



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0710; Product Identifier 2019-NM-060-AD; Amendment 39-21009; AD 2019-25-11]

RIN 2120-AA64

Airworthiness Directives; Viking Air Limited (Type Certificate previously held by Bombardier, Inc.; Canadair Limited) Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Viking Air Limited Model CL-215-1A10 and CL-215-6B11 (CL-215T Variant) airplanes. This AD was prompted by reports of cracks on the wing lower skin under the drag angle at a certain wing station (WS). This AD requires a one-time inspection of the wing lower skin under the drag angle at a certain WS to determine if a certain repair or modification has been accomplished; repetitive visual inspections of certain fuselage structures; repetitive eddy current inspections of the front spar along a certain WS reference line, the drag angle, and all fastener holes; repetitive structural gap checks of a certain surface; and corrective actions if necessary. This AD also requires replacing certain rivets with certain fasteners, and corrective actions if necessary. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Viking Air Limited, 1959 de Havilland Way, Sidney, British Columbia V8L 5V5, Canada; telephone +1-250-656-7227; fax +1-250-656-0673; email acs-technical.publications@vikingair.com; Internet <https://www.vikingair.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0710.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0710; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Aziz Ahmed, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart Avenue,

Suite 410, Westbury, NY 11590; telephone 516-228-7329; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian AD CF-2019-07, dated March 4, 2019 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Viking Air Limited Model CL-215-1A10 and CL-215-6B11 (CL-215T Variant) airplanes. You may examine the MCAI in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0710.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Viking Air Limited Model CL-215-1A10 and CL-215-6B11 (CL-215T Variant) airplanes. The NPRM published in the Federal Register on October 4, 2019 (84 FR 53076). The NPRM was prompted by reports of cracks on the wing lower skin under the drag angle at a certain WS. The NPRM proposed to require a one-time inspection of the wing lower skin under the drag angle at a certain WS to determine if a certain repair or modification has been accomplished; repetitive visual inspections of certain fuselage structures; repetitive eddy current inspections of the front spar along a certain WS reference line, the drag angle, and all fastener holes; repetitive structural gap checks of a certain surface; and corrective actions if necessary. The NPRM also proposed to require replacing certain rivets with certain fasteners, and corrective actions if necessary. The FAA is issuing this AD to address this condition,

which if not detected and corrected, may lead to widespread fatigue damage and wing structure failure. See the MCAI for additional background information.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The FAA received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

The FAA reviewed the relevant data and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes.

The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information under 1 CFR part 51

Viking has issued Alert Service Bulletin 215-A568, Revision 4, dated January 22, 2019. This service information describes procedures for a one-time inspection of the wing lower skin under the drag angle at a certain WS to determine if a certain repair or modification has been accomplished; repetitive visual inspections of fastener installation for abnormal conditions (missed, sheared, distorted, deformed or loose fastener heads/collar/nuts, and corrosion) and corrective actions as necessary; repetitive visual inspections of the open fastener holes for cracks, burrs, elongation, double or mis-drilled holes, or corrosion, and corrective actions as necessary; repetitive visual inspections of

drag angles, wing lower skin, lower stringers, spar lower caps/webs, and fuselage structures (internally and externally) where fasteners are removed for surface cracks or evidence of distortion and surface defects (scratches, gouges, nicks, scores, dents, surface pitting/corrosion, or other surface damage), and corrective actions as necessary; repetitive bolt hole eddy current (BHEC) inspections of all identified fastener holes (except reference holes) for cracks, and corrective actions as necessary; repetitive eddy current surface scans for surface defects and cracks of the drag angle (along the bending radius) and all fastener holes in which crack(s) indication is observed, and corrective actions as necessary; repetitive structural gap checks of the mating surface between the wing lower skin and the drag angles and corrective actions as necessary; and procedures for replacing certain rivets with certain fasteners, and corrective actions as necessary. Corrective actions include, among other things, repair, replacement, and oversizing any affected holes.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 4 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions*

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Up to 48 work-hours X \$85 per hour = Up to \$4,080	\$0	Up to \$4,080	Up to \$16,320

*Table does not include estimated costs for reporting.

The FAA estimates that it would take about 1 work-hour per product to comply with the reporting requirement in this AD. The average labor rate is \$85 per hour. Based on these figures, the FAA estimates the cost of reporting the inspection results on U.S. operators to be \$340, or \$85 per product.

The FAA has received no definitive data that would enable the agency to provide cost estimates for the on-condition actions specified in this AD.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number. The control number for the collection of information required by this AD is 2120-0056. The paperwork cost associated with this AD has been detailed in the Costs of Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting associated with this AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator.

Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2019-25-11 Viking Air Limited (Type Certificate previously held by Bombardier, Inc.; Canadair Limited): Amendment 39-21009; Docket No. FAA-2019-0710; Product Identifier 2019-NM-060-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to the Viking Air Limited (Type Certificate previously held by

Bombardier, Inc.; Canadair Limited) airplanes, certificated in any category, identified in paragraphs (c)(1) and (2) of this AD.

(1) Model CL-215-1A10 airplanes, serial numbers 1001 through 1125 inclusive.

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

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Reason

This AD was prompted by reports of cracks on the wing lower skin under the drag angle at a certain wing station (WS). The FAA is issuing this AD to address this condition, which if not detected and corrected, may lead to widespread fatigue damage and wing structure failure.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Reporting of Existing Repairs

(1) Within 10 months after the effective date of this AD: Perform a one-time inspection to identify existing standard structural repair manual (SRM) repairs and non-standard repairs on the wing box between WS 355L and WS 355R in accordance with the Accomplishment Instructions of Viking Alert Service Bulletin 215-A568, Revision 4, dated January 22, 2019. A review of airplane maintenance records is acceptable in lieu of this inspection if accomplishment of the repair or modification can be conclusively determined from that review. For the purposes of this AD, replacement of damaged wing box primary structural member is considered a “repair.”

(2) If, during the inspection required by paragraph (g)(1) of this AD, a repair or modification of the wing box between WS 355L and WS 355R is found: Within 11 months after the effective date of this AD: Submit an Inspection Reply Form with details of the repair or modification to Viking Air Limited via email at technical.support@vikingair.com or via fax at 1-403-295-8888, and request inspection instructions for the repaired or modified structure in accordance with the procedures specified in paragraph (o)(2) of this AD.

(h) Record Keeping

Beginning no later than 30 days after 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 paragraph (i) of this AD. For the purposes of this AD, total operation cycles equals water drops plus water landings (non-water scooping/dropping operations) plus land landings. If there are no records of water landings, determine total operation cycles using only land landings and water drops.

(i) Repetitive Actions

Except as specified in paragraph (m) of this AD, at the earliest of the times specified in figure 1 to paragraphs (i), (l), and (m) of this AD: Do the actions specified in paragraphs (i)(1) through (6) of this AD. Repeat the actions thereafter at intervals not to exceed the earliest of the times specified in figure 2 to paragraphs (i) and (m) of this AD.

(1) Perform a visual inspection of the fastener installation for abnormal conditions (missed, sheared, distorted, deformed or loose fastener heads/collar/nuts, and corrosion) in accordance with Section II.A.1. of the Accomplishment Instructions of Viking Alert Service Bulletin 215-A568, Revision 4, dated January 22, 2019.

(2) Perform a visual inspection of the open fastener holes for cracks, burrs, elongation, double or mis-drilled holes, and corrosion in accordance with Section II.A.1. of the Accomplishment Instructions of Viking Alert Service Bulletin 215-A568, Revision 4, dated January 22, 2019.

(3) Perform a visual inspection of the drag angles, wing lower skin, lower stringers, spar lower caps/webs, and fuselage structures (internally and externally) where fasteners are removed for surface cracks or evidence of distortion and surface defects in accordance with Section II.A.2. of the Accomplishment Instructions of Viking Alert Service Bulletin 215-A568, Revision 4, dated January 22, 2019.

(4) Perform a bolt hole eddy current (BHEC) inspection of all identified fastener holes (except reference holes) specified in Figure 1 of Viking Alert Service Bulletin 215-A568, Revision 4, dated January 22, 2019, for any cracks in accordance with Section II.A.3. of the Accomplishment Instructions of Viking Alert Service Bulletin 215-A568, Revision 4, dated January 22, 2019.

(5) Perform an eddy current surface scan for surface defects and cracks of the drag angle (along the bending radius) and all fastener holes in which crack(s) indication have been observed in accordance with Section II.A.4. of the Accomplishment Instructions of Viking Alert Service Bulletin 215-A568, Revision 4, dated January 22, 2019.

(6) Perform a structural gap check between the drag angles and the wing lower skin in accordance with Section II.A.5. of the Accomplishment Instructions of Viking Alert Service Bulletin 215-A568, Revision 4, dated January 22, 2019.

Figure 1 to paragraphs (i), (l), and (m) – Initial compliance times

Description	Total Flight Hours as of the Effective Date of this AD	Total Water Drops as of the Effective Date of this AD	Total Operation Cycles as of the Effective Date of this AD
Initial Inspection Threshold	7,500	10,000	12,000

Figure 2 to paragraphs (i) and (m) – Repetitive compliance times

Description	Flight Hours	Water Drops	Total Operation Cycles
Repetitive Inspection	3,750	5,000	6,000

(j) Corrective Actions

If any of the findings identified in paragraphs (j)(1) through (6) of this AD are found, before further flight, repair using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Viking Air Limited’s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(1) If, during any inspection required by paragraph (i)(1) of this AD, any abnormal condition is found.

(2) If, during any inspection required by paragraph (i)(2) of this AD, any cracks, burrs, elongation, double or mis-drilled holes, or corrosion are found.

(3) If, during any inspection required by paragraph (i)(3) of this AD, any surface cracks or evidence of distortion or surface defects are found.

(4) If, during any inspection required by paragraph (i)(4) of this AD, any cracks are found.

(5) If, during any inspection required by paragraph (i)(5) of this AD, any surface defects or cracks are found.

(6) If, during any structural gap check required by paragraph (i)(6) of this AD, any gaps are found.

(k) Exception to Service Information

Where Viking Alert Service Bulletin 215-A568, Revision 4, dated January 22, 2019, specifies that preventative Repair Engineering Order (REO) 215-57-V022 may be installed and certain inspections may be done as specified in that REO, this AD does not allow the use of that REO for compliance with this AD.

(l) Replace Rivets

For airplanes on which the actions specified in Viking Alert Service Bulletin 215-A568, Revision 3, dated June 15, 2016, or earlier, have been accomplished: At the earliest of the times specified in figure 1 to paragraphs (i), (l), and (m) of this AD, perform a one-time replacement of installed NAS1242AD rivets with Titanium Hi-Lite fasteners and do a BHEC inspection of the open holes for cracks in accordance with the Accomplishment Instructions of Viking Alert Service Bulletin 215-A568, Revision 4, dated January 22, 2019. If any crack is found, before further flight, repair using a method approved by the Manager, New York ACO Branch, FAA; or TCCA; or Viking Air Limited's TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

(m) Initial Compliance Time for Certain Airplanes

(1) For airplanes on which the actions specified in Viking Alert Service Bulletin 215-A568, Revision 3, dated June 15, 2016, or earlier, have not been accomplished: At the times specified in figure 3 to paragraph (m)(1) of this AD, accomplish the actions required by paragraph (i) of this AD. Repeat the actions thereafter at the times specified in figure 2 to paragraphs (i) and (m) of this AD. For the purposes of this AD, the earliest compliance time applies if the accumulated airplane flight times (flight hours, water drops, or total operation cycles) meet multiple criteria.

Figure 3 to paragraph (m)(1) – Initial compliance times for airplanes on which the actions specified in Viking Alert Service Bulletin 215-A568, Revision 3, dated June 15, 2016, or earlier, have not been accomplished

Total Flight Hours as of the Effective Date of this AD	Total Water Drops as of the Effective Date of this AD	Total Operation Cycles as of the Effective Date of this AD	Compliance Time
7,500 or more	Or 22,001 or more	Or 26,401 or more	Within 4 months after the effective date of this AD
7,500 or more	Or 20,001 to 22,000	Or 24,001 to 26,400	Within 8 months after the effective date of this AD
7,500 or more	Or 10,000 to 20,000	Or 12,000 to 24,000	Within 18 months after the effective date of this AD
Less than 7,500	And less than 10,000	And less than 12,000	At or before the initial inspection time in figure 1 to paragraphs (i), (l), and (m) of this AD, or within 18 months after the effective date of this AD, whichever occurs later

(2) For airplanes on which the actions specified in Viking Alert Service Bulletin 215-A568, Revision 3, dated June 15, 2016, or earlier, have been accomplished: At the times specified in figure 4 to paragraph (m)(2) of this AD, accomplish the actions

required by paragraph (i) of this AD. Repeat the actions thereafter at the times specified in figure 2 to paragraphs (i) and (m) of this AD. For the purposes of this AD, the earliest compliance time applies if the accumulated airplane flight times (flight hours, water drops, or total operation cycles) meet multiple criteria.

Figure 4 to paragraph (m)(2) –Initial compliance times for airplanes on which the actions specified in Viking Alert Service Bulletin 215-A568, Revision 3, dated June 15, 2016, or earlier, have been accomplished

Total Flight Hours as of the Effective Date of this AD	Total Water Drops as of the Effective Date of this AD	Total Operation Cycles as of the Effective Date of this AD	Compliance Time
7,500 or more	Or 20,001 or more	Or 24,001 or more	Within 12 months after the effective date of this AD
7,500 or more	Or 10,000 to 20,000	Or 12,000 to 24,000	Within 18 months after the effective date of this AD
Less than 7,500	And less than 10,000	And less than 12,000	At or before the initial inspection time in figure 1 to paragraphs (i), (l), and (m) of this AD, or within 18 months after the effective date of this AD, whichever occurs later

(n) Reporting

At the applicable time specified in paragraph (n)(1) or (2) of this AD: Report the results of the actions required by paragraph (i) of this AD to Viking Air Limited via email at technicalsupport@vikingair.com or fax at +1-403-295-8888 in accordance with the instructions of Viking Alert Service Bulletin 215-A568, Revision 4, dated January 22, 2019.

(1) If the action was done on or after the effective date of this AD: Submit the report within 30 days after the inspection.

(2) If the action was done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

(o) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or TCCA; or Viking Air Limited's TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

(3) *Reporting Requirements*: A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control

Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 1 hour per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory as required by this AD. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

(p) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian AD CF-2019-07, dated March 4, 2019, for related information. This MCAI may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0710.

(2) For more information about this AD, contact Aziz Ahmed, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7329; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

(q) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Viking Alert Service Bulletin 215-A568, Revision 4, dated January 22, 2019.

(ii) [Reserved]

(3) For service information identified in this AD, contact Viking Air Limited, 1959 de Havilland Way, Sidney, British Columbia V8L 5V5, Canada; telephone +1-250-656-7227; fax +1-250-656-0673; email acs-technical.publications@vikingair.com; Internet <https://www.vikingair.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Des Moines, Washington, on December 12, 2019.

Jeffrey E. Duven,
Director,
System Oversight Division,
Aircraft Certification Service.

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