



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

**[Docket No. FAA-2024-0029; Project Identifier MCAI-2023-01182-T; Amendment
39-22741; AD 2024-08-08]**

RIN 2120-AA64

Airworthiness Directives; Airbus SAS Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2021-20-08, which applied to certain Airbus SAS Model A318, A319, A320, A321, A330-200, A330-200 Freighter, A330-300, A330-800, A330-900, A340-200, A340-300, A340-500, A340-600, and A380-800 series airplanes. AD 2021-20-08 required replacing certain nickel-cadmium (Ni-Cd) batteries with serviceable Ni-Cd batteries. This AD was prompted by a report that repetitive disconnection and reconnection of certain Ni-Cd batteries during airplane parking or storage could lead to a reduction in capacity of those batteries. This AD adds airplanes to the applicability and requires replacement of certain affected parts with serviceable parts as a precondition for return to service of airplanes from storage or parking, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-0029; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For material incorporated by reference in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; website easa.europa.eu. You may find this material on the EASA website at ad.easa.europa.eu.

- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-0029.

FOR FURTHER INFORMATION CONTACT: Dan Rodina, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 206-231-3225; email dan.rodina@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part

39 to supersede AD 2021-20-08, Amendment 39-21746 (86 FR 57025, October 14, 2021) (AD 2021-20-08). AD 2021-20-08 applied to certain Airbus SAS Model A318, A319, A320, A321, A330-200, A330-200 Freighter, A330-300, A330-800, A330-900, A340-200, A340-300, A340-500, A340-600, and A380-800 series airplanes. AD 2021-20-08 required replacing certain Ni-Cd batteries with serviceable Ni-Cd batteries or maintaining the electrical storage capacity of those Ni-Cd batteries during airplane storage or parking. The FAA issued AD 2021-20-08 to address reduced capacity of certain Ni-Cd batteries, which could lead to reduced battery endurance performance and possibly result in failure to supply the minimum essential electrical power during abnormal or emergency conditions.

The NPRM published in the *Federal Register* on January 22, 2024 (89 FR 3897). The NPRM was prompted by AD 2023-0196, dated November 10, 2023 (EASA AD 2023-0196) (also referred to as the MCAI), issued by EASA, which is the Technical Agent for the Member States of the European Union. The MCAI states that it was determined that the on-wing preservation procedures originally provided for these airplanes did not ensure the expected preservation of the battery capacity.

In the NPRM, the FAA proposed to require replacement of certain affected parts with serviceable parts as a precondition for return to service of airplanes from storage or parking, as specified in EASA AD 2023-0196. The FAA is issuing this AD to address reduced capacity of certain Ni-Cd batteries. The unsafe condition, if not addressed, could lead to reduced battery endurance and possibly result in failure to supply the minimum essential electrical power during abnormal or emergency conditions.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-0029.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from the Air Line Pilots Association, International (ALPA) and an individual. Both commenters supported the NPRM without change.

The FAA received additional comments from American Airlines (AA), Delta Air Lines (DAL), United Airlines (UA), and two individuals. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Extend Compliance Time

DAL requested a 90-day transition period between AD 2021-20-08 and the new proposed AD requirements. DAL stated that compliance requirements and instructions are currently set to comply with AD 2021-20-08, and these requirements and instructions cannot be instantly transitioned the day the new AD becomes effective. As an example, DAL stated revising the Airbus A350 aircraft maintenance manual (AMM) can take 60 days due to complexity of the process. DAL explained that AD requirements that must be complied with as of the AD effective date can be set up and complied with if starting from zero AD mandated instructions, but when transitioning from one set of AD mandated instructions to a significantly different set of AD mandated instructions, a time of transition must be allowed for in the new AD.

The FAA partially agrees. The FAA concurs the requirement to replace affected batteries results in a new set of AD mandated instructions, but the FAA does not concur with a 90-day transition period (grace period). However, the FAA has determined that a 30-day grace period is appropriate and will not adversely affect safety. The FAA has added paragraph (h)(3) to this AD accordingly.

Request for Clarification of Terms

AAL requested clarification of "parking and storage" as intended by the proposed AD. The commenter asked whether "parking and storage" included extended heavy

maintenance checks, such as an S-check that is abnormally extended beyond the 6-month time-limit due to inspection findings or material sourcing issues, or extended downtime for aircraft repair or modification such as a large repair for aircraft tug collision damage or a large-scale interior modification.

The FAA agrees to clarify. It is the responsibility of the operator to apply the relevant instructions provided in the AMM related to extended heavy maintenance checks or downtime for aircraft repair or modification. A dedicated preservation regime shall be defined in line with the maintenance activity requirements (for example, the need to keep batteries connected), based upon the applicable AMM parking and storage procedures. If a battery meets the definition of a “serviceable part” as specified in EASA AD 2023-0196, then the requirement to replace after “parking and storage” does not apply because it is not an affected part. However, if the battery meets the definition of an “affected part” as specified in EASA AD 2023-0196, the requirement to replace after “parking and storage” does apply.

Request to Remove Erroneous References

DAL and UA requested removal of any reference to parts manufacturer approval (PMA) batteries in the SUMMARY and Background of the NPRM. Delta also requested removal of the term “PMA” from the “Related Service Information under 1 CFR Part 51” section of the NPRM. The commenters stated that the references are incorrect because those batteries are not referenced in the related EASA AD.

The FAA agrees. The SUMMARY and Background of the NPRM, as well as the “Related Service Information Under 1 CFR Part 51” paragraph, incorrectly referred to PMA parts in describing the requirements of AD 2021-20-08 and the MCAI, which specify to replace certain Ni-Cd batteries. The FAA has removed the incorrect references to PMA parts from this AD.

Request to Withdraw the Proposed AD

A commenter asked what data there is to support the need for early replacement of the affected batteries. The FAA infers that the commenter is requesting withdrawal of the proposed AD.

The FAA does not agree with the inferred request to withdraw this AD. The FAA has obtained information to indicate that mandatory action is necessary to maintain the continued operational safety of these airplanes. This AD has not been changed regarding this inferred request.

Conclusion

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on this product. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information under 1 CFR Part 51

EASA AD 2023-0196 specifies procedures for replacing certain Ni-Cd batteries with serviceable Ni-Cd batteries. EASA AD 2023-0196 adds Model A300 series airplanes; Model A300 B4-600, B4-600R, and F4-600R series airplanes, and Model A300 C4-605R Variant F airplanes (collectively called Model A300-600 series airplanes); Model A310 series airplanes; and Model A350-941 and -1041 airplanes to the applicability. This material is reasonably available because the interested parties have

access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 1,814 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

| Action | Labor cost | Parts cost | Cost per product | Cost on U.S. operators |
|---------------|--------------------------------------|-------------------|-------------------------|-------------------------------|
| New actions | 5 work-hours X \$85 per hour = \$425 | \$0 | \$425 | \$770,950 |

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the

national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a

substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive (AD) 2021-20-08, Amendment 39-21746

(86 FR 57025, October 14, 2021); and

b. Adding the following new AD:

2024-08-08 Airbus SAS: Amendment 39-22741; Docket No. FAA-2024-0029; Project Identifier MCAI-2023-01182-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2021-20-08, Amendment 39-21746 (86 FR 57025, October 14, 2021) (AD 2021-20-08).

(c) Applicability

This AD applies to all Airbus SAS airplanes identified in paragraphs (c)(1) through (14) of this AD, certificated in any category.

(1) Model A300 B4-2C, B4-103, and B4-203 airplanes.

(2) Model A300 B4-601, B4-603, B4-620, and B4-622 airplanes

(3) Model A300 B4-605R and B4-622R airplanes-

(4) Model A300 C4-605R variant F airplanes.

(5) Model A300 F4-605R and F4-622R airplanes.

(6) Model A310-203, -204, -221, -222, -304, -322, -324, and -325 airplanes.

(7) Model A318-111, -112, -121, and -122 airplanes.

(8) Model A319-111, -112, -113, -114, -115, -131, -132, -133, -151N, -153N, and -171N airplanes.

(9) Model A320-211, -212, -214, -216, -231, -232, -233, -251N, -252N, -253N, -271N, -272N, and -273N airplanes.

(10) Model A321-111, -112, -131, -211, -212, -213, -231, -232, -251N, -251NX, -252N, -252NX, -253N, -253NX, -271N, -271NX, -272N, and -272NX airplanes.

(11) Model A330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, -343, -841, and -941 airplanes.

(12) Model A340-211, -212, -213, -311, -312, -313, -541, and -642 airplanes.

(13) Model A350-941 and A350-1041 airplanes.

(14) Model A380-841, -842, and -861 airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 24, Electrical Power.

(e) Unsafe Condition

This AD was prompted by a report that repetitive disconnection and reconnection of certain nickel-cadmium (Ni-Cd) batteries during airplane parking or storage could lead to a reduction in capacity of those batteries. The FAA is issuing this AD to address reduced capacity of certain Ni-Cd batteries. The unsafe condition, if not addressed, could lead to reduced battery endurance and possibly result in failure to supply the minimum essential electrical power during abnormal or emergency conditions.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2023-0196, dated November 10, 2023 (EASA AD 2023-0196).

(h) Exceptions to EASA AD 2023-0196

(1) Where EASA AD 2023-0196 refers to its effective date, this AD requires using the effective date of this AD.

(2) This AD does not adopt the “Remarks” section of EASA AD 2023-0196.

(3) The compliance for the replacement specified in paragraph (1) of EASA 2023-0196 is at the time specified in paragraph (1) of EASA AD 2023-0196, or within 30 days after the effective date of this AD, whichever occurs later.

(i) Additional AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send

your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the International Validation Branch, mail it to the address identified in paragraph (k) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, International Validation Branch, FAA; or EASA; or Airbus SAS's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Required for Compliance (RC)*: Except as required by paragraph (i)(2) of this AD, if any service information referenced in EASA AD 2023-0196 that contains paragraphs that are labeled as RC, the instructions in RC paragraphs, including subparagraphs under an RC paragraph, must be done to comply with this AD; any paragraphs, including subparagraphs under those paragraphs, that are not identified as RC are recommended. The instructions in paragraphs, including subparagraphs under those paragraphs, not identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the instructions identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to instructions identified as RC require approval of an AMOC.

(j) Additional Information

For more information about this AD, contact Dan Rodina, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 206-231-3225; email dan.rodina@faa.gov.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2023-0196, dated November 10, 2023.

(ii) [Reserved]

(3) For EASA AD 2023-0196, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; website easa.europa.eu. You may find this EASA AD on the EASA website at ad.easa.europa.eu.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations, or email fr.inspection@nara.gov.

Issued on April 17, 2024.

Victor Wicklund,
Deputy Director, Compliance & Airworthiness Division,
Aircraft Certification Service.

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