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) to ADs.

Number:

CF-2011-42R1

Effective Date:

19 June 2019

ATA:

53

Type Certificate:

H-92

Subject:

Fuselage - Longeron Cracking

Revision:

Supersedes AD CF-2011-42, issued 9 November 2011

Applicability:

Bell Helicopter Textron Canada Limited (BHTCL) helicopters equipped with upper left longeron assembly part number 206-031-314-037, 206-031-314-177 or spare assembly part number 206-031-314-219B:

Model 407, serial numbers 53000 through 53900, 53911 through 54061 and 54300.

Compliance:

As indicated below, unless already accomplished.

Background:

It has been determined that the upper left longeron part number (P/N) 206-031-314-037, 206-031-314-177 and spare assembly P/N 206-031-314-219B on helicopters with 1200 or more hours air time is prone to cracking. This situation, if not corrected, can lead to a loss of structural integrity and subsequent loss of the helicopter.

The original version of this AD mandated corrective action introduced by Bell Helicopter Alert Service Bulletin 407-11-95 Revision A, dated 12 August 2011.

Revision 1 of this AD is issued to correct an error in Part II of the French version of the original AD as well as to make editorial changes for clarity. Part II of the original French version specified the inspection schedule for the upper left longeron assembly that was not modified with external strap doublers in both paragraphs A and B. Paragraph B of Part II specifies the inspection schedule for the upper left longeron assembly that is modified with external strap doublers.

Helicopters with the upper left longeron configuration that were not modified with external strap doublers and have been inspected repetitively every 150 hours air time in accordance with the French version of AD CF-2011-42, will require a verification inspection. All other Helicopters inspected in accordance with the previous English or French version of this AD are in compliance with the requirements of this AD.

Corrective Actions:

Part I. Initial Inspection

In accordance with the following phase-in schedule:

A. For helicopters with 1200 or more hours air time since new: within the next 50 hours air time from 21 November 2011, effective date of AD CF-2011-42, but no later than 30 November 2011, and

B. For helicopters with less than 1200 hours air time since new: prior to reaching 1250 hours air time, perform the following inspections:

A general visual inspection for cracks of the aft fuselage top skin in accordance with the Accomplishment Instructions, Part I of Alert Service Bulletin (ASB) 407-11-95 Revision A dated 12 August 2011 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada. If the skin is found cracked, remove the skin and replace it with a new skin before further flight.

A general visual inspection of the upper left longeron assembly for general condition and cracks in accordance with Part II of the above mentioned ASB or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada. If the longeron is found cracked, proceed to Part IV of this AD. If the longeron is found serviceable, proceed to Part II of this AD.

Part II. Repetitive Inspection

Inspect in accordance with Part II of the above mentioned ASB using the following schedule:

A. For the upper left longeron assembly not modified with external strap doublers in accordance with Part III of the above mentioned ASB, at intervals not to exceed 50 hours air time. If the longeron is found cracked, proceed to Part IV of this AD.

B. For the upper left longeron assembly modified with external strap doublers in accordance with Part III of the above mentioned ASB, at intervals not to exceed 150 hours air time. If the longeron is found cracked, proceed to Part IV of this AD.

Part III. Verification Inspection

A. For helicopters with the upper left longeron assembly not modified with external strap doublers in accordance with Part III of ASB 407-11-95 Revision A dated 12 August 2011 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, that are being inspected at intervals exceeding 50 hours air time: within the next 50 hours air time from the effective date of this AD, inspect the aft fuselage top skin and upper longeron assembly as per the general visual inspection instructions found in Part I of this AD.

Part IV. Repair

A. If the longeron is found cracked and the crack has not propagated through the complete longeron, before further flight, stop drill the longeron and repair in accordance with Part IV of the above mentioned ASB, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, or replace with the new longeron assembly P/N 206-031-314-237B and install three (3) external CRES strap doublers.

B. If the longeron is found cracked and the crack has propagated through the complete unit, perform a repair of the longeron in accordance with Part IV of above mentioned ASB or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada or replace with the new longeron assembly P/N 206-031-314-237B and install three (3) external CRES strap doublers.

C. After the completion of the repair, perform a general visual inspection of the repaired longeron at intervals not to exceed 50 hours air time for general condition and cracks in accordance with Part II of the above mentioned ASB or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Part V. Terminating Action

The terminating action to this AD consists of the installation of a new longeron assembly P/N 206-031-314-237B and installation of the three (3) external CRES strap doublers as defined in Part III of the above mentioned ASB or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 5 June 2019

Contact:

Grant Walker, Continuing Airworthiness, Ottawa, telephone 888-663-3639, facsimile 613-996-9178 or e-mail AD-CN@tc.gc.ca or any Transport Canada Centre.