



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-2015-21

Effective Date:

30 July 2015

ATA:

27

Type Certificate:

A-22

Subject:

Flight Controls – Elevator Control System - Corrosion of the Elevator Control Rod and Elevator Actuating Lever on the Control Column

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:

There have been a number of reports of corrosion and/or cracking at the elevator actuating lever on the control column, in the elevator control rod assemblies, and at the rod end plug.

Undetected corrosion and/or cracking of the elevator control rod assemblies or elevator actuating lever may lead to the failure of the components with consequent loss of aeroplane control.

Corrective Actions:

Part 1 – Initial Detailed Visual Inspection of Control Rod Assemblies P/N C2CF619A and CT2CF1021-1, the Elevator Actuating Lever on the Control Column and the Control Column Torque Tube

- A. Perform an initial detailed visual inspection for corrosion, cracking and/or other damages on the exterior of the elevator control rod assemblies, the elevator actuating lever on the control column and on the control column torque tube in accordance with (IAW) Viking Air Ltd. Service Bulletin (SB) V2/0005 Revision C, paragraph 1.D.1 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada using the following schedule:

Component	Age of Assembly	Previously Inspected IAW SB V2/0005 revision NC, A or B?	Action Required
Control Rod Assembly P/N C2CF619A	15 years or greater since new or of unknown age	Yes	Part 1 of this AD is satisfied. Continue IAW Part 2 and 3 of this AD.
		No	Within 120 days or 100 air time hours, whichever occurs first, from the effective date of this AD: a) Inspect IAW with Part 1 of this AD and continue IAW Part 2 and 3 of this AD or b) Optionally, replace the control rod assembly with P/N C2CF619A-11 rod assembly and continue IAW Part 2 of this AD.
	Less than 15 years since new	Yes	Part 1 of this AD is satisfied. Continue IAW Part 2 and 3 of this AD.
		No	Within 120 days or 100 air time hours, whichever occurs first, from the effective date of this AD, inspect IAW Part 1 of this AD. Continue IAW Part 2 and 3 of this AD
Control Rod Assembly P/N CT2CF1021-1	N/A	Yes	Part 1 of this AD is satisfied. Continue IAW Part 2 of this AD.
		No	Within 120 days or 100 air time hours, whichever occurs first, from the effective date of this AD, inspect IAW Part 1 of this AD and continue IAW Part 2 of this AD.
Elevator Actuating Lever on the Control Column Control Column Torque Tube	N/A	Yes	Part 1 of this AD is satisfied. Continue IAW Part 2 of this AD.
		No	Within 120 days or 100 air time hours, whichever occurs first, from the effective date of this AD, inspect IAW Part 1 of this AD and continue IAW Part 2 of this AD.

B. If corrosion, cracking or other damages are found on:

1. the P/N C2CF619A control rod assembly, replace the rod assembly with P/N C2CF619A-11 rod assembly prior to next flight or contact Viking Air Ltd. for an approved repair and incorporate the repair prior to next flight.
2. the P/N CT2CF1021-1 control rod assembly, replace the rod assembly with P/N CT2CF1021-1 rod assembly prior to next flight or contact Viking Air Ltd. for an approved repair and incorporate the repair prior to next flight.

3. the elevator actuating lever and/or control column torque tube, contact Viking Air Ltd. for an approved repair and incorporate the repair prior to next flight.

Part 2 – Repetitive Inspection (applicable to control rod assembly P/Ns C2CF619A, C2CF619A-9, C2CF619A-11 and CT2CF1021-1, the elevator actuating lever on the control column and control column torque tube)

Within 30 days from the effective date of this AD, incorporate the applicable repetitive inspection task into the Transport Canada approved maintenance schedule as follows:

- A. For DHC-2 Mk. I, Mk. II and Mk. III: DHC-2 Beaver Maintenance Manual, PSM 1-2-2, Appendix 2, Part 3, Item 20A. (Refer to Temporary Revision 2-38.)
- B. For DHC-2 Mk. III: DHC-2 Turbo Beaver Supplementary Maintenance Manual, PSM 1-2T-2, Part 4, Item 20 A. (Refer to Temporary Revision 2T-14.)

Part 3 – Service Life Limit of Control Rod Assemblies P/N C2CF619A

- A. P/N C2CF619A control rod assemblies are life-limited to 15 years and must be replaced with P/N C2CF619A-11 control rod assembly prior to exceeding the life limit except as authorized by Part 3, Paragraph B of this AD.
- B. Replace all P/N C2CF619A control rod assemblies 15 years or greater since new or of unknown age at the effective date of this AD with P/N C2CF619A-11 control rod assembly within one year from this effective date of the AD.
- C. From the effective date of this AD, no person shall install P/N C2CF619A or P/N C2CF619A-9 control rod assemblies as a replacement.
- D. Part 3 of this AD **does not** constitute terminating action for the Part 2 repetitive inspection requirements.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 16 July 2015

Contact:

Yosha Mendis, Continuing Airworthiness, Ottawa, telephone 613-952-4357, facsimile 613-996-9178 or e-mail AD-CN@tc.gc.ca or any Transport Canada Centre.