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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2006-24261; Directorate Identifier 2006-NE-12-AD; Amendment 39-15768; AD 2008-26-02]**

**RIN 2120-AA64**

#### **Airworthiness Directives; General Electric Company (GE) CT7-8A Turboshaft Engines**

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

**ACTION:** Final rule.

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**SUMMARY:** The FAA is superseding an existing airworthiness directive (AD) for certain GE CT7-8A turboshaft engines. That AD currently requires initial and repetitive inspections of the electrical chip detectors for the No. 3 bearing. This AD requires removing from service certain GE CT7-8A turboshaft engines within 6,200 cycles-since-new. This AD results from investigation for the root causes of two failures of the No. 3 bearing. We are issuing this AD to prevent failure of the No. 3 bearing due to contamination by aluminum oxide, which could result in a possible in-flight shutdown of the engines and loss of control or forced landing of the aircraft.

**DATES:** This AD becomes effective January 26, 2009.

**ADDRESSES:** You can get the service information identified in this AD from General Electric Aircraft Engines CT7 Series Turboshaft Engines, 1000 Western Ave., Lynn, MA 01910; telephone (781) 594-6726; fax (781) 594-1583.

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 Richards, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: christopher.j.richards@faa.gov; telephone (731) 238-7133; fax (781) 238-7199.

**SUPPLEMENTARY INFORMATION:** The FAA proposed to amend 14 CFR part 39 by superseding AD 2006-06-51, Amendment 39-14566 (71 FR 19627, April 17, 2006), with a proposed

AD. The proposed AD applies to certain GE CT7-8A turboshaft engines. We published the proposed AD in the Federal Register on March 19, 2008 (73 FR 14731). That action proposed to:

- Delete the requirements to inspect the electrical chip detector, and
- Require removing any engine that has a serial number (SN) listed in Table 1 of the proposed AD within 6,200 cycles-since-new (CSN) unless the front frame was flushed and the No. 3 bearing replaced, and
- Prohibit installing any engine that has a SN listed in Table 1 of the proposed AD unless the front frame was flushed and the No. 3 bearing replaced.

### **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 have considered the comments received.

### **Request for Changes to Contact Information for Service Information**

One commenter, GE, asks that we change a typographical error in the contact information for the service information from Turboprop to Turboshaft. They also inform us they changed the contact telephone and fax numbers.

We agree. We changed Turboprop to Turboshaft, and we changed the contact telephone and fax numbers to (781) 594-6726 and (781) 594-1583 respectively.

### **Request for Changes to Actions Since AD 2006-06-51 Was Issued**

The same commenter asks us to change the second bulleted item in Actions Since AD 2006-06-51 Was Issued section and to delete the third bulleted item.

We partially agree. Adding "within 6,200 cycles-since-new (CSN) unless \* \* \* replaced" is more clear. However, that section appears in the preamble of the NPRM only. The final rule doesn't contain that section so we can't make the requested change to the preamble.

### **Request To Remove the Prohibition Against Installing Engines After the Effective Date of This AD**

The same commenter asks us to remove the paragraph prohibiting reinstallation of an engine until this AD has been complied with. The commenter states there should be no restriction on reinstalling an engine already in the field that might have been temporarily removed for maintenance or used as a spare engine. The commenter states when these engines are sent to an Engine Overhaul Shop (within 6,200 CSN) they will get their front frame flushed and No. 3 bearing replaced. Therefore, within the 6,200 CSN compliance requirement, there should be no restriction to reinstalling the engines listed in Table 1 of the proposed AD.

We agree. We have deleted the installation prohibition from the regulatory text of the final rule.

### **Request To Reference the Latest Revision of Service Bulletin CT7-8 S/B 72-0017**

The same commenter asks us to change the Relevant Service Information section and the Related Information paragraph to include Service Bulletin (SB) CT7-8 S/B 72-0017, Revision 01, dated February 15, 2008, and SB CT7-8 S/B 72-0017, Revision 02, dated May 14, 2008. The commenter states that GE issued SB CT7-8 S/B 72-0017, Revision 01, dated February 15, 2008, and SB CT7-8 S/B 72-0017, Revision 02, dated May 14, 2008, after we issued the NPRM.

We partially agree. We added SB CT7-8 S/B 72-0017, Revision 02, dated May 14, 2008, to the Related Information paragraph (i) and changed paragraph (g) to state "remove the engine from service and flush the front frame and replace the No. 3 bearing. GE Aircraft Engines Service Bulletin No. CT7-8 S/B 72-0017, Revision 02, dated May 14, 2008 or earlier revision, contains information on flushing the front frame and replacing the No. 3 bearing." However, the Relevant Service Information section appears in the preamble of the NPRM only. The final rule doesn't contain that section so we can't make the requested change to the preamble.

### **Request To Add Compliance Times to the Related Service Information Paragraph**

The same commenter asks us to change the Related Service Information paragraph to include the compliance time of "within 6,200 CSN or at the next shop visit, whichever occurs first." The commenter recommends inserting this information to provide a brief explanation of the intent of GE CT7-8 Service Bulletin 72-0017.

We don't agree. We already specify the compliance times in the regulatory text. The purpose of the Related Service Information paragraph is to provide a user with additional information that they can use when complying with the regulatory requirements of the AD.

### **Request To Remove an Engine SN From Table 1 of the AD**

The same commenter asks us to remove engine SN 947266 from Table 1 of the AD. The commenter states that they added that engine to the "completed compliance list" in Revision 01 of GE Aircraft Engines CT7-8 Service Bulletin 72-0017.

We agree. We removed engine SN 947266 from Table 1 of the AD.

### **Request To Replace the Phrase "Remove the Engine From Service"**

The same commenter asks us to replace the phrase "remove the engine from service" in paragraph (g) with "Comply with GE Aircraft Engines CT7-8 Service Bulletin 72-0017 Rev 00 or Rev 01 or Rev 02, unless the front frame was flushed and the No. 3 bearing was replaced previously." The commenter recommends the change to clarify the requirements by stating that each engine listed in Table 1 of the AD must comply with the requirements of GE Aircraft Engines CT7-8 Service Bulletin 72-0017 within 6,200 CSN.

We partially agree. We determined paragraph (g) is clear because it states the actions apply to engines with SNs listed in Table 1 and because paragraph (e) requires performing the actions unless the actions have already been done. However, we did change paragraph (g) from "within 6,200 cycles-since new, remove engine from service" to "within 6,200 cycles-since new, remove the engine from service and flush the front frame and replace the No. 3 bearing. GE CT7-8 Shop Manual, GEK 10517, and GE Aircraft Engines Service Bulletin No. CT7-8 S/B 72-0017, Revision 02, dated May 14, 2008, or earlier revision, contain information on flushing the front frame and replacing the No. 3 bearing." We also added a new paragraph (h) to prohibit installing any No. 3 bearing removed as required by paragraph (g).

## **Conclusion**

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

## **Costs of Compliance**

We estimate that this AD will affect 29 engines installed on helicopters of U.S. registry. We also estimate that it will take about 66.0 work-hours per engine to perform the required actions, and that the average labor rate is \$80 per work-hour. Required parts will cost about \$3,476 per engine. Based on these figures, we estimate the total cost of the AD to U.S. operators to be \$253,924.

## **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 removing Amendment 39-14566 (71 FR 19627, April 17, 2006) and by adding a new airworthiness directive, Amendment 39-15768, to read as follows:



**2008-26-02 General Electric Company:** Amendment 39-15768. Docket No. FAA-2006-24261; Directorate Identifier 2006-NE-12-AD.

**Effective Date**

(a) This airworthiness directive (AD) becomes effective January 26, 2009.

**Affected ADs**

(b) This AD supersedes AD 2006-06-51, Amendment 39-14566.

**Applicability**

(c) This AD applies to General Electric Company (GE) CT7-8A turboshaft engines that have a serial number (SN) listed in Table 1 of this AD. These engines are installed on, but not limited to, Sikorsky S92 helicopters.

**Table 1—Affected Engines by Serial Number**

Engine Serial Number					
947205	947215	947230	947243	947254	947265
947206	947217	947232	947244	947255	947274
947207	947218	947233	947245	947256	947277
947208	947219	947235	947247	947258	947278
947209	947220	947238	947248	947260	947279
947210	947221	947240	947249	947261	947280
947211	947223	947241	947250	947262	947284
947212	947225	947242	947253	947263	947285
947214	947228				

**Unsafe Condition**

(d) This AD results from investigation for the root causes of two failures of the No. 3 bearing. We are issuing this AD to prevent failure of the No. 3 bearing due to contamination by aluminum oxide, which could result in a possible in-flight shutdown of the engines and loss of control or forced landing of the aircraft.

**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.

(f) No further action is required if:

- (1) Your engine has a SN that is not listed in Table 1 of this AD, or
- (2) Your engine has a SN listed in Table 1 of this AD, but the engine log specifies that the front frame was flushed and the No. 3 bearing was replaced.

### **Engines With SNs listed in Table 1 of This AD**

(g) For engines with a SN listed in Table 1 of this AD, within 6,200 cycles-since-new, remove the engine from service and flush the front frame and replace the No. 3 bearing. GE CT7-8 Shop Manual, GEK 10517, contains information on replacing the No. 3 bearing and GE Aircraft Engines Service Bulletin No. CT7-8 S/B 72-0017, Revision 02, dated May 14, 2008, or earlier revision, contains information on flushing the front frame and replacing the No. 3 bearing.

### **Prohibition Against Reinstalling a No. 3 Bearing**

(h) After the effective date of this AD, do not install any No. 3 bearing removed as a requirement of paragraph (g) of this AD.

### **Alternative Methods of Compliance**

(i) The Manager, Engine Certification Office, FAA, 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**

(j) GE CT7-8 Shop Manual, GEK 10517, and GE Aircraft Engines Service Bulletin No. CT7-8 S/B 72-0017, Revision 02, dated May 14, 2008 and earlier revisions pertain to the subject of this AD. Contact General Electric Aircraft Engines CT7 Series Turboshift Engines, 1000 Western Ave., Lynn, MA 01910; telephone (781) 594-6726; fax (781) 594-1583, for a copy of this service information.

(k) Contact Christopher Richards, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: christopher.j.richards@faa.gov; telephone (731) 238-7133; fax (781) 238-7199, for more information about this AD.

### **Material Incorporated by Reference**

(l) None.

Issued in Burlington, Massachusetts, on December 9, 2008.  
Peter A. White,  
Assistant Manager, Engine and Propeller Directorate,  
Aircraft Certification Service.