2020, accomplish the following:

- A. For an affected system, perform a one-time SDI of all ends of the supply hoses for blockage in accordance with the Accomplishment Instructions of the SB.
- B. If the supply hose is found to be internally blocked, before further flight, replace it with a non-affected EFS supply hose in accordance with the Accomplishment Instructions of the SB.
- C. If the supply hose is found to be free of blockage, the supply hose is serviceable and must be marked, before further flight, in accordance with the Accomplishment Instructions of the SB.

Part II – Parts Installation Prohibition

For all serial numbers of Bell model 429 helicopters, as of the effective date of AD CF-2020-21, 16 June 2020, an affected EFS supply hose is not eligible for installation as a replacement part.

The use of later revisions of the ASB that have been approved by the Chief, Continuing Airworthiness, Transport Canada, is acceptable for compliance to the requirements of this AD.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 19 August 2020

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