



## Airworthiness Directive

**AD No.:** 2019-0310

**Issued:** 20 December 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:

AIRBUS

### Type/Model designation(s):

A380 aeroplanes

**Effective Date:** 03 January 2020

**TCDS Number(s):** EASA.A.110

**Foreign AD:** Not applicable

**Supersedure:** None

## ATA 27 – Flight Controls – Rudder Electrical Backup Hydraulic Actuator Solenoid Valves – Replacement / Master Minimum Equipment List – Amendment

### Manufacturer(s):

Airbus

### Applicability:

Airbus A380-841, A380-842 and A380-861 aeroplanes, all manufacturer serial numbers.

### Definitions:

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

**The SB:** Airbus Service Bulletin (SB) A380-27-8068, which refers to Goodrich Actuation Systems SB 31129-27-12.

**The MER:** Airbus A380 Master Minimum Equipment List (MMEL), Major Event Revision (MER), approved 03 December 2019.

**Affected part:** Solenoid valves, having part number (P/N) D90ST0216-100, and having a serial number (s/n) in the range 2289 to 2775 inclusive, for rudder electrical back-up hydraulic actuators (EBHA) and elevator servo controls, except those with an encircled 'R' engraved on the identification plate. A solenoid valve where the s/n cannot be determined is considered to be an affected part.



**Serviceable part:** Solenoid valves, eligible for installation on rudder EBHA or elevator servo controls, which are not an affected part.

**Groups:**

Group 1 aeroplanes are those that have an affected part installed on both rudder and elevator.

Group 2 aeroplanes are those that have an affected part installed on rudder only.

Group 3 aeroplanes are those that have an affected part installed on elevator only.

Group 4 aeroplanes are those that do not have an affected part installed, neither on rudder nor on elevator.

**Reason:**

An in-service occurrence was reported where, during engine shut down on ground, the upper rudder yellow EBHA untimely went into active mode. Investigation identified that a ball was missing inside the solenoid valve of the EBHA, which may have caused this active mode when the hydraulic circuit was pressurized. This non-conformity of a missing ball inside the solenoid valve may exist on rudder EBHAs and elevator servo controls.

This condition, if not detected and corrected, could lead to rudder runaway or elevator runaway, possibly resulting in loss of control of the aeroplane.

To address this potential unsafe condition, Airbus issued the SB to provide instructions to identify and replace the affected parts on rudder EBHA, and issued the MER of the A380 MMEL that incorporates temporary restrictions of the associated MMEL items.

For the reasons described above, this AD requires implementation of certain dispatch restrictions. This AD also requires replacement of the affected parts on rudder EBHA. Replacement of the affected parts on rudder allows removal of some MMEL restrictions on the rudder.

This AD is considered to be an interim action and further AD action may follow to require replacement of solenoid valves installed on elevator servo controls.

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

Required as indicated, unless accomplished previously:

**MMEL Changes / Dispatch Restrictions:**

- (1) For Group 1, Group 2 and Group 3 aeroplanes: Within 30 days after the effective date of this AD, amend the MMEL, on the basis of which the operator MEL is made, as specified in Table 1 of this AD, as applicable, in accordance with the instructions of the MER, inform all flight crews, and, thereafter, operate the aeroplane accordingly.



Table 1 – Applicability of Restricted (NO GO) MMEL Items

Restricted MMEL items	Affected Aeroplanes		
	Group 1	Group 2	Group 3
27-24-02A Rudder Double Pressure Function	Applicable	Applicable	Not applicable
27-24-04A Rudder EBHA	Applicable	Applicable	Not applicable
27-93-01A PRIM 1	Applicable	Applicable	Applicable
27-34-01 Elevator Electro-Hydrostatic Actuator (only for the outboard elevators)	Applicable	Not applicable	Applicable

**Replacement:**

- (2) For Group 1 and Group 2 aeroplanes: Within 6 months after the effective date of this AD, replace each affected part (installed at locations as indicated in the SB) on the rudder EBHA with a serviceable part, as defined in this AD, in accordance with the instructions of the SB.

**Part Installation:**

- (3) For Group 1, Group 2, Group 3 and Group 4 aeroplanes: From the effective date of this AD, do not install on any aeroplane an affected part on any rudder EBHA or elevator servo control.

**MMEL Change:**

- (4) After replacement of all affected parts on the rudder EBHA of an aeroplane as required by paragraph (2) of this AD, the restrictions of MMEL items “27-24-02A Rudder Double Pressure Function” and “27-24-04A Rudder EBHA” implemented on that aeroplane as required by paragraph (1) of this AD are no longer necessary and can be removed from that aeroplane.

**Ref. Publications:**

Airbus SB A380-27-8068 original issue dated 12 December 2019.

Airbus A380 MMEL MER, approved 03 December 2019.

The use of later approved revisions of the above-mentioned documents 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. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.
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: AIRBUS SAS - EIANA (Airworthiness Office), Telephone: +33 562 110 253, Fax: +33 562 110 307, E-mail: [account.airworth-A380@airbus.com](mailto:account.airworth-A380@airbus.com).

