



# AIRWORTHINESS DIRECTIVE

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*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.*

<b>Number:</b>	<b>Effective Date:</b>
CF-2020-01	28 January 2020
<b>ATA:</b>	<b>Type Certificate:</b>
28	A-142

**Subject:**  
Fuel System – Non-Conforming Installation of Electrical Bonding Jumpers

**Applicability:**  
De Havilland Aircraft of Canada Limited (formerly Bombardier Inc.) model DHC-8-400, DHC-8-401 and DHC-8-402 aeroplanes, serial numbers 4001, 4003 and subsequent.

**Compliance:**  
As indicated below, unless already accomplished.

**Background:**  
It was reported that electrical bonding jumpers had been installed on fuel scavenge lines even though their removal was required by AD CF-2010-31 on in-service aeroplanes and on the production configuration. A subsequent investigation determined that electrical bonding jumpers on the fuel scavenge and vent lines may have similarly been installed in production or in-service at other locations. If present, these electrical bonding jumpers could affect the integrity of the fuel scavenge and vent line electrical bonding paths, which may lead to lightning strike induced fuel tank ignition. This AD mandates an inspection at specific wing stations for brackets and electrical bonding jumpers on the fuel scavenge and vent lines, and their removal or modification, if discovered. This AD also prohibits the use of certain maintenance procedures to preclude the installation of these electrical bonding jumpers in the future. These actions will mitigate the risk of lightning strike induced fuel tank ignition.

**Corrective Actions:**  
For the purpose of Part I and Part II of this AD, the following definition applies: **Prohibited tasks:** The Bombardier (BA) Aircraft Maintenance Manual (AMM) and Maintenance Task Card Manual (MTCM) tasks identified in Part III paragraphs A and B of this AD, respectively, or any procedure or task that requires fuel tank access that uses non-manufacturer-approved procedures.

**Part I – Applicable to DHC-8-400, DHC-8-401 and DHC-8-402 Aeroplanes, Serial Numbers 4001 and 4003 through 4597 – Inspection and Removal of Fuel Scavenge and Vent Line Electrical Bonding Jumpers and Brackets from Specific Wing Stations:**

For serial numbers 4001 and 4003 through 4118:

- A. Within 6000 hours air time or 36 months, whichever occurs first, from the effective date of this AD, inspect wing stations +/- 79.7, +/- 136.3, +/- 173.2, and +/- 299.019 in the left and right wings for brackets and electrical bonding jumpers on the fuel scavenge and vent lines, and remove or modify the electrical bonding jumpers and brackets, if installed, in accordance with the initial issue of BA Service Bulletin (SB) 84-28-29, dated 17 October 2018, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

For serial numbers 4119 through 4597:

- B. Within 6000 hours air time or 36 months, whichever occurs first, from the effective date of this

AD, inspect wing stations +/- 79.7, +/- 136.3, and +/- 173.2 in the left and right wings for brackets and electrical bonding jumpers on the fuel scavenge and vent lines, and remove or modify the electrical bonding jumpers and brackets, if installed, in accordance with the initial issue of BA SB 84-28-30, dated 17 October 2018, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

**Part II – Applicable to DHC-8-400, DHC-8-401 and DHC-8-402 Aeroplanes, Serial Numbers 4001, 4003 and Subsequent – Maintenance Program Verification and Rework**

For serial numbers 4001 and 4003 through 4597:

- A. For aeroplanes that have complied with Part I paragraphs A or B of this AD prior to the effective date of this AD, within 60 days from the effective date of this AD, verify the aeroplane maintenance records to confirm if any of the **prohibited tasks** were accomplished during or after the incorporation of Part I paragraphs A or B of this AD.
- B. Within 6000 hours air time or 36 months, whichever occurs first, from the effective date of this AD, if any of the **prohibited tasks** were accomplished during or after the incorporation of Part I paragraphs A or B of this AD, or if it cannot be confirmed that they were not accomplished during or after the incorporation of Part I paragraphs A or B of this AD, repeat the inspection and rectification of the fuel scavenge and vent line electrical bonding jumpers and brackets in the left and right wings in accordance with Part I paragraphs A or B of this AD, as applicable.

For serial numbers 4598 and subsequent with an aeroplane date of manufacture, as identified on the identification plate of the aeroplane, dated prior to the effective date of this AD:

- C. Within 60 days from the effective date of this AD, verify the aeroplane maintenance records to confirm if any of the **prohibited tasks** were accomplished on or after the aeroplane date of manufacture.
- D. If any of the **prohibited tasks** were accomplished on or after the aeroplane date of manufacture, or if it cannot be confirmed that they were not accomplished on or after the aeroplane date of manufacture, rework is required to verify the fuel scavenge and vent line electrical bonding jumper and bracket installations in the left and right wings. Within 6000 hours air time or 36 months, whichever occurs first, from the effective date of this AD, contact De Havilland Aircraft of Canada Limited for approved instructions. Incorporation of these approved instructions within 6000 hours air time or 36 months, whichever occurs first, from the effective date of this AD, satisfies the requirements of this paragraph.

**Part III – Applicable to DHC-8-400, DHC-8-401 and DHC-8-402 Aeroplanes, Serial Numbers 4001, 4003 and Subsequent – Maintenance Tasks:**

As of the effective date of this AD:

- A. It is prohibited to use the following BA AMM tasks appearing in Revision 63 of the Dash 8 Series 400 AMM, PSM 1-84-2, dated 5 October 2018, or earlier revisions of these tasks, on De Havilland Aircraft of Canada Limited model DHC-8-400, DHC-8-401 and DHC-8-402 aeroplanes. Temporary Revisions (TRs) of these AMM tasks, dated 2 November 2018 or earlier, are also prohibited for use unless excepted below:
  - a. 28-12-01-000-801 Removal of the Inboard Vent Line with the exception of Temporary Revision (TR) 28-170 dated 2 November 2018;
  - b. 28-12-01-400-801 Installation of the Inboard Vent Line with the exception of TR 28-171 dated 2 November 2018;
  - c. 28-11-06-000-801 Removal of the Motive Flow Lines with the exception of TR 28-166 dated 2 November 2018;
  - d. 28-11-06-400-801 Installation of the Motive Flow Lines with the exception of TR 28-167 dated 2 November 2018;
  - e. 28-11-16-000-801 Removal of the Scavenge Flow Lines with the exception of TR 28-168 dated 2 November 2018;
  - f. 28-11-16-400-801 Installation of the Scavenge Flow Lines with the exception of TR 28-169 dated 2 November 2018;
  - g. 28-10-00-280-806 Detailed Inspection of the Teflon™ Sleeve on the Fuel Tank Vent Line, LH and RH (FSL #284000-406) with the exception of TR 28-163 dated 1 August 2018.
- B. It is prohibited to use the following BA MTCM task cards appearing in Revision 43 of the Dash 8

Series 400 MTCM, PSM 1-84-7TC, dated 5 May 2018, or earlier revisions or amendments of these task cards, on De Havilland Aircraft of Canada Limited model DHC-8-400, DHC-8-401, and DHC-8-402 aeroplanes. Amendments of these MTCM task cards, dated 1 August 2018 or earlier, are also prohibited for use unless excepted below:

- a. 000-28-520-704 Detailed Inspection of the Teflon™ Sleeve on the Fuel Tank Vent Line (LH) with the exception of 000-28-520-704 (Config A01), Revision 43, Amendment 0001, dated 1 August 2018;
- b. 000-28-620-704 Detailed Inspection of the Teflon™ Sleeve on the Fuel Tank Vent Line (RH) with the exception of 000-28-620-704 (Config A01), Revision 43, Amendment 0001, dated 1 August 2018.

**Authorization:**

For the Minister of Transport,

*ORIGINAL SIGNED BY*

Rémy Knoerr  
Chief, Continuing Airworthiness  
Issued on 14 January 2020

**Contact:**

Hilary Ross, Continuing Airworthiness, Ottawa, telephone 888-663-3639, facsimile 613-996-9178 or e-mail [AD-CN@tc.gc.ca](mailto:AD-CN@tc.gc.ca) or any Transport Canada Centre.