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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2017-0452; Product Identifier 2017-NE-14-AD; Amendment 39-19050; AD 2017-19-20]**

**RIN 2120-AA64**

#### **Airworthiness Directives; General Electric Company Turboshift Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain General Electric Company (GE) CT7-8A and CT7-9B model turboshift engines. This AD was prompted by reports from the manufacturer that the high-pressure compressor (HPC) impeller installed on these engines may have suffered from material degradation during the manufacturing process. This AD requires removal of the affected HPC impellers. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective October 27, 2017.

**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: [gae.aoc@ge.co](mailto:gae.aoc@ge.co). You may view this service information at the 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. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0452.

#### **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-2017-0452; 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:** Kasra Sharifi, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7773; fax: 781-238-7199; email: kasra.sharifi@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 CT7-8A and CT7-9B model turboshaft engines. The NPRM published in the Federal Register on June 16, 2017 (82 FR 27634). The NPRM was prompted by reports from the manufacturer that the HPC impeller installed on these engines may have suffered from material degradation during the manufacturing process. The NPRM proposed to require removal of the affected HPC impellers. We are issuing this AD to prevent failure of the HPC impeller, uncontained HPC impeller release, damage to the engine, and damage to the airplane/helicopter.

**Comments**

We gave the public the opportunity to participate in developing this final rule. We received no comments on the NPRM or on the determination of the cost to the public.

**Conclusion**

We reviewed the relevant data and determined that air safety and the public interest require adopting this final rule as proposed.

**Related Service Information**

We reviewed GE Service Bulletin (SB) CT7-TP S/B 72-0524, dated June 16, 2016. The SB describes procedures for replacing the affected HPC impellers.

**Costs of Compliance**

We estimate that this AD affects 1 engine installed on a helicopter of U.S. registry. We estimate the following costs to comply with this AD:

**Estimated Costs**

| <b>Action</b>        | <b>Labor cost</b>                  | <b>Parts cost</b> | <b>Cost per product</b> | <b>Cost on U.S. operators</b> |
|----------------------|------------------------------------|-------------------|-------------------------|-------------------------------|
| Replace HPC impeller | 0 work-hours × \$85 per hour = \$0 | \$70,000          | \$70,000                | \$70,000                      |

**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 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 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.

## **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):



**2017-19-20 General Electric Company:** Amendment 39-19050; Docket No. FAA-2017-0452; Product Identifier 2017-NE-14-AD.

**(a) Effective Date**

This AD is effective October 27, 2017.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to General Electric Company (GE) CT7-8A and CT7-9B model turboshaft engines with a high-pressure compressor (HPC) impeller, part number 5123T51P02, and serial number, GLHTPH9G, GLHTPP7P, or GLHTPJHN, installed.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 7230, Turbine Engine Compressor Section.

**(e) Unsafe Condition**

This AD was prompted by reports from the manufacturer that the HPC impeller installed on these engines may have suffered from material degradation during the manufacturing process. We are issuing this AD to prevent failure of the HPC impeller. This unsafe condition, if not corrected, could result in failure of the HPC impeller, uncontained HPC impeller release, damage to the engine, and damage to the airplane/helicopter.

**(f) Compliance**

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

(1) For CT7-9B engines, remove the affected HPC impeller from service at the next engine shop visit after the effective date of this AD, or prior to accumulating 12,000 cycles since new, whichever is earlier.

(2) For CT7-8A engines, remove the affected HPC impeller from service at the next engine shop visit after the effective date of this AD, or prior to accumulating 1,500 engine hours after the effective date of this AD, whichever is earlier.

**(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 flanges.

**(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**

(1) For more information about this AD, contact Kasra Sharifi, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7773; fax: 781-238-7199; email: kasra.sharifi@faa.gov.

(2) GE Service Bulletin CT7-TP S/B 72-0524, dated June 16, 2016, can be obtained from GE using the contact information in paragraph (i)(3) of this AD.

(3) For 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 the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7125.

**(j) Material Incorporated by Reference**

None.

Issued in Burlington, Massachusetts, on September 13, 2017.  
Robert J. Ganley,  
Manager, Engine and Propeller Standards Branch,  
Aircraft Certification Service.