

## Airworthiness Directive

**AD No.:** 2019-0241

**Issued:** 26 September 2019

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

**Design Approval Holder's Name:**

POWERJET S.A.

**Type/Model designation(s):**

SaM146 engines

**Effective Date:** 10 October 2019

**TCDS Number(s):** EASA.E.034

**Foreign AD:** Not applicable

**Supersedure:** None

### ATA 72 – Engine – High Pressure Compressor and High Pressure Turbine Rotating Parts – Life Limit Reduction / Replacement

**Manufacturer(s):**

Safran Aircraft Engines, formerly SNECMA; UEC Saturn, formerly OAO NPO Saturn

**Applicability:**

SaM146-1S17, SaM146-1S17C, SaM146-1S18 and SaM146-1S18C engines, all serial numbers (s/n).

These engines are known to be installed on, but not limited to, Sukhoi RRJ-95B aeroplanes.

**Definitions:**

For the purpose of this AD, the following definitions apply:

**The S/B:** Powerjet S.A. SaM146-1S Service Bulletin (S/B) 72-0227.

**Affected part:** High pressure compressor (HPC) Stage 1 blisks, HPC Stage 2 blisks, high pressure turbine (HPT) discs and HPT rear shafts having a Part Number (P/N) and a s/n as listed in Appendix 1 of this AD.

**Serviceable part:** HPC Stage 1 blisks, HPC Stage 2 blisks, HPT discs and HPT rear shafts which are not an affected part.

**Reason:**

The airworthiness limitations for the SaM146 engines, which are approved by EASA, are currently defined and published in the Engine Shop Manual, chapter 05. Recently, a batch of parts was identified which cannot be operated up to the published life limit.

This condition, if not corrected, could lead to engine failure and consequent release of high energy parts, possibly resulting in damage to, and reduced control of, the aeroplane.

To address this potential unsafe condition, Powerjet published the S/B, providing the list of affected parts and the reduced life limit.

For the reasons described above, this AD requires replacement of each affected part with a serviceable part. This AD also specifies the conditions for installation of an affected part.

**Required Action(s) and Compliance Time(s):**

Required as indicated, unless accomplished previously:

**Replacement:**

- (1) Before exceeding the applicable life limit, as specified in the S/B, replace each affected part with a serviceable part. This can be accomplished in accordance with the instructions of the applicable Engine Shop Manual.

**Part Installation:**

- (2) From the effective date of this AD, it is allowed to install an affected part on any engine, provided it has not exceeded the applicable life limit, as specified in the S/B, and that, following installation, it is replaced as required by paragraph (1) of this AD.

**Ref. Publications:**

Powerjet S.A. SaM146-1S S/B No. 72-0227 dated 02 August 2019.

The use of later approved revisions of the above-mentioned document is acceptable for compliance with the requirements of this AD.

**Remarks:**

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. This AD was posted on 26 August 2019 as PAD 19-160 for consultation until 23 September 2019. No comments were received during the consultation period.
3. Enquiries regarding this AD should be referred to the EASA Programming and Continued Airworthiness Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).
4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the [EU aviation safety reporting system](#).



5. For any question concerning the technical content of the requirements in this AD, please contact: PowerJet Customer Support Centre, Telephone: +33 1 64 14 81 46, Fax: +33 1 64 14 80 89, E-mail: [powerjet.csc@safrangroup.com](mailto:powerjet.csc@safrangroup.com).

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## Appendix 1 – Affected Parts

Part	P/N	s/n
HPC Stage 1 blisk	365-000-805-0	PA596197
	365-000-806-0	PA835944 PA596199
HPC Stage 2 blisk	365-000-912-0	PA825598
	365-000-915-0	PA674465 PA814061
HPT disk	365-013-505-0	PA862878 PA808892 PA879924 PA698005 PA873875 PC077227 PA873866 PC124522
HPT rear shaft	365-013-713-0	DE458541

