[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0398; Project Identifier MCAI-2020-00881-T; Amendment 39-22085; AD 2022-12-13]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc., 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 Bombardier, Inc., Model CL-600-1A11 (600), CL-600-2A12 (601), and CL-600-2B16 (601-3A and 601-3R Variants) airplanes. This AD was prompted by reports that during certain operating modes, the flight guidance/autopilot does not account for engine failure while capturing an altitude. This AD requires revising the existing airplane flight manual (AFM) to provide the flightcrew with a new limitation and procedure for operation during certain flight modes. 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 certain publications 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 Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval,

Québec H4S 1Y9, Canada; telephone 514-855-2999; email ac.yul@aero.bombardier.com; Internet bombardier.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 regulations.gov by searching for and locating Docket No. FAA-2022-0398.

Examining the AD Docket

You may examine the AD docket on the Internet at regulations.gov by searching for and locating Docket No. FAA-2022-0398; 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 mandatory continuing airworthiness information (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.

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.

SUPPLEMENTARY INFORMATION:

Background

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2020-02, dated February 13, 2020 (TCCA AD CF-2020-02), to correct an unsafe condition for certain Bombardier, Inc., Model CL-600-1A11 (600), CL-600-2A12 (601), and CL-600-2B16 (601-3A, 601-3R, and 604 Variants) airplanes.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc., Model CL-600-1A11 (600), CL-600-2A12 (601), and CL-600-2B16 (601-3A, 601-3R, and 604 Variants) airplanes. The NPRM published in the *Federal Register* on April 11, 2022 (87 FR 21037). The NPRM was prompted by reports that during certain operating modes, the flight guidance/autopilot does not account for engine failure while capturing an altitude. The NPRM proposed to require revising the existing AFM to provide the flightcrew with a new limitation and procedure for operation during certain flight modes. The FAA is issuing this AD to address a possible engine failure during or before a climb while in ALTSEL, ASEL or ALTS CAP mode, which could cause the airspeed to drop significantly below the safe operating speed. Prompt crew intervention may be required to maintain a safe operating speed.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the cost to the public.

Change to the Applicability

Since the FAA issued the NPRM, TCCA revised AD CF-2020-02 and issued TCCA AD CF-2020-02R1, dated August 11, 2022 (TCCA AD CF-2020-02R1) (also referred to as the MCAI). TCCA stated the applicability was revised to remove Model CL-600-2B16 (604 Variants) as it was determined that these airplanes do not utilize ALTSEL, ASEL and ALTS CAP modes in their configurations. TCCA also stated that the AFM references for these airplanes were removed from the TCCA AD. You may examine the MCAI in the AD docket on the Internet at regulations.gov by searching for and locating Docket No. FAA-2022-0398.

The FAA concurs with the change to the applicability because Model CL-600-

2B16 (604 Variants) airplanes are not affected by the identified unsafe condition. The FAA has revised the applicability of this AD accordingly. The FAA has also removed the AFM references for these airplanes from this final rule and revised the Costs of Compliance paragraph in this final rule to specify there are 123 affected U.S. airplanes.

Conclusion

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes and the changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products.

Related Service Information under 1 CFR Part 51

Bombardier has issued the following service information. This service information contains a new AFM limitation and procedure for operation during certain flight modes. These documents are distinct since they apply to different airplane configurations. These configurations may include the presence or absence of winglets, incorporation of service bulletin 601-0300 which introduces an airspeed limitation placard, and the type of engine installed on the airplane.

- Automatic Flight Control System, Systems Limitations, Limitations, Bombardier Canadair Challenger Model CL-600-2A12, AFM, Product Support Publication (PSP) No. 601-1B-1, Revision 85, dated June 16, 2021.

- Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures, Bombardier Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1B-1, Revision 85, dated June 16, 2021.

- Automatic Flight Control System, Systems Limitations, Limitations, Bombardier Canadair Challenger Model CL-600-2B16, AFM, PSP No. 601A-1-1, Revision 96, dated June 16, 2021.

- Engine Failure in Climb During ASEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures, Bombardier Canadair Challenger Model CL-600-2B16, AFM, PSP No. 601A-1-1, Revision 96, dated June 16, 2021.

- Automatic Flight Control System, Systems Limitations, Limitations, Canadair Challenger Model CL-600-1A11, AFM, Product Publication No. 600, Revision A115, dated June 16, 2021.

- Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Normal Procedures, Canadair Challenger Model CL-600-1A11, AFM, Product Publication No. 600, Revision A115, dated June 16, 2021.

- Automatic Flight Control System, Systems Limitations, Limitations, Canadair Challenger Model CL-600-1A11, AFM, PSP No. 600-1, Revision 107, dated June 16, 2021.

- Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures, Canadair Challenger Model CL-600-1A11, AFM, PSP No. 600-1, Revision 107, dated June 16, 2021.

- Automatic Flight Control System, Systems Limitations, Limitations, Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1A, Revision 129, dated June 16, 2021.

- Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures, Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1A, Revision 129, dated June 16, 2021.

- Automatic Flight Control System, Systems Limitations, Limitations, Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1A-1, Revision 83, dated June 16, 2021.

- Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures, Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1A-1, Revision 83, dated June 16, 2021.

- Automatic Flight Control System Systems Limitations, Limitations, Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1B, Revision 87, dated June 16, 2021.

- Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures, Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1B, Revision 87, dated June 16, 2021.

- Automatic Flight Control System, Systems Limitations, Limitations, Canadair Challenger Model CL-600-2B16, AFM, PSP No. 601A-1, Revision 107, dated June 16, 2021.

- Engine Failure in Climb During ASEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures, Canadair Challenger Model CL-600-2B16, AFM, PSP No. 601A-1, Revision 107, dated June 16, 2021.

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 123 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 X $85 per hour = $85	$0	$85	$10,455

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.

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:

2022-12-13 Bombardier, Inc.: Amendment 39-22085; Docket No. FAA-2022-0398; Project Identifier MCAI-2020-00881-T.

(a) Effective Date

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

(b) Affected Airworthiness Directives (ADs)

None.

(c) Applicability

This AD applies to the Bombardier, Inc., airplanes, certificated in any category, identified in paragraphs (c)(1) through (3) of this AD.

(1) Model CL-600-1A11 (600), serial numbers 1001 through 1085 inclusive.

(2) Model CL-600-2A12 (601), serial numbers 3001 through 3066 inclusive.

(3) Model CL-600-2B16 (601-3A and 601-3R Variants), serial numbers 5001 through 5194 inclusive.

(d) Subject

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

(e) Reason

This AD was prompted by reports that during certain operating modes, the flight guidance/autopilot does not account for engine failure while capturing an altitude. The FAA is issuing this AD to address a possible engine failure during or before a climb while in ALTSEL, ASEL or ALTS CAP mode, which could cause the airspeed to drop

significantly below the safe operating speed. Prompt crew intervention may be required to maintain a safe operating speed.

(f) Compliance

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

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

Within 30 days after the effective date of this AD: Revise the existing AFM to incorporate the information specified in the limitation and procedure specified in the applicable AFM specified in figure 1 to paragraph (g) of this AD.

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

Airplane Serial Numbers	New Limitation and Procedure	AFM	Revision
Model CL-600-1A11 (600 variant), serial numbers 1001 through 1085 for non-winglets	Automatic Flight Control System, Systems Limitations, Limitations; and Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Normal Procedures	Canadair Challenger Model CL-600-1A11, AFM, Product Publication No. 600	Revision A115, dated June 16, 2021
Model CL-600-1A11 (600 variant), serial numbers 1001 through 1085 for winglets	Automatic Flight Control System, Systems Limitations, Limitations; and Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures	Canadair Challenger Model CL-600-1A11, AFM, Product Support Publication (PSP) No. 600-1	Revision 107, dated June 16, 2021
Model CL-600-2A12 (601 variant), serial numbers 3001 through 3066	Automatic Flight Control System, Systems Limitations, Limitations; and Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures	Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1A	Revision 129, dated June 16, 2021
Model CL-600-2A12 (601 variant), serial numbers 3001	Automatic Flight Control System, Systems Limitations, Limitations; and Engine Failure in	Bombardier Canadair Challenger Model CL-600-2A12,	Revision 83, dated June 16, 2021

Airplane Serial Numbers	New Limitation and Procedure	AFM	Revision
through 3066 with Service Bulletin (SB) 601-0360 incorporated	Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures	AFM, PSP No. 601-1A-1	
Model CL-600-2A12 (601 variant), serial numbers 3001 through 3066 with -3A engine	Automatic Flight Control System, Systems Limitations, Limitations; and Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures	Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1B	Revision 87, dated June 16, 2021
Model CL-600-2A12, serial numbers 3001 through 3066 with -3A engine and SB 601-0360 incorporated	Automatic Flight Control System, Systems Limitations, Limitations; and Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures	Bombardier Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1B-1	Revision 85, dated June 16, 2021
Model CL-600-2B16 (601-3A/3R variant), serial numbers 5001 through 5194	Automatic Flight Control System, Systems Limitations, Limitations; and Engine Failure in Climb During ASEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures	Canadair Challenger Model CL-600-2B16, AFM, PSP No. 601A-1	Revision 107, dated June 16, 2021
Model CL-600-2B16 (601-3A/3R variant), serial numbers 5001 through 5194 with SB 601-0360 incorporated	Automatic Flight Control System, Systems Limitations, Limitations; and Engine Failure in Climb During ASEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures	Bombardier Canadair Challenger Model CL-600-2B16, AFM, PSP No. 601A-1-1	Revision 96, dated June 16, 2021

(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 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. 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 Bombardier, Inc.'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) TCCA AD CF-2020-02R1, dated August 11, 2022, for related information. This MCAI may be found in the AD docket on the Internet at regulations.gov by searching for and locating Docket No. FAA-2022-0398.

(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.

(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) Automatic Flight Control System, Systems Limitations, Limitations, Bombardier Canadair Challenger Model CL-600-2A12, Airplane Flight Manual (AFM), Product Support Publication (PSP) No. 601-1B-1, Revision 85, dated June 16, 2021.

(ii) Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures, Bombardier Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1B-1, Revision 85, dated June 16, 2021.

(iii) Automatic Flight Control System, Systems Limitations, Limitations, Bombardier Canadair Challenger Model CL-600-2B16, AFM, PSP No. 601A-1-1, Revision 96, dated June 16, 2021.

(iv) Engine Failure in Climb During ASEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures, Bombardier Canadair Challenger Model CL-600-2B16, AFM, PSP No. 601A-1-1, Revision 96, dated June16, 2021.

(v) Automatic Flight Control System, Systems Limitations, Limitations, Canadair Challenger Model CL-600-1A11, AFM, Product Publication No. 600, Revision A115, dated June 16, 2021.

(vi) Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Normal Procedures, Canadair Challenger Model CL-600-1A11, AFM, Product Publication No. 600, Revision A115, dated June 16, 2021.

(vii) Automatic Flight Control System, Systems Limitations, Limitations, Canadair Challenger Model CL-600-1A11, AFM, PSP No. 600-1, Revision 107, dated June 16, 2021.

(viii) Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures, Canadair Challenger Model CL-600-1A11, AFM, PSP No. 600-1, Revision 107, dated June 16, 2021.

(ix) Automatic Flight Control System, Systems Limitations, Limitations, Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1A, Revision 129, dated June 16, 2021.

Note 1 to paragraph (ix): The page date for page i of the Limitations Contents specified in the List of Effective Pages of the Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1A, Revision 129, dated June 16, 2021, is incorrect; the correct page date is April 16, 2020.

(x) Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures, Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1A, Revision 129, dated June 16, 2021.

(xi) Automatic Flight Control System, Systems Limitations, Limitations, Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1A-1, Revision 83, dated June 16, 2021.

Note 2 to paragraph (xi): The page date for page i of the Limitations Contents specified in the List of Effective Pages of the Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1A-1, Revision 83, dated June 16, 2021, is incorrect; the correct page date is April 16, 2020.

(xii) Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures, Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1A-1, Revision 83, dated June 16, 2021.

(xiii) Automatic Flight Control System, Systems Limitations, Limitations, Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1B, Revision 87, dated June 16, 2021.

Note 3 to paragraph (xiii): Page iii of the Limitations Contents specified in the List of Effective Pages of the Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1B, Revision 87, dated June 16, 2021, does not exist.

(xiv) Engine Failure in Climb During ALTSEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures, Canadair Challenger Model CL-600-2A12, AFM, PSP No. 601-1B, Revision 87, dated June 16, 2021.

(xv) Automatic Flight Control System, Systems Limitations, Limitations, Canadair Challenger Model CL-600-2B16, AFM, PSP No. 601A-1, Revision 107, dated June 16, 2021.

(xvi) Engine Failure in Climb During ASEL, Airplane Handling Procedures Following Engine Failure, Abnormal Procedures, Canadair Challenger Model CL-600-2B16, AFM, PSP No. 601A-1, Revision 107, dated June 16, 2021.

(3) For service information identified in this AD, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email ac.yul@aero.bombardier.com; Internet bombardier.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 fr.inspection@nara.gov, or go to: archives.gov/federal-register/cfr/ibr-locations.html.

Issued on August 16, 2022.

Christina Underwood, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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