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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-0392; Directorate Identifier 2011-NE-12-AD; Amendment 39-16808; AD 2011-19-03]

RIN 2120-AA64

Airworthiness Directives; General Electric Company (GE) CT7-8, CT7-8A, CT7-8A1, CT7-8E, and CT7-8F5 Turboshaft Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD was prompted by four reports of unrecoverable engine stalls, during hover in a left-roll attitude. This AD requires the installation of an accessory gearbox (AGB) axis-A oil slinger nut to the axis-A shaft assembly. We are issuing this AD to prevent an unrecoverable engine stall, leading to a helicopter forced landing or accident.

DATES: This AD is effective November 9, 2011.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of November 9, 2011.

ADDRESSES: For service information identified in this AD, contact GE-Aviation, M/D Rm. 285, One Neumann Way, Cincinnati, OH 45215; phone: 513-552-3272; e-mail: geaeaoc@ge.com. You may review copies of the referenced service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, 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; 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 AD, 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: Walter Meibaum, Aerospace Engineer, Engine & Propeller Directorate, FAA, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7119; fax: 781-238-7199; e-mail: walter.meibaum@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We received four reports of GE CT7-8 series turboshaft helicopter engines experiencing unrecoverable engine stalls, during hover in a left-roll attitude. Investigation revealed that during a prolonged left roll, excessive return oil from the AGB may return to the A-sump and exceed the sump's scavenging capability. The sump then floods, leading to over-heated oil, which preheats the air entering the engine's compressor. This preheated air causes inlet thermal distortion. This condition, if not corrected, could result in an unrecoverable engine stall, leading to a helicopter forced landing or accident. We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM published in the Federal Register on May 2, 2011 (76 FR 24407). That NPRM proposed to require the installation of an AGB axis-A oil slinger nut to the axis-A shaft assembly.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM published in the Federal Register on May 2, 2011 (76 FR 24407).

Since we issued the NPRM published in the Federal Register on May 2, 2011 (76 FR 24407), GE issued a revision to the service bulletin we are incorporating by reference in this AD. The revision includes new information in the procedure required to torque the oil slinger nut. This AD incorporates by reference, GE Aircraft Engines CT7-8 Turboshaft Engine Service Bulletin No. CT7-8 S/B 72-0033, Revision 1, dated April 28, 2011.

Also since we issued the NPRM published in the Federal Register on May 2, 2011 (76 FR 24407), we discovered that in the applicability paragraph, we inadvertently omitted engine serial number 953071. We corrected that omission in paragraph (c) (4) by changing "CT7-8E, engine S/Ns 953068 and below, and S/Ns 953070 and 953072" to "CT7-8E, engine S/Ns 953068 and below, and S/Ns 953070 through 953072".

Conclusion

We reviewed the relevant data and determined that air safety and the public interest require adopting the AD as proposed except for minor editorial changes. We have determined that these minor changes are consistent with the intent that was proposed in the NPRM published in the Federal Register on May 2, 2011 (76 FR 24407) for correcting the unsafe condition.

Costs of Compliance

We estimate that this AD will affect 80 engines installed on helicopters of U.S. registry. We also estimate that it will take about one work-hour per engine to perform the actions required by this AD, and that the average labor rate is $85 per work-hour. Required parts will cost about $700 per engine. Based on these figures, we estimate the total cost of the AD to U.S. operators to be $62,800.

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

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):

2011-19-03 General Electric Company: Amendment 39-16808; Docket No. FAA-2011-0392; Directorate Identifier 2011-NE-12-AD.

Effective Date

(a) This AD is effective November 9, 2011.

Affected ADs

(b) None.

Applicability

(c) This AD applies to the following General Electric Company (GE) turboshaft engines:
(1) CT7-8, all engine serial numbers (S/Ns).
(2) CT7-8A, engine S/Ns 947565 and below.
(3) CT7-8A1, engine S/Ns 530017 and below.
(4) CT7-8E, engine S/Ns 953068 and below, and S/Ns 953070 through 953072.
(5) CT7-8F5, engine S/Ns 731005 and below, and S/Ns 731007, 731008, 817021, and 817022.

Unsafe Condition

(d) This AD was prompted by four reports of unrecoverable engine stalls, during hover in a left-roll attitude. We are issuing this AD to prevent an unrecoverable engine stall, leading to a helicopter forced landing or accident.

Compliance

(e) Comply with this AD at the next engine shop visit, the next 1,500-hour helicopter inspection, or before operation after next engine installation, whichever occurs first.

Installation of Accessory Gearbox (AGB) Axis-A Oil Slinger Nut

(f) Install the AGB axis-A oil slinger nut to the axis-A shaft assembly. Use Accomplishment Instructions, paragraphs 3.A. through 3.C. of GE Aircraft Engines CT7-8 Turboshaft Engine Service Bulletin No. CT7-8 S/B 72-0033, Revision 1, dated April 28, 2011, to do the installation.

Previous Credit

(g) An oil slinger nut installation performed before the effective date of this AD using GE Aircraft Engines CT7-8 Turboshaft Engine Service Bulletin No. CT7-8 S/B 72-0033, dated February 11, 2011, satisfies the installation requirements of this AD.

Alternative Methods of Compliance (AMOCs)

(h) The Manager, Engine Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

Related Information

(i) For more information about this AD, contact Walter Meibaum, Aerospace Engineer, Engine & Propeller Directorate, FAA, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7119; fax: 781-238-7199; e-mail: walter.meibaum@faa.gov.

Material Incorporated by Reference

(j) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) under 5 U.S.C. 552(a) and 1 CFR part 51 of the following service information on the date specified:

(1) GE Aircraft Engines CT7-8 Turboshaft Engine Service Bulletin No. CT7-8 S/B 72-0033, Revision 1, dated April 28, 2011, approved for IBR November 9, 2011.

(2) For service information identified in this AD, contact GE-Aviation, M/D Rm. 285, One Neumann Way, Cincinnati, OH 45215; phone: 513-552-3272; e-mail: geaeaoc@ge.com.

(3) You may review copies of the service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call 202-741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Burlington, Massachusetts, on September 8, 2011.
Peter A. White,
Manager, Engine & Propeller Directorate,
Aircraft Certification Service.