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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-0808; Directorate Identifier 2008-NE-18-AD; Amendment 39-15712; AD 2008-22-16]

RIN 2120-AA64

Airworthiness Directives; General Electric Company (GE) CT58 Series Turboshift Engines

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain GE CT58 series turboshaft engines. This AD requires recalculating the lives of certain part numbered compressor spools using a new repetitive heavy lift (RHL) multiplying factor. This AD results from reports of cracks originating from the inner faces of the locking screw holes in the compressor spool. We are issuing this AD to prevent cracks due to RHL missions. Cracks could result in an uncontained rotor burst and damage to, or loss of, the helicopter and serious injuries to any person onboard.

DATES: This AD becomes effective December 1, 2008.

ADDRESSES: You can get the service information identified in this AD from GE Aircraft Engines Customer Support Center, M/D 285, 1 Neumann Way, Evendale, OH 45215; telephone (513) 552-3272; fax (513) 552-3329; e-mail GEAE.csc@ae.ge.com.

The Docket Operations office is located at Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

FOR FURTHER INFORMATION CONTACT: Christopher J. Richards, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: christopher.j.richards@faa.gov; telephone (781) 238-7133; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: The FAA proposed to amend 14 CFR part 39 with a proposed AD. The proposed AD applies to certain GE CT58 series turboshaft engines. We published the proposed AD in the Federal Register on July 23, 2008 (73 FR 42724). That action proposed to

require recalculating the cycles on certain compressor spools using new RHL mission multipliers within 30 days after the effective date of the proposed AD.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office 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 street address for the Docket Operations office (telephone (800) 647-5527) is provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

Comments

We provided the public the opportunity to participate in the development of this AD. We received no comments on the proposal or on the determination of the cost to the public.

Conclusion

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

Costs of Compliance

We estimate that this proposed AD will affect 89 engines installed on helicopters of U.S. registry. We also estimate that it will take about 0.5 work-hour per engine to perform the proposed actions, and that the average labor rate is \$80 per work-hour. Prorated life lost for the compressor spools will cost about \$16,972 per engine. Based on these figures, we estimate the total cost of this AD to U.S. operators to be \$1,514,068.

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 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); and

(3) 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.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary at the address listed under ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration 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:



2008-22-16 General Electric Company (GE): Amendment 39-15712. Docket No. FAA-2008-0808; Directorate Identifier 2008-NE-18-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective December 1, 2008.

Affected ADs

(b) None.

Applicability

(c) This AD applies to GE CT58 series turboshaft engines with a compressor spool, part number (P/N) 5920T82G07, 6010T57G07, or 6010T57G08, installed. These engines are installed on, but not limited to, Sikorsky S-61A, S-61L, S-61N, S-61R, S-62, and Columbia 107-II helicopters.

Unsafe Condition

(d) This AD results from reports of cracks originating from the inner faces of the locking screw holes in the compressor spool. We are issuing this AD to prevent cracks due to repetitive heavy lift (RHL) missions. Cracks could result in an uncontained rotor burst and damage to, or loss of, the helicopter and serious injuries to any person onboard.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

Recalculating Compressor Spool Cycles

(f) Within 30 days after the effective date of this AD, recalculate the life of compressor spools, P/N 5920T82G07, 6010T57G07, or 6010T57G08, using an RHL mission multiplying factor of both 3.7 cycles per hour and 6.0 cycles per hour. GE Alert Service Bulletin CT58 S/B 72-A0162, Revision 12, dated April 17, 2008, contains information on calculating life cycles for the compressor spools.

Removing Compressor Spools Based on the New Recalculated Cycles

(g) Before January 1, 2010, remove the compressor spools, P/N 5920T82G07, 6010T57G07, or 6010T57G08, at the earlier of when:

(1) The compressor spool reaches its part life limit as calculated using an RHL multiplying factor of 3.7, or

(2) You can see the spool at shop visit after it has reached its part life limit using an RHL multiplying factor of 6.0.

(h) On January 1, 2010 and thereafter, remove the engine before the compressor spool exceeds its part life limit as calculated using an RHL multiplying factor of 6.0.

(i) As of January 1, 2010, don't use an RHL multiplying factor of 3.7 to calculate the life of the compressor spool.

Installation Prohibition

(j) After the effective date of this AD, don't install any engine that has a compressor spool installed that meets or exceeds the life limits as calculated in paragraph (g)(1) through (g)(2) or (h) of this AD.

Alternative Methods of Compliance

(k) The Manager, Engine Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Related Information

(l) GE Alert Service Bulletin CT58 S/B 72-A0162, Revision 12, dated April 17, 2008, pertains to the subject of this AD.

(m) Contact Christopher J. Richards, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: christopher.j.richards@faa.gov; telephone (781) 238-7133; fax (781) 238-7199, for more information about this AD.

Material Incorporated by Reference

(n) None.

Issued in Burlington, Massachusetts, on October 20, 2008.
Peter A. White,
Assistant Manager, Engine and Propeller Directorate,
Aircraft Certification Service.