[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA- 2015-0165; Directorate Identifier 2015-NE-02-AD]

RIN 2120-AA64

Airworthiness Directives; General Electric Company Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede airworthiness directive (AD) 2015-15-03, which applies to all General Electric Company (GE) GEnx turbofan engine models. AD 2015-15-03 precludes the use of certain full authority digital engine control (FADEC) software on GEnx turbofan engines. Since we issued AD 2015-15-03, GE implemented final design changes that remove the unsafe condition. This proposed AD would require removing a specific part and replacing it with a part eligible for installation and specifying the FADEC software version for the affected GEnx turbofan engines. We are proposing this AD to prevent engine failure, loss of thrust control, and damage to the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 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 http://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 service information identified in this NPRM, contact General Electric Company, GE Aviation, Room 285, 1 Neumann Way, Cincinnati, OH 45215; phone: 513-552-3272; email: geae.aoc@ge.com. You may view this service information at the FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2015-0165; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Christopher McGuire, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7120; fax: 781-238-7199; email: chris.mcguire@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section.

Include “Docket No. FAA-2015-0165; Directorate Identifier 2015-NE-02-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM because of those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

Discussion

On July 13, 2015, we issued AD 2015-15-03, Amendment 39-18212 (80 FR 42707, July 20, 2015), (“AD 2015-15-03”), for all GE GEnx-1B turbofan engines with FADEC software, version B175 or earlier, installed, and all GE GEnx-2B turbofan engines with FADEC software, version C065 or earlier, installed. AD 2015-15-03 precludes the use of FADEC software, version B175 or earlier, in GEnx-1B engines, and the use of FADEC software, version C065 or earlier, in GEnx-2B engines. AD 2015-15-03 resulted from engine power loss due to ice crystal icing conditions. We issued AD 2015-15-03 to prevent engine failure, loss of thrust control, and damage to the airplane.

Actions Since AD 2015-15-03 Was Issued

Since we issued AD 2015-15-03, GE implemented final design changes that remove the unsafe condition.

Related Service Information

We reviewed GE GEnx-2B Service Bulletin (SB) 72-0241 R00, dated March 16, 2016 that describes removal and installation procedures for fan hub stator assembly booster outlet guide vane (BOGV); GE GEnx-2B SB 73-0041 R00, dated July 2, 2015 that describes reprograming procedures for electronic engine control (EEC) software

version C075; and GE GEnx-1B SB 73-0044 R00, dated July 1, 2015 that describes reprograming procedures for EEC software version B185.

FAA's Determination

We are proposing this AD because we 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.

Proposed AD Requirements

This NPRM would require removing from service the GEnx-2B fan hub stator assembly BOGV, P/N B1316-00720, and replacing with a part eligible for installation. This NPRM would also specify the FADEC software version for GEnx-1B and GEnx-2B engines.

Costs of Compliance

We estimate that this proposed AD affects 130 engines installed on airplanes of U.S. registry. We estimate that it would take about 1 hour per engine to comply with the software installation proposed by this AD. We also estimate that 32 engines would require hardware replacement, which would take about 60 hours per engine. Required parts cost about $390,000 per engine. The average labor rate is $85 per hour. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be $12,654,250.

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.

We are 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

We have 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 that the proposed regulation:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and

(4) 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 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 removing airworthiness directive (AD) 2015-15-03, Amendment 39-18212 (80 FR 42707, July 20, 2015), and adding the following new AD:

General Electric Company: Docket No. FAA-2015-0165; Directorate Identifier 2015-NE-02-AD.

(a) Comments Due Date

The FAA must receive comments on this AD action by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2015-15-03, Amendment 39-18212 (80 FR 42707, July 20, 2015).

(c) Applicability

This AD applies to all General Electric Company (GE) GEnx-1B and GEnx-2B turbofan engines.

(d) Unsafe Condition

This AD was prompted by final design changes that remove the unsafe condition. We are issuing this AD to prevent engine failure, loss of thrust control, and damage to the airplane.

(e) Compliance

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

(1) Thirty days after the effective date of this AD, do not operate any GE GEnx-1B engine with electronic engine control (EEC) full authority digital engine control (FADEC) software, version B180 or earlier, installed.

(2) Thirty days after the effective date of this AD, do not operate any GE GEnx-2B engine with EEC FADEC software, version C068 or earlier, installed.

(3) At the next shop visit after the effective date of this AD, remove from service all GE GEnx-2B67, -2B67B, and -2B67/P fan hub stator assembly booster outlet guide vanes, part number B1316-00720, and replace with a part eligible for installation.

(f) Installation Prohibition

After removing any software, version B180 or earlier, for the GE GEnx-1B engines; or software, version C068 or earlier, for the GE GEnx-2B engines, do not operate those engines with any software, version earlier than B180 or C068.

(g) Definition

For the purpose of this AD, an "engine shop visit" is the induction of an engine into the shop for maintenance involving the separation of pairs of major mating engine case flanges, except for the following situations which do not constitute an engine shop visit:

(1) Separation of engine flanges solely for the purposes of transportation without subsequent maintenance does not constitute an engine shop visit.

(2) Separation of engine flanges solely for the purpose of replacing the fan or propulsor without subsequent maintenance does not constitute an engine shop visit.

(h) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

(i) Related Information

For more information about this AD, contact Christopher McGuire, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200

District Avenue, Burlington, MA 01803; phone: 781-238-7120; fax: 781-238-7199; email: chris.mcguire@faa.gov.

Issued in Burlington, Massachusetts, on October 24, 2016.

Colleen M. D'Alessandro,
Manager, Engine & Propeller Directorate,
Aircraft Certification Service.
[FR Doc. 2016-26011 Filed: 11/2/2016 8:45 am; Publication Date: 11/3/2016]