[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-7099; Directorate Identifier 2016-NE-15-AD; Amendment 39-18737; AD 2016-25-11]

RIN 2120-AA64

Airworthiness Directives; International Aero Engines AG Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain International Aero Engines AG (IAE) V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5, V2525-D5, V2528-D5, and V2531-E5 turbofan engines. This AD was prompted by nine in-flight shutdowns (IFSDs) that resulted from premature failure of the No. 3 bearing. This AD requires inspections and corrective actions for bearing damage. This AD also requires removal of the No. 3 bearing from service at the next engine shop visit. We are issuing this AD to correct the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact International Aero Engines AG, 400 Main Street, East Hartford, CT 06118; phone: 860-565-0140; email: help24@pw.utc.com; Internet: http://fleetcare.pw.utc.com.

You may view this referenced service information at the FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125. It is also available on the internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2016-7099.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2016-7099; 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: Brian Kierstead, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7772; fax: 781-238-7199; email: brian.kierstead@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain IAE V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5, V2525-D5, V2528-D5, and V2531-E5 turbofan engines. The NPRM published in the Federal Register on July 21, 2016 (81 FR 47313). The NPRM was prompted by nine IFSDs resulting from premature failure of the No. 3 bearing. This condition, if not corrected, could result in failure of the No. 3 bearing, failure of one or more engines, loss of thrust control, and loss of the airplane.

The NPRM proposed to require removal of the No. 3 bearing from service at the next engine shop visit. We are issuing this AD to prevent failure of the No. 3 bearing, failure of one or more engines, loss of thrust control, and loss of the airplane.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA's response to each comment. Boeing supported the NPRM.

Request to Add Terminating Action

MTU Maintenance Hanover GmbH (MTU) requested that IAE Non Modification Service Bulletin (NMSB) V2500-ENG-72-0673, dated June 3, 2016, be added as a terminating action in this AD. MTU also requested IAE NMSB V2500-ENG-72-0673 be included in credit for previous action. They reason that following the issue of IAE NMSB V2500-ENG-72-0671, dated March 22, 2016, IAE released IAE NMSB V2500-ENG-72-0673, which recommends removal of No. 3 bearing serial numbers (S/Ns) identical to those listed in IAE NMSB V2500-ENG-72-0671.

We partially agree. We agree that the removal of the suspect bearing in accordance with IAE NMSB V2500-ENG-72-0673, dated June 3, 2016 would accomplish both the (e)(3) compliance and (f) terminating action requirements of this AD because both IAE service documents reference identical bearing S/Ns.

We disagree that including IAE NMSB V2500-ENG-72-0673 as a terminating action or listing as credit for previous action is necessary since replacement of a bearing S/N per IAE NMSB V2500-ENG-72-0673, dated June 3, 2016, makes the engine no longer applicable to the AD. We did not change this AD.

Request to Remove Certain Engine Models from Applicability

IAE and MTU request engine models V2525-D5, V2528-D5, and V2531-E5 be removed from the applicability section of this AD. IAE states that the suspect No. 3

bearings referenced by this AD have all been installed in A5 series engines as specified in IAE NMSB V2500-ENG-72-0671, dated March 22, 2016 and requests alignment with the service instructions in order to provide consistency between the IAE NMSB V2500-ENG-72-0671 and this AD. MTU reasons that the IAE NMSBs V2500-ENG-72-0671 and V2500-ENG-72-0673 do not list V2525-D5, V2528-D5, and V2531-E5 engine models, therefore, this AD should not be applicable to these models.

We disagree. The applicability section of this AD identifies all V2500 engine models of the same type design where the suspect bearing could be installed. This AD further refines the applicability section with identification of specific No. 3 bearing S/Ns listed in IAE NMSB V2500-ENG-72-0671, Appendix 1, dated March 22, 2016. We did not change this AD.

Request to Identify Applicability by Either Engine S/N or Bearing S/N

Cathay Pacific Airways (CPA) requests the applicability section be revised to identify either the engine S/N or the No. 3 bearing S/N listed in IAE NMSB V2500-ENG-72-0671, dated March 22, 2016. CPA suggests that operators might identify engine applicability based on the No. 3 bearing S/N or the engine S/N, as both are listed in IAE NMSB V2500-ENG-72-0671, Appendix 1, dated March 22, 2016.

We disagree. Determining applicability by engine S/N in lieu of the No. 3 bearing S/N is not adequate, as the suspect bearing may have been reinstalled in another engine. We did not change this AD.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD as proposed.

Related Service Information under 1 CFR part 51

We reviewed IAE NMSB V2500-ENG-72-0671, dated March 22, 2016. The NMSB describes procedures for inspecting the MMCD and further actions if metallic

debris is found. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

We reviewed IAE NMSB V2500-ENG-72-0673, dated June 3, 2016. The NMSB describes procedures for removal and replacement of the No. 3 bearing.

Costs of Compliance

We estimate that this AD affects 11 engines installed on airplanes of U.S. registry. We estimate that it would take about 1 hour to perform the inspection. The average labor rate is $85 per hour. We estimate the cost to replace a No. 3 bearing to be $54,510. Based on these figures, we estimate the cost of this AD on U.S. operators to be $600,545.

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):

2016-25-11 **International Aero Engines AG**: Amendment 39-18737; Docket No. FAA-2016-7099; Directorate Identifier 2016-NE-15-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to International Aero Engines AG (IAE) V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5, V2525-D5, V2528-D5, and V2531-E5 turbofan engines with No. 3 bearing serial numbers (S/Ns) listed in Appendix 1 of IAE Non-Modification Service Bulletin (NMSB) V2500-ENG-72-0671, dated March 22, 2016.

(d) Unsafe Condition

This AD was prompted by several in-flight shutdowns that resulted from premature failure of the No. 3 bearing. We are issuing this AD to correct the unsafe condition on these products.

(e) Compliance

Comply with this AD within the compliance times specified, unless already done.

(1) Prior to accumulating 125 flight hours (FH) after the effective date of this AD, inspect the master magnetic chip detector (MMCD) for metallic debris. If no metallic debris is found during the MMCD inspection, repeat the inspection within every 125 FH.

(2) If metallic debris is found during the MMCD inspection, evaluate the debris using paragraph 2.B. of the Accomplishment Instructions in IAE NMSB V2500-ENG-72-0671, dated March 22, 2016. Perform additional inspections or remove the engine from service in accordance with the Accomplishment Instructions in IAE NMSB V2500-ENG-72-0671.

(3) Remove the No. 3 bearing from service at the next engine shop visit and replace it with a bearing part/serial number combination not listed in Appendix 1 of IAE NMSB V2500-ENG-72-0671, dated March 22, 2016.

(f) Mandatory Terminating Action

Removal of the No. 3 bearing from service at the next engine shop visit and replacement with a bearing not listed in Appendix 1 of IAE NMSB V2500-ENG-72-0671, dated March 22, 2016, is terminating action to this AD.

(g) Definition

For the purpose of this AD, an "engine shop visit" is the induction of an engine into the shop for maintenance involving the separation of pairs of major mating engine flanges, except that the separation of engine flanges solely for the purposes of transportation without subsequent engine maintenance does not constitute an engine shop visit.

(h) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

(i) Related Information

(1) For more information about this AD, contact Brian Kierstead, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7772; fax: 781-238-7199; email: brian.kierstead@faa.gov.

(2) IAE NMSB V2500-ENG-72-0673, dated June 3, 2016, can be obtained from IAE using the contact information in paragraph (j)(3) of this AD.

(j) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) International Aero Engines AG (IAE) Non-Modification Service Bulletin V2500-ENG-72-0671, dated March 22, 2016.

(ii) Reserved.

(3) For IAE service information identified in this AD, contact International Aero Engines AG, 400 Main Street, East Hartford, CT 06118; phone: 860-565-0140; email: help24@pw.utc.com; Internet: http://fleetcare.pw.utc.com.

(4) You may view this service information at FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued in Burlington, Massachusetts, on November 28, 2016.

Colleen M. D'Alessandro,
Manager, Engine & Propeller Directorate,
Aircraft Certification Service.
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