



# 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-2019-07

**Effective Date:**

18 March 2019

**ATA:**

57

**Type Certificate:**

A-86

**Subject:**

Wing – Cracking of the Wing Lower Skin at Wing Station (WS) 51 under the Drag Angle

**Applicability:**

Viking Air Ltd. (formerly Bombardier Inc.) aeroplanes:

Model CL-215-1A10, serial numbers 1001 through 1125.

Model CL-215-6B11 (CL-215T Variant), serial numbers 1001 through 1125.

**Compliance:**

As indicated below, unless already accomplished.

**Background:**

Multiple cracks were discovered on the wing lower skin under the drag angle at WS 51 on both the left hand (LH) and the right hand (RH) side. At least seven aeroplanes have been repaired for damage in this area. The cracks had initiated from the fastener holes located between stringers and under the spar lower caps. If undetected, the cracks may lead to widespread fatigue damage and wing structure failure. The type certificate holder (TCH) published Service Bulletin (SB) 215-A568 to detect and, if necessary, repair cracking on the wing lower skin under the drag angles.

SB 215-A568 is the fifth SB that has been published by the TCH to detect and repair fatigue damage of wing structures around WS 51. Transport Canada has issued four ADs to mandate compliance with each of the previous four SBs.

This AD requires compliance with Viking Air Ltd. (Viking) SB 215-A568 revision 4. SB 215-A568 revision 4 requires different corrective actions and compliance times for aeroplanes that have been inspected in accordance with previous revisions of SB 215-A568 than for aeroplanes that have not been inspected in accordance with previous revisions. For aeroplanes that have previously been inspected in accordance with the requirements of SB 215-A568 Revision 3 or an earlier revision, the initial inspection of SB revision 4 also requires replacement of fasteners that were installed during that previous inspection.

The compliance requirements in SB 215-A568 are based on flight hours, water drops and total operation cycles. Total operation cycles are defined in the SB as the sum of water drops, land landings and water landings. Most operators have not been keeping records of the number of water landings. This AD includes a requirement to begin keeping records of water landings.

Viking has developed a modification that is intended to strengthen the structure affected by this AD. This modification is defined in Viking Repair Engineering Order (REO) 215-57-V022. The accomplishment of this modification is not mandatory. If this modification is accomplished, then some of the inspection requirements required by this AD and SB 215-A568 Revision 4 will differ from the requirements that apply to unmodified aeroplanes. Details of those differences are contained in REO 215-57-V022 and SB 215-A568.

**Corrective Actions:**

- A. Within 10 months from the effective date of this AD, examine the aeroplane and/or the maintenance records to determine if the structure that is affected by this AD has been repaired or modified. If the structure has been repaired or modified, within 11 months from the effective date of this AD, contact Viking with details of the repairs and/or modifications and request inspection instructions for the repaired and/or modified structure. The Viking inspection instructions, if required, may apply to either the initial inspection, the repeat inspections, or both.

Note: If Viking determines that the inspection requirements must be adjusted for a specific aeroplane due to repaired/modified structures, then approval for an Alternative Means of Compliance must be requested from the governing regulatory authority of the state of registry for the aeroplane.

- B. Beginning no later than 30 days from the effective date of this AD, record all water landings, land landings and water drops and use this data to determine compliance times for the inspections required by this AD.

Note: If there are no records of water landings available, determine total operation cycles with reference only to land landings and water drops.

- C. Perform the initial and repeat inspections as required by Viking SB 215-A568 Revision 4 dated January 22, 2019 in accordance with that SB except that:
1. When compliance time refers to the issuing date of SB 215-A568 Revision 4, reference must be made to the effective date of this AD.
  2. The initial inspection of aeroplanes with more than 20 000 water drops or more than 24 000 total operation cycles must be completed within 12 months from the effective date of this AD.
- D. If damage is found during the inspection or fastener replacement, before further flight, repair the damage in accordance with the requirements of Viking SB 215-A568 Revision 4 dated January 22, 2019.
- E. Report existing repairs, modifications and the results of the initial and repeat inspections to Viking in accordance with the requirements of SB 215-A568 Revision 4 dated January 22, 2019.

Note: The requirement to report existing repairs and modifications in Corrective Action E is not a duplication of the requirement to provide details of repaired or modified structure to Viking in Corrective Action A. The reporting requirement of Corrective Action A applies only if repairs or modifications exist at the WS 51 area. That report will ensure that appropriate inspection instructions are used for the repaired/modified structure. The reporting requirements of Corrective Action E include the repairs/modifications between WS 355L and WS 355R for the purpose of assessing the overall wing box structural condition. Corrective Action E applies to all aeroplanes and will provide Viking with information on failures and defects that may require further corrective actions.

The use of later revisions of SB 215-A568 that have been approved by the Chief, Continuing Airworthiness, Transport Canada, or REO 215-57-V022 that have been approved by Transport Canada is acceptable for compliance to the requirements of this AD.

**Authorization:**

For the Minister of Transport,

*ORIGINAL SIGNED BY*

Rémy Knoerr  
Chief, Continuing Airworthiness  
Issued on 4 March 2019

**Contact:**

Ross McGowan, Continuing Airworthiness, Ottawa, telephone 888-663-3639, facsimile 613-996-9178 or e-mail [AD-CN@tc.gc.ca](mailto:AD-CN@tc.gc.ca) or any Transport Canada Centre.