



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2018-0169; Product Identifier 2017-NM-095-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Airbus Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to supersede Airworthiness Directive (AD) 2015-02-17, which applies to all Airbus Model A330-200, A330-200 Freighter, and A330-300 series airplanes. AD 2015-02-17 requires revising the electrical emergency configuration procedure in the Emergency Procedures section of the airplane flight manual (AFM) to include procedures for deploying the ram air turbine manually to provide sufficient hydraulic power and avoid constant speed motor/generator (CSM/G) shedding. Since we issued AD 2015-02-17, we have determined that replacement or modification of the two flight warning computers (FWCs) is necessary to address the identified unsafe condition. This proposed AD would add a requirement to replace or modify the two FWCs. This proposed AD would also remove airplanes from the applicability. We are proposing this AD to address the unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Airbus SAS, Airworthiness Office – EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone: +33 5 61 93 36 96; fax: +33 5 61 93 45 80; email: [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com); Internet: <http://www.airbus.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0169; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments

received, and other information. The street address for the Docket Operations office (telephone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Vladimir Ulyanov, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3229.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2018-0169; Product Identifier 2017-NM-095-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

**Discussion**

We issued AD 2015-02-17, Amendment 39-18084 (80 FR 4762, January 29, 2015) (“AD 2015-02-17”), for all Airbus Model A330-200, A330-200 Freighter, and

A330-300 series airplanes. AD 2015-02-17 requires revising the electrical emergency configuration procedure in the Emergency Procedures section of the AFM to include procedures for deploying the ram air turbine manually to provide sufficient hydraulic power and avoid CSM/G shedding. AD 2015-02-17 resulted from an electrical load analysis that revealed that hydraulic power might not be sufficient to supply the CSM/G during slat/flap extension when only one engine is running. We issued AD 2015-02-17 to prevent CSM/G shedding in conjunction with the loss of the main electrical system, which could lead to the scenario where the flight crew is not clearly warned that the electrical system has switched on the battery and thus has a limited duration that would allow a safe landing.

#### **Actions Since AD 2015-02-17 Was Issued**

Since we issued AD 2015-02-17, we have determined that replacement or modification of the two FWCs is necessary to address the identified unsafe condition.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2017-0105R1, dated July 17, 2017 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus Model A330-200, A330-200 Freighter, and A330-300 series airplanes. The MCAI states:

The Constant Speed Motor/Generator (CSM/G), as installed on Airbus A330 aeroplanes, is qualified for an overload condition of 9.5 kVA [kilovolt-ampere] for 30 minutes. This duration is sufficient to perform safe landing and go-around. However, electrical load analysis revealed that the hydraulic power might not be sufficient to supply the CSM/G during slat/flap extension, when only one engine is running.

This condition, if not corrected, and in conjunction with the loss of main system, could lead to a scenario where the crew is not clearly warned that the electrical system has switched on the battery and thus has a limited duration to support a safe landing.

To initially address this potential unsafe condition, Airbus issued an Aircraft Flight Manual (AFM) Temporary Revision (TR) to amend the electrical emergency configuration “ELEC EMER CONFIG” procedure to require the pilot to deploy the ram air turbine manually before setting the Landing Recovery to “ON” position, which provides sufficient hydraulic power and avoids CSM/G shedding under worst-case operational conditions. Consequently, EASA issued AD 2014-0273 to require amendment of the AFM by incorporating the applicable Airbus TR.

After finding that [EASA] AD 2014-0273 contained some incorrect and incomplete information, EASA issued AD 2014-0281 [which corresponds to FAA AD 2015-02-17], retaining the requirements of EASA AD 2014-0273, which was superseded, but correcting the information related to pre-mod / pre Service Bulletin (SB) or post-mod / post SB aeroplane configurations.

Since EASA AD 2014-0281 was issued, in order to improve the “ELEC EMER CONFIG” procedure, Airbus developed modifications to install improved Flight Warning Computer (FWC), which is embodied in production through Airbus modification (mod) 205228, and to be embodied in service with Airbus SB A330-31-3232  
\* \* \*

For the reasons described above, this [EASA] AD retains the requirements of EASA AD 2014-0281, which is superseded, and requires installation of a software standard upgrade [or replacement] of the two FWCs and removal of the applicable AFM TR once the aeroplane is modified.

Since EASA AD 2017-0105 was issued, it was identified that there was no need to require removal of applicable AFM TR, nor incorporation of a later AFM revision, as the contents are identical. This revised [EASA] AD deletes the requirement of paragraph (3) [of EASA AD 2017-0105].

\* \* \* \* \*

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0169.

**Related Service Information under 1 CFR part 51**

Airbus has issued Service Bulletin A330-31-3232, Revision 01, dated February 14, 2017. The service information describes procedures for replacement or modification of the FWCs. This service information 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.

**FAA’s Determination and Requirements of this Proposed AD**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of these same type designs.

**Differences Between this Proposed AD and the MCAI or Service Information.**

The MCAI applies to all Airbus Model A330-200, A330-200 Freighter, and A330-300 series airplanes. However, this proposed AD excludes airplanes on which Airbus modification 205228 has been embodied in production. Modification 205228 addresses the unsafe condition specified in this proposed AD. We have coordinated this difference with EASA.

## Costs of Compliance

We estimate that this proposed AD affects 105 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
AFM revision (retained actions from AD 2015-02-17)	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$8,925
FWC modification or replacement (new proposed action)	3 work-hours X \$85 per hour = \$255	\$0	\$255	\$26,775

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

### 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.

We are 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.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;

2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska; and

4. 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 Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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 removing Airworthiness Directive (AD) 2015-02-17, Amendment 39-18084 (80 FR 4762, January 29, 2015), and adding the following new AD:

**Airbus:** Docket No. FAA-2018-0169; Product Identifier 2017-NM-095-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD replaces AD 2015-02-17, Amendment 39-18084 (80 FR 4762, January 29, 2015) (“AD 2015-02-17”).

**(c) Applicability**

This AD applies to the airplanes identified in paragraphs (c)(1), (c)(2), and (c)(3) of this AD, certificated in any category, all manufacturer serial numbers, except those airplanes with Airbus modification 205228 embodied in production.

(1) Airbus Model A330-201, -202, -203, -223, and -243 airplanes.

(2) Airbus Model A330-223F and -243F airplanes.

(3) Airbus Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by an electrical load analysis that revealed that hydraulic power might not be sufficient to supply the constant speed motor/generator (CSM/G) during slat/flap extension when only one engine is running. We are issuing this AD to prevent such a condition which, in conjunction with the loss of the main electrical system, could lead to the scenario where the flight crew is not clearly warned that the electrical system has switched on the battery and thus has a limited duration that would allow a safe landing.

**(f) Compliance**

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

**(g) Retained Airplane Flight Manual (AFM) Revision, with a New Exception**

This paragraph restates the requirements of paragraph (g) of AD 2015-02-17, with a new exception. Except for airplanes identified in paragraph (h) of this AD: Within 15 days after February 13, 2015 (the effective date of AD 2015-02-17), revise the Emergency Procedures section of the Airbus A330 AFM to include the information in the applicable Airbus temporary revision (TR) specified in paragraph (g)(1) or (g)(2) of this AD. This may be done by inserting a copy of the applicable TR specified in paragraph (g)(1) or (g)(2) of this AD into the AFM. Operate the airplane according to the procedures in the applicable TR. When the information in the applicable TR has been included in the general revisions of the AFM, the general revisions may be inserted into the AFM, provided the relevant information in the general revision is identical to that in the TR, and the TR may be removed.

(1) For airplanes in Airbus pre-modification 47930 configuration and pre-Airbus Service Bulletin A330-28-3067 configuration: Airbus A330/A340 AFM TR TR427, UPDATE OF ELEC - EMER CONFIG PROCEDURE, Issue 1.0, dated November 7, 2014.

(2) For airplanes in Airbus post-modification 47930 configuration or post-Airbus Service Bulletin A330-28-3067 configuration: Airbus A330/A340 AFM TR TR428, UPDATE OF ELEC - EMER CONFIG PROCEDURE, Issue 1.0, dated November 7, 2014.

**(h) New Airplanes Not Affected by the Retained AFM Revision**

Airplanes operated with an AFM that incorporates the information in Airbus EMERGENCY PROCEDURES/24-ELECTRICAL POWER/ELEC – EMER CONFIG Documentary Unit (DU) 00005218.0001001 (for airplanes in Airbus pre-modification 47930 configuration and pre-Airbus Service Bulletin A330-28-3067 configuration), or DU 00005218.0002001 (for airplanes in an Airbus post-modification 47930 configuration or post-Airbus Service Bulletin A330-28-3067 configuration), as applicable, are compliant with the requirements of paragraph (g) of this AD, provided that the applicable DU is not removed from the AFM.

**(i) New Definitions**

(1) For the purposes of this AD, an affected FWC is a FWC standard lower than T7-0. An FWC that is not affected is a FWC standard T7-0 having part number (P/N) LA2E20202T70000, or higher standard.

(2) For the purposes of this AD: Group 1 airplanes are those equipped with an affected FWC (as defined in paragraph (i)(1) of this AD) as of the effective date of this AD. Group 2 airplanes are those equipped with FWCs that are not affected (as defined in paragraph (i)(1) of this AD) as of the effective date of this AD.

**(j) New Requirement of this AD: FWC Replacement or Modification**

For Group 1 airplanes: Within 24 months after the effective date of this AD: Replace or modify an affected FWC with an FWC that is not affected, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A330-31-3232, Revision 01, dated February 14, 2017.

**(k) Parts Installation Prohibition**

(1) For Group 1 airplanes: After accomplishing the actions required by paragraph (j) of this AD, no person may install an affected FWC on the modified airplane.

(2) For Group 2 airplanes: As of the effective date of this AD, no person may install an affected FWC on any airplane.

**(l) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (j) of this AD, if those actions were performed before the effective date of this AD using Airbus Service Bulletin A330-31-3232, dated May 4, 2016.

**(m) Other FAA AD Provisions**

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, International Section, Transport Standards 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 local Flight Standards District Office, as appropriate. If sending information directly to the International Section, send it to the attention of the person identified in paragraph (n)(2) of this AD. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov.

(i) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(ii) AMOCs approved previously for AD 2015-02-17 are approved as an AMOC for the corresponding provisions of this AD.

**(2) Contacting the Manufacturer:** As of the effective date of this AD, for any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or the European Aviation Safety Agency (EASA); or Airbus's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

**(3) Required for Compliance (RC):** If any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are 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 procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

**(n) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2017-0105R1, dated July 17, 2017, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0169.

(2) For more information about this AD, contact Vladimir Ulyanov, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St.,

Des Moines, WA 98198; telephone and fax 206-231-3229.

(3) For service information identified in this AD, contact Airbus SAS, Airworthiness Office – EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone: +33 5 61 93 36 96; fax: +33 5 61 93 45 80; email: [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com); Internet: <http://www.airbus.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued in Des Moines, Washington, on March 22, 2018.

Michael Kaszycki,  
Acting Director,  
System Oversight Division,  
Aircraft Certification Service.

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