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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2020-0206; Product Identifier 2019-NM-202-AD; Amendment 39-21220; AD 2020-17-15]**

**RIN 2120-AA64**

#### **Airworthiness Directives; MHI RJ Aviation ULC (Type Certificate Previously Held by Bombardier, Inc.) Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for all MHI RJ Aviation ULC Model CL-600-2B19 (Regional Jet Series 100 & 440), CL-600-2C10 (Regional Jet Series 700, 701 & 702), CL-600-2C11 (Regional Jet Series 550), CL-600-2D15 (Regional Jet Series 705), CL-600-2D24 (Regional Jet Series 900), and CL-600-2E25 (Regional Jet Series 1000) airplanes. This AD was prompted by a determination that certain airplanes have outdated magnetic variation (MV) tables inside navigation systems. This AD requires revising the existing airplane flight manual (AFM) to update the Flight Management System (FMS), Inertial Reference System (IRS), and Attitude and Heading Reference System (AHRS) limitations. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective November 3, 2020.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of November 3, 2020.

**ADDRESSES:** For service information identified in this final rule, contact MHI RJ Aviation ULC, 12655 Henri-Fabre Blvd., Mirabel, Québec J7N 1E1 Canada; Widebody Customer Response Center North America toll-free telephone +1-844-272-2720 or direct-dial telephone +1-514-855-8500; fax +1-514-855-8501; email [thd.crj@mhirj.com](mailto:thd.crj@mhirj.com); internet <https://mhirj.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety 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-2020-0206.

## **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-2020-0206; 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, 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:** Siddeeq Bacchus, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7362; fax 516-794-5531; email [9-avs-nyaco-cos@faa.gov](mailto: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-2019-40, dated November 1, 2019 (“Canadian AD CF-2019-40”) (also referred to as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all MHI RJ Aviation ULC (type certificate previously held by Bombardier, Inc.) Model CL-600-2B19 (Regional Jet Series 100 & 440), CL-600-2C10 (Regional Jet Series 700, 701 & 702), CL-600-2C11 (Regional Jet Series 550), CL-600-2D15 (Regional Jet Series 705), CL-600-2D24 (Regional Jet Series 900), and CL-600-2E25 (Regional Jet Series 1000) 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-2020-0206.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all MHI RJ Aviation ULC Model CL-600-2B19 (Regional Jet Series 100 & 440), CL-600-2C10 (Regional Jet Series 700, 701 & 702), CL-600-2C11 (Regional Jet Series 550), CL-600-2D15 (Regional Jet Series 705), CL-600-2D24 (Regional Jet Series 900), and CL-600-2E25 (Regional Jet Series 1000) airplanes. The NPRM published in the Federal Register on March 26, 2020 (85 FR 17036). The NPRM was prompted by a determination that certain airplanes have outdated MV tables inside navigation systems. The NPRM proposed to require revising the existing AFM to update the FMS, IRS, and AHRS limitations. The FAA is issuing this AD to address outdated MV tables inside navigation systems, which can affect the performance of the navigation systems and result in the presentation of misleading magnetic heading references on the Primary Flight Displays (PFDs) and Multi-Function Displays (MFDs), positioning the airplane outside of the terrain and obstacle protection provided by instrument flight procedures and flight route designs (e.g., outdated MV tables can lead to significantly inaccurate heading, course, and bearing calculations). See the MCAI for additional background information.

### **Comments**

The FAA gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA's response to each comment.

### **Support for the NPRM**

The Airline Pilots Association, International stated its support for the NPRM.

## **Request To Refer to the Latest Service Information**

Bombardier requested that the FAA refer to the latest service information in the NPRM. Bombardier noted that the proposed rule does not refer to the latest AFM revisions, but acknowledged that the proposed rule does refer to the AFM revisions that introduced changes to the MV tables in the limitations sections of the AFMs. Bombardier listed the current AFM revisions as of the time the comment was submitted.

The FAA does not agree. This AD does not directly mandate incorporating a specific revision level of the corresponding AFMs, but does require incorporating the information provided in the referenced AFM revisions in paragraph (g) of this AD. The language in paragraph (g) of this AD is designed to allow the incorporation of this information to be accomplished independent of the revision level of the AFM, under the condition that the incorporated information is identical to the information that is provided in the referenced AFM revisions specific in paragraph (g) of this AD. The FAA notes that when this comment was submitted, the information provided by the revisions of the AFMs listed by the commenter was identical to the information provided in the referenced AFM revisions in paragraph (g) of this AD. The FAA has not changed the AD in this regard.

## **Conclusion**

The FAA reviewed the relevant data, considered the comments received, 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**

Bombardier has issued the following service information, which describes procedures for updating, among other systems, the FMS, IRS, and AHRS. These documents are distinct since they apply to different airplane models.

- Section 02-09–Navigation System Limitations, of Chapter 2–LIMITATIONS, of the Bombardier CRJ Series Regional Jet Model CL-600-2B19 Airplane Flight Manual, CSP A-012, Volume 1, Revision 71A, dated April 26, 2019.
- Section 02-09–Navigation System Limitations, of Chapter 2–LIMITATIONS, of the Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) Airplane Flight Manual, CSP B-012, Revision 26, dated March 1, 2019.
- Section 02-09–Navigation System Limitations, of Chapter 2–LIMITATIONS, of the Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) Airplane Flight Manual, CSP B-012, Revision 28, dated September 18, 2019.
- Section 02-09–Navigation System Limitations, of Chapter 2–LIMITATIONS, of the Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and CL-600-2D15 (Series 705) Airplane Flight Manual, CSP C-012, Volume 1, Revision 21, dated March 29, 2019.
- Section 02-09–Navigation System Limitations, of Chapter 2–LIMITATIONS, of the Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) Airplane Flight Manual, CSP D-012, Revision 21, dated February 15, 2019.

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 1,072 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
1 work-hour × \$85 per hour = \$85	\$0	\$85	\$91,120

## 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 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):



**FAA**  
**Aviation Safety**

## **AIRWORTHINESS DIRECTIVE**

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)  
[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

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**2020-17-15 MHI RJ Aviation ULC (Type Certificate Previously Held by Bombardier, Inc.):**  
Amendment 39-21220; Docket No. FAA-2020-0206; Product Identifier 2019-NM-202-AD.

**(a) Effective Date**

This AD is effective November 3, 2020.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to MHI RJ Aviation ULC (type certificate previously held by Bombardier, Inc.) Model CL-600-2B19 (Regional Jet Series 100 & 440), CL-600-2C10 (Regional Jet Series 700, 701 & 702), CL-600-2C11 (Regional Jet Series 550), CL-600-2D15 (Regional Jet Series 705), CL-600-2D24 (Regional Jet Series 900), and CL-600-2E25 (Regional Jet Series 1000) airplanes, certificated in any category, all serial numbers.

**(d) Subject**

Air Transport Association (ATA) of America Code 34, Navigation.

**(e) Reason**

This AD was prompted by a determination that certain airplanes have outdated magnetic variation (MV) tables inside navigation systems. The FAA is issuing this AD to address outdated MV tables inside navigation systems, which can affect the performance of the navigation systems and result in the presentation of misleading magnetic heading references on the Primary Flight Displays (PFDs) and Multi-Function Displays (MFDs), positioning the airplane outside of the terrain and obstacle protection provided by instrument flight procedures and flight route designs (e.g., outdated MV tables can lead to significantly inaccurate heading, course, and bearing calculations).

**(f) Compliance**

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

**(g) Airplane Flight Manual (AFM) Revision**

Within 30 days after the effective date of this AD, revise the existing AFM to incorporate the information specified in Section 02-09–Navigation System Limitations, of Chapter 2–LIMITATIONS, of the applicable Bombardier CRJ Series Regional Jet AFM specified in figure 1 to paragraph (g) of this AD.

**Figure 1 to paragraph (g) – AFM Revisions**

<b>MHI RJ Aviation ULC Airplane Model</b>	<b>AFM Title</b>	<b>AFM Revision</b>
CL-600-2B19	Bombardier CRJ Series Regional Jet Model CL-600-2B19 AFM, CSP A-012, Volume 1	Revision 71A, dated April 26, 2019
CL-600-2C10	Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) AFM, CSP B-012	Revision 26, dated March 1, 2019
CL-600-2C11	Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) AFM, CSP B-012	Revision 28, dated September 18, 2019
CL-600-2D15 and CL-600-2D24	Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and CL-600-2D15 (Series 705) AFM, CSP C-012, Volume 1	Revision 21, dated March 29, 2019
CL-600-2E25	Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) AFM, CSP D-012	Revision 21, dated February 15, 2019

**(h) 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 Transport Canada Civil Aviation (TCCA); or MHI RJ Aviation ULC's TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

**(i) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian AD CF-2019-40, dated November 1, 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-2020-0206.

(2) For more information about this AD, contact Siddeeq Bacchus, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600

Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7362; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

**(j) 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) Section 02-09–Navigation System Limitations, of Chapter 2–LIMITATIONS, of the Bombardier CRJ Series Regional Jet Model CL-600-2B19 Airplane Flight Manual, CSP A-012, Volume 1, Revision 71A, dated April 26, 2019.

(ii) Section 02-09–Navigation System Limitations, of Chapter 2–LIMITATIONS, of the Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) Airplane Flight Manual, CSP B-012, Revision 26, dated March 1, 2019.

Note 1 to paragraph (j)(2)(ii): Page 02-09-1 of this document is identified as Revision 22, dated September 15, 2017.

(iii) Section 02-09–Navigation System Limitations, of Chapter 2–LIMITATIONS, of the Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) Airplane Flight Manual, CSP B-012, Revision 28, dated September 18, 2019.

Note 2 to paragraph (j)(2)(iii): Page 02-09-1 of this document is identified as Revision 22, dated September 15, 2017.

(iv) Section 02-09–Navigation System Limitations, of Chapter 2–LIMITATIONS, of the Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and CL-600-2D15 (Series 705) Airplane Flight Manual, CSP C-012, Volume 1, Revision 21, dated March 29, 2019.

Note 3 to paragraph (j)(2)(iv): Page 02-09-1 of this document is identified as Revision 17, dated October 13, 2017.

(v) Section 02-09–Navigation System Limitations, of Chapter 2–LIMITATIONS, of the Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) Airplane Flight Manual, CSP D-012, Revision 21, dated February 15, 2019.

Note 4 to paragraph (j)(2)(v): Page 02-09-1 of this document is identified as Revision 17, dated June 16, 2017.

(3) For service information identified in this AD, contact MHI RJ Aviation ULC, 12655 Henri-Fabre Blvd., Mirabel, Québec J7N 1E1 Canada; Widebody Customer Response Center North America toll-free telephone +1-844-272-2720 or direct-dial telephone +1-514-855-8500; fax +1-514-855-8501; email thd.crj@mhirj.com; internet <https://mhirj.com>.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety 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](mailto:fedreg.legal@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.



Issued on August 14, 2020.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

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