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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2019-0365; Product Identifier 2019-NE-12-AD; Amendment 39-19718; AD 2019-16-15]

RIN 2120-AA64

#### Airworthiness Directives; Pratt & Whitney Turbofan Engines

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for all Pratt & Whitney (PW) PW1519G, PW1521G, PW1521GA, PW1524G, PW1525G, PW1521G-3, PW1524G-3, PW1525G-3, PW1919G, PW1921G, PW1922G, PW1923G, and PW1923G-A model turbofan engines. This AD was prompted by corrosion found on the high-pressure compressor (HPC) front hub, which could result in certain HPC front hubs cracking before reaching their published life limit. This AD requires revisions to the Airworthiness Limitations Section (ALS) of the manufacturer's Instructions for Continued Airworthiness (ICA) and air carrier's approved Continued Airworthiness Maintenance Programs (CAMP) to incorporate new or more restrictive airworthiness limitations. The FAA is issuing this AD to address the unsafe condition on these products. **DATES:** This AD is effective October 1, 2019.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 1, 2019.

**ADDRESSES:** For service information identified in this final rule, contact Pratt

& Whitney, 400 Main Street, East Hartford, CT 06118; phone: 800-565-0140; fax: 860-565-5442; email: [help24@pw.utc.com](mailto: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-2019-0365.

#### 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-2019-0365; 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 address for Docket Operations is 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:** 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](mailto:kevin.m.clark@faa.gov).

#### SUPPLEMENTARY INFORMATION:

##### Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all PW PW1519G, PW1521G, PW1521GA, PW1524G, PW1525G, PW1521G-3, PW1524G-3, PW1525G-3, PW1919G, PW1921G, PW1922G, PW1923G, and PW1923G-A model turbofan engines. The NPRM published in the **Federal Register** on May 31, 2019 (84 FR 25203). The NPRM was prompted by corrosion found on the HPC front hub, which could result in certain HPC front hubs cracking before reaching their published life limit. The NPRM proposed to require revisions to the ALS of the manufacturer's ICA and

air carrier's approved CAMP to incorporate new or more restrictive airworthiness limitations. The FAA is issuing this AD to address the unsafe condition on these products.

#### Comments

The FAA gave the public the opportunity to participate in developing this final rule. The FAA received no comments on the NPRM or on the determination of the cost to the public.

#### Conclusion

The FAA reviewed the relevant data and determined that air safety and the public interest require adopting this final rule as proposed except for minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

#### Related Service Information Under 14 CFR Part 51

The FAA reviewed PW Service Bulletin (SB) PW1000G-A-72-00-0109-00A-930A-D, Issue No. 001, dated April 2, 2019 ("PW SB PW1000G-A-72-00-0109-00A-930A-D"), and PW SB PW1000G-A-72-00-0058-00B-930A-D, Issue No. 002, dated May 10, 2019 ("PW SB PW1000G-A-72-00-0058-00B-930A-D"). PW SB PW1000G-A-72-00-0109-00A-930A-D describes the revised maximum cycle limits of the HPC front hub for PW PW1500G engines. PW SB PW1000G-A-72-00-0058-00B-930A-D describes the revised maximum cycle limits of the HPC front hub for PW PW1900 engines. 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.

#### Costs of Compliance

The FAA estimates that this AD affects 18 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
Revise the ALS and CAMP .....	1 work-hour × \$85 per hour = \$85 .....	\$0	\$85	\$1,530

**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,
- (2) Will not affect intrastate aviation in Alaska, 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.

**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):

**2019–16–15 Pratt & Whitney:** Amendment 39–19718; Docket No. FAA–2019–0365; Product Identifier 2019–NE–12–AD.

**(a) Effective Date**

This AD is effective October 1, 2019.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Pratt & Whitney (PW) PW1519G, PW1521G, PW1521GA, PW1524G, PW1525G, PW1521G–3, PW1524G–3, PW1525G–3, PW1919G, PW1921G, PW1922G, PW1923G, and PW1923G–A model turbofan engines.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by corrosion found on the high-pressure compressor (HPC) front hub, which could result in certain HPC front hubs cracking before reaching their published life limit. The FAA is issuing this AD to prevent failure of the HPC front hub. The unsafe condition, if not addressed, could result in uncontained release of the HPC front hub, 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 Action**

Within 90 days after the effective date of this AD, revise the Airworthiness Limitations

Section of the PW Instructions for Continued Airworthiness, and for air carrier operations, the approved continuous airworthiness maintenance program, with the following maximum cycle limits for HPC front hub, part number 30G3210.

(1) For PW PW1519G, PW1521G, PW1521GA, PW1524G, PW1525G, PW1521G–3, PW1524G–3, and PW1525G–3 model turbofan engines, use the cycle limits established in Table 3, Revision to Table of Limits, of PW Service Bulletin (SB) PW1000G–A–72–00–0109–00A–930A–D, Issue No. 001, dated April 2, 2019.

(2) For PW PW1919G, PW1921G, PW1922G, PW1923G, and PW1923G–A model turbofan engines, use the cycle limits established in Table 3, Revision to Table of Limits, of PW SB PW1000G–A–72–00–0058–00B–930A–D, Issue No. 002, dated May 10, 2019.

**(h) 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 (i) 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.

**(i) 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.

**(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) Pratt & Whitney (PW) Service Bulletin (SB) PW1000G–A–72–00–0109–00A–930A–D, Issue No. 001, dated April 2, 2019.

(ii) PW SB PW1000G–A–72–00–0058–00B–930A–D, Issue No. 002, dated May 10, 2019.

(3) For PW service information identified in this AD, contact Pratt & Whitney, 400 Main Street, East Hartford, CT 06118; phone: 800–565–0140; fax: 860–565–5442; email:

help24@pw.utc.com; internet: <http://fleetcare.pw.utc.com>.

(4) You may view this service information at 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.

(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 August 19, 2019.

**Karen M. Grant,**

Acting Manager, Engine & Propeller Standards Branch, Aircraft Certification Service.

[FR Doc. 2019-18339 Filed 8-26-19; 8:45 am]

**BILLING CODE 4910-13-P**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2019-0528; Product Identifier 2018-NE-24-AD; Amendment 39-19717; AD 2019-16-14]

RIN 2120-AA64

#### Airworthiness Directives; Rolls-Royce Deutschland Ltd & Co KG Turbofan Engines

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** The FAA is superseding airworthiness directive (AD) 2018-25-01 for all Rolls-Royce plc (RR) Trent 1000-A, Trent 1000-C, Trent 1000-D, Trent 1000-E, Trent 1000-G, and Trent 1000-H turbofan model engines. AD 2018-25-01 required initial and repetitive inspections of the intermediate-pressure compressor (IPC) stage 1 rotor (R1) blades, IPC stage 2 rotor (R2) blades, and IPC shaft stage 2 dovetail posts, and removing any cracked parts from service. This AD retains those inspections, revises certain reinspection intervals, and adds certain engine models to the applicability. This AD was prompted by a determination by the manufacturer of the need to revise inspection intervals for certain affected engines. In addition, the FAA added recently validated additional engine models to the applicability. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective September 11, 2019.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of September 11, 2019.

The FAA must receive any comments on this AD by October 11, 2019.

**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 AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, United Kingdom, DE24 8BJ; phone: 011-44-1332-242424; fax: 011-44-1332-249936; email: [corporate.care@rollsroyce.com](mailto:corporate.care@rollsroyce.com); internet: <https://customers.rollsroyce.com/public/rollsroycecare>. You may view this service information at the FAA, Engine & 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-2019-0528.

#### 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-2019-0528; 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 AD, the mandatory continuing airworthiness information (MCAI), regulatory evaluation, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Dorie Resnik, Aerospace Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone:

781-238-7693; fax: 781-238-7199; email: [dorie.resnik@faa.gov](mailto:dorie.resnik@faa.gov).

#### SUPPLEMENTARY INFORMATION:

##### Discussion

The FAA issued AD 2018-25-01, Amendment 39-19511 (83 FR 62694, December 6, 2018), (“AD 2018-25-01”), for all RR Trent 1000-A, Trent 1000-C, Trent 1000-D, Trent 1000-E, Trent 1000-G, and Trent 1000-H turbofan engine models. AD 2018-25-01 required initial inspections and repetitive inspections of the IPC R1 blades, IPC R2 blades, and IPC shaft stage 2 dovetail posts, and removal of any cracked parts from service. AD 2018-25-01 resulted from the manufacturer determining the need for repetitive inspections of the IPC R1 blades, IPC R2 blades, and IPC shaft stage 2 dovetail posts. The FAA issued AD 2018-25-01 to prevent failure of the IPC, which could result in failure of one or more engines, loss of thrust control, and loss of the airplane.

#### Actions Since AD 2018-25-01 Was Issued

Since the FAA issued AD 2018-25-01, RR determined that inspection intervals for certain affected engines need to be revised. Also, since the FAA issued AD 2018-25-01, the European Union Aviation Safety Agency (EASA) has issued EASA AD 2019-0075, dated March 29, 2019 (“the MCAI”), which requires initial and repetitive inspections of IPC R1 blades, IPC R2 blades, and IPC shaft stage 2 dovetail posts installed on certain engines and removal of any cracked parts from service.

Also, since the FAA issued AD 2018-25-01, the type certificate (TC) for all Trent 1000 turbofan model engines was revised to add RR Trent 1000-AE2 and Trent 1000-CE2 engine models to the list of applicable engine models. Both Trent 1000-AE2 and Trent 1000-CE2 engine models were identified in EASA AD 2019-0075 and are subject to the same unsafe condition as the other models listed in the Applicability of this AD.

In addition, Rolls-Royce plc transferred TC E00076EN to Rolls-Royce Deutschland Ltd & Co KG (RRD) on February 21, 2019. The FAA has therefore revised the TC holder name from “Rolls-Royce plc” in AD 2018-25-01 to “Rolls-Royce Deutschland Ltd & Co KG” in this AD. Where applicable, for example when referring to the relevant service information, the FAA continues to use the name “Rolls-Royce plc” in this AD.

The FAA also updated our estimate for labor hours when replacing the IPC