



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-2022-02

Effective Date:

11 February 2022

ATA:

55

Type Certificate:

A-142

Subject:

Stabilizers – Horizontal Stabilizer Lower Centre Skin Panel – Corrosion Damage

Applicability:

De Havilland Aircraft of Canada Limited (formerly Bombardier Inc.) model DHC-8-401 and -402 aeroplanes, serial numbers 4001 and 4003 through 4549.

Compliance:

Within 8000 hours air time or 48 months, whichever occurs first, from the effective date of this AD, unless already accomplished.

Background:

There have been multiple reports of corrosion on the horizontal stabilizer lower centre skin panel, including a finding of corrosion where the skin thickness had been substantially reduced affecting design margins. The root cause was determined to be an inconsistent chemical processing of the lower centre skin panel, where the anodizing layer and primer were found to be missing on some areas of the skin panel surface. A substantial reduction of skin panel thickness due to the effects of corrosion will compromise the structural integrity of the horizontal stabilizer. This AD mandates the inspection of the horizontal stabilizer lower centre skin panel for corrosion and rectification of the affected skin panel surface.

Corrective Actions:

Part I – Inspection of the Horizontal Stabilizer Lower Centre Skin Panel

- A. Inspect the horizontal stabilizer lower centre skin panel in accordance with Section 3.B. Part A of the Accomplishment Instructions of De Havilland Aircraft of Canada Service Bulletin (SB) 84-55-05 Revision C, dated 19 August 2021, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.
- B. If corrosion is found, before further flight, proceed to Part II of this AD.

Inspection of the horizontal stabilizer lower centre skin panel in accordance with SB 84-55-05 Initial Issue, dated 12 January 2016 or SB 84-55-05 Revision A, dated 3 June 2016 or SB 84-55-05 Revision B, dated 26 February 2021, also meets the intent of Part I.A. of this AD.

Part II – Rework or Replacement of the Horizontal Stabilizer Lower Centre Skin Panel

If the horizontal stabilizer lower centre skin panel is found corroded, before further flight, rework the existing horizontal stabilizer lower centre skin panel or replace it with a new panel in accordance with the following:

- A. If the corrosion is within the allowable repair limits as indicated in Section 3.B. Part B of the Accomplishment Instructions of De Havilland Aircraft of Canada SB 84-55-05 Revision C, dated 19 August 2021, perform the corrosion rework in accordance with Section 3.B. Part B of the

Accomplishment Instructions of De Havilland Aircraft of Canada SB 84-55-05 Revision C, dated 19 August 2021, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Accomplishment of the rework before the effective date of this AD, in accordance with SB 84-55-05 Initial Issue, dated 12 January 2016 or SB 84-55-05 Revision A, dated 3 June 2016 or SB 84-55-05 Revision B, dated 26 February 2021, also meets the intent of part II.A. this AD.

- B. If the corrosion is beyond the allowable repair limits as indicated in Section 3.B. Part B of the Accomplishment Instructions of De Havilland Aircraft of Canada SB 84-55-05 Revision C, dated 19 August 2021, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, contact De Havilland Aircraft of Canada to obtain instructions for an approved repair and implement the repair accordingly. The repair must specifically refer to this AD.

Alternatively, replace the existing horizontal stabilizer lower centre skin panel in accordance with the Accomplishment Instructions of De Havilland Aircraft of Canada SB 84-55-11 Initial Issue, dated 16 February 2021, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

- C. Accomplishment of any of the following Repair Drawings (RDs) in Table 1 below prior to the effective date of this AD also meets the requirements of Part II of this AD.

Table 1: Repair Drawings

RD No.	Issue	Date
8/4-55-1061	3	7 October 2014
8/4-55-1064	2	27 October 2014
8/4-55-1107	3	11 March 2016
8/4-55-1110	2	11 March 2016
8/4-55-1124	3	13 April 2021
8/4-55-1138	1	3 June 2015
8/4-55-1144	2	17 May 2016
8/4-55-1166	2	29 June 2016
8/4-55-1178	2	29 June 2016
8/4-55-1200	2	29 June 2016
8/4-55-1219	2	29 June 2016
8/4-55-1363	1	28 October 2016
8/4-55-1450	1	2 March 2017
8/4-55-1484	1	11 April 2017
8/4-55-1705	2	20 September 2018
8/4-55-1837	1	4 October 2019

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 28 January 2022

Contact:

Mihaela Kramer, Continuing Airworthiness, Ottawa, telephone 888-663-3639, facsimile 613-996-9178 or e-mail TC.AirworthinessDirectives-Consignesdenavigabilite.TC@tc.gc.ca or any Transport Canada Centre.