



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2021-0098; Project Identifier MCAI-2020-01121-T]

RIN 2120-AA64

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

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to supersede Airworthiness Directive (AD) 2019-22-07, which applies to all MHI RJ Aviation ULC Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, Model CL-600-2D24 (Regional Jet Series 900) airplanes, and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. AD 2019-22-07 requires revising the existing airplane flight manual (AFM) to include a limitation and an abnormal operating procedure for the Automatic Flight Control System (AFCS). Since the FAA issued AD 2019-22-07, it was found that the limitation and abnormal operating procedure did not include reference to a certain mode. This proposed AD would require revising the existing AFM and adding airplanes to the applicability. The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For MHI RJ Aviation ULC service information identified in this NPRM, 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.

### **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-2021-0098; 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 NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

**FOR FURTHER INFORMATION CONTACT:** Steven Dzierzynski, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7367; email [9-avs-nyaco-cos@faa.gov](mailto:9-avs-nyaco-cos@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0098; Project Identifier MCAI-2020-01121-T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this proposed AD.

### **Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Steven Dzierzynski, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone

516-228-7367; email 9-avs-nyaco-cos@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

### **Discussion**

The FAA issued AD 2019-22-07, Amendment 39-19786 (85 FR 439, January 6, 2020) (AD 2019-22-07), for all MHI RJ Aviation ULC Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, Model CL-600-2D24 (Regional Jet Series 900) airplanes, and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. AD 2019-22-07 requires revising the existing AFM to include a limitation and an abnormal operating procedure for the AFCS. AD 2019-22-07 resulted from a report that during AFCS ALTS CAP or (V) ALTS CAP mode, the flight guidance/autopilot does not account for engine failure while capturing an altitude. The FAA issued AD 2019-22-07 to address an engine failure, if it occurs during or before a climb while in ALTS CAP or (V) ALTS CAP mode, which may cause the airspeed to drop significantly below the safe operating speed, possibly resulting in reduced control of the airplane.

### **Actions Since AD 2019-22-07 was Issued**

Since the FAA issued AD 2019-22-07, it was found that the limitation and abnormal operating procedure did not include reference to (V) ALTV CAP mode. It was also found that the MHI RJ Aviation ULC Model CL-600-2C11 (Regional Jet Series 550) airplanes are also affected by the same unsafe condition.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2018-32R1, dated August 7, 2020 (also referred to after this as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition 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. 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-2021-0098.

This proposed AD was prompted by a report that found that the limitation and abnormal operating procedure did not include reference to (V) ALTV CAP mode (Model CL-600-2B19 airplanes do not have (V) ALTS CAP or (V) ALTV CAP mode). The risk of the unsafe condition also exists during (V) ALTV CAP mode. The FAA is proposing this AD to address an engine failure, if it occurs during or before a climb while in ALTS CAP, (V) ALTS CAP, or (V) ALTV CAP mode, as applicable, which may cause the airspeed to drop significantly below the safe operating speed, possibly resulting in reduced control of the airplane. See the MCAI for additional background information.

#### **Related Service Information under 1 CFR Part 51**

Bombardier has issued the following service information, which describes procedures for revising the existing AFM by including a limitation that specifies a warning for the AFCS and an abnormal operating procedure if an engine failure occurs during or before a climb while in ALTS CAP mode, (V) ALTS CAP mode, or (V) ALTV CAP mode, as applicable. These documents are distinct since they apply to different airplane models.

- Subject 2, “Automatic Flight Control System (AFCS),” of Section 02-08, “System Limitations,” of Chapter 2, “LIMITATIONS”; and Subject 1.C, “Engine Failure in Climb During ALTS CAP,” of Section 05-02, “IN-FLIGHT ENGINE FAILURES,” of Chapter 5, “ABNORMAL PROCEDURES”; of the Bombardier CRJ Series Regional Jet Model CL-600-2B19 AFM, CSP A-012, Volume 1, Revision 73, dated January 3, 2020.

- Subject 2,” Automatic Flight Control System (AFCS),” of Section 02-08, “System Limitations,” of Chapter 2, “LIMITATIONS”; and Subject 1.C, “Engine Failure in Climb During ALTS CAP,” and Subject 1.D, “Engine Failure in Climb During (V) ALTS CAP or (V) ALTV CAP,” of Section 05-02, “IN-FLIGHT ENGINE FAILURES,” of Chapter 5, “ABNORMAL PROCEDURES”; of the Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) AFM CSP B-012, Revision 31, dated May 8, 2020.

- Subject 2, “Automatic Flight Control System (AFCS),” of Section 02-08, “System Limitations,” of Chapter 2, “LIMITATIONS”; and Subject 1.C, “Engine Failure in Climb During ALTS CAP,” and Subject 1.D, “Engine Failure in Climb During (V) ALTS CAP or (V) ALTV CAP,” of Section 05-02, “IN-FLIGHT ENGINE FAILURES,” of Chapter 5, “ABNORMAL PROCEDURES”; of the Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and CL-600-2D15 (Series 705) AFM, CSP C-012, Volume 1, Revision 24, dated March 27, 2020.

- Subject 2, “Automatic Flight Control System (AFCS),” of Section 02-08, “System Limitations,” of Chapter 2, “LIMITATIONS”; and Subject 1.C, “Engine Failure in Climb During ALTS CAP,” and Subject 1.D, “Engine Failure in Climb During (V) ALTS CAP or (V) ALTV CAP,” of Section 05-02, “IN-FLIGHT ENGINE FAILURES,” of Chapter 5, “ABNORMAL PROCEDURES”; of the Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) AFM CSP D-012, Revision 23, dated February 14, 2020.

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.

## **FAA’s Determination**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to the FAA’s bilateral agreement with the State of Design Authority, the FAA has been notified of the unsafe condition described in the MCAI and service information referenced above. The FAA is proposing this AD because the FAA evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

## **Proposed Requirements of this NPRM**

This proposed AD would retain none of the requirements of AD 2019-22-07. This proposed AD would require revising the existing AFM to include reference to (V) ALTV CAP mode, as applicable, in the limitation and an abnormal operating procedure for the AFCS.

## **Costs of Compliance**

The FAA estimates that this proposed AD affects 992 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

### **Estimated costs for required actions**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
New proposed actions	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$84,320

## **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**

The FAA has determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would 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.

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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 (AD) 2019-22-07, Amendment 39-19786 (85 FR 439, January 6, 2020), and

b. Adding the following new AD:

**MHI RJ Aviation ULC (Type Certificate Previously Held by Bombardier, Inc.):**

Docket No. FAA-2021-0098; Project Identifier MCAI-2020-01121-T.

**(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) action by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD replaces AD 2019-22-07, Amendment 39-19786 (85 FR 439, January 6, 2020) (AD 2019-22-07).

**(c) Applicability**

This AD applies to the MHI RJ Aviation ULC airplanes identified in paragraphs (c)(1) through (6) of this AD, certificated in any category, all manufacturer serial numbers.

(1) Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes.

(2) Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes.

(3) Model CL-600-2C11 (Regional Jet Series 550) airplanes.

(4) Model CL-600-2D15 (Regional Jet Series 705) airplanes.

(5) Model CL-600-2D24 (Regional Jet Series 900) airplanes.

(6) Model CL-600-2E25 (Regional Jet Series 1000) airplanes.

**(d) Subject**

Air Transport Association (ATA) of America Code 22, Auto Flight.

**(e) Reason**

This AD was prompted by a report that during the Automatic Flight Control System (AFCS) ALTS CAP, (V) ALTS CAP, or (V) ALTV CAP mode, the flight guidance/autopilot does not account for engine failure while capturing an altitude. The FAA is issuing this AD to address an engine failure, if it occurs during or before a climb while in ALTS CAP, (V) ALTS CAP, or (V) ALTV CAP mode, which may cause the airspeed to drop significantly below the safe operating speed, possibly resulting in reduced control of the airplane.

**(f) Compliance**

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

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

Within 60 days after the effective date of this AD: Revise the existing AFM to include the information in Subject 2, “Automatic Flight Control System (AFCS),” of Section 02-08, “System Limitations,” of Chapter 2, “LIMITATIONS”; and Subject 1.C, “Engine Failure in Climb During ALTS CAP,” or Subject 1.D, “Engine Failure in Climb During (V) ALTS CAP or (V) ALTV CAP,” of Section 05-02, “IN-FLIGHT ENGINE FAILURES,” of Chapter 5, “ABNORMAL PROCEDURES”; as applicable; of the applicable AFM identified in figure 1 to paragraph (g) of this AD.

**Figure 1 to paragraph (g) - AFM Revision**

<b>Bombardier Airplane Model</b>	<b>Bombardier AFM</b>	<b>AFM Revision</b>
CL-600-2B19	Bombardier CRJ Series Regional Jet Model CL-600-2B19 CSP A-012, Volume 1	Revision 73, dated January 3, 2020
CL-600-2C10 CL-600-2C11	Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) CSP B-012	Revision 31, dated May 8, 2020
CL-600-2D15 CL-600-2D24	Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and CL-600-2D15 (Series 705) CSP C-012, Volume 1	Revision 24, dated March 27, 2020
CL-600-2E25	Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) CSP D-012	Revision 23, dated February 14, 2020

**(h) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD, using the applicable AFM specified in figure 2 to paragraph (h) of this AD.

**Figure 2 to paragraph (h) - Credit for Previous AFM Revision**

<b>Bombardier Airplane Model</b>	<b>Bombardier AFM</b>	<b>CRJ Series Regional Jet AFM Revision</b>
CL-600-2B19	Bombardier CRJ Series Regional Jet Model CL-600-2B19 CSP A-012, Volume 1	Revision 70, dated July 13, 2018; or Revision 68, dated August 4, 2017
CL-600-2C10 CL-600-2C11	Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) CSP B-012	Revision 29, dated September 20, 2019
CL-600-2D15 CL-600-2D24	Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and CL-600-2D15 (Series 705) CSP C-012, Volume 1	Revision 22, June 7, 2019
CL-600-2E25	Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) CSP D-012	Revision 22, dated September 6, 2019

**(i) Other FAA AD Provisions**

(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 responsible Flight Standards 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 responsible Flight Standards 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.

**(j) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA AD CF-2018-32R1, dated August 7, 2020, 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-2021-0098.

(2) For more information about this AD, contact Steven Dzierzynski, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7367; email 9-avs-nyaco-cos@faa.gov.

(3) For MHI RJ Aviation ULC 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](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.

Issued on February 12, 2021.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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