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[Page 26478-26481]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2003-NE-16-AD; Amendment 39-13145; AD 2003-08-52]

RIN 2120-AA64

Airworthiness Directives; GE Aircraft Engines CT7-9B Turboprop Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: This document publishes in the Federal Register an amendment adopting Airworthiness Directive (AD) 2003-08-52 that was sent previously to all known U.S. owners and operators of GE Aircraft Engines (GEAE) CT7-9B turboprop engines. This AD requires rigging the compressor variable geometry (VG) to VG schedule N. This AD is prompted by reports of 12 compressor stall events that occurred over a six-month period. The actions specified in this AD are intended to prevent a dual-engine in-flight shutdown or power loss due to a compressor stall during deceleration from takeoff power to climb power.

DATES: Effective June 2, 2003, to all persons except those persons to whom it was made immediately effective by emergency AD 2003-08-52, issued on April 15, 2003, which contained the requirements of this amendment. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of June 2, 2003.

We must receive any comments on this AD by July 15, 2003.

ADDRESSES: Use one of the following addresses to submit comments on this AD:

- By mail: The Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2003-NE-16-AD, 12 New England Executive Park, Burlington, MA 01803-5299.
- By fax: (781) 238-7055.
- By e-mail: 9-ane-adcomment@faa.gov.

You may get the service information referenced 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. You may examine the AD docket, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA. You may examine the service information, by appointment, at the FAA, New

England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

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.

SUPPLEMENTARY INFORMATION: On April 15, 2003, we issued emergency AD 2003-08-52, that is applicable to GEAE CT7-9B turbofan engines. That emergency AD requires rigging the compressor VG to VG schedule N. That action was prompted by reports of 12 compressor stall events that occurred over a six-month period. This is in contrast to recent historical experience of four to six stall events per year. The stall events have occurred on deceleration when transitioning from takeoff power to climb power. Of the 10 events under investigation, nine had the compressor VG rigged to the VG schedule N1. The manufacturer's maintenance manuals and related service bulletins permit the compressor VG to be rigged to either the VG schedule N or the VG schedule N1. The VG schedule N provides a higher stall margin at the expense of a small reduction of engine performance margin as compared to the VG schedule N1. Since 1992, the manufacturer has recommended that overhaul shops use the VG schedule N only. VG schedule N provides more stall margin on used engines, which inherently have a lower stall margin due to wear or deterioration. Other factors that contribute to lower stall margins include dirty compressors and the increased compressor clearances that occur during the first takeoff of the day. This condition, if not corrected, could result in a dual-engine in-flight shutdown or power loss due to a compressor stall during deceleration from takeoff power to climb power.

Relevant Service Information

We have reviewed and approved the technical contents of GEAE Alert Service Bulletin (ASB) No. CT7-TP S/B 72-A0328, Revision 1, dated April 8, 2003. That ASB describes procedures for rigging the compressor VG to the VG schedule N.

FAA's Determination and Requirements of This AD

The unsafe condition described previously is likely to exist or develop on other GEAE CT7-9B turboprop engines of the same type design. Therefore, we are issuing this AD to prevent a dual-engine in-flight shutdown or power loss due to a compressor stall during deceleration from takeoff power to climb power. This AD requires:

- If both engines on the airplane are rigged to VG schedule N1, rigging the compressor VG on one engine to VG schedule N within 30 flight hours (FH) or 3 days after the effective date of this AD, whichever occurs later and,
- Rigging the remaining engine compressor VG to VG schedule N within 100 FH or 10 days after the effective date of this AD, whichever occurs earlier.
- If only one engine is rigged to VG schedule N1, rigging the compressor VG to VG schedule N within 100 FH or 10 days after the effective date of this AD, whichever occurs earlier.

You must do the actions per GEAE ASB No. CT7-TP S/B 72-A0328, Revision 1, dated April 8, 2003, described previously.

FAA's Determination of the Effective Date

Since it was found that immediate corrective action was required, notice and opportunity for prior public comment were impracticable and contrary to the public interest and that good cause existed to make the AD effective immediately on April 15, 2003, to all known U.S. owners and operators of GEAE CT7-9B turboprop engines. These conditions still exist, and we are publishing the AD in the Federal Register as an amendment to section 39.13 of part 39 of the Federal Aviation Regulations (14 CFR part 39) to make it effective to all persons.

Changes to 14 CFR Part 39–Effect on the AD

On July 10, 2002, we issued a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs our AD system. This regulation now includes material that relates to special flight permits, alternative methods of compliance, and altered products. This material previously was included in each individual AD. Since this material is included in 14 CFR part 39, we will not include it in future AD actions.

Interim Action

The investigation to determine the root causes of the decel stall events is ongoing. We may take further rulemaking action when we have identified the root causes.

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 submit any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "AD Docket No. 2003-NE-16-AD" in the subject line of your comments. If you want us to acknowledge receipt of your mailed comments, send us a self-addressed, stamped postcard with the docket number written on it; we will date-stamp your postcard and mail it back to you. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it. If a person contacts us through a nonwritten communication, and that contact relates to a substantive part of this AD, we will summarize the contact and place the summary in the docket. We will consider all comments received by the closing date and may amend the AD in light of those comments.

We are reviewing the writing style we currently use in regulatory documents. We are interested in your comments on whether the style of this document is clear, and your suggestions to improve the clarity of our communications with you. You may get more information about plain language at http://www.plainlanguage.gov.

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 by sending a request to us at the address listed under ADDRESSES. Include "AD Docket No. 2003-NE-16-AD" in your request.

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 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"

2003-08-52 GE Aircraft Engines: Amendment 39-13145. Docket No. 2003-NE-16-AD.

Effective Date

(a) This amendment becomes effective June 2, 2003, to all persons except those persons to whom it was made immediately effective by emergency AD 2003-08-52, issued April 15, 2003.

Affected ADs

(b) None.

Applicability

(c) This AD applies to GEAE CT7-9B turboprop engines. These engines are installed on, but not limited to Saab Aircraft AB 340B airplanes.

Unsafe Condition

(d) This AD was prompted by reports of 12 compressor stall events that occurred over a six month period. The actions specified in this AD are intended to prevent a dual-engine in-flight shutdown or power loss due to a compressor stall during deceleration from takeoff power to climb power.

Compliance

(e) Compliance with the requirements of this AD is required as indicated unless already done.

Determining Compressor VG Rigging Schedule

(f) Determine which schedule was used to rig the compressor VG. The serial numbers (SNs) contained in Table 1 of this AD are known to have been rigged to VG schedule N1. Engines with SNs that are not listed in Table 1 might be rigged to VG schedule N1. You must review the engine records to determine if the engines are rigged to VG schedule N1 using GEAE Service Bulletin (SB) No. CT7-TP S/B 72-0241, dated April 6, 1990. Table 1 follows:

TABLE 1.—SNs OF ENGINES KNOWN TO HAVE BEEN RIGGED TO VG SCHEDULE N1

785102	785104	785106	785107	785109	785111
785112	785113	785117	785118	785125	785128
785129	785131	785133	785136	785138	785148
785150	785151	785152	785154	785160	785185
785188	785211	785231	785232	785234	785235
785237	785239	785241	785257	785259	785265
785266	785275	785322	785325	785326	785334
785375	785391	785400	785459	785460	785462
785465	785474	785476	785477	785480	785481
785487	785499	785506	785534	785538	785554
785569	785591	785592	785598	785603	785700
785759					

Rigging the Compressor VG to Schedule N

(g) If the compressor VGs of both engines on the airplane are rigged to VG schedule N using GEAE SB CT7-TP S/B 72-0328 dated June 9, 1992 or GEAE Alert Service Bulletin (ASB) CT7-TP S/B 72-A0328, Revision 1, dated April 8, 2003 no further action is required.

(h) If the compressor VGs on both engines on the airplane are rigged to VG schedule N1, do the following:

(1) Within 30 flight hours (FH) or 3 days after the effective date of this AD, whichever occurs later, rig the compressor VG on one engine to VG schedule N in accordance with 3.A.(1) through 3.A.(12) of the Accomplishment Instructions of GEAE ASB No. CT7-TP S/B 72-A0328, Revision 1, dated April 8, 2003.

(2) Within 100 FH or 10 days after the effective date of this AD, whichever occurs earlier, rig the compressor VG on the remaining engine to VG schedule N in accordance with 3.A.(1) through 3.A.(12) of the Accomplishment Instructions of GEAE ASB No. CT7-TP S/B 72-A0328, Revision 1, dated April 8, 2003.

(i) If the compressor VG on one engine on the airplane is rigged to VG schedule N1, within 100 FH or 10 days after the effective date of this AD, whichever occurs earlier, rig the compressor VG to VG schedule N in accordance with 3.A.(1) through 3.A.(12) of the Accomplishment Instructions of GEAE ASB No. CT7-TP S/B 72-A0328, Revision 1, dated April 8, 2003.

Installation of Engines With VG Schedule N1

(j) After the effective date of this AD, do not install any CT7-9B turboprop engine that is rigged to VG schedule N1 on to any Saab Aircraft AB 340B airplane.

Alternative Methods of Compliance

(k) Alternative methods of compliance must be requested in accordance with 14 CFR part 39.19, and must be approved by the Manager, Engine Certification Office, Federal Aviation Administration (FAA).

Material Incorporated by Reference

(l) The rigging of the compressor VG must be done in accordance with GE Aircraft Engines Alert Service Bulletin (ASB) No. CT7-TP S/B 72-A0328, Revision 1, dated April 8, 2003. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may get a copy from GE Aircraft Engines Customer Support Center, M/D 285, 1 Neumann Way, Evendale, OH 45215, telephone (513) 552-3272, fax (513) 552-3329, email GEAE.csc@ae.ge.com. You may review copies at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

Related Information

(m) Additional information to help minimize the occurrence of multiple-engine in-flight shutdowns or power loss may be found in GEAE All Operator's Wire CT7-03-02, dated April 3, 2003.

Issued in Burlington, MA on May 7, 2003.
Jay J. Pardee,
Manager, Engine and Propeller Directorate, Aircraft Certification Service.
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