



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-2025-13

Effective Date:

19 March 2025

ATA:

34

Type Certificate:

A-177

Subject:

Navigation – Minimum Equipment List (MEL) Item Prohibitions when Operating in Canada due to 3.45 to 3.98 GHz frequency band (5G C-Band) Wireless Broadband Interference

Applicability:

Bombardier Inc. model BD-700-2A12 aeroplanes, all serial numbers.

Compliance:

Within 30 days from the effective date of this AD, unless already accomplished.

Background:

In July 2023, Innovation, Science and Economic Development Canada (ISED), Canada's spectrum regulator, published Standard Radio System Plans (SRSP)-520 Issue 3 and Radio Standard Specifications (RSS)-192 Issue 5. These publications define the spectrum environment for the 5G C-Band in Canada. The spectrum auctions for 5G C-Band in the 3.45 to 3.65 GHz (3.5 GHz) and the 3.65 to 3.9 GHz (3.8 GHz) band were completed in 2021 and 2023, respectively. Deployment in the 3.8 GHz band may have started as early as May 2024. Furthermore, ISED recently concluded a consultation on non-competitive local licensing (NCL) framework for operation in the frequency bands of 3.9 to 3.98 GHz.

The frequency bands allocated to these services are close to those used by aeroplanes' radio altimeters (4.2 to 4.4 GHz). Transport Canada (TC) has determined that radio altimeters cannot be relied upon to perform their intended function if they experience interference from wireless broadband operations in the 5G C-Band. Based on ISED's resolutions regarding the Canadian spectrum environment, TC has determined that aeroplanes equipped with radio altimeters deemed compliant with the Federal Aviation Administration (FAA) AD 2023-10-02, are less susceptible to 5G interference in the Canadian environment, considering the existing spectrum mitigations. To protect aviation safety, TC issued AD CF-2024-14, which defines radio altimeter tolerant aeroplanes and mandates limitations of operations with non-tolerant radio altimeter when operating in the entire Canadian airspace.

Bombardier has determined that 5G C-Band broadband interference can result in unavailable or misleading radio altimeter information which, in combination with a weight-on-wheels (WOW) signal failure and dispatch under applicable MEL items could adversely affect the safe operation of the aeroplane during takeoff and landing, due to the inadvertent deployment of the ground spoiler pair during landing, or due to a significantly takeoff rotation delay. TC is issuing this AD, CF-2025-13, to prohibit operation under certain MEL items where harmful interference due to 5G C-Band is possible. This AD, CF-2025-13, has similar requirements to CF-2023-45, which was issued to address risks in the U.S. 5G C-band environment.

Given the sunset of certain spectrum mitigations in January 2026 and January 2028, it is not certain that a standard can be established for radio altimeter tolerant aeroplanes to the full scope of 5G emissions permitted in Canada after January 2026. This AD, CF-2025-13, is considered an interim action and further AD action may follow.

Corrective Actions:**Part I – Definitions**

For the purpose of this AD, the following definitions apply:

Radio Altimeter Tolerant Aeroplane is one for which the radio altimeter, as installed, demonstrates the tolerances for emissions specified in Paragraph A and Paragraph B, Part I, of AD CF-2024-14, issued on 15 May 2024, using a method approved by the FAA or TC. Currently, aeroplanes that meet the requirements of the FAA definition of "radio altimeter tolerant airplane", as per Paragraph (g) Definitions of FAA AD 2023-10-02, are considered radio altimeter tolerant aeroplanes in Canada.

Non-Radio Altimeter Tolerant Aeroplane is one for which the radio altimeter, as installed, does not demonstrate the tolerances for emissions specified in Paragraph A and Paragraph B, Part I, of AD CF-2024-14, issued on 15 May 2024. Currently, aeroplanes that meet the requirements of the FAA definition of "non-radio altimeter tolerant airplane", as per Paragraph (g) Definitions of FAA AD 2023-10-02, are considered non-radio altimeter tolerant aeroplanes in Canada.

Applicable MEL Items refer to the MEL items corresponding with the following MMEL items:

- A. Section 1 Line Replaceable Unit (LRU) Component Relief:
 - a. 32-43-33 – MAIN WHEEL AXLE-INTERFACE-MODULE/WHEEL SPEED TRANSDUCER 1) WHEEL SPEED TRANSDUCER
 - b. 32-61-09 – MAIN LANDING GEAR WEIGHT ON WHEELS PROXIMITY SWITCHES
 - c. 34-44-00 – RADIO ALTIMETER SYSTEM
- B. Section 2 Crew Alerting System (CAS) Message Relief:
 - a. 27-0645 – 27 FLT CTRL – PFCC BCU INPUT REDUND LOSS
 - b. 27-0660 – 27 FLT CTRL – PFCC LGSCU INPUT REDUND LOSS
 - c. 27-0665 – 27 FLT CTRL – PFCC RAD ALT INPUT REDUND LOSS
 - d. 32-0048 – 32 GEAR – GEAR WOW / WOFFW REDUND LOSS
 - e. 32-1005 – ANTISKID DEGRADED (CAUTION)
 - f. 34-1200 – RAD ALT 1 FAIL (ADVISORY)

Part II – MEL Prohibitions

- A. For Non-Radio Altimeter Tolerant Aeroplanes: it is prohibited to dispatch or release into or out of airports in the Canadian airspace under the applicable MEL items defined in this AD, CF-2025-13.
- B. For Radio Altimeter Tolerant Aeroplanes: it is prohibited to dispatch or release into or out of airports in the Canadian airspace under the applicable MEL items defined in this AD, CF-2025-13, unless operating at a 5G Protected Runway as identified in ISED's SRSP-520, Annex D: Definition of Exclusion Zone, Map of Exclusion Zones and Protection Zones.
- C. AMOCs approved with AD CF-2023-45 for the U.S. airspace are approved as AMOCs with this AD, CF-2025-13, for the Canadian airspace.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Jenny Young
Chief, Continuing Airworthiness
Issued on 5 March 2025

Contact:

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