[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-0660; Product Identifier 2017-NE-21-AD; Amendment 39-19132; AD 2017-26-01]

RIN 2120-AA64

Airworthiness Directives; General Electric Company Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain General Electric Company (GE) GEnx-1B64/P2, -1B67/P2, -1B70/P2, -1B70/75/P2, -1B70C/P2, and -1B74/75/P2 turbofan engines. This AD was prompted by a report of the failure of the high-pressure turbine (HPT) stage 1 blade retainer and subsequent in-flight shutdown of the engine. This AD requires inspection of the HPT stage 1 blade retainer. We are 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 a certain publication 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 General Electric Company, GE-Aviation, Room 285, 1 Neumann Way, Cincinnati, OH 45215, phone: 513-552-3272; fax: 513-552-3329; email: geae.aoc@ge.com. You may view this service information at the FAA, Engine and Propeller Standards Branch, 1200 District

Avenue, Burlington, MA. It is also available on the internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2017-0660.

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-2017-0660; 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 final rule, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, 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: Christopher McGuire, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7120; fax: 781-238-7199; email: chris.mcguire@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain GE GEnx-1B64/P2, -1B67/P2, -1B70/P2, -1B70/75/P2, -1B70C/P2, and -1B74/75/P2 turbofan engines. The NPRM published in the Federal Register on September 1, 2017 (82 FR 41577). The NPRM was prompted by a report of the failure of the HPT stage 1 blade retainer and subsequent in-flight shutdown of the engine. The NPRM proposed to require inspection of the HPT stage 1 blade retainer. We are issuing this AD to correct the unsafe condition on these products.

Comments

We gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Revise Compliance Time

American Airlines (AA) requested that we change the compliance time in this AD to align with the compliance schedule in GE GEnx-1B Service Bulletin (SB) 72-0326 R02, revised August 16, 2017. AA indicated the SB identifies two populations of HPT stage 1 blade retainers, one that requires inspection at the next shop visit and a second that requires inspection when the part is removed from the engine. The proposed AD, however, proposed inspection of all affected retainers at next shop visit. Due to this discrepancy between the proposed AD and the SB, AA requested this AD require inspections of the HPT stage 1 blade retainers at next shop visit and at part removal, as required by GEnx-1B SB 72-0326 R02.

GE commented that, based on its analysis, conducting the required inspection of the HPT stage 1 blade retainer at its next piece-part exposure is sufficient. GE requested that this final rule AD be changed to require inspection of all affected parts at piece-part exposure rather than at the next shop visit.

We partially agree. We disagree with AA that requiring inspections of HPT stage 1 blade retainers at next shop visit and at part removal, per GE GEnx-1B SB 72-0326 R02, revised August 16, 2017, is necessary. We agree with GE that the risk assessment justifies waiting until exposure of the part to perform the inspection and the change clarifies the compliance action. We revised the compliance section of this AD to require that the HPT stage 1 blade retainer be inspected at its next piece-part exposure.

Request to Align Compliance by Part Population

Japan Airlines (JAL) requested that the compliance be changed to two populations of parts with two different compliance intervals. JAL indicated this change would align this AD with the two populations of affected parts identified in GE GEnx-1B SB 72-0326 R02, revised August 16, 2017.

We disagree. Although the SB specifies certain part numbers be inspected sooner than at piece-part exposure, our risk assessment determined that performing the inspection for all affected parts at piece-part exposure addresses the safety concern represented by failure of the HPT stage 1 blade retainer. We did not change this AD.

Request to Incorporate Required for Compliance (RC) Label into SB

AA requested that we incorporate the RC label into GEnx-1B SB 72-0326 R02, revised August 16, 2017. AA indicated this change would clarify which sections of the SB are required to accomplish this AD. Using the RC label in the SB would also be consistent with FAA Advisory Circular (AC) 20-176A, "Service Bulletins Related to Airworthiness Directives and Indicating FAA Approval on Service Documents," dated June 16, 2014, and FAA Order 8110.117A, "Service Bulletins Related to Airworthiness Directives," dated June 18, 2014.

We disagree. FAA Order 8110.117A and AC 20-176A provide guidance, respectively, to FAA aviation safety engineers in the review of SBs and to design approval holders (DAHs) in the development and drafting of these SBs. These documents do not require use of the RC label by DAHs in drafting in SBs, and GE is not required to use this label. The paragraph from GE GEnx-1B SB 72-0326 R02, revised August 16, 2017, that is incorporated by reference by this AD, clearly identifies the steps that operators must follow to perform the inspection. We did not change this AD.

Request to Add Reference to Related SB

An individual commenter requested that GE GEnx-1B SB 72-0327 R02, revised August 16, 2017, be mentioned in this AD since this SB is related to GEnx-1B SB 72-0326 R02, revised August 16, 2017. The commenter indicated GEnx-1B SB 72-0327 also relates to inspection of the stage one HPT blade retainer, but references an alternate part number. The commenter requested that the relationship between GEnx-1B SB 72-0327 R02 and GEnx-1B SB 72-0326 R02 be stated clearly.

We partially agree. Although GE GEnx-1B SB 72-0327 R02, revised August 16, 2017, has a part number in common with the parts identified in GE GEnx-1B SB 72-0326 R02, revised August 16, 2017, the serial numbers for the parts identified in GEnx-1B SB 72-0327 differ from those in GEnx-1B SB 72-0326. The serial numbered parts identified in GEnx-1B SB 72-0327 pose a lower risk to flight safety and are not affected by this AD. We did not change this AD.

Support for the AD

The Air Line Pilots Association expressed support for the NPRM as written.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

Related Service Information under 1 CFR part 51

We reviewed GE GEnx-1B SB 72-0326 R02, revised August 16, 2017. The SB describes procedures for piece-part inspection of the HPT stage 1 blade retainer. 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

We estimate that this AD affects 11 engines installed on airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection of the HPT stage 1 blade retainer	1 work-hour x $85 per hour = $85	$0	$85	$935

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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

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

(3) Will not affect intrastate aviation in Alaska, 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.

Adoption of 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):

2017-26-01 **General Electric Company**: Amendment 39-19132; Docket No. FAA-2017-0660; Product Identifier 2017-NE-21-AD.

(a) Effective Date

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

(b) Affected ADs

None.

(c) Applicability

This AD applies to General Electric Company (GE) GEnx-1B64/P2, -1B67/P2, -1B70/P2, -1B70/75/P2, -1B70C/P2, and -1B74/75/P2 turbofan engines, with a high-pressure turbine (HPT) stage 1 blade retainer, part number (P/N) 2445M91P01 or 2383M99P02, with a serial number listed in Planning Information, Paragraph 1.A., of GE GEnx-1B Service Bulletin (SB) 72-0326 R02, revised August 16, 2017.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by a report of the failure of the HPT stage 1 blade retainer and subsequent in-flight shutdown of the engine. We are issuing this AD to prevent failure of the HPT stage 1 blade retainer. The unsafe condition, if not corrected, could result in failure of one or more engines, loss of thrust control, and damage to the airplane.

(f) Compliance

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

(g) Required Actions

(1) At the next piece-part exposure of the HPT stage 1 blade retainer after the effective date of this AD, perform a one-time inspection of the HPT stage 1 blade retainer in accordance with the Accomplishment Instructions, paragraph 3.A.(1), in GE GEnx-1B SB 72-0326 R02, revised August 16, 2017.

(2) If any cracks are found in the HPT stage 1 blade retainer, or the retainer does not meet the dimensional criteria found in the Accomplishment Instructions, Paragraph 3.A.(1), in GEnx-1B SB 72-0326 R02, revised August 16, 2017, replace the HPT stage 1 blade retainer with a part eligible for installation.

(h) Definition

For the purpose of this AD, "piece-part exposure" is defined as when the part is completely disassembled.

(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 ECO

Branch, send it to the attention of the person identified in paragraph (j)(1) 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 Christopher McGuire, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7120; fax: 781-238-7199; email: christopher.mcguire@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) GEnx-1B Service Bulletin 72-0326 R02, revised August 16, 2017.

(ii) Reserved.

(3) For GE service information identified in this AD, contact General Electric Company, GE-Aviation, Room 285, 1 Neumann Way, Cincinnati, OH 45215, phone: 513-552-3272; fax: 513-552-3329; email: geae.aoc@ge.com.

(4) You may view this service information at FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(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, call 202-741-6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued in Burlington, Massachusetts, on December 11, 2017.

Robert J. Ganley,
Manager, Engine and Propeller Standards Branch,
Aircraft Certification Service.
[FR Doc. 2017-27248 Filed: 12/18/2017 8:45 am; Publication Date: 12/19/2017]