



# 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) with ADs.*

**Number:**

CF-2021-30

**Effective Date:**

21 September 2021

**ATA:**

35

**Type Certificate:**

A-177

**Subject:**

Oxygen – Passenger Oxygen Boxes Non-Conformity

**Applicability:**

Bombardier Inc. model BD-700-1A10 and BD-700-1A11 aeroplanes, all serial numbers.

**Compliance:**

As indicated below, unless already accomplished.

**Background:**

There have been multiple instances in production whereby passenger oxygen box dual manifolds have had their pistons ejected during functional tests. An investigation discovered a non-conformity of the dual manifold which occurred during the manufacturing process of certain passenger oxygen boxes.

Left uncorrected, an affected unit may eject the piston in-service when used for emergency descent, smoke or fire, resulting in a high rate of oxygen leakage. Consequently, this leakage may deplete the oxygen for all passengers when it is still needed.

This AD requires a one-time inspection of the passenger oxygen boxes on certain aeroplanes to find and remove affected units, and a prohibition against installing affected passenger oxygen boxes on all aeroplanes.

**Corrective Actions:**

**Part I – Inspection and Replacement of Affected Assemblies (Applicable to Aeroplane Serial Numbers 9771, 9779, 9784, 9788 through 9824, 9853 through 9857, 9859 through 9879, and 60001 through 60042)**

Within the compliance times indicated below, inspect all passenger oxygen box dual manifold assemblies to verify if any are affected, and replace affected assemblies in accordance with the applicable Bombardier service bulletin (SB) as indicated in Table 1 below, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

- A. For aeroplane serial numbers 9771, 9779, 9784, 9788 through 9824, 9853 through 9857 and 9859 through 9876, within 4 months from the effective date of this AD; and
- B. For aeroplane serial numbers 9877 through 9879 and 60001 through 60042, within 30 months from the effective date of this AD.

**Table 1 – Applicable SBs**

<b>Aeroplane Model</b>	<b>Applicable SB</b>
BD-700-1A10	700-35-6004 Revision 5, dated 27 August 2021
BD-700-1A10	700-35-6502 Basic Issue, dated 27 August 2021
BD-700-1A11	700-35-5004 Revision 2, dated 27 August 2021
BD-700-1A11	700-35-5502 Basic Issue, dated 27 August 2021

Compliance with earlier revisions of the applicable SB as indicated in Table 1 above, prior to the effective date of this AD, also satisfies the requirement to inspect all passenger oxygen box dual manifold assemblies and replace affected assemblies.

**Part II – Installation Prohibition (applicable to all aeroplane serial numbers)**

For all aeroplanes, as of the effective date of this AD, it is prohibited to install an affected part. Affected parts are passenger oxygen box assemblies having dual manifold assemblies with part number 100-009-39, with lot and serial numbers as shown in Table 2 below.

**Table 2 – Affected Parts**

<b>Lot Numbers Affected</b>	<b>Serial Numbers Affected</b>
3516-001	3516-001-01 through 3516-001-60
3538-002	3538-002-01 through 3538-002-60
3598-001	3598-001-01 through 3598-001-60
3568-001	3568-001-01 through 3568-001-60
3724-001	3724-001-01 through 3724-001-20
3724-002	3724-002-01 through 3724-002-12
3706-001	3706-001-01 through 3706-001-40

**Authorization:**

For the Minister of Transport,

*ORIGINAL SIGNED BY*

Rémy Knoerr  
Chief, Continuing Airworthiness  
Issued on 7 September 2021

**Contact:**

Daniel Gosselin, Continuing Airworthiness, Ottawa, telephone 888-663-3639, facsimile 613-996-9178 or e-mail [TC.AirworthinessDirectives-Consignesdenavigabilite.TC@tc.gc.ca](mailto:TC.AirworthinessDirectives-Consignesdenavigabilite.TC@tc.gc.ca) or any Transport Canada Centre.