



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-2018-21

Effective Date:

14 August 2018

ATA:

57

Type Certificate:

A-142

Subject:

Wings – Cracked Spoiler Actuator Bracket

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.

This AD requires initial and repetitive inspections of the outboard spoiler brackets, and requires replacement of any brackets found cracked. It also requires replacement of the brackets with a new design, which terminates the inspection requirement.

Corrective Actions:

Part I – Initial and Repetitive Inspections

- A. Perform initial and repetitive inspections of the outboard spoiler actuator brackets with part numbers 85714018-001 or 85714018-002 in accordance with Section 3.B Part A of Bombardier Inc. Service Bulletin (SB) 84-27-72 Revision A, dated 6 June 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 the effective date 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 the effective date of this AD, perform the initial inspection before accumulating 6000 hours air time from the effective date of this AD.
- C. Accomplishment of section 3.B Part A of SB 84-27-72, Initial Issue, dated 19 January 2017, prior to the effective date 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.

- 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 brackets, part numbers 85714018-001 or 85714018-002, with new brackets having part numbers 85714018-003 or 85714018-004, in accordance with section 3.B Part B of SB 84-27-72 Revision A, dated 6 June 2017.
- 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 the effective date 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 the effective date of this AD, replace the brackets before accumulating 6000 hours air time from the effective date of this AD.
- C. Accomplishment of section 3.B Part B of SB 84-27-72, Initial Issue, dated 19 January 2017, prior to the effective date 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 31 July 2018

Contact:

Daniel Gosselin, Continuing Airworthiness, Ottawa, telephone 1-888-663-3639, facsimile 613-996-9178 or e-mail AD-CN@tc.gc.ca or any Transport Canada Centre.