



Airworthiness Directive

AD No.: 2020-0006

Issued: 13 January 2020

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: 27 January 2020

TCDS Number(s): EASA.E.034

Foreign AD: Not applicable

Supersedure: None

ATA 73 – Engine – Fuel Nozzle – Replacement

Manufacturer(s):

SAFRAN Aircraft Engines, formerly SNECMA; and UEC Saturn, formerly OAO NPO Saturn

Applicability:

SaM146-1S17, SaM146-1S17C, SaM146-1S18 and SaM146-1S18C engines, all serial numbers.

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 SB: PowerJet S.A. Service Bulletin (SB) 73-0023.

Affected part: Fuel nozzles, having Part Number (P/N) 365-144-303-0 or P/N 365-144-503-0.

Serviceable part: Any fuel nozzle, which is not an affected part; or an affected part, which has not exceeded 7 000 flight hours (FH) since its first installation on an engine.

Groups: Group 1 engines are those that have an affected part installed. Group 2 engines are those that do not have an affected part installed.



Reason:

In-service findings have shown that some SaM146 engines may be subject to a high level of wear of the fuel nozzle noses and sliding seals, resulting in an increase of the leakage section between fuel nozzles and combustion chamber.

This condition, if not corrected, could lead to the inability to restart the engine following flame out, possibly resulting in reduced control of the aeroplane.

Prompted by these findings, Powerjet S.A. published the SB, which identifies certain parts potentially subject to excessive wear and provides instructions for timely removal from service of the affected parts.

For the reasons described above, this AD requires removal from service of the affected parts. This AD also prohibits (re)installation of affected parts that have exceeded the new reduced limits.

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

Required as indicated, unless accomplished previously:

Removal from Service:

- (1) For Group 1 engines: Before an affected part exceeds 7 000 FH since its first installation on an engine, or within 300 FH after the effective date of this AD, whichever occurs later, replace that affected part with a serviceable part in accordance with the instructions of the SB.

Part(s) Installation:

- (2) From the effective date of this AD, it is allowed to install on any engine an affected part, provided it is a serviceable part, as defined in this AD and that, following installation, the affected part is replaced as required by paragraph (1) of this AD.

Engine Installation:

- (3) From the effective date of this AD, it is allowed to install a Group 1 engine on an aeroplane, provided the affected parts on that engine are serviceable parts, as defined in this AD, and that, following installation, each affected part on the engine is replaced as required by paragraph (1) of this AD.

Ref. Publications:

Powerjet S.A. SB 73-0023 original issue dated 19 January 2016, or Revision 1 dated 31 March 2016, or Revision 2 dated 21 April 2016.

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 21 November 2019 as PAD 19-207 for consultation until 19 December 2019. The Comment Response Document can be found in the [EASA Safety Publications Tool](#), in the compressed (zipped) file attached to the record for this AD.
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.
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.

