



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-2021-32R1

Effective Date:

8 August 2022

ATA:

35

Type Certificate:

A-276

Subject:

Oxygen – Third Crew Member Oxygen Mask – Introduction of Chafing Protection for Flex Hose and Rerouting of Electrical Harness

Revision:

Supersedes AD CF-2021-32, issued 17 September 2021.

Applicability:

MHI RJ Aviation ULC. (formerly Bombardier Inc.) model CL-600-2B19 aeroplanes, all serial numbers.

Compliance:

Within 4000 hours air time or 24 months, whichever occurs first, from 1 October 2021, the effective date of AD CF-2021-32, unless already accomplished.

Background:

An operator reported an oxygen-fed ground fire event in March 2020. The root cause remains undetermined, but evidence suggests that electrical arcing from a faulty third crew member (observer) oxygen mask surround light wire, carrying 115 volts of alternating current (VAC), ignited a concentration of oxygen. The cause of the oxygen leak is unknown. An investigation conducted by MHI RJ Aviation ULC. (MHIRJ) on aircraft in the field concluded that the oxygen supply hose connecting to the rear of the observer oxygen mask box assembly could be subject to chafing damage.

AD CF-2021-32 was issued to prevent the possibility of damage to the observer's oxygen mask supply hoses and any potential for an oxygen-fed fire in the vicinity of the observer's oxygen mask stowage compartment.

Since AD CF-2021-32 was issued, an operator reported a fouling condition between the power feed wires for the stowage box light strip and an existing aluminum bracket in the mask stowage compartment of the entrance monument.

This AD revision, CF-2021-32R1, mandates the revised MHIRJ Service Bulletin (SB) 601R-35-022 to prevent the possibility of damage to the observer's oxygen mask supply hoses and any potential for an oxygen-fed fire in the vicinity of the observer's oxygen mask stowage compartment. The revised MHIRJ SB 601R-35-022 adds Part B. to include additional instructions for the inspection of the flexible lamp assembly, an inspection of the wire harness assembly and requires a bracket to be trimmed to prevent the newly discovered fouling condition.

Corrective Actions:

Part I – Applicable to Aeroplanes That Have Not Accomplished MHIRJ SB 601R-35-022, Initial Issue, Dated 1 June 2021, or Revision A, Dated 12 October 2021

Inspect and correct, if required, the observer's oxygen mask stowage box and stowage compartment, the observer's mask oxygen hose connections, hose routing and the associated electrical harness; reroute

the electrical harness and apply protective sealant in accordance with Part A. Section 2.B. of the Accomplishment Instructions of MHIRJ SB 601R-35-022, Revision B, dated 21 April 2022, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Part II – Applicable to Aeroplanes That Have Accomplished MHIRJ SB 601R-35-022, Initial Issue, Dated 1 June 2021, or Revision A, Dated 12 October 2021

Perform the bracket modification in accordance with Part B. Section 2.E. of the Accomplishment Instructions of MHIRJ SB 601R-35-022, Revision B, dated 21 April 2022, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Robert Ferguson
Acting Director, National Aircraft Certification
Issued on 25 July 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.