



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) to ADs.

Number:

CF-2019-25

Effective Date:

19 July 2019

ATA:

20

Type Certificate:

A-22

Subject:

Airframe – Corrosion

Replacement:

Supersedes:

AD CF-2017-33, issued 27 September 2017

AD CF-61-12, issued in 1961

Applicability:

Viking Air Ltd. (formerly Bombardier Inc.) model DHC-2 Mk. I, DHC-2 Mk. II and DHC-2 Mk. III aeroplanes, all serial numbers.

Compliance:

As indicated below, unless already accomplished.

Background:

Service experience indicates that aging aircraft are more likely to be affected by corrosion. Viking Air Limited (Viking), as Type Certificate holder for the DHC-2, has developed a supplementary inspection and corrosion control program which identifies specific areas that must be inspected to ensure the corrosion-related degradation does not result in an unsafe condition. The program is documented in Viking Product Support Manual (PSM) 1-2-5 DHC-2 Beaver Supplementary Inspection and Corrosion Control Manual (SICCM).

Corrosion levels are defined in PSM 1-2-5 as a means for assessing the effectiveness of the corrosion control program and recording the results of the inspections mandated by this AD.

The initial issue of PSM 1-2-5, Revision IR, was mandated by AD CF-2017-33. The initial issue of PSM 1-2-5 focused on the flight control systems. Viking has revised PSM 1-2-5 to Revision 1. This revision includes additional inspection tasks for components of airframe systems other than flight controls. This AD is issued to require accomplishment of those additional inspection tasks and supersedes AD CF-2017-33.

This AD continues to require accomplishment of the tasks that were included in the initial issue of PSM 1-2-5. Note: The tasks being carried over from Revision IR to Revision 1 are required to be performed in accordance with the current revision of PSM 1-2-5, reference CAR 571.02 paragraph (1) (a).

Transport Canada (TC) has concluded that Tasks C57-51-01 and C57-51-02 make the repetitive inspections required by AD CF-61-12 unnecessary. CF-61-12 is therefore cancelled.

Viking determined that changes to the compliance times for two of the tasks in PSM 1-2-5 were required. For task C57-51-01 the repeat interval was every 1 year in Revision IR and is changed to every 2 years in Revision 1. For task C57-51-02 the repeat interval was every 4 years in Revision IR and is changed to every 4 years or 500 hours air time, whichever occurs first, in Revision 1.

Corrective Actions:

- A. As of the effective date of this AD, continue to accomplish the inspection tasks that were included in SICCM PSM 1-2-5, Revision IR, dated 21 June 2017, in accordance with the instructions and at the frequency specified in the SICCM Revision 1.
- B. Within 8 months from the effective date of this AD, or upon reaching the threshold for each applicable task, whichever occurs later, accomplish the inspection tasks that have been added with Revision 1 of PSM 1-2-5, dated 10 January 2019 (hereafter referred to as "the Manual") or later revisions approved by TC. These new tasks are listed in Table 1. Thresholds for each task are specified in Part 3 of the Manual.

Table 1

Task number	Description
C32-46-01	Ski Link and Attachment Bolts, Link-to-Ski and Link-to-Actuator
C53-10-01	Forward Fuselage Tubular Frame 'Birdcage'
C53-10-02	Forward Fuselage Tubular Frame 'Birdcage', Thickness Check
C53-40-01	Webbed Plate and Tie Bars (STA -16.00)
C53-40-02	Fuselage Fittings, Landing Gear/Float Strut/Wing Strut Attachment (STA 8.00)
C55-10-01	Horizontal Stabilizer (Tailplane), Structure and Skin
C55-10-02	Front Horizontal stabilizer (Tailplane) Pick-Up Brackets
C55-20-03	Elevator and Tab, Structure and Skin
C55-30-01	Fin Attachment Fittings and Bolts (MK I)
C55-30-02	Fin Attachment Fittings and Bolts (MK III)
C55-30-03	Fin Attachment Fittings and Bolts (MK II)
C55-40-03	Rudder and Tab, Structure and Skin
C57-10-01	Wing Structure and Flap/Aileron Hinge Arm Support Brackets
C73-20-01	Engine and Propeller Control Actuating Rods, Connecting Rods and Lay Shafts (MK I, MK II)
C73-20-02	Engine and Propeller Control Actuating Rods and Lay Shafts (MK III)

- C. If corrosion or other damage is detected during an inspection, before further flight, perform further inspection, categorize corrosion level, repair/rework/replace and re-protect affected parts in accordance with Part 3 of the Manual.

Note: If corrosion is detected, the level of corrosion should be included in the aircraft maintenance record where completion of the inspection is being recorded.

- D. If corrosion or other damage will be repaired rather than having the part replaced, before further flight, repair in accordance with Viking PSM 1-2-2 or PSM 1-2-3 or Federal Aviation Administration Advisory Circular (AC) 43.13-1B or AC 43-4A, as applicable. In cases where the damage is outside the limits contained in these publications, before further flight, repair in accordance with a repair design that is acceptable to the local Civil Aviation Authority. The repair must specifically mention this AD.
- E. Subsequently, at the intervals specified in Part 3 of the Manual, repeat the inspections specified in Part 2 of the Manual.
- F. Inform Viking of Level 2 and Level 3 corrosion as specified in Paragraph 5 of Part 3 of the Manual.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 5 July 2019

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