

COMMENT RESPONSE DOCUMENT

EASA PAD No. 23-099

[Published on 04 September 2023 and officially closed for comments on 02 October 2023]

Commenter 1: Lufthansa CityLine GmbH – Daniel Leitzbach – 06/09/2023

Comment # 1

Does the A320 time requirement include components that were installed on an aircraft with several consecutive parking periods < 6 months, with RTS in between, but exceeding 6 months in total?

EASA response:

Comment noted: The AD requires replacement of Nickel-Cadmium (Ni-Cd) batteries having Part Number (P/N) as defined in Table 1 of the AD which was stored on wing during a single period exceeding the applicable Time Limit as defined in Table 1 of the AD. The condition of the “single time limit period” replaces the previous determining condition which was defined based on the number of disconnection/reconnection cycles.

EASA also draws attention to the applicable Airbus MPD tasks applicable to the affected batteries and calendar time counting methodology which foresee replacement and shop visit for the affected batteries after 6 or 12 calendar months of service after the last battery check, as applicable to aeroplane type and battery Part Number (P/N). This ensures that the battery capacity remains above the minimum required performance to ensure functioning during emergency electrical conditions. The intention of this AD is to avoid dispatch of an aeroplane after a single long-time storage/parking period (6 or 12 months, as applicable) with a potential drop of the battery capacity below the minimum required performance for emergency electrical conditions. The time periods indicated in the AD were defined by Airbus with a degree of conservatism reflecting the potential disconnection/reconnection cycles during a single long-time storage/parking period.

No changes have been made to the Final AD in response to this comment.



Commenter 2: Singapore Airlines Limited (SIA) – Soh Kian Ann – 07/09/2023**Comment # 2**

SIAEC would like to seek clarification regarding whether the number of reconnection cycles will affect the serviceability of the battery. In accordance with EASA AD 2020-0274, aircraft which have an affected part installed, which have more than 4 reconnection cycles will need to replace the battery within the compliance time defined in the Table 2 of AD 2020-0274. However, for PAD 23-099, the requirement on the number of reconnection cycles is removed and the new requirement is to replace the affected part with serviceable part before release to service of an aeroplane after a storage or parking period as defined in Table 1 of PAD.

Question: If an aircraft is kept in parking/storage period of less than the time limit as defined in Table 1 of PAD, but has gone through more than 4 reconnection cycles, can the battery be considered as serviceable part?

EASA response:

Comment noted: It is each reconnection cycle which causes the loss of the battery capacity. In the current (P)AD, an average number of reconnection cycles per month and a more precise estimation of the loss of battery capacity per reconnection cycle have been considered and converted into calendar compliance time. Accordingly, the determining condition to classify a Ni-Cd battery as affected part qualified for replacement is the time period length which the battery spent on the parked/stored aeroplane.

No changes have been made to the Final AD in response to this comment.

Commenter 3: United Air Lines – Jeff Shrader – 18/09/2023**Comment # 3**

United Airlines has reviewed the subject PAD and have no objections to the rule's scope of safety but does have the following exception.

As in the superseded EASA AD, PMA parts were not included. The FAA in turn issued two ADs, one for OEM battery (AD 2021-20-08) the other for PMA battery (AD 2021-21-02) and stated within AD 2021-21-02 that "The FAA is discussing how to address OEM and PMA parts in ADs for future rulemaking." UAL recommends EASA and Airbus collaborate with the FAA regarding the addition of PMA to simplify regulatory adherence as other operators have similar positions on PMA.



EASA response:

Comment noted: The EASA and FAA collaborate in accordance with the Agreement between the Government of the United States of America and the European Union on Cooperation in the Regulation of Civil Aviation Safety and its Technical Implementation Procedure for Design Approval, Production Activities, Export Airworthiness Approval, Post Design Approval Activities, and Technical Assistance in order to ensure approving the design of civil aeronautical products and articles eligible for import into the U.S. and the EU, the process for obtaining eligibility for import, and the means for providing continued support of those civil aeronautical products and articles after import.

The Final AD applies to the original equipment manufacturer (OEM) part numbers listed in Table 1 of the AD, only. PMA approval P/N are not affected by the AD and will be likely addressed by a dedicated FAA AD which is the State of Design for affected PMA approved batteries.

No changes have been made to the Final AD in response to this comment.

Commenter 4: China Hainan Airlines – Leo Zhu – 08/09/2023
Comment # 4**Description**

There are A330 airplanes in HNA (China Hainan Airlines) fleet that are equipped with Ni-Cd batteries P/N 405CH.

For AD 2020-0274:

HNA have one-time replaced the affected batteries in accordance with the requirements of AD 2020-0274 and A24L007-20 Rev 01, and performed on-wing preservation on batteries for storage or parking using the AMM program.

On-wing preservation requires a battery replacement time limit of 12 months, which is consistent with the execution interval (12MO) of MPD tasks 243851-01-1 and 243852-01-2, thus Airlines have relatively easy control and lower maintenance costs.

For PAD 23-099:

The replacement time limit for batteries is set to 6 months. This may resulted in us having to shorten the interval of MPD tasks to 6 months to meet the requirements of proposed AD, but it will increase our maintenance costs.

In our view, when the aircraft is in a parking or storage state, we consider it to be in a non-airworthy state, so during the parking or storage period, we believe that there is no need to proactively replace the battery, only need to replace the battery before the aircraft return to service.



According to PAD 23-099 (the proposed AD), if we only require replacing the battery before release to service of an airplane after a storage or parking period, HNA may need to apply for a separate AMOC from EASA. This will increase EASA's workload.

Request

Can EASA include replacing the battery before return to service of an airplane after a storage or parking period as an alternative method in PAD 23-099 (the proposed AD)? So that airlines can flexibly choose different methods based on their own needs.

EASA response:

Comment noted: Paragraph (1) of the AD requires replacement of the Ni-Cd battery (which spent on a stored/parked aeroplane a single time period more than the Time Limit defined in Table 1 of the AD) before release to service of the aeroplane after the storage/parking. The replacement of the battery for Airbus A330 and A340 aeroplanes should not be done every 6 months. The replacement should be done before return to service if the parking/storage duration exceeded 6 months. For example: if the storage duration is 8 months the battery shall be replaced at the end of the 8 months, not at 6 months. The AD requirement does not impact the 12 months MPD requirement.

No changes have been made to the Final AD in response to this comment.

Commenter 5: Lufthansa Technik AG – Egbert Hahn – 12/09/2023

Comment # 5

The impending EASA AD requires the necessity to revise A320 AMM Task

- 10-30-00-554-005-A Return to operation after a storage period (ON A/C ALL)
- 10-30-00-554-804-A Return to operation after a parking period (ON A/C ALL).

Please mandate the requirement to exchange both main batteries if storage or parking time will be more than six (06) months in both AMM tasks above.

This would be helpful for the operator to define a final fix – based on an OEM document - for the impending EASA AD.



EASA response:

Comment noted: The AMM procedures for return to operation are currently under revision by Airbus. The AD intention is not to mandate the listed AMM tasks.

No changes have been made to the Final AD in response to this comment.

Commenter 6: Qatar Airways – Ossama Alzoughbi – 14/09/2023
Comment # 6

- A. As per this PAD, before release to service of an aeroplane after a storage or parking period, as applicable, replace each affected part, as defined in this AD, with a serviceable part in accordance with approved Airbus maintenance instructions. As per our understanding, if the affected battery P/Ns are preserved on wing for a period of less than 6 months (for A320 Fam/A330/A340) and less 12 months (for A350/A380), then no replacement is required. Please confirm our understanding, if our understanding is correct, please update para (1) “Replacement” to reflect that no action is required if the affected battery P/Ns are preserved on wing for a period of less than 6 months (for A320 Fam/A330/A340) and less 12 months (for A350/A380) in order to avoid any confusion.
- B. Please confirm if the batteries which are repetitively used for periodic checks during parking and storage time of aircraft, i.e. connected, disconnected and removed from aircraft, then sent to store and subject to shop visit for capacity check every 6 month are considered as serviceable parts. If yes, please update the definition for serviceable parts.

EASA response:

Comment A not agreed: The commenter understanding is correct. Paragraph (1) defines the conditions when the replacement of the the Ni-Cd battery is required. In all other cases, by exclusion, the replacement is not required. It is not the purpose of an EASA AD to mandate a not required action.

No changes have been made to the Final AD in response to this comment.

Comment B: EASA confirms that the commenter understanding is correct and that the serviceable part definition was refined.

The final AD was amended accordingly.



Commenter 7: American Airlines – Ben Niaki – 15/09/2023**Comment # 7**

In response to EASA PAD 23-099, American Airlines requests clarification as to:

- A Whether AD applies to original equipment manufacturer (OEM) part numbers listed in Table 1 of EASA PAD AND corresponding parts manufacturer approval (PMA) part numbers.
- B The definition of “parking and storage” as intended by this AD. Does “parking and storage” as defined by this AD include extended heavy maintenance checks? For example, an S-check that is abnormally extended beyond the 6 month time-limit due to inspection findings or material sourcing issues. Does “parking and storage” as defined by this AD include extended downtime for aircraft repair or modification such as a large repair for aircraft tug collision damage or a large-scale interior modification?

EASA response:

Comment A noted. The Final AD applies to the original equipment manufacturer (OEM) part numbers listed in Table 1 of the AD, only. PMA approval P/Ns are not affected by the AD and will be likely addressed by a dedicated FAA AD which is the State of Design for affected PMA approved batteries. Please refer to the superseded EASA AD 2020-0274 and FAA ADs AD 2021-20-08 and AD 2021-21-02.

No changes have been made to the Final AD in response to this comment.

Comment B noted: In accordance with Airbus “In Service Information (ISI) article 10.00.00003”, it is the responsibility of the operator to apply the relevant instructions provided in AMM Chapter 10 Parking & Storage in the frame of extended heavy maintenance checks or extended downtime for aircraft repair/modification. A dedicated preservation regime shall be defined in line with the maintenance activity requirements (for example: need of batteries kept connected), based upon the AMM parking and storage procedures.

No changes have been made to the Final AD in response to this comment.



Commenter 8: Swiss International Air Lines Ltd. – Paul Mugnier – 18/09/2023**Comment # 8**

One suggestion regarding PAD 23-099 is to give for each Table 1 interval its equivalent time in hours.
This way it would concur with AIRBUS Maintenance Program Document.

EASA response:

Comment not agreed. The Time Limits indicated in Table 1 of the AD represents calendar time during which the aeroplane is parked/stored. During the parking/storage the aeroplane does not accumulate any flight hours/flight cycles.

No changes have been made to the Final AD in response to this comment.

Commenter 9: Aviation Island S.L. – Adrián Requeni – 21/09/2023**Comment # 9**

Part Numbers 285CH, 2758 or 416526 have been considered as affected part for A320 type aircraft. However, Part Number 4575126-() with ETSO approval number EASA.21O.10048348 can be installed in A32X aircraft by STC 10061176 approval number.

For this reason, I would want to ask if this Part Number 4575126-() should be considered as an affected part like the rest of the Battery Part Numbers present in Table 1 of PAD 23-099.

EASA response:

Comment noted. Batteries installed by design changes (STC 10061176) are not subject of this AD. The potential unsafe condition which may arise from long time parking/storage of Hawker Enersys Type F20/23XLM Battery, P/N 4575126-() on wing shall be assessed and determine by the STC approval holder. At this time EASA does not have information about the existence of such determination.

No changes have been made to the Final AD in response to this comment.



Commenter 10: Delta Air Lines, Inc.– Michael Tharp– 26/09/2023**Comment # 10**

Replace the “Part(s) Installation” (3) instructions in the PAD with the following:

“From the effective date of this AD, only a Serviceable Part can be installed on an aircraft listed in the Applicability section of this AD.”

The instructions as written in the PAD are difficult to understand and clearly comply with. They appear to be a re-written version of the “Replacement: (1)” instructions. The Part(s) reinstallation requirement needs to simply state that as of the AD effective date, only “Serviceable Parts” can be installed on any aircraft applicable to this AD.

EASA response:

Comment agreed. The wording of paragraph (3) Part Installation was simplified.

The final AD was amended accordingly.

Commenter 11: Airbus Protect– Kevin ETCHEBARNE – 29/09/2023**Comment # 11**

Regarding the Applicability of this AD: Could you please delete A300 B1 and B2 as their Type Certificate has been removed

EASA response:

Comment agreed. A300 B1, A300 B2-1A, A300 B2-1C, A300 B2K-3C, A300 B2-202, A300 B2-203, A300 B2-320 are removed from the Applicability.

The Final AD has been amended accordingly.

