



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-1996; Project Identifier AD-2022-01361-E; Amendment 39-22570; AD 2023-20-11]

RIN 2120-AA64

Airworthiness Directives; International Aero Engines, LLC Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain International Aero Engines, LLC (IAE LLC) Model PW1124G1-JM, PW1127G-JM, PW1127GA-JM, PW1129G-JM, PW1130G-JM, PW1133G-JM, and PW1133GA-JM engines. This AD was prompted by a manufacturer investigation which revealed that Maintenance, Repair, and Overhaul (MRO) shops were misinterpreting accepted knife edge coating wear limits on the high-pressure compressor (HPC) rear hub. This AD requires replacement of the HPC rear hub with a part eligible for installation. 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].

Director of the Federal Register approved the incorporation by reference of a certain publications listed in this AD as of [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 [regulations.gov](https://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: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1996; 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, any comments received, and other information. The street address for Docket Operations is listed above.

Material Incorporated by Reference:

- For Pratt & Whitney service information identified in this final rule, contact International Aero Engines, LLC, 400 Main Street, East Hartford, CT 06118; phone: (860) 565-0140; email: help24@prattwhitney.com; website: connect.prattwhitney.com.

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1996.

FOR FURTHER INFORMATION CONTACT: Mark Taylor, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238-7229; email: mark.taylor@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2023-1996 and Project Identifier AD-2022-01361-E” at the beginning of your comments. The most helpful comments reference a specific portion of the final rule, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this final rule.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this AD contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this AD, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this AD. Submissions containing CBI should be sent to Mark Taylor, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA was notified by the manufacturer that MRO shops misinterpreted the serviceable limits of HPC rear hubs on certain IAE LLC Model PW1124G1-JM, PW1127G-JM, PW1127GA-JM, PW1129G-JM, PW1130G-JM, PW1133G-JM, and PW1133GA-JM engines, and accepted knife edge coating wear that was beyond the design intent. The manufacturer indicated that the intended limit on knife edge coating is no more than 25-percent top coat loss, but shops misinterpreted the limit as no more than 25-percent bond coat loss. Acceptance of coating loss beyond the manufacturer's intended limit may cause heat-induced cracking at the forward and aft knife edge seals and uncontained separation of the HPC rear hub. This condition, if not addressed, could result in uncontained debris release, damage to the engine, damage to the airplane, in-

flight shutdown, and loss of the airplane. The FAA is issuing this AD to address the unsafe condition on these products.

FAA's Determination

The FAA is issuing this AD because the agency has determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Pratt & Whitney Service Bulletin PW1000G-C-72-00-0209-00A-930A-D, Issue No: 002, dated June 20, 2023, which provides the list of affected serial numbers for the HPC rear hub. 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 ADDRESSES.

AD Requirements

This AD requires replacement of the HPC rear hub with a part eligible for installation.

Justification for Immediate Adoption and Determination of the Effective Date

Section 553(b)(3)(B) of the Administrative Procedure Act (APA) (5 U.S.C. 551 *et seq.*) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for "good cause," finds that those procedures are "impracticable, unnecessary, or contrary to the public interest." Under this section, an agency, upon finding good cause, may issue a final rule without providing notice and seeking comment prior to issuance. Further, section 553(d) of the APA authorizes agencies to make rules effective in less than thirty days, upon a finding of good cause.

The FAA justifies waiving notice and comment prior to adoption of this rule because no domestic operators use this product. It is unlikely that the FAA will receive any adverse comments or useful information about this AD from any U.S. operator. Accordingly, notice and opportunity for prior public comment are unnecessary, pursuant to 5 U.S.C. 553(b)(3)(B). In addition, for the foregoing reasons, the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) for making this amendment effective in less than 30 days.

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 FAA has determined that it has good cause to adopt this rule without prior notice and comment, RFA analysis is not required.

Costs of Compliance

The FAA estimates that this AD affects 0 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 HPC rear hub	73 work-hours x \$85 per hour = \$6,205	\$0	\$6,205	\$0

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.

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.

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:

2023-20-11 International Aero Engines, LLC: Amendment 39-22570; Docket No. FAA-2023-1996; Project Identifier AD-2022-01361-E.

(a) Effective Date

This airworthiness directive (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 International Aero Engines, LLC Model PW1124G1-JM, PW1127G-JM, PW1127GA-JM, PW1129G-JM, PW1130G-JM, PW1133G-JM, and PW1133GA-JM engines with an installed high-pressure compressor (HPC) rear hub, part number 30G4008, with a serial number (S/N) listed in Table 2 or Table 3 of Pratt & Whitney Service Bulletin PW1000G-C-72-00-0209-00A-930A-D, Issue No: 002, dated June 20, 2023 (PW1000G-C-72-00-0209-00A-930A-D, Issue No: 002).

(d) Subject

Joint Aircraft System Component (JASC) Code 7230, Turbine Engine Compressor Section.

(e) Unsafe Condition

This AD was prompted by a manufacturer investigation which revealed that Maintenance, Repair, and Overhaul shops were misinterpreting accepted knife edge coating wear limits. The FAA is issuing this AD to prevent heat-induced cracking at the forward and aft knife edge seals and uncontained separation of the HPC rear hub. The unsafe condition, if not addressed, could result in uncontained debris release, damage to the engine, damage to the airplane, in-flight shutdown, and loss of the airplane.

(f) Compliance

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

(g) Required Actions

At the next engine shop visit after the effective date of this AD, replace the HPC rear hub with a part eligible for installation.

(h) Definitions

(1) For the purpose of this AD, a “part eligible for installation” is:

(i) Any HPC rear hub with an S/N that does not appear in Table 2 or Table 3 of PW1000G-C-72-00-0209-00A-930A-D, Issue No: 002; or

(ii) Any HPC rear hub that has been serviced in accordance with Pratt & Whitney Service Bulletin PW1000G-C-72-00-0209-00A-930A-D (any revision).

(2) 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 major mating engine flange H. The separation of engine flanges solely for the purpose of transportation without subsequent engine maintenance does not constitute an engine shop visit.

(i) Credit for Previous Actions

You may take credit for the actions required by paragraph (g) of this AD if you performed those actions before the effective date of this AD using Pratt & Whitney Service Bulletin PW1000G-C-72-00-0209-00A-930A-D, Issue No: 001, dated September 13, 2022.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, AIR-520 Continued Operational Safety 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 AIR-520 Continued Operational Safety Branch, send it to the attention of the person identified in paragraph (k) of this AD and email 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 Mark Taylor, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238-7229; email: mark.taylor@faa.gov.

(l) 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) Pratt & Whitney Service Bulletin PW1000G-C-72-00-0209-00A-930A-D, Issue No: 002, dated June 20, 2023.

(ii) [Reserved]

(3) For Pratt & Whitney service information identified in this AD, contact International Aero Engines LLC, 400 Main Street, East Hartford, CT 06118; phone: (860) 565-0140; email: help24@prattwhitney.com; website: connect.prattwhitney.com.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110.

(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, email: fr.inspection@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on October 5, 2023.

Victor Wicklund, Deputy Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2023-22849 Filed: 10/16/2023 8:45 am; Publication Date: 10/17/2023]