[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0393; Product Identifier 2019-NE-14-AD; Amendment 39-19654; AD 2019-11-08]

RIN 2120-AA64

Airworthiness Directives; International Aero Engines Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all International Aero Engines, LLC (IAE) PW1133G-JM, PW1133GA-JM, PW1130G-JM, PW1129G-JM, PW1127G-JM, PW1127GA-JM, PW1127G1-JM, PW1124G-JM, PW1124G1-JM, and PW1122G-JM model turbofan engines. This AD requires the removal of the main gearbox (MGB) assembly and electronic engine control (EEC) software and the installation of a part and software version eligible for installation. This AD was prompted by multiple reports of in-flight engine shutdowns (IFSDs) as the result of high-cycle fatigue causing fracture of certain parts of the MGB assembly. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The FAA must receive comments on this AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

• Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.

• Fax: 202-493-2251.

• Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, 20590.

• Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this final rule, contact International Aero Engines, LLC, 400 Main Street, East Hartford, CT, 06118; phone: 800-565-0140; email: help24@pw.utc.com; internet: http://fleetcare.pw.utc.com. You may view this service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759. It is also available on the internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2019-0393.

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-2019-0393; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Kevin M. Clark, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7088; fax: 781-238-7199; email: kevin.m.clark@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The FAA learned of 13 IFSD events on certain IAE PW1100G-JM model turbofan engines beginning in October, 2018. After further analysis, IAE determined that the integrated drive generator (IDG) oil pump drive gearshaft assembly in the MGB assembly fractured during engine operation as a result of high-cycle fatigue. In response, IAE subsequently redesigned the IDG oil pump drive gearshaft assembly in the MGB assembly with an axially thicker gear web, a radially thicker gear rim, and an improved tooth tip relief to improve MGB assembly durability and reliability. IAE also redesigned the EEC software to restrict engine operation to certain parameters. This condition, if not addressed, could result in failure of one or more engines, loss of thrust control, and loss of the airplane. The FAA is issuing this AD to address the unsafe condition on these products.

Related Service Information

The FAA reviewed PW Service Bulletin (SB) PW1000G-C-72-00-0129-00A-930A-D, Original Issue, dated April 18, 2019, and PW SB PW1000G-C-73-00-0037-00A-930A-D, Original Issue, dated May 28, 2019. PW SB PW1000G-C-72-00-0129-00A-930A-D, Original Issue, dated April 18, 2019, describes procedures for replacing the IDG oil pump drive gearshaft assembly in the MGB assembly. PW SB PW1000G-C-73-00-0037-00A-930A-D, Original Issue, dated May 28, 2019, describes procedures for replacing the EEC software to incorporate FCS 5.0 software.

FAA's Determination

The FAA is issuing this AD because it evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

AD Requirements

This AD requires the removal of the MGB assembly and EEC software and the installation parts and software versions eligible for installation.

Interim Action

These actions are interim actions, and the FAA may do additional rulemaking in the future for removal and replacement of the MGB assembly on the engines that do not operate on 180-minute or 120-minute extended operations (ETOPS) flights.

FAA's Justification and Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule. Multiple IAE PW1100G-JM model turbofan engines experienced MGB assembly failures recently, which resulted in IFSDs. The MGB assemblies must be removed for ETOPS operators within 90 or 120 days after the effective date of this AD, depending on the length of the operator's ETOPS flights, to ensure the MGB assemblies are replaced before fractures develop that could result in the failure of both MGB assemblies and a dual IFSD event. Therefore, the FAA finds good cause that notice and opportunity for prior public comment are impracticable. In addition, for the reason stated above, the FAA finds that good cause exists for making this amendment effective in less than 30 days.

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, the FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2019-0393 and Product Identifier 2019-NE-14-AD at the beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this final rule. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

The FAA will post all comments received, without change, to http://www.regulations.gov, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about this final rule.

Regulatory Flexibility Act

The requirements of the Regulatory Flexibility Act (RFA) do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without notice and comment, RFA analysis is not required.

Costs of Compliance

The FAA estimates that this AD affects 72 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replace the MGB	13 work-hours X $85 per hour =	$75,000	$76,105	$5,479,560

assembly	$1,105			
Replace the EEC software	3 work-hours X $85 per hour = $255	$0	$255	$18,360

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.

The FAA is 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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

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, and

(2) Will not affect intrastate aviation in Alaska.

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):

2019-11-08 **International Aero Engines**: Amendment 39-19654; Docket No. FAA-2019-0393; Product Identifier 2019-NE-14-AD.

(a) Effective Date

This AD is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all International Aero Engines, LLC (IAE) PW1133G-JM, PW1133GA-JM, PW1130G-JM, PW1129G-JM, PW1127G-JM, PW1127GA-JM, PW1127G1-JM, PW1124G-JM, PW1124G1-JM, and PW1122G-JM model turbofan engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 7260, Turbine Engine Accessory Drive.

(e) Unsafe Condition

This AD was prompted by multiple reports of in-flight engine shutdowns as the result of high-cycle fatigue causing fracture of certain parts of the main gearbox (MGB) assembly. The FAA is issuing this AD to prevent failure of the MGB assembly. The unsafe condition, if not addressed, could result in failure of one or more engines, loss of thrust control, and loss of the airplane.

(f) Compliance

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

(g) Required Actions

(1) Remove the MGB assembly, part number (P/N) 5322505, and install a part eligible for installation as follows:

(i) For engines that operate on 180-minute extended operations (ETOPS) flights, within 90 days from the effective date of this AD;

(ii) For engines that operate on 120-minute ETOPS flights, within 120 days from the effective date of this AD.

(2) For engines with MGB assembly P/N 5322505, within 120 days from the effective date of this AD, remove electronic engine control (EEC) software earlier than FCS 5.0 from the engine and load EEC software that is eligible for installation.

(h) Installation Prohibition

(1) After the effective date of this AD, do not install integrated drive generator (IDG) oil pump drive gearshaft assembly, P/N 5322630-01, into an MGB assembly.

(2) After the effective date of this AD, do not load EEC software earlier than FCS 5.0 on any engine identified in paragraph (c) of this AD with an MGB assembly, P/N 5322505.

(i) Definitions

(1) For the purpose of this AD, a "part eligible for installation" is an MGB assembly with an IDG oil pump drive gearshaft assembly other than P/N 5322630-01.

(2) For the purpose of this AD, "EEC software that is eligible for installation" is EEC software FCS 5.0 and later.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k) of this AD. You may email your request to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Related Information

For more information about this AD, contact Kevin M. Clark, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7088; fax: 781-238-7199; email: kevin.m.clark@faa.gov.

(l) Material Incorporated by Reference

None.

Issued in Burlington, Massachusetts, on June 6, 2019.

Robert J. Ganley,
Manager, Engine & Propeller Standards Branch,
Aircraft Certification Service.
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