

[Federal Register: June 21, 2005 (Volume 70, Number 118)]  
[Rules and Regulations]  
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[DOCID:fr21jn05-6]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2005-21586; Directorate Identifier 2005-NE-16-AD; Amendment 39-14148; AD 2005-13-11]**

**RIN 2120-AA64**

#### **Airworthiness Directives; General Electric Company CT64-820-4 Turboprop Engines**

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

**ACTION:** Final rule; request for comments.

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for General Electric Company (GE) CT64-820-4 turboprop engines with stage 1 turbine disk and shaft, part number (P/N) 6004T47P03 or 4921T10P02 installed. This AD requires removing from service these stage 1 turbine disk and shafts at reduced compliance times. This AD results from the discovery by the manufacturer of low-cycle-fatigue (LCF) cracks found in stage 1 turbine disk and shafts, P/Ns 6004T47P03 and 4921T10P02. We are issuing this AD to prevent uncontained failure of the stage 1 turbine disk and shaft, resulting in damage to the airplane.

**DATES:** This AD becomes effective July 6, 2005.

We must receive any comments on this AD by August 22, 2005.

**ADDRESSES:** Use one of the following addresses to comment on this AD:

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.
  - Government-wide rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
  - Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-0001.
  - Fax: (202) 493-2251.
  - Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- Contact 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 address: GEAE.csc@ae.ge.com, for the service information identified in this AD.

**FOR FURTHER INFORMATION CONTACT:** Anthony W. Cerra Jr., Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone 781-238-7128; fax 781-238-7199; e-mail address: anthony.cerra@faa.gov.

**SUPPLEMENTARY INFORMATION:** GE has informed us that cracks have been found in some retired stage 1 disk and shafts which were removed from military T64 engines and are equivalent to the CT64-820-4 P/Ns 6004T47P03 and 4921T10P02. The cracks were located at "small feature" locations. A "small feature" location is any rotating hardware feature with drawing radii less than 0.020-inch, that could become potentially life limiting. These cracks were difficult to find due to the nature of their geometry and location on the part. The cracks were confirmed upon metallurgical evaluation of cut-up sections of those parts. This condition, if not corrected, could result in an uncontained failure of the stage 1 turbine disk and shaft, resulting in damage to the airplane.

GE is aware of about 50 engines that are in service. Three of these engines have the affected parts. GE has coordinated the compliance plan with the operator of these three certain serial number engines. The specific compliance times for these engines minimize adverse operator impact, yet maintain the interests of safety. GE is aware of approximately 90 additional engines for which GE does not know if the engines are in service or if they have the affected parts. GE has established the additional removal-from-service compliance times for these other engines in the event that any are still in service. We are using GE's compliance times in this AD.

### **FAA's Determination and Requirements of This AD**

Although no airplanes that are registered in the United States use these engines, the possibility exists that the engines could be used on airplanes that are registered in the United States in the future. The unsafe condition described previously is likely to exist or develop on other CT64-820-4 turboprop engines of the same type design. We are issuing this AD to prevent uncontained failure of the stage 1 turbine disk and shaft, resulting in damage to the airplane. This AD requires removing from service stage 1 turbine disk and shafts, P/Ns 6004T47P03 and 4921T10P02 at reduced compliance times.

### **FAA's Determination of the Effective Date**

Since there are currently no domestic operators of this engine model, notice and opportunity for public comment before issuing this AD are unnecessary. A situation exists that allows the immediate adoption of this regulation.

### **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to send us any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "AD Docket No. FAA-2005-21586; Directorate Identifier 2005-NE-16-AD" in the subject line of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it.

We will post all comments we receive, without change, to <http://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of the DMS Web site, anyone can find and read the comments in any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union,

etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78) or you may visit <http://dms.dot.gov>.

### **Examining the AD Docket**

You may examine the docket that contains the AD, any comments received, and any final disposition in person at the DMS Docket Offices between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Office (telephone (800) 647-5227) is located on the plaza level of the Department of Transportation Nassif Building at the street address stated in ADDRESSES. Comments will be available in the AD docket shortly after the DMS receives them.

### **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 the 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); 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**

Under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "www.faa.gov"*

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The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2005-13-11 General Electric Company:** Amendment 39-14148. Docket No. FAA-2005-21586; Directorate Identifier 2005-NE-16-AD.

## Effective Date

- (a) This airworthiness directive (AD) becomes effective July 6, 2005.

## Affected ADs

- (b) None.

## Applicability

(c) This AD applies to General Electric Company (GE) CT64-820-4 turboprop engines with stage 1 turbine disk and shaft, part number (P/N) 6004T47P03 or 4921T10P02 installed. These engines are installed on, but not limited to, DeHavilland DHC-5D Buffalo airplanes.

## Unsafe Condition

(d) This AD results from the discovery by the manufacturer of low-cycle fatigue (LCF) cracks found in stage 1 turbine disk and shafts, P/Ns 6004T47P03 and 4921T10P02. We are issuing this AD to prevent uncontained failure of the stage 1 turbine disk and shaft, resulting in damage to the airplane.

## 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.

## Engine Serial Numbers (SNs) 268537, 268565, and 268637

(f) For engine serial number (SN) 268537, remove the stage 1 turbine disk and shaft from service at or before accumulating 1,700 cycles-since-new (CSN), or by December 31, 2005, whichever occurs first.

(g) For engine SN 268565, remove the stage 1 turbine disk and shaft from service at or before accumulating 1,585 CSN, or by December 31, 2005, whichever occurs first.

(h) For engine SN 268637, remove the stage 1 turbine disk and shaft from service at or before accumulating 1,345 CSN, or by December 31, 2005, whichever occurs first.

### **All Other Engines**

(i) For all other engines that have accumulated 590 CSN or more on the stage 1 turbine disk and shaft on the effective date of this AD, remove stage 1 turbine disk and shaft from service at or before accumulating an additional 10 cycles-in-service, at or before accumulating the service life limit of 1,700 CSN, or by December 31, 2005, whichever occurs first.

(j) For all other engines that have accumulated fewer than 590 CSN on the stage 1 turbine disk and shaft on the effective date of this AD, remove stage 1 turbine disk and shaft from service at the next piece-part-exposure, or before accumulating 600 CSN, or by December 31, 2005, whichever occurs first.

(k) After the effective date of this AD, do not install any stage 1 turbine disk and shaft, P/N 6004T47P03 or 4921T10P02, into any engine.

(l) After the effective date of this AD, do not install any engine with stage 1 turbine disk and shaft, P/N 6004T47P03 or 4921T10P02, into any airplane.

### **Definition**

(m) For the purpose of this AD, piece-part exposure is defined as the stage 1 disk and shaft is completely disassembled using the disassembly instructions of the manufacturer's engine manual, or other FAA-approved engine manual.

### **Alternative Methods of Compliance**

(n) 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**

(o) Information on determining engine usage in cycles for comparison to CT64 service life limits can be found in GE Service Bulletin CEB No. 93, Revision 2, dated May 30, 1984. GE Alert Service Bulletin No. CT64 S/B 72-A0113, Revision 1, dated May 16, 2005, also pertains to the subject of this AD.

### **Material Incorporated by Reference**

(p) None.

Issued in Burlington, Massachusetts, on June 14, 2005.

Robert Ganley,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 05-12173 Filed 6-20-05; 8:45 am]

BILLING CODE 4910-13-P