



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0190; Project Identifier 2019-CE-048-AD; Amendment 39-22556; AD 2023-19-06]

RIN 2120-AA64

Airworthiness Directives; Viking Air Limited (Type Certificate Previously Held by Bombardier Inc. and de Havilland Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 64-09-03, which applied to all de Havilland (type certificate now held by Viking Air Limited (Viking)) Model DHC-2 “Beaver” airplanes. AD 64-09-03 required inspecting the aileron mass balance weight arms for cracks and corrosion and replacing any damaged part. Since the FAA issued AD 64-09-03, Transport Canada superseded its mandatory continuing airworthiness information (MCAI) to correct an unsafe condition on these products. This AD requires incorporating into the existing maintenance records for your airplane the actions and associated thresholds and intervals, including life limits, specified in a supplemental inspection and corrosion control manual for Model DHC-2 airplanes. This AD also requires completing all of the initial tasks identified in this manual and reporting certain corrosion findings to Viking. The actions in this supplemental inspection and corrosion control manual include the inspection of the aileron balance weight arms required by AD 64-09-03. 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:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-0190; 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 MCAI, 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.

Material Incorporated by Reference:

- For service information identified in this final rule, contact Viking Air Limited Technical Support, 1959 de Havilland Way, Sidney, British Columbia, Canada V8L 5V5; phone: (800) 663-8444; fax: (250) 656-0673; email: technical.support@vikingair.com; website: vikingair.com/support/service-bulletins.

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

FOR FURTHER INFORMATION CONTACT: James Delisio, Continued Operational Safety Program Manager, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (516) 228-7321; email: 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to supersede AD 64-09-03, Amendment 718 (29 FR 5390, April 22, 1964) (AD 64-09-03). AD 64-09-03 applied to all de Havilland (type certificate now held by Viking Air Limited) Model DHC-2 “Beaver” airplanes. AD 64-09-03 required repetitively inspecting the aileron mass balance weight arms for cracks and corrosion and replacing any damaged part. AD 64-09-03 resulted from cracks and corrosion found on aileron mass balance weight arm part numbers (P/Ns) C2WA151, C2WA152, C2WA127, and C2WA128. The FAA issued AD 64-09-03 to address corrosion-related degradation of the aileron mass balance weight arms which, if not addressed, could lead to structural failure with consequent loss of control of the airplane.

The NPRM published in the *Federal Register* on February 8, 2022 (87 FR 7065); corrected February 18, 2022 (87 FR 9274). The NPRM was prompted by AD CF-2019-25, dated July 19, 2019 (referred to after this as the MCAI), issued by Transport Canada, which is the aviation authority for Canada. The MCAI states that it supersedes prior Transport Canada ADs related to a supplementary inspection and corrosion control program for aging airplanes, which identifies specific locations of an airplane that must be inspected to ensure corrosion-related degradation does not result in an unsafe condition. The MCAI continues to require the tasks included in the initial issue of Viking, DHC-2 Beaver Supplemental Inspection and Corrosion Control Manual, PSM 1-2-5, dated June 21, 2017, and requires additional inspections for components of airframe systems other than flight controls, which are included in Viking DHC-2 Beaver Supplemental Inspection and Corrosion Control Manual, PSM 1-2-5, Revision 1, dated January 10, 2019 (Viking PSM 1-2-5, Revision 1). Corrosion-related degradation, if not addressed, could lead to structural failure with consequent loss of control of the airplane.

You may examine the MCAI in the AD docket at regulations.gov under Docket No. FAA-2022-0190.

In the NPRM, the FAA proposed to require establishing a corrosion prevention and control program approved by the FAA. In the NPRM, the FAA also proposed to require completing all of the initial tasks identified in the program and reporting corrosion findings to Viking.

The FAA issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 to supersede AD 64-09-03. The SNPRM published in the *Federal Register* on April 25, 2023 (88 FR 24927). The SNPRM was prompted by the FAA's decision to revise the proposed actions specified in the NPRM and to reopen the comment period to allow the public the chance to comment on whether the proposed AD would have a significant economic impact on a substantial number of small entities. In the SNPRM, the FAA proposed to require incorporating into the existing maintenance records for your airplane the actions and associated thresholds and intervals, including life limits, specified in Parts 2 and 3 of Viking PSM 1-2-5, Revision 1, completing all the initial tasks identified in Viking PSM 1-2-5, Revision 1, and reporting to Viking any Level 2 or Level 3 corrosion findings. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from three individuals. The following presents the comments received on the SNPRM and the FAA's response to each comment.

Request to Withdraw NPRM and SNPRM

One individual commenter requested that the FAA reconsider issuing the proposed AD and a second individual commenter requested that the FAA withdraw the proposed rulemaking. The first commenter noted that during an annual inspection, a

licensed Airframe and Powerplant (A&P) mechanic can determine if an airplane has been properly maintained and if corrosion is present. This commenter indicated that, by issuing the proposed AD, the FAA would force many operators and pilots to give up their airplanes due to exorbitant costs. This commenter stated that because one or two airplanes were found with extensive corrosion, all Model DHC-2 airplanes should not be placed in the same category and that “the Beaver” is one of the finest built airplanes and should be respected as such.

The second individual commenter stated that the FAA must stop broad brushing all airplanes of a certain build as the same. The commenter noted that a Model DHC-2 “Beaver” built in 1948 is not the same as one built in 1967 and that the lifetime use of service and environmental conditions determine an airplane’s risk factors. The commenter explained that many Beavers have thousands of pages of flight records spanning over 70 years that allow owners and maintainers to subjectively evaluate an airplane’s condition and operating environments; therefore, based on the points above, the FAA should immediately withdraw the proposed rulemaking because it lacks merit.

The FAA acknowledges the commenters’ concerns regarding the impact this final rule will have on operators and pilots. As noted by the first commenter, Model DHC-2 airplanes are currently required to perform annual and 100-hour inspections, including inspections for corrosion, that are required by the Federal Aviation Regulations. The FAA does not agree that these current regulations require the same inspections as those proposed in the SNPRM. The inspections proposed in the SNPRM are focused on certain areas of the airplane and are more detailed than those covered in the required annual or 100-hour inspections. The inspections required by this AD are part of a supplemental inspection and corrosion prevention program that is included in Parts 2 and 3 of Viking PSM 1-2-5, Revision 1. These inspection types and intervals address locations or parts that are not currently required to be inspected as part of annual or 100-hour inspections in

existing regulations. These new inspections and intervals are needed to detect and address corrosion, which could lead to structural failure with consequent loss of control of the airplane.

The FAA also acknowledges the first commenter's concern regarding the "exorbitant cost" of complying with the requirements of this AD that could result in operators and pilots having to give up their airplanes. Under 14 CFR 39.1, issuance of an AD is based on the finding that an unsafe condition exists or is likely to develop in aircraft of a particular type design. An aging airplane requires more attention during maintenance procedures and, at times, more frequent inspections of structural components to detect damage due to environmental deterioration, accidental damage, and fatigue. The unsafe condition addressed in this final rule includes undetected corrosion, which could lead to structural failure and consequent loss of control of the airplane. Inspections and repairs are therefore necessary to detect and correct such corrosion before it leads to structural failure.

In response to both commenters' statements that all Model DHC-2 airplanes should not be placed in the same category, the FAA has determined that an unsafe condition exists or is likely to exist or develop in other products of the same type design. In this case, the FAA independently reviewed the MCAI and related service information and determined an unsafe condition exists and an AD is needed to address that unsafe condition. Further, it is within the FAA's authority and responsibility to issue ADs to require actions to address unsafe conditions that are not otherwise being addressed (or are not addressed adequately) by routine maintenance procedures.

The FAA has not changed this AD regarding this issue.

Request for Clarification Regarding Conflicting AD Requirements for the Affected Models

One individual commenter requested clarification regarding what operators should do if there are conflicts between the requirements specified in the SNPRM and the requirements of existing ADs for the affected airplanes. The commenter noted that AD 2008-11-11, Amendment 39-15533 (73 FR 34611, June 18, 2008) (AD 2008-11-11) specifies a fluorescent penetrant inspection for cracks in the front spar center section web of the tailplane, while task C55-10-02 in Viking PSM 1-2-5, Revision 1, allows using a fluorescent penetrant or an eddy current inspection, which seems contradictory.

The FAA acknowledges the commenter's concern. The FAA has reviewed all potentially related ADs against the proposed requirements in the SNPRM and determined that other than AD 64-09-03, no other ADs need to be superseded or rescinded. Any other ADs involving inspections for corrosion on the affected airplanes require either inspections for different parts or locations on an airplane or the inspections are not as in-depth or repetitive; therefore, they do not overlap with the inspections required by this AD. This includes the requirements of AD 2008-11-11, which requires inspecting a different airplane part than the part specified in task C55-10-02 of Viking PSM 1-2-5, Revision 1.

The FAA has not changed this AD regarding this issue.

Request to Revise Requirements Based on Airplane Usage Conditions

One individual commenter requested that the SNPRM be revised to provide different requirements based on how an airplane is used. The commenter suggested that instead of using a broad approach and including all Model DHC-2 airplanes, the FAA should use a logical evaluation process and consider the following parameters to determine if an airplane's airworthiness might be compromised due to corrosion: operating environment (exposure to saltwater); commercial or private use; stress on the airframe due to repetitive flights with heavy loads; total flight hours on the airframe; airplane history (has it been partially or completely rebuilt); and maintenance history.

The FAA disagrees with the commenter's request to change the SNPRM based on different airplane operational usage. There is no current requirement to track the hours spent flying in different conditions or types of water. Additionally, operators may not know an airplane's entire flight or maintenance history. Without this detailed knowledge of each airplane, it would be impossible for the FAA to develop a special set of inspections based on airplane usage conditions. However, operators may submit a proposal for revised requirements by requesting an alternative method of compliance (AMOC) using the procedures specified in paragraph (i) of this AD.

The FAA has not changed this AD regarding this issue.

Request to Revise Costs of Compliance

One individual commenter requested that the FAA revise the labor rate in the Costs of Compliance section of the SNPRM. The commenter noted that the FAA's estimate of \$85 per hour is not accurate and that the current labor rate for an experienced DHC-2/3 airplane mechanic is greater than \$110 per hour, depending on where in the United States the work is being performed. The commenter also mentioned that public comments on the NPRM that is related to the SNPRM stated that DHC-2 mechanic rates are \$110 to \$150 per hour, depending on the geographic regions where the work is being performed. The commenter added that the proposed costs do not consider the current shortage of qualified mechanics able to do the inspections.

The FAA agrees that the labor rate of \$85 per work-hour is dated but disagrees with the commenter's estimate of \$110 to \$150 per hour. The FAA notes that the current wage rate for aviation mechanics as provided by the Bureau of Labor Statistics, found at www.bls.gov/oes/current/oes493011.htm, after accounting for fringe benefits that are valued at roughly 50% of the nominal wage, is lower than the estimated fully burdened labor rate (a labor rate with fringe benefits included) of \$85 per work-hour; therefore, the FAA is unable to justify increasing the labor rate from \$85 per work-hour. The FAA

continues to use the higher \$85 per work-hour figure in order to provide a conservative estimate of the costs.

Regarding the commenter's statement that the wage rate for DHC-2 mechanics varies geographically, the commenter did not provide any documentation or references to support this statement. Furthermore, unless the distribution of DHC-2 airplanes also varies along the same geography, using an average rate captures the average effect, including any higher wages; therefore, the FAA has not added a geographical adjustment into its assessment.

The FAA acknowledges the commenter's concerns regarding labor shortages, although this does not affect the cost of this final rule.

The FAA has not changed this AD regarding this issue.

Conclusion

These products have been approved by the aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, this AD is adopted as proposed in the SNPRM.

ADs Mandating Airworthiness Limitations (ALS)

The FAA has previously mandated airworthiness limitations by issuing ADs that require revising the ALS of the existing maintenance manual or instructions for continued airworthiness to incorporate new or revised inspections. This AD, however, requires establishing and incorporating new inspections into the existing maintenance records required by 14 CFR 91.417(a)(2) or 135.439(a)(2) for your airplane. The FAA does not

intend this as a substantive change. Requiring incorporation of the new ALS requirements into the existing maintenance records, rather than requiring individual repetitive inspections and replacements, allows operators to record AD compliance once after updating the existing maintenance records, rather than recording compliance after every inspection and part replacement.

Related Service Information under 1 CFR Part 51

The FAA reviewed Viking PSM 1-2-5, Revision 1, which specifies procedures for inspecting locations of the airplane that are particularly susceptible to corrosion-related degradation and includes repetitive inspection intervals, defines the different levels of corrosion, and provides corrective action if corrosion is found.

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 ADDRESSES.

Other Related Service Information

The FAA reviewed Viking DHC-2 Beaver Service Bulletin V2/0011, Revision NC, dated November 28, 2019. This service information provides a list of new inspection tasks that have been added to the DHC-2 supplementary inspection and corrosion control program, Viking PSM 1-2-5, Revision 1.

Impact on Intrastate Aviation in Alaska

In light of the heavy reliance on aviation for intrastate transportation in Alaska, the FAA has fully considered the effects of this final rule (including costs to be borne by affected operators) from the earliest possible stages of AD development. As previously stated, 14 CFR part 39 requires operators to correct an unsafe condition identified on an airplane to ensure operation of that airplane in an airworthy condition. The FAA has determined that the need to correct corrosion-related degradation in aging aircraft, which

could lead to structural failure with consequent loss of control of the airplane, outweighs any impact on aviation in Alaska.

Costs of Compliance

The FAA estimates that this AD affects 409 airplanes of U.S. registry. The FAA also estimates that it will take about 1 work-hour per airplane at a labor rate of \$85 per work-hour to revise the existing maintenance records.

Based on these figures, the FAA estimates the cost of this AD on U.S. operators to be \$34,765 or \$85 per airplane.

The FAA estimates it will take about 1 work-hour to report any Level 2 corrosion found during the initial or subsequent inspections or any Level 3 corrosion found during the initial or subsequent inspections, for an estimated cost of \$85 per airplane.

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 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 currently 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 take approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. 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.

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.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980, Public Law 96-354, 94 Stat. 1164 (5 U.S.C. 601-612) (RFA) establishes as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation.

To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration. The RFA covers a wide-range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a rule will have a significant economic impact on a substantial number of small entities. If the agency

determines that it will, the agency must prepare a regulatory flexibility analysis as described in the RFA.

The FAA published an Initial Regulatory Flexibility Analysis (IRFA) for this rule to aid the public in commenting on the potential impacts to small entities. The FAA considered the public comments in developing the final rule and this Final Regulatory Flexibility Analysis (FRFA). A FRFA must contain the following:

(1) A statement of the need for, and objectives of, the rule;

(2) A statement of the significant issues raised by the public comments in response to the IRFA, a statement of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments;

(3) The response of the agency to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA) in response to the proposed rule, and a detailed statement of any change made to the proposed rule in the final rule as a result of the comments;

(4) A description of and an estimate of the number of small entities to which the rule will apply or an explanation of why no such estimate is available;

(5) A description of the projected reporting, recordkeeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record; and

(6) A description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.

1. Need for and Objectives of the Rule

The NPRM proposed to supersede AD 64-09-03, which applied to all de Havilland (type certificate now held by Viking) Model DHC-2 “Beaver” airplanes, because after the FAA issued AD 64-09-03, Transport Canada superseded its MCAI to identify specific locations of an airplane that must be inspected to ensure corrosion-related degradation does not result in an unsafe condition. This final rule requires incorporating into the existing maintenance records for your airplane the actions and associated thresholds and intervals, including life limits, specified in a supplemental inspection and corrosion control manual for Model DHC-2 airplanes. This final rule also requires completing all the initial tasks identified in this manual and reporting certain corrosion findings to Viking. The actions in this supplemental inspection and corrosion control manual include the inspection of the aileron balance weight arms required by AD 64-09-03.

2. Significant Issues Raised in Public Comments

The FAA received comments related to costs from three individual commenters. The following presents the significant issues in the comments received on the SNPRM and the FAA’s response to each comment.

Request to Revise Requirements Based on Airplane Usage Conditions

Two commenters requested that the SNPRM be revised to have different requirements based on how the airplane is used, including but not limited to corrosion level, operating environment (e.g., near salt water), commercial or private use, and airplane history.

The FAA disagrees with the commenters’ requests to change the SNPRM based on airplane operational usage. There is no current requirement to track the hours spent flying in different conditions or types of water. Additionally, operators may not know an airplane’s entire flight or maintenance history. Without this detailed knowledge of each

airplane, it would be impossible for the FAA to develop a special set of inspections based on airplane usage conditions. However, operators may submit a proposal for revised requirements by requesting an AMOC using the procedures specified in paragraph (i) of this AD. The FAA has not changed this AD regarding this issue.

Request to Revise Costs of Compliance: Labor Rate

One commenter requested that the FAA revise the labor rate in the Costs of Compliance section of the SNPRM. The commenter noted that current labor rates are anywhere from \$110 to \$150 per hour and added that the proposed costs do not consider the current shortage of qualified mechanics able to do the inspections.

The FAA agrees that the labor rate of \$85 per work-hour provided in the SNPRM is dated but disagrees with the provided estimate of \$110 to \$150 per hour provided by the commenter. The FAA notes that the current wage rate for aviation mechanics as provided by the Bureau of Labor Statistics, found at www.bls.gov/oes/current/oes493011.htm, after accounting for fringe benefits that are valued at roughly 50% of the nominal wage, is lower than the estimated fully burdened labor rate (a labor rate with fringe benefits included) of \$85 per work-hour. Therefore, the FAA is unable to justify increasing the labor rate from \$85 per work-hour. The FAA continues to use the higher \$85 per work-hour figure in order to provide a conservative estimate of the costs.

The commenter also indicated that the wage rate for DHC-2 mechanics varies geographically but did not provide any documentation or references to support this statement. Furthermore, unless the distribution of DHC-2 airplanes also varies along the same geography, using an average rate captures the average effect, including any higher wages; therefore, the FAA has not added a geographical adjustment into its assessment.

3. Response to SBA Comments

The Chief Counsel for Advocacy of the SBA did not file any comments in response to the SNPRM. Thus, the FAA did not make any changes to this final rule.

4. Small Entities to Which the Rule Will Apply

The FAA used the definition of small entities in the RFA for this analysis. The RFA defines small entities as small businesses, small governmental jurisdictions, or small organizations. In 5 U.S.C. section 601(3), the RFA defines “small business” to have the same meaning as “small business concern” under section 3 of the Small Business Act. The Small Business Act authorizes the SBA to define “small business” by issuing regulations.

SBA (2022) has established size standards for various types of economic activities, or industries, under the North American Industry Classification System (NAICS).¹ These size standards generally define small businesses based on the number of employees or annual receipts.

The FAA Civil Aircraft Registry shows 409 Model DHC-2 Mk. I, DHC-2 Mk. II, and DHC-2 Mk. III airplanes that will be affected by this AD. These 409 airplanes are registered to 235 private businesses, 76 individuals, and 3 government agencies. The 76 individuals and 3 government agencies are excluded from this analysis as the RFA does not apply to individuals and the 3 government agencies are not small entities as defined by the RFA.²

¹ Small Business Administration (SBA). 2022. Table of Size Standards. Effective July 14, 2022. <https://www.sba.gov/document/support-table-size-standards>.

² Two airplanes are registered to the US Department of the Interior. Five airplanes are registered to the United States Forest Service, within the US Department of Agriculture. Two airplanes are registered to the State of Alaska to the Alaska Department of Fish & Game. These government agencies are not small entities under the RFA.

Three hundred nineteen (319) airplanes are owned and operated by 235 private entities. A sample of 50 private businesses was randomly selected for the analysis.³ Of the 50 sampled entities, 45 were found to be small. The results of the cost impact analysis for these 45 small entities are shown in Table 1 and will be discussed in the following section.

As can be seen, the impacts range from nearly 0%, to a maximum of 0.5%. The average impact is 0.1%, and the median impact rounds to 0.0%. As such, the FAA has determined that this rule will not significantly impact a substantial number of small entities.

³ The sample was selected by shuffling the order of the list of 409 DHC-2 airplanes in the FAA Registry and going down the randomized list. If revenue and employee count data were available, it was included in the sample; otherwise, it was excluded. This process was repeated until 50 firms, for which revenue and employee data were available, had been added to the sample. The shuffling was accomplished by giving each entry in the registry an index value between 0 and 1 using Excel's RAND function. The entries were then sorted by that index value to randomize their order.

Table 1. Cost Impact on Small Entities

Operator	FAA Registry Type	DHC-2	Revenues		Cost /	NAICS	Size	NAICS Industry
		A/C	(\$1,000)	Cost	Revenue	Code	Standard	
ALASKAS FISHING UNLIMITED INC	Non-Citizen Corp.	1	79	\$170.0	0.2%	721214	\$8 mn	Recreational and Vacation Camps (except Campgrounds)
DOUGLAS AVIATION LTD	Corporation	2	90	\$340.0	0.4%	541990	\$17 mn	All Other Professional, Scientific and Technical Services
NORTHSTAR HOLDINGS LLC	LLC	3	110	\$510.0	0.5%	551112	\$40 mn	Offices of Other Holding Companies
RHK OF KANSAS	Corporation	1	110	\$170.0	0.2%	541110	\$13.5 mn	Offices of Lawyers
SUMMIT LEASING LLC	LLC	1	110	\$170.0	0.2%	532490	\$35 mn	Other Comm'l & Ind. Machinery and Equip. Rental & Leasing
JESPERSEN AIRCRAFT SERVICES INC	Corporation	3	113	\$510.0	0.4%	481219	\$22 mn	Other Nonscheduled Air Transportation Comm'l Air, Rail, & Water Transp. Equip.
KATMAI AIR LLC	LLC	1	117	\$170.0	0.1%	532411	\$40 mn	Rental and Leasing
MUSTANG HIGH FLIGHT LLC	LLC	1	127	\$170.0	0.1%	334511	1250 emp.	Search, Detect., Nav., Guid., Aero., & Naut. Systems & Inst. Mfg
FLIGHT MANAGEMENT LLC	LLC	2	161	\$340.0	0.2%	561110	\$11 mn	Office Administrative Services
NEWHALEN LODGE INC	Corporation	3	165	\$510.0	0.3%	721199	\$8 mn	All Other Traveler Accommodation
4R AVIATION LLC	LLC	1	177	\$170.0	0.1%	336411	1500 emp.	Aircraft Manufacturing
RAINBOW KING LODGE INC	Corporation	2	209	\$340.0	0.2%	721199	\$8 mn	All Other Traveler Accommodation
DOYON AIRCRAFT LEASING LLC	LLC	1	250	\$170.0	0.1%	532411	\$40 mn	Comm'l Air, Rail, & Water Transp. Equip. Rental and Leasing
KENMORE CREW LEASING INC TRUSTEE	Corporation	1	278	\$170.0	0.1%	532490	\$35 mn	Other Comm'l & Ind. Machinery and Equip. Rental & Leasing
COMANCHE FIGHTERS LLC	LLC	1	301	\$170.0	0.1%	813930	\$14.5 mn	Labor Unions and Similar Labor Organizations
BAY AIR INC	Corporation	1	307	\$170.0	0.1%	481111	1500 emp.	Scheduled Passenger Air Transportation
COYOTE AIR LLC	LLC	2	310	\$340.0	0.1%	481211	1500 emp.	Nonscheduled Chartered Passenger Air Transp.
KINGFISHER AIR INC	Corporation	1	366	\$170.0	0.0%	481219	\$22 mn	Other Nonscheduled Air Transportation
ASSOCIATED LEASING LLC	LLC	1	500	\$170.0	0.0%	532490	\$35 mn	Other Comm'l & Ind. Machinery and Equip. Rental & Leasing
TIKCHIK NARROWS LODGE INC	Corporation	3	720	\$510.0	0.1%	721214	\$8 mn	Recreational and Vacation Camps (except Campgrounds)
NORTHWEST SEAPLANES INC	Corporation	3	750	\$510.0	0.1%	481111	1500 emp.	Scheduled Passenger Air Transportation
SNOW MOUNTAIN ENTERPRISES LLC	LLC	1	750	\$170.0	0.0%	532000	\$8 mn	Rental and Leasing Services, N.F.S.
ISLAND WINGS AIR SERVICE LLC	LLC	2	956	\$340.0	0.0%	481211	1500 emp.	Nonscheduled Chartered Passenger Air Transp.
TVPX AIRCRAFT SOLUTIONS INC TRUSTEE	Corporation	3	1,157	\$510.0	0.0%	336310	1000 emp.	Motor Vehicle Gasoline Engine and Engine Parts Mfg
SHELDON AIR SERVICE LLC	LLC	1	1,400	\$170.0	0.0%	481219	\$22 mn	Other Nonscheduled Air Transportation
TALKEETNA AIR TAXI INC	Corporation	1	1,635	\$170.0	0.0%	481219	\$22 mn	Other Nonscheduled Air Transportation
NO SEE UM LODGE INC	Corporation	3	2,036	\$510.0	0.0%	721214	\$8 mn	Recreational and Vacation Camps (except Campgrounds)
WARD AIR INC	Corporation	4	2,191	\$680.0	0.0%	481219	\$22 mn	Other Nonscheduled Air Transportation
HISTORIC FLIGHT FOUNDATION	Corporation	1	2,500	\$340.0	0.0%	712110	\$30 mn	Museums
LAKE HAVASU SEAPLANES LLC	LLC	1	2,500	\$170.0	0.0%	611000	\$8 mn	Educational Services, N.F.S.
RDJ BROTHERS TRUCKING INC	Corporation	1	2,500	\$170.0	0.0%	236000	\$39.5 mn	Construction of buildings, N.F.S.
SEAWIND AVIATION INC	Corporation	2	2,500	\$170.0	0.0%	481211	1500 emp.	Nonscheduled Chartered Passenger Air Transp.
TIKCHIK AIRVENTURES LLC	LLC	1	2,500	\$170.0	0.0%	481211	1500 emp.	Nonscheduled Chartered Passenger Air Transp.

WOLF TRAIL LODGE INC	Corporation	1	2,500	\$170.0	0.0%	721000	\$8 mn	Accommodation, N.F.S.
ANDREW AIRWAYS INC	Corporation	3	2,576	\$510.0	0.0%	485999	\$16.5 mn	All Other Transit and Ground Passenger Transportation
ALASKAS ENCHANTED LAKE LODGE INC	Corporation	2	2,729	\$340.0	0.0%	721310	\$12.5 mn	Rooming & Boarding Houses, Dormitories, and Workers' Camps
RAINBOW RIVER LODGE LLC	LLC	2	4,000	\$340.0	0.0%	721214	\$8 mn	Recreational and Vacation Camps (except Campgrounds)
K BAY AIR LLC	LLC	1	4,427	\$170.0	0.0%	481219	\$22 mn	Other Nonscheduled Air Transportation
RAPIDS CAMP LODGE INC	Corporation	1	7,000	\$170.0	0.0%	713990	\$8 mn	All Other Amusement and Recreation Industries
PROGRESSIVE PLASTICS INC	Corporation	1	7,500	\$170.0	0.0%	326199	750 emp.	All Other Plastics Product Manufacturing
BROWN HELICOPTER INC	Corporation	1	9,000	\$170.0	0.0%	336412	1500 emp.	Aircraft Engine and Engine Parts Manufacturing
PERRYCOOK FLIGHT SERVICES LLC	LLC	1	12,500	\$170.0	0.0%	481211	1500 emp.	Nonscheduled Chartered Passenger Air Transp.
KOMRO INTERNATIONAL LLC	LLC	1	14,100	\$170.0	0.0%	423820	125 emp.	Farm & Garden Machinery & Equip. Merchant Wholesalers
CONCRETE WORKS OF COLORADO INC	Corporation	1	16,190	\$170.0	0.0%	238110	\$16.5 mn	Poured Concrete Foundation and Structure Contractors
KENMORE AIR HARBOR LLC	LLC	9	51,500	\$1,530.0	0.0%	481111	1500 emp.	Scheduled Passenger Air Transportation

Total 80 \$161,997 \$13,600
Mean \$3,600 \$302 0.1%
Median \$956 \$170 0.0%

- Notes: 1. The size standard is the maximum size for the NAICS industry considered by the Small Business Administration to be a small entity.
2. AD costs per airplane are 1 work-hour x \$85 = \$85 + \$85 reporting costs for initial inspection, for a total of \$170.
3. All percentage figures are rounded to the nearest tenth of a percent. All 0.0% figures represent values below 0.1%, but above 0%.

5. Projected Reporting, Recordkeeping, and Other Compliance Requirements

The FAA estimates that this AD will take 1 work-hour per airplane at a labor rate of \$85 per work-hour to incorporate into the existing maintenance records the actions specified in Parts 2 and 3 of Viking PSM 1-2-5, Revision 1, plus \$85 per airplane to report any Level 2 corrosion found during the initial or subsequent inspections or any Level 3 corrosion found during the initial or subsequent inspections, for an estimated total cost of \$170 per airplane.

The estimated cost of this AD, per small entity, is shown in the “Cost” column of Table 1 and cost impact is measured by cost as a percentage of revenues. As the table shows, the mean cost impact is 0.1% of annual revenues,⁴ while the median cost impact is 0.0%.

To the extent that small entities provide more unique services or serve markets with less competition, they may also be able to pass on costs in the form of price increases. However, the FAA assumed that none of these small entities would be able to pass these compliance costs to their customers in terms of higher prices. This shows no significant impact on any of the small entities.

6. Significant Alternatives Considered

As part of the FRFA, the FAA is required to consider regulatory alternatives that may be less burdensome.

The FAA did not find any significant regulatory alternatives to this AD that would accomplish the safety objectives of this AD.

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

⁴ These revenue data come from online sources such as zoominfo.com, opencorporates.com, buzzfile.com, manta.com, allbiz.com, and lookupcompanyrevenue.com.

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 have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the RFA.

List of Subjects in 14 CFR Part 39

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

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:

a. Removing Airworthiness Directive 64-09-03, Amendment 718 (29 FR 5390, April 22, 1964); and

b. Adding the following new airworthiness directive:

2023-19-06 Viking Air Limited (Type Certificate Previously Held by Bombardier Inc. and de Havilland Inc.): Amendment 39-22556; Docket No. FAA-2022-0190; Project Identifier 2019-CE-048-AD.

(a) Effective Date

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

(b) Affected ADs

This AD replaces AD 64-09-03, Amendment 718 (29 FR 5390, April 22, 1964).

(c) Applicability

This AD applies to Viking Air Limited (type certificate previously held by Bombardier Inc. and de Havilland Inc.) Model DHC-2 Mk. I, DHC-2 Mk. II, and DHC-2 Mk. III airplanes, all serial numbers, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC) Code 2000, Airframe.

(e) Unsafe Condition

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as corrosion-related degradation in aging aircraft. The FAA is issuing this AD to detect and address corrosion, which could lead to structural failure with consequent loss of control of the airplane.

(f) Compliance

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

(g) Required Actions

(1) Within 90 days after the effective date of this AD, incorporate into the existing maintenance records required by 14 CFR 91.417(a)(2) or 135.439(a)(2), as applicable for your airplane, the actions and associated thresholds and intervals, including life limits, specified in Parts 2 and 3 of Viking DHC-2 Beaver Supplemental Inspection and Corrosion Control Manual, PSM 1-2-5, Revision 1, dated January 10, 2019 (Viking PSM 1-2-5, Revision 1). Do each initial task within 6 months after the effective date of this AD or at the threshold for each applicable task specified in Part 3 of Viking Product Support Manual PSM 1-2-5, Revision 1, whichever occurs later. Where Viking PSM 1-2-5,

Revision 1, specifies contacting Viking for instructions on forward and rear fin attachment bolt replacement, inspection, and installation, and for a disposition regarding attachment bolts, this AD requires contacting the Manager, International Validation Branch, FAA; or Transport Canada; or Viking's Transport Canada Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

Note 1 to paragraph (g)(1): Viking DHC-2 Beaver Service Bulletin V2/0011, Revision NC, dated November 28, 2019, contains additional information related to this AD.

(2) After the action required by paragraph (g)(1) of this AD has been done, no alternative actions and associated thresholds and intervals, including life limits, are allowed unless they are approved as specified in paragraph (i) of this AD.

(h) Reporting

(1) For inspections done after the effective date of this AD, report to Viking any Level 2 or Level 3 corrosion, as specified in Viking PSM 1-2-5, Revision 1, at the times specified in and in accordance with part 3, paragraph 5, of Viking PSM 1-2-5, Revision 1.

(2) For inspections done before the effective date of this AD, within 30 days after the effective date of this AD, report to Viking any Level 2 or Level 3 corrosion, as specified in Viking PSM 1-2-5, Revision 1, in accordance with part 3, paragraph 5, of Viking PSM 1-2-5, Revision 1.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation 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 International Validation Branch, mail it to ATTN: Program Manager, Continuing Operational Safety, at the address identified in paragraph (j)(2) of this AD or email to: 9-AVS-AIR-730-AMOC@faa.gov. If mailing information, also submit information by email.

(2) 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.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved specifically for this AD by the Manager, International Validation Branch, FAA.

(j) Additional Information

(1) Refer to the MCAI from Transport Canada, AD CF-2019-25, dated July 5, 2019, for related information. This Transport Canada AD may be found in the AD docket at regulations.gov under Docket No. FAA-2022-0190.

(2) For more information about this AD, contact James Delisio, Continued Operational Safety Program Manager, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (516) 228-7321; email: 9-avs-nyaco-cos@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (k)(3) and (4) of this AD.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference 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 the AD specifies otherwise.

(i) Viking DHC-2 Beaver Supplemental Inspection and Corrosion Control Manual, PSM 1-2-5, Revision 1, dated January 10, 2019.

(ii) [Reserved]

(3) For service information identified in this AD, contact Viking Air Limited Technical Support, 1959 De Havilland Way, Sidney, British Columbia, Canada, V8L 5V5; phone: (800) 663-8444; fax: (250) 656-0673; email: technical.support@vikingair.com; website: vikingair.com/support/service-bulletins.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

(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: fr.inspection@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on September 15, 2023.

Victor Wicklund, Deputy Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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