



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-2018-21R1

Effective Date:

1 November 2018

ATA:

57

Type Certificate:

A-142

Subject:

Wings – Cracked Spoiler Actuator Bracket

Revision:

Supersedes AD CF-2018-21, issued 31 July 2018.

Applicability:

Bombardier Inc. model DHC-8-400, -401 and -402 aeroplanes, serial numbers 4001 through 4547.

Compliance:

As indicated below, unless already accomplished.

Background:

During a scheduled aileron inspection, a crack was found in the right-hand outboard spoiler bracket of an in-service aircraft. An investigation concluded that the crack was caused by low load, high cycle fatigue. A cracked bracket could cause inoperability or jam of a single spoiler panel and possible jam of the aileron circuit. This condition, if not corrected, could adversely affect the continued safe operation and landing of the aeroplane.

The original version of this AD required initial and repetitive inspections of the outboard spoiler brackets, and required replacement of any brackets found cracked. It also required replacement of the brackets with a new design, which terminates the inspection requirement.

Revision 1 of this AD is issued to correct an error in the date of Service Bulletin (SB) 84-27-72 Revision A. This AD also clarifies the part numbers of the outboard spoiler actuator brackets and their assemblies.

Corrective Actions:

Part I – Initial and Repetitive Inspections

- A. Perform initial and repetitive inspections of the outboard spoiler actuator brackets with part numbers 85714052-101 or 85714052-102 (belonging to assemblies 85714018-001 or 85714018-002, respectively) in accordance with Section 3.B Part A of Bombardier Inc. SB 84-27-72 Revision A, dated 9 November 2017, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.
- B. The inspection identified in Part I paragraph A of this AD is required according to the following schedule:
 - 1. For aeroplanes that have accumulated less than 12 000 hours air time as of 14 August 2018, the effective date of the original version of this AD, perform the initial inspection before accumulating 18 000 hours air time; and

2. For aeroplanes that have accumulated 12 000 hours air time or more as of 14 August 2018, the effective date of the original version of this AD, perform the initial inspection before accumulating 6000 hours air time from 14 August 2018, the effective date of the original version of this AD.
- C. Accomplishment of section 3.B Part A of SB 84-27-72 Initial Issue, dated 19 January 2017, prior to 14 August 2018, the effective date of the original version of this AD, also meets the intent of Part I paragraph B of this AD.
 - D. After the initial inspection, repeat the inspection required by Part I paragraph A of this AD at intervals not to exceed 8000 hours air time, until Part II of this AD is accomplished.
 - E. If either outboard spoiler actuator bracket is found cracked, replace both brackets before further flight in accordance with Part II of this AD. The repeat inspection required by Part I paragraph D of this AD is not required on spoiler brackets that have been replaced in accordance with Part II of this AD.

Part II – Part Replacement

- A. Replace the outboard spoiler actuator bracket assemblies, part numbers 85714018-001 or 85714018-002, with new bracket assemblies having part numbers 85714018-003 or 85714018-004, in accordance with section 3.B Part B of SB 84-27-72 Revision A, dated 9 November 2017, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.
- B. If either outboard spoiler bracket is found cracked from an inspection required by Part I of this AD, comply with Part II paragraph A of this AD before further flight. Otherwise, the part replacements identified in Part II paragraph A of this AD are required according to the following schedule:
 1. For aeroplanes that have accumulated less than 34 000 hours air time as of 14 August 2018, the effective date of the original version of this AD, replace the brackets before accumulating 40 000 hours air time; and
 2. For aeroplanes that have accumulated 34 000 hours air time or more as of 14 August 2018, the effective date of the original version of this AD, replace the brackets before accumulating 6000 hours air time from 14 August 2018, the effective date of the original version of this AD.
- C. Accomplishment of section 3.B Part B of SB 84-27-72 Initial Issue, dated 19 January 2017, prior to 14 August 2018, the effective date of the original version of this AD, also meets the intent of Part II of this AD.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 18 October 2018

Contact:

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