

Proposed Rules

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This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-1640; Project Identifier AD-2022-00283-E]

RIN 2120-AA64

Airworthiness Directives; Pratt & Whitney Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for all Pratt & Whitney (PW) Model PW2037, PW2037M, and PW2040 engines with a certain high-pressure turbine (HPT) 2nd stage blade assembly installed. This proposed AD was prompted by an in-flight shutdown (IFSD) caused by the fracture of HPT 2nd stage turbine hub assembly lugs, which resulted in blade liberation and a titanium fire in the high-pressure compressor (HPC). This proposed AD would require a visual inspection of the HPT 2nd stage blade assemblies for missing contact marks, a dimensional shadowgraph inspection of the HPT 2nd stage blade assemblies for blade root profile dimensional inspection, and an eddy current inspection (ECI) of the HPT 2nd stage turbine hub assembly for conforming slot flatness. This proposed AD would also require removal and replacement of any HPT 2nd stage turbine hub assembly or HPT 2nd stage blade assembly that does not pass any inspection. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by September 25, 2023.

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) by searching for and locating Docket No. FAA-2023-1640; 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 NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

Material Incorporated by Reference:

- For service information identified in this NPRM, contact Pratt & Whitney, 400 Main Street, East Hartford, CT 06118; phone: (800) 565-0140; email: help24@pw.utc.com; website: connect.prattwhitney.com.

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

FOR FURTHER INFORMATION CONTACT: Carol Nguyen, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238-7655; email: carol.nguyen@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under **ADDRESSES**. Include "Docket No. FAA-2023-1640; Project Identifier AD-2022-00283-E" at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, 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 proposal because of those comments.

The FAA has been informed that PW has done some outreach with affected operators regarding the proposed

corrective actions for this unsafe condition. As a result, affected operators are already aware of the proposed corrective actions and, in some cases, have already begun planning for replacement of certain HPT 2nd stage turbine hub assemblies and HPT 2nd stage blade assemblies. Therefore, the FAA has determined that a 30-day comment period is appropriate given the particular circumstances related to the proposed correction of this unsafe condition.

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](https://www.regulations.gov), including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

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 NPRM 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 NPRM, 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 NPRM. Submissions containing CBI should be sent to Carol Nguyen, 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 received a report of an IFSD of a Model PW2037 engine installed on a Boeing Model 757 airplane that occurred on September 8, 2020. Subsequent investigation by the manufacturer found that two turbine hub assembly lug fractures on the HPT 2nd stage turbine hub assembly caused

the release of four HPT 2nd stage blade assemblies part number (P/N) 1B7522, which caused damage upstream in the HPC, resulting in a titanium fire. Further investigation by the manufacturer revealed the blade root profile of certain HPT 2nd stage blade assemblies did not conform to the manufacturer's type design. The non-conforming blades installed in the HPT 2nd stage turbine hub assembly caused uneven contact on the HPT 2nd stage turbine hub assembly lug leading to increased attachment stress resulting in failure of the HPT 2nd stage turbine hub assembly lug and HPT 2nd stage turbine hub assembly. This condition, if not addressed, could result in the uncontained release of the HPT 2nd stage blade assemblies, damage to the engine, and damage to the airplane.

FAA's Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information Under 1 CFR Part 51

The FAA reviewed PW Turbojet Engine Service Bulletin PW2000 A72-777, Revision 2, dated April 11, 2023 (PW2000 A72-777 Rev. 2). This service information specifies procedures for performing a visual inspection of the HPT 2nd stage blade assemblies, dimensional shadowgraph inspection of the HPT 2nd stage blade assemblies, and an ECI of the HPT 2nd stage turbine hub assembly. 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**.

Proposed AD Requirements in This NPRM

This proposed AD would require accomplishing the actions identified as "RC" (required for compliance) in the Accomplishment Instructions of PW2000 A72-777 Rev. 2, except for any differences identified as exceptions in the regulatory text of this proposed AD.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 425 engines installed on airplanes of U.S. registry.

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

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
ECI of the HPT 2nd stage turbine hub assembly	8 work-hours × \$85 per hour = \$680.	\$0	\$680	\$289,000
Visual inspection of HPT 2nd stage blade assembly	8 work-hours × 85 per hour = 680.	0	680	289,000
Dimensional shadowgraph inspection of HPT 2nd stage blade assemblies.	8 work-hours × 85 per hour = 680.	0	680	289,000

The FAA estimates the following costs to do any necessary replacements that would be required based on the

results of the proposed inspections. The agency has no way of determining the

number of aircraft that might need these replacements:

ON-CONDITION COSTS

Action	Labor cost	Parts cost	Cost per product
Replace HPT 2nd stage turbine hub assembly	0 work-hours × \$85 per hour = \$0 ..	\$456,000	\$456,000
Replace HPT 2nd stage blade assembly	0 work-hours × \$85 per hour = \$0 ..	17,000	17,000

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

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Would not affect intrastate aviation in Alaska, and

(3) Would 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.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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:

Pratt & Whitney: Docket No. FAA–2023–1640; Project Identifier AD–2022–00283–E.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by September 25, 2023.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Pratt & Whitney (PW) Model PW2037, PW2037M, and PW2040 engines with a high-pressure turbine (HPT) 2nd stage blade assembly, part number (P/N) 1B7522 installed.

(d) Subject

Joint Aircraft System Component (JASC) Code 7250, Turbine Section.

(e) Unsafe Condition

This AD was prompted by an in-flight shutdown caused by the fracture of HPT 2nd stage turbine hub assembly lugs. The FAA is issuing this AD to prevent failure of the HPT 2nd stage turbine hub assembly lug and HPT 2nd stage blade assemblies. The unsafe condition, if not addressed, could result in the uncontained release of the HPT 2nd stage blade assemblies, damage to the engine, and damage to the airplane.

(f) Compliance

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

(g) Required Actions

Before exceeding the applicable compliance times specified in Planning Information, Compliance, page 2, of PW Turbojet Engine Service Bulletin PW2000 A72–777, Revision 2, dated April 11, 2023 (PW2000 A72–777 Rev. 2), or before accumulating 500 cycles after the effective date of this AD, whichever occurs later, perform all applicable actions identified as “RC” (required for compliance) in, and in accordance with, the Accomplishment Instructions of PW2000 A72–777 Rev. 2.

(h) Credit for Previous Actions

You may take credit for the actions required by paragraph (g) of this AD if you performed these actions before the effective date of this AD in accordance with PW Turbojet Engine Service Bulletin PW2000 A72–777, Initial Issue, dated September 29, 2021, or PW Turbojet Engine Service Bulletin PW2000 A72–777, Revision 1, dated December 21, 2022.

(i) 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 certification office, send it to the attention of the person identified in paragraph (j) 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.

(3) Except as required by paragraph (g) of this AD: For service information that contains steps that are labeled as Required for Compliance (RC), the following provisions apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator’s maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(j) Related Information

For more information about this AD, contact Carol Nguyen, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; phone: (781) 238–7655; email: carol.nguyen@faa.gov.

(k) 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 Turbojet Engine Service Bulletin PW2000 A72–777, Revision 2, dated April 11, 2023.

(ii) [Reserved]

(3) For service information identified in this AD, contact Pratt & Whitney, 400 Main Street, East Hartford, CT 06118; phone: (800) 565–0140; email: help24@pw.utc.com; website: connect.prattwhitney.com.

(4) You may view this service information at 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 July 24, 2023.

Victor Wicklund,

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

[FR Doc. 2023–18259 Filed 8–24–23; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2023–0009; Project Identifier MCAI–2022–00789–T]

RIN 2120–AA64

Airworthiness Directives; Airbus SAS Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Supplemental notice of proposed rulemaking (SNPRM).

SUMMARY: The FAA is revising a notice of proposed rulemaking (NPRM) that would have applied to certain Airbus SAS Model A319–115 airplanes; Model A320–214, –216, –232, –251N, and –271N airplanes; and Model A321–211, –231, –251N, –251NX, –252NX, –253N, –253NX, –271N, –271NX, and –272N airplanes. This action revises the NPRM by adding Model A321–213 airplanes, which were inadvertently left out of the applicability. The FAA is proposing this airworthiness directive (AD) to address the unsafe condition on these products. Since these actions would impose an additional burden over those in the NPRM, the FAA is requesting comments on this SNPRM.

DATES: The FAA must receive comments on this SNPRM by October 10, 2023.

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. 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 under Docket No. FAA–2023–0009; or in person at Docket Operations between 9 a.m. and