



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 19-210

Issued: 05 December 2019

Note: This Proposed Airworthiness Directive (PAD) 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.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

Design Approval Holder's Name:

AIRBUS

Type/Model designation(s):

A380 aeroplanes

Effective Date: [TBD - standard: 14 days after AD issue date]

TCDS Number(s): EASA.A.110

Foreign AD: Not applicable

Supersedure: None

ATA 24 – Electrical Power – Ram Air Turbine Gearbox – Inspection

Manufacturer(s):

Airbus

Applicability:

Airbus A380-841, A380-842 and A380-861 aeroplanes, all manufacturer serial number (MSN).

Definitions:

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

Affected part: Ram air turbines (RAT), having Part Number (P/N) 1704287G or P/N 1704287H.

The SB: Airbus Service Bulletin (SB) A380-24-8158.

Aeroplane date of manufacture: The date of transfer of title, which is referenced in Airbus documentation at the time of first delivery to an operator.

Reason:

An occurrence was reported where a RAT installed on an aeroplane failed a ground torque check in accordance with the instructions of Airbus SB A380-24-8133, with the RAT gearbox drain hole plugged. Subsequent disassembly of the RAT gearbox revealed excess water in the gearbox and



corrosion. After investigation by the RAT manufacturer (previously Hamilton Sundstrand Corporation, currently Collins Aerospace), a significant amount of water, oil and metallic particles were found in the gearbox.

Prompted by that event, Airbus published SB A380-24-8147 (which includes reference to Hamilton Sundstrand Corporation SB ERPS38M-24-9) to provide inspection instructions and EASA issued AD 2019-0124, applicable to a limited number of MSN, later superseded by EASA AD 2019-0192, reducing the compliance time, to require a one-time manual turbine free rotation check of each affected part and, depending on results, accomplishment of applicable corrective action(s). That AD also required reporting certain findings to Collins Aerospace.

Since EASA AD 2019-0192 was issued, reported results of the rotation check revealed several cases with water quantity in excess of 25 ml.

This condition, if not detected and corrected, could lead to water ingress into the gearbox, surrounding the turbine shaft gear and freezing at altitude, possibly preventing RAT operation, resulting in loss of electrical generation, which could, if combined with an electrical system emergency condition, possibly result in reduced control of the aeroplane.

To address this unsafe condition, Airbus issued the SB to provide inspection instructions.

For the reasons described above, this AD requires repetitive detailed inspections (DET) of gearbox oil of each affected part, and, depending on results, accomplishment of applicable corrective action(s).

This AD is considered to be an interim measure and further AD action may follow.

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

Required as indicated, unless accomplished previously:

Inspection(s):

- (1) Within the compliance time as defined in Table 1 of this AD, as applicable, and, thereafter, at intervals not to exceed 6 months or 4 000 flight hours (FH) whichever occurs first, accomplish a DET of the gearbox oil of the affected part in accordance with the instructions of the SB.

Corrective Action(s):

- (2) If, during any DET as required by paragraph (1) of this AD, the calculated water ingress rate is higher than 4 ml per month, before next flight, contact Airbus for approved instructions (which may include redefinition of the DET interval and possible additional actions to be accomplished) and, thereafter, within the compliance time(s) specified therein, accomplish those instructions accordingly.

Reporting:

- (3) Within 10 days after each inspection as required by paragraph (1) of this AD, report the results (including no findings) to Airbus.



Table 1 – Initial DET

Aeroplane date of manufacture	Compliance time	
Before 01 January 2019	whichever occurs later, A or B :	
	A	Within 6 months or 4 000 FH, whichever occurs first after accomplishment of Airbus SB A380-24-8147
	B	Within 3 months or 2 000 FH, whichever occurs first after the effective date of this AD
From 01 January 2019 up to the effective date of this AD inclusive	Within 3 months or 2 000 FH, whichever occurs first after the effective date of this AD	
After the effective date of this AD	Within 6 months or 4 000 FH, whichever occurs first after the aeroplane date of manufacture	

Terminating Action:

(4) None.

Ref. Publications:

Airbus SB A380-24-8158 original issue dated 15 November 2019.

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

Remarks:

1. This Proposed AD will be closed for consultation on 02 January 2020.
2. Enquiries regarding this PAD should be referred to the EASA Programming and Continued Airworthiness Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, can be reported to the [EU aviation safety reporting system](#).
4. For any question concerning the technical content of the requirements in this PAD, please contact: Airbus – EIANA (Airworthiness Office), Telephone: +33 562 110 253, Fax: +33 562 110 307, E-mail: account.airworth-A380@airbus.com.

