



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-2022-34

Effective Date:

4 July 2022

ATA:

35

Type Certificate:

A-131

Subject:

Oxygen – Supply System Flexible Oxygen Hose Deterioration Over Time

Applicability:

Bombardier Inc. model CL-600-2B16 aeroplanes, serial numbers 5701 through 5990 and 6050 through 6162 with Interior Supplemental Type Certificate (STC) SA06-90.

Compliance:

As indicated below, unless already accomplished.

Background:

Oxygen leaks have been found during scheduled maintenance tests of the aeroplane oxygen system. Further investigation of the leaks found oxygen hoses that were cracked, brittle or broken. This condition was found to exist on multiple aeroplanes. The oxygen hose material has been found to deteriorate over time and the condition is limited to O2C20T1 and O2C20T14 series oxygen system hoses fabricated by the O2 Corporation, identifiable by a specific series of part numbers. This condition, if not corrected, may lead to a leak in the oxygen line, which may result in failure to provide oxygen to passengers and crew as well as resulting in an oxygen enriched atmosphere creating a fire risk.

Bombardier Inc. has issued service bulletins to remove and replace the affected hose series with new specified hose series.

Transport Canada AD CF-2021-17R1 and this AD have been issued to address this condition on certain aeroplanes. However, this condition may exist on other aeroplanes that have hoses made from age-sensitive elastomer materials.

The Federal Aviation Administration issued Special Airworthiness Information Bulletin (SAIB) NM-13-34, dated 23 May 2013, and Transport Canada issued Civil Aviation Safety Alert (CASA) CASA 2021-12, dated 24 August 2021, to communicate information regarding this condition.

Corrective Actions:

Part I – Parts Replacement

- A. For aeroplanes with 6 years or less from the STC SA06-90 aeroplane's completion issuance (specific aeroplane's Modification Data Summary (MDS) release date), remove and replace the O2C20T1 and O2C20T14 series oxygen system hoses within 31 months from the effective date of this AD or no later than 12 months after the aeroplane reaches 6 years from the STC SA06-90 aeroplane's completion issuance (specific aeroplane's MDS release date), whichever occurs first, in accordance with the applicable Bombardier Inc. service bulletin (SB) referenced in Table 1 below.
- B. For aeroplanes with more than 6 years from the STC SA06-90 aeroplane's completion issuance (specific aeroplane's MDS release date), remove and replace the O2C20T1 and O2C20T14 series oxygen system hoses within 7 months from the effective date of this AD in accordance with the applicable Bombardier Inc. SB referenced in Table 1 below.

Compliance with earlier revisions of the applicable SB referenced in Table 1 below also meets the requirements of Part I of this AD.

Table 1 – SB References

Aeroplane Model	Applicable Bombardier SB
CL-600-2B16 (604 Variant) Challenger 605	SB 605-35-006, Revision 1, dated 28 January 2022 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.
CL-600-2B16 (604 Variant) Challenger 650	SB 650-35-002, Revision 1, dated 28 January 2022 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Part II – Installation Prohibition of Affected Parts

From the effective date of this AD, O2C20T1 and O2C20T14 series of hoses are not eligible for installation as replacement parts on model CL-600-2B16 aeroplane serial numbers affected by this AD.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Zack Teclemariam
Acting Chief, Continuing Airworthiness
Issued on 20 June 2022

Contact:

Danilo Verrelli, 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.