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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-0902; Project Identifier AD-2020-01174-E; Amendment 39-21273; AD 2020-20-17]

RIN 2120-AA64

Airworthiness Directives; General Electric Company Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all General Electric Company GE90-110B1 and GE90-115B model turbofan engines. This AD was prompted by an in-service occurrence of loss of engine thrust control resulting in uncommanded high thrust. This AD prohibits dispatch of an airplane if certain status messages are displayed on the engine indicating and crew alerting system (EICAS) and if certain conditions are present per the manufacturer's service information. As a terminating action, this AD requires revision of the existing FAA-approved minimum equipment list (MEL) by incorporating into the MEL the dispatch restrictions listed in this AD. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective October 23, 2020.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 23, 2020.

The FAA must receive comments on this AD by November 23, 2020.

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: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this final rule, contact General Electric Company, 1 Neumann Way, Cincinnati, OH 45215; phone: 513-552-3272; email: aviation.fleetsupport@ge.com; website: www.ge.com. You may view this service information 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 781-238-7759. It is also available on the internet at https://www.regulations.gov by searching for and locating Docket No. FAA-2020-0902.

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-2020-0902; 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 street address for the Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Stephen Elwin, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7236; fax: 781-238-7199; email: stephen.l.elwin@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA received a report from the manufacturer of an in-service loss of engine thrust control that occurred on October 27, 2019, resulting in uncommanded high thrust. Analysis by the manufacturer found accumulated thermal cycles of the MN4 integrated circuit in the full authority digital engine control (FADEC) through normal operation causes the solder ball joints to wear out and eventually fail over time. The failure was preceded by an inbound FADEC EICAS “ENG EEC C1” status message one flight before the in-service occurrence. This condition, if not addressed, could result in loss of engine thrust control and reduced control of the airplane. The FAA is issuing this AD to address the unsafe condition on these products.

FAA's Determination

The FAA is issuing this AD because the agency evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Related Service Information Under 1 CFR Part 51

The FAA reviewed GE GE90-100 Service Bulletin (SB) 73-0117, R01, dated August 5, 2020. The SB describes procedures for checking for an inbound FADEC EICAS “ENG EEC C1” status message and corresponding conditions. 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.

AD Requirements

This AD prohibits dispatch of the airplane if certain status messages are displayed on the EICAS and if certain conditions are present per the manufacturer's service information. As a terminating action, this AD requires, within 120 days of the effective date of this AD, revision of the existing

FAA-approved MEL by incorporating into the MEL the dispatch restrictions listed in paragraph (g) of this AD.

Interim Action

The FAA considers this AD interim action. The manufacturer is still reviewing the unsafe condition and the FAA will consider further rulemaking.

Justification for Immediate Adoption and Determination of the Effective Date

Section 553(b)(3)(B) of the Administrative Procedure Act (APA) (5 U.S.C.) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for "good cause," finds that those procedures are "impracticable, unnecessary, or contrary to the public interest." Under this section, an agency, upon finding good cause, may issue a final rule without seeking comment prior to issuance. Further, Section 553(d) of the APA authorizes agencies to make rules effective in less than 30 days, upon a finding of good cause.

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies foregoing notice and comment prior to adoption of this rule. On October 27, 2019, a Boeing Company Model 777-300 airplane powered by GE GE90-115B model turbofan engines experienced an unresponsive throttle for 11.5 minutes during descent into Abu Dhabi International Airport. The pilot regained throttle control of the engine while at an altitude over 15,000 feet, continued the descent to the airport, and landed without further incident. The investigation by the manufacturer discovered that cracking of the MN4 integrated circuit solder ball caused one of the FADEC channels to read an erroneous thrust lever resolver angle value which, once selected, caused an erroneously high thrust command. The manufacturer issued service information in August 2020 that provides procedures for status message checks of the FADEC required by this AD.

The FAA considers the failure of the MN4 integrated circuit in the FADEC an urgent safety issue, requiring immediate review of FADEC EICAS status messages and possible prohibition of departure of the airplane.

Accordingly, notice and opportunity for prior public comment are impracticable and contrary to public interest pursuant to 5 U.S.C. 553(b)(3)(B).

In addition, the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) for making this amendment effective in less than 30 days.

Comments Invited

The FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2020-0902 and Project Identifier AD-2020-01174-E at the beginning of your comments. The most helpful comments reference a specific portion of the final rule, 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 this final rule 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 FAA will also post a report summarizing each substantive verbal contact received about this final rule.

Confidential Business Information

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 AD 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 AD, 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 AD. Submissions containing CBI should be sent to Stephen Elwin, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Regulatory Flexibility Act

The requirements of the Regulatory Flexibility Act (RFA) do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without notice and comment, RFA analysis is not required.

Costs of Compliance

The FAA estimates that this AD affects 206 engines installed on airplanes of U.S. registry.

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
Revise the existing MEL	1 work-hour × $85 per hour = $85	$0	$85	$17,510

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, and

(2) Will not affect intrastate aviation in Alaska.

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 (AD):

2020-20-17 General Electric Company: Amendment 39-21273; Docket No. FAA-2020-0902; Project Identifier AD-2020-01174-E.

(a) Effective Date

This AD is effective October 23, 2020.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all General Electric Company GE90-110B1 and GE90-115B model turbofan engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 7600, Engine Controls.

(e) Unsafe Condition

This AD was prompted by an in-service occurrence of loss of engine thrust control resulting in uncommanded high thrust. The FAA is issuing this AD to prevent dispatch of the airplane when certain faults caused by degradation of the MN4 integrated circuit in the full authority digital engine control (FADEC) are displayed and certain FADEC conditions are present. The unsafe condition, if not addressed, could result in loss of engine thrust control and reduced control of the airplane.

(f) Compliance

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

(g) Required Actions

After the effective date of this AD, notwithstanding the provisions of the operator's minimum equipment list (MEL), dispatch of an airplane is prohibited if the engine indicating and crew alerting system (EICAS) displays the status message “ENG EEC C1 L” or “ENG EEC C1 R” and any condition is present that is listed in the Accomplishment Instructions, paragraphs 3.A.(2)(f), 3.A.3(a), or 3.A.(4) of GE GE90-100 Service Bulletin (SB) 73-0117 R01, dated August 5, 2020.

(h) Terminating Action

As terminating action for the requirements of paragraph (g) of this AD, within 120 days of the effective date of this AD, revise the existing FAA-approved MEL by incorporating into the MEL the

dispatch restrictions listed in paragraph (g) of this AD as a required operation or maintenance procedure. Specific alternative MEL wording to accomplish the actions specified in paragraph (g) of this AD can be approved by the operator's principal operations or maintenance inspector.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO 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 the attention of the person identified in paragraph (j) of this AD. You may email your request to: ANE-AD-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.

(j) Related Information

For more information about this AD, contact Stephen Elwin, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7236; fax: 781-238-7199; email: stephen.l.elwin@faa.gov.

(k) 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 the AD specifies otherwise.

(i) General Electric Company (GE) GE90-100 Service Bulletin 73-0117 R01, dated August 5, 2020.

(ii) [Reserved]

(3) For GE service information identified in this AD, contact General Electric Company, 1 Neumann Way, Cincinnati, OH 45215; phone: 513-552-3272; email: aviation.fleetsupport@ge.com; website: www.ge.com.

(4) You may view this service information at 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 781-238-7759.

(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, or go to: https://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on September 25, 2020.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

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