



# Notification of a Proposal to issue an Airworthiness Directive

**PAD No.: 20-164**

**Issued: 12 October 2020**

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):**

see Applicability

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

**TCDS Number(s):** EASA.A.064, EASA.A.004, EASA.A.015 and EASA.A.110

**Foreign AD:** Not applicable

**Supersedure:** None

## ATA 24 – Electrical Power – Nickel-Cadmium Rechargeable Batteries – Replacement

### Manufacturer(s):

Airbus, formerly Airbus Industrie

### Applicability:

Airbus A318, A319, A320, A321, A330, A340 and A380 aeroplanes, all certified models, all manufacturer serial numbers (MSN).

### Definitions:

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

**All certified models:** This includes all models (of a type design) certified before the date of issuance of this AD.

**Affected part:** Nickel-Cadmium (Ni-Cd) battery, Part Numbers (P/N) as defined in Table 1 of this AD, all serial numbers.

**Serviceable part:** An affected part which was, prior to installation, fully (re)charged in an approved battery shop at constant current and after (re)charging, was never installed and (re)connected to an aeroplane which was parked or stored for more than 2 days, except when the disconnection and



subsequent connection of the battery has been accomplished using the preservation procedures as defined in the applicable AOT.

**The applicable AOT:** Airbus Alert Operators Transmission (AOT) A24N006-20 (A318, A319, A320 and A321 aeroplanes), A24L007-20 (A330 and A340 aeroplanes) and A24R009-20 (A380 aeroplanes), as applicable.

**Reconnection cycle:** Repeated disconnection and connection of a battery, installed on an aeroplane, to aeroplane electrical system during parking or storage periods (for A330 and A340 aeroplanes) or parking periods (for A318, A319, A320, A321 and A380 aeroplanes) since the last battery charge at constant current in approved battery shop, as defined in the applicable AOT, except when:

- the disconnection and subsequent connection of the battery has been accomplished using the on-wing battery preservation procedures as defined in the applicable AOT, or
- the battery has been disconnected, physically removed from the airplane and then subsequently installed and connected during accomplishment of an off-wing battery preservation procedures as referenced in the applicable AOT.

**Groups:** Group 1 aeroplanes are those which have an affected part installed, which has more than 4 reconnection cycles.

Group 2 aeroplanes are those which have an affected part installed, which has 4 or less reconnection cycles; or have a serviceable part installed.

#### Reason:

Results of the investigation by Airbus and the manufacturer of Ni-Cd batteries have determined that repetitive disconnection and reconnection of batteries during aeroplane parking or storage (as detailed in the applicable Aircraft Maintenance Manual) may lead to reduction of capacity of those batteries.

This condition, if not corrected, could lead to reduced battery endurance performance, possibly resulting in failure to supply the minimum essential electrical power during abnormal or emergency conditions.

To address this potential unsafe condition, Airbus issued the applicable AOT to provide maintenance instructions.

For the reasons described above, and in order to meet the intent of the AOT, this AD requires replacement of certain affected parts with serviceable parts and provides conditions for return to service of affected parts installed on aeroplanes in parking or storage. This AD also introduces an alternative method to battery replacement required by this AD.

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

Required as indicated, unless accomplished previously:



**Replacement:**

- (1) For Group 1 aeroplanes: Within the compliance time defined in Table 2 of this AD and thereafter before each release to service of an aeroplane (see also Notes 2 and 3 of this AD), replace each affected part with a serviceable part in accordance with the instructions of the applicable AOT.

Table 1 – Affected P/N

<b>Aeroplane Type(s)</b>	<b>P/N</b>
A318, A319, A320 and A321	2758 or 416526
A330 and A340	4059, 405CH or 505CH
A380	505CH2

Table 2 – Battery Replacement

<b>Aeroplane Type(s)</b>	<b>Compliance Time</b> (after the effective date of this AD)
A318, A319, A320 and A321	Within 4 months
A330 and A340	Within 6 months
A380	Within 6 months

Note 1: After replacement of a battery on an aeroplane as required by paragraph (1) of this AD, the aeroplane becomes Group 2 aeroplane, until the battery reconnection cycles (as defined in this AD) becomes more than 4.

**Alternative Method – Preservation:**

- (2) For Group 2 (see Note 2 of this AD) aeroplanes: From the effective of this AD, provided that the preservation procedures (off-wing or on-wing, as applicable) are accomplished on an aeroplane in accordance with the instructions of the applicable AOT, no replacements of affected parts in accordance with the requirements of paragraph (1) of this AD are required (anymore) for that aeroplane.

Note 2: For the purpose of this AD, a Group 2 aeroplane on which the preservation procedures, as detailed in the applicable AOT, are not accomplished becomes a Group 1 aeroplane after application of more than 4 reconnection cycles (see Definitions of this AD). A Group 2 aeroplane on which preservation procedures, as detailed in the applicable AOT, are accomplished, remains a Group 2 aeroplane independently from the number of disconnection and subsequent reconnection of the batteries.

Note 3: For Group 1 and Group 2 aeroplanes, the use of off-wing or on-wing preservation procedures, as detailed in the applicable AOT, prevents (further) reduction of the capacity of an affected part.

**Ref. Publications:**

Airbus AOT A24N006-20 original issue dated 09 September 2020, or Revision 1 dated 12 October 2020.



Airbus AOT A24L007-20 original issue dated 23 September 2020.

Airbus AOT A24R009-20 original issue dated 23 September 2020.

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

**Remarks:**

1. This Proposed AD will be closed for consultation on 26 October 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](mailto: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](#). This may include reporting on the same or similar components, other than those covered by the design to which this PAD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
4. For any question concerning the technical content of the requirements in this PAD, please contact: AIRBUS, as specified below:  
For A320 family program : Airworthiness Office; E-mail: [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com).  
For A330 and A340 family program: Airworthiness Office, E-mail: [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com).  
For A380 program : Airworthiness Office, E-mail: [account.airworth-A380@airbus.com](mailto:account.airworth-A380@airbus.com).

