Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations* or email *fr.inspection@nara.gov*.

Issued on February 25, 2025.

Suzanne Masterson,

Deputy Director, Integrated Certificate Management Division, Aircraft Certification Service.

[FR Doc. 2025–03395 Filed 3–3–25; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2024–2424; Project Identifier AD–2024–00416–E; Amendment 39–22970; AD 2025–04–12]

RIN 2120–AA64

Airworthiness Directives; CFM International, S.A. Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain CFM International, S.A. (CFM) Model LEAP–1A, LEAP–1B, and LEAP–1C engines. This AD was prompted by a manufacturer investigation that revealed a quality escape for low-pressure turbine (LPT) disks made from forgings with nonconforming grain size. This AD requires removal and replacement of the LPT stage 4 and stage 5 disks. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective April 8, 2025.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of April 8, 2025.

ADDRESSES:

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA–2024–2424; 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.

Material Incorporated by Reference:

- For CFM material identified in this AD, contact CFM, GE Aviation Fleet Support, 1 Neumann Way, M/D Room 285, Cincinnati, OH 45215; phone: (877) 432–3272; email: *aviation.fleetsupport@ge.com*.
- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222–5110. It is also available at *regulations.gov* under Docket No. FAA–2024–2424.

FOR FURTHER INFORMATION CONTACT: Mehdi Lamnyi, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238–7743; email: *mehdi.lamnyi@faa.gov*.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain CFM Model LEAP–1A, LEAP–1B, and LEAP–1C engines. The NPRM published in the **Federal Register** on November 8, 2024 (89 FR 88681). The NPRM was prompted by a report of a quality escape on LPT disks made from forgings with nonconforming material grain size on certain CFM Model LEAP–1A and LEAP–1B engines. The supplier assessed the duplex microstructure using an arithmetic average grain size instead of considering the coarsest grain size. After a re-check of all forgings, the supplier has identified a number of parts with a coarse grain size that is below the drawing requirement. In the NPRM, the FAA proposed to require removal and replacement of the LPT stage 4 and stage 5 disks at the next piece-part exposure or before exceeding between 2,400 and 19,000 cycles since new, depending on the applicable threshold identified in CFM Service Bulletin (SB) LEAP–1A–72–00–0519–01A–930A–D, Issue 001–00, dated September 18, 2024 (CFM SB LEAP–1A–72–00–0519–01A–930A–D) or CFM SB LEAP–1B–72–00–0419–01A–930A–D Issue 001–00, dated September 18, 2024 (CFM SB LEAP–1B–72–00–0419–01A–930A–D). 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 two commenters. Commenters included Air Line Pilots Association, International and The Boeing Company. All commenters supported the NPRM without change.

Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting the 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 NPRM.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed CFM SB LEAP–1A–72–00–0519–01A–930A–D; CFM SB LEAP–1B–72–00–0419–01A–930A–D; and CFM SB LEAP–1C–72–00–0100–01A–930A–D, Issue 001–00, dated September 18, 2024. This material specifies the part numbers and serial numbers of affected LPT disks, and the cycles since new thresholds for the replacement of affected LPT disks. These documents are distinct because they apply to different engine models. This material 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 13 engines installed on airplanes of U.S. registry. The FAA estimates that 2 engines will need removal and replacement of the LEAP–1A LPT stage 5 disk; 8 engines will need removal and replacement of the LEAP–1B LPT stage 5 disk; and 3 engines will need removal and replacement of the LEAP–1B LPT stage 4 disk.

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

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Remove and replace LEAP–1A LPT stage 5 disk.	150 work-hours × $85 per hour = $12,750	$225,500	$238,250	$476,500
Remove and replace LEAP–1B LPT stage 5 disk.	150 work-hours × $85 per hour = $12,750	205,100	217,850	1,742,800
Remove and replace LEAP–1B LPT stage 4 disk.	150 work-hours × $85 per hour = $12,750	442,800	455,550	1,366,650

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(f), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2025–04–12 CFM International, S.A.: Amendment 39–22970; Docket No. FAA–2024–2424; Project Identifier AD–2024–00416–E.

(a) Effective Date

This airworthiness directive (AD) is effective April 8, 2025.

(b) Affected ADs

None.

(c) Applicability

This AD applies to the following CFM International, S.A. (CFM) Model engines:

(1) LEAP–1A23, LEAP–1A24, LEAP–1A24E1, LEAP–1A26, LEAP–1A26CJ, LEAP–1A26E1, LEAP–1A29, LEAP–1A29CJ, LEAP–1A30, LEAP–1A32, LEAP–1A33, LEAP–1A33B2, LEAP–1A35A;

(2) LEAP–1B21, LEAP–1B23, LEAP–1B25, LEAP–1B27, LEAP–1B28, LEAP–1B28B1, LEAP–1B28B2, LEAP–1B28B2C, LEAP–1B28B3, LEAP–1B28BBJ1, LEAP–1B28BBJ2; and

(3) LEAP–1C28, LEAP–1C30, and LEAP–1C30B1.

(d) Subject

Joint Aircraft System Component (JASC) Code 7250, Turbine Section.

(e) Unsafe Condition

This AD was prompted by a manufacturer investigation that revealed a quality escape for certain low-pressure turbine (LPT) disks made from forgings with nonconforming grain size. The FAA is issuing this AD to prevent the fracture and uncontained failure of certain LPT stage 4 and stage 5 disks. The unsafe condition, if not addressed, could result in uncontained part release, damage to the engine, and damage to the airplane.

(f) Compliance

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

(g) Required Actions

(1) For LEAP–1A engines with an installed LPT stage 5 disk having a part number (P/N) and serial number (S/N) listed in Table 1, Table 2, or Table 3 of CFM Service Bulletin (SB) LEAP–1A–72–00–0519–01A–930A–D, Issue 001–00, dated September 18, 2024 (CFM SB LEAP–1A–72–00–0519–01A–930A–D): At the next piece-part exposure of the LPT stage 5 disk, or before exceeding the applicable cycles since new (CSN) threshold identified in Table 1, Table 2, or Table 3 of CFM SB LEAP–1A–72–00–0519–01A–930A–D, whichever occurs first after the effective date of this AD, remove the LPT stage 5 disk from service and replace with a part eligible for installation.

(2) For LEAP–1B engines with an installed LPT stage 4 disk having a P/N and S/N listed in Table 1 of CFM SB LEAP–1B–72–00–0419–01A–930A–D, Issue 001–00, dated September 18, 2024 (CFM SB LEAP–1B–72–00–0419–01A–930A–D): At the next piece-part exposure of the LPT stage 4 disk, or before exceeding the applicable CSN threshold identified in Table 1 of CFM SB LEAP–1B–72–00–0419–01A–930A–D, whichever occurs first after the effective date of this AD, remove the LPT stage 4 disk from service and replace with a part eligible for installation.

(3) For LEAP–1B engines with an installed LPT stage 5 disk having a P/N and S/N listed in Table 2 or Table 3 of CFM SB LEAP–1B–72–00–0419–01A–930A–D: At the next piece-part exposure of the LPT stage 5 disk, or before exceeding the applicable CSN threshold identified in Table 2 or Table 3 of CFM SB LEAP–1B–72–00–0419–01A–930A–D, whichever occurs first after the effective date of this AD, remove the LPT stage 5 disk from service and replace with a part eligible for installation.

(h) Installation Prohibition

(1) After the effective date of this AD, do not install an LPT stage 5 disk that has a P/N and S/N identified in Table 1, Table 2, or Table 3, of CFM SB LEAP–1A–72–00–0519–01A–930A–D, in any LEAP–1A engine.

(2) After the effective date of this AD, do not install an LPT stage 4 disk or LPT stage 5 disk that has a P/N and S/N identified in Table 1, Table 2, or Table 3, of CFM SB LEAP–1B–72–00–0419–01A–930A–D in any LEAP–1B engine.

(3) After the effective date of this AD, do not install an LPT stage 5 disk that has a P/N and S/N identified in Table 1 of CFM SB LEAP–1C–72–00–0100–01A–930A–D, Issue 001–00, dated September 18, 2024, in any LEAP–1C engine.

(i) Definitions

For the purpose of this AD:

(1) ''LEAP–1A engines'' are CFM Model LEAP–1A23, LEAP–1A24, LEAP–1A24E1, LEAP–1A26, LEAP–1A26CJ, LEAP–1A26E1, LEAP–1A29, LEAP–1A29CJ, LEAP–1A30, LEAP–1A32, LEAP–1A33, LEAP–1A33B2, and LEAP–1A35A engines.

(2) ''LEAP–1B engines'' are CFM Model LEAP–1B21, LEAP–1B23, LEAP–1B25, LEAP–1B27, LEAP–1B28, LEAP–1B28B1, LEAP–1B28B2, LEAP–1B28B2C, LEAP–1B28B3, LEAP–1B28BBJ1, and LEAP–1B28BBJ2 engines.

(3) ''LEAP–1C engines'' are CFM Model LEAP–1C28, LEAP–1C30, and LEAP–1C30B1 engines.

(4) A ''part eligible for installation'' on a LEAP–1A engine is an LPT stage 5 disk that does not have a P/N and S/N identified in Table 1, Table 2, or Table 3 of CFM SB LEAP–1A–72–00–0519–01A–930A–D.

(5) A ''part eligible for installation'' on a LEAP–1B engine is an LPT stage 4 disk or LPT stage 5 disk that does not have a P/N and S/N identified in Table 1, Table 2, or Table 3 of CFM SB LEAP–1B–72–00–0419–01A–930A–D.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, AIR–520 Continued Operational Safety 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 AIR–520 Continued Operational Safety Branch, send it to the attention of the person identified in paragraph (k) of this AD and email to: *AMOC@faa.gov*.

(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.

(k) Additional Information

For more information about this AD, contact Mehdi Lamnyi, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238–7743; email: *mehdi.lamnyi@faa.gov*.

(l) Material Incorporated by Reference

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

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

(i) CFM Service Bulletin (SB) LEAP–1A–72–00–0519–01A–930A–D, Issue 001–00, dated September 18, 2024.

(ii) CFM SB LEAP–1B–72–00–0419–01A–930A–D, Issue 001–00, dated September 18, 2024.

(iii) CFM SB LEAP–1C–72–00–0100–01A–930A–D, Issue 001–00, dated September 18, 2024.

(3) For CFM material identified in this AD, contact CFM International, S.A., GE Aviation Fleet Support, 1 Neumann Way, M/D Room 285, Cincinnati, OH 45215; phone: (877) 432–3272; email: *aviation.fleetsupport@ge.com*.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222–5110.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations* or email *fr.inspection@nara.gov*.

Issued on February 21, 2025.

Peter A. White,

Deputy Director, Integrated Certificate Management Division, Aircraft Certification Service.

[FR Doc. 2025–03459 Filed 3–3–25; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2024–2543; Project Identifier MCAI–2024–00342–T; Amendment 39–22969; AD 2025–04–11]

RIN 2120–AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Bombardier, Inc., Model BD–700–2A12 airplanes. This AD was prompted by the discovery that a partial loss of thrust after an engine failure during a required navigation performance authorization required (RNP–AR) approach under certain weight, altitude and temperature (WAT) conditions, may lead to a descent below the specified path guidance. This AD requires a revision to the existing airplane flight manual (AFM), to incorporate updated WAT tables for RNP–AR approach operations. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective April 8, 2025.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of April 8, 2025.

ADDRESSES:

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA–2024–2543; 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.

Material Incorporated by Reference:

- For Bombardier material 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;* website *bombardier.com.*
- You may view this material 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 at *regulations.gov* under Docket No. FAA–2024–2543.

FOR FURTHER INFORMATION CONTACT: Joseph Catanzaro, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 516–228–7300; email: *9-avs-nyaco-cos@faa.gov*.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Bombardier, Inc., Model BD–700–2A12 airplanes. The NPRM published in the **Federal Register** on November 27, 2024 (89 FR 93528). The NPRM was prompted by AD CF–2024–22, dated June 13, 2024, issued by Transport Canada, which is the aviation authority for Canada (referred to after this as the MCAI). The MCAI states it was discovered that a partial loss of thrust after an engine failure during an RNP–AR approach under certain WAT conditions, may lead to a descent below 75 feet of the path guidance, requiring a go-around. The resultant vertical deviation may exceed allowable approach containment for obstacle clearance and may largely reduce the safety margins in the missed approach.

In the NPRM, the FAA proposed to require a revision to the existing AFM, to incorporate updated WAT tables for RNP–AR approach operations that contain possible vertical deviations within the 75-foot requirement. The FAA is issuing this AD to address the unsafe condition on these products.