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### DEPARTMENT OF TRANSPORTATION

**Federal Aviation Administration** 

## 14 CFR Part 39

[Docket No. FAA-2017-0515; Product Identifier 2016-NM-171-AD; Amendment 39-19061; AD 2017-20-04]

## RIN 2120-AA64

## **Airworthiness Directives; Airbus Airplanes**

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Airbus Model A300 B4-600, B4-600R, and F4-600R series airplanes, Model A300 C4-605R Variant F airplanes (collectively called Model A300-600 series airplanes), and Model A310 series airplanes. This AD was prompted by reports of unreliable airspeed indications that were caused by pitot heater resistance shorted to ground. This AD requires replacement of certain parts. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective November 15, 2017.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of November 15, 2017.

**ADDRESSES:** For service information identified in this final rule, contact Airbus SAS, Airworthiness Office–EAW, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone: +33 5 61 93 36 96; fax: +33 5 61 93 44 51; email: account.airworth-eas@airbus.com; Internet: http://www.airbus.com. You may view this referenced service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2017-0515.

## **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-2017-0515; 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 AD, the regulatory evaluation, any comments received, and other information. The street address for the

Docket Office (telephone: 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Dan Rodina, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone: 425-227-2125; fax: 425-227-1149.

## SUPPLEMENTARY INFORMATION:

## Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Airbus Model A300 B4-600, B4-600R, and F4-600R series airplanes, Model A300 C4-605R Variant F airplanes (collectively called Model A300-600 series airplanes), and Model A310 series airplanes. The NPRM published in the Federal Register on June 9, 2017 (82 FR 26758) ("the NPRM"). The NPRM was prompted by reports of unreliable airspeed indications that were caused by pitot heater resistance shorted to ground. The NPRM proposed to require replacement of certain parts. We are issuing this AD to ensure proper flight crew awareness of unreliable airspeed indications. This condition, if not recognized by the flight crew, could possibly result in reduced control of the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2016-0195, dated September 30, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for certain Airbus Model A300 B4-600, B4-600R, and F4-600R series airplanes, Model A300 C4-605R Variant F airplanes (collectively called Model A300-600 series airplanes), and Model A310 series airplanes. The MCAI states:

An operator recently reported two events of unreliable airspeed indications. Investigations revealed that in both events, a Pitot heater resistance was shorted to ground.

Pitot probes are heated to prevent ice accretion. De-icing performance of the Pitot probe might be reduced if Pitot probe heater degrades over time. The magnitude of deicing performance reduction will depend on how much the heater is degraded. The Pitot probe de-icing reduction will be hidden to the crew (the heater current detector will not trigger a "Heat Fault" because in case of short-to-case failure the resulting current variation will be limited).

In severe icing conditions, if de-icing performances are significantly reduced, it may cause unreliable airspeed events, with no cockpit effects except erroneous airspeed indication(s) displayed on the Primary Flight Display (PFD) or the standby airspeed indicators.

Unreliable airspeed indications, if not recognized by the crew, could possibly result in reduced control of the aeroplane.

To ensure proper crew awareness of unreliable airspeed indication(s) situation, Airbus introduced a dedicated Electronic Centralised Aircraft Monitoring (ECAM) Warning (Indicated Airspeed Discrepancy Warning).

The following configuration is required to enable this ECAM Warning:

-The Flight Warning Computer (FWC) standard S17 has to be installed by accomplishing Service Bulletins (SB) A310-31-2144 or A300-31-6140: This requirement was already rendered mandatory by EASA AD 2015-0174 [which does not have a corresponding FAA AD. EASA AD 2015-0174 superseded EASA AD 2012-0088 (EASA AD 2012-0088 corresponds to FAA AD 2012-21-15, Amendment 39-17231 (77 FR 67256, November 9, 2012))];

-The ECAM Symbol Generator Unit (SGU), standard W32, Part Number (P/N) 9612670332 has to be installed, by accomplishing Service Bulletins (SB) A310-31-2123, A300-31-6124 or SB A300-31-6113.

For the reason described above, this [EASA] AD requires a software standard upgrade of the ECAM SGU.

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-2017-0515.

#### Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA's response to each comment.

#### Support for the NPRM

The Air Line Pilots Association, International and FedEx expressed support for the NPRM.

#### **Request To Include Historical Information**

Airbus requested that we include historical information regarding EASA AD 2015-0174, which is included in the quoted MCAI material in the NPRM. Airbus explained that EASA AD 2015-0174, dated August 24, 2015, superseded EASA AD 2012-0088, dated June 25, 2012, which specified accomplishment of certain Airbus Service Bulletins. Airbus stated that any corresponding FAA ADs should also be identified.

We agree that additional historical information regarding EASA AD 2015-0174 and any corresponding FAA ADs would be helpful. We have added the requested historical information to the quoted MCAI material regarding EASA AD 2015-0174, which superseded EASA AD 2012-0088, and the corresponding FAA AD.

## **Requests To Allow Use of a Later ECAM SGU Software Standard and Related Service Information**

Airbus and FedEx requested that we revise the NPRM to allow use of ECAM SGU software standard W33, which includes the corrections found in ECAM SGU software standard W32.

FedEx also requested that we update the NPRM to include new service information that provides procedures for the upgrade to ECAM SGU software standard W33. FedEx mentioned that it is preparing to upgrade its fleet to ECAM SGU software standard W33.

We agree with the requests to allow use of ECAM SGU software standard W33, because ECAM SGU software standard W33 includes all of the necessary changes from ECAM SGU software standard W32. We have revised the preamble and regulatory text of this final rule, where applicable, to include the additional ECAM SGU software standard and part number.

We also agree to add Airbus Service Bulletins A300-31-6142, Revision 01, dated November 21, 2013, and A310-31-2145, Revision 01, dated November 13, 2013, for accomplishment of the installation of ECAM SGU software standard W33. We have revised this final rule accordingly.

## Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

## **Related Service Information Under 1 CFR Part 51**

Airbus has issued the following service information.

- Airbus Service Bulletin A300-31-6113, Revision 03, including Appendix 01, dated July 5, 2016 (for Model A300-600 series airplanes).
- Airbus Service Bulletin A300-31-6124, Revision 01, dated July 4, 2016 (for Model A300-600 series airplanes).
- Airbus Service Bulletin A300-31-6142, Revision 01, dated November 21, 2013 (for Model A300-600 series airplanes).
- Airbus Service Bulletin A310-31-2123, Revision 01, including Appendix 01, dated July 1, 2016 (for Model A310 series airplanes).
- Airbus Service Bulletin A310-31-2145, Revision 01, dated November 13, 2013 (for Model A310 series airplanes).

The service information describes procedures for replacement of the ECAM SGU software standard W32 or W33. These documents are distinct since they apply to different airplane configurations or apply to different ECAM SGU software standards (W32, part number 9612670332, and W33, part number 9612670333). 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.

## **Costs of Compliance**

We estimate that this AD affects 139 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

| Action      | Labor cost                                        | Parts cost       | Cost per<br>product | Cost on U.S.<br>operators |
|-------------|---------------------------------------------------|------------------|---------------------|---------------------------|
| Replacement | Up to 4 work-hours $\times$ \$85 per hour = \$340 | Up to<br>\$2,360 | Up to \$2,700       | Up to \$375,300.          |

## **Estimated Costs**

#### 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 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 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. 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.

#### **Adoption of 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 adding the following new airworthiness directive (AD):



FAA Aviation Safety

## AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/ www.gpoaccess.gov/fr/advanced.html

**2017-20-04 Airbus:** Amendment 39-19061; Docket No. FAA-2017-0515; Product Identifier 2016-NM-171-AD.

## (a) Effective Date

This AD is effective November 15, 2017.

## (b) Affected ADs

None.

## (c) Applicability

This AD applies to the Airbus airplanes identified in paragraphs (c)(1), (c)(2), (c)(3), (c)(4), and (c)(5) of this AD, certificated in any category, all manufacturer serial numbers, except those on which Airbus modification 12691 or 13665 has been embodied in production.

- (1) Airbus Model A300 B4-601, B4-603, B4-620, and B4-622 airplanes.
- (2) Airbus Model A300 B4-605R and B4-622R airplanes.
- (3) Airbus Model A300 F4-605R and F4-622R airplanes.
- (4) Airbus Model A300 C4-605R Variant F airplanes.
- (5) Airbus Model A310-203, -204, -221, -222, -304, -322, -324, and -325 airplanes.

## (d) Subject

Air Transport Association (ATA) of America Code 31, Instruments.

## (e) Reason

This AD was prompted by reports of unreliable airspeed indications that were caused by pitot heater resistance shorted to ground. We are issuing this AD to ensure proper flight crew awareness of unreliable airspeed indications. This condition, if not recognized by the flight crew, could possibly result in reduced control of the airplane.

## (f) Compliance

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

# (g) Replacement of the Electronic Centralized Aircraft Monitoring (ECAM) Symbol Generator Unit (SGU)

Within 36 months after the effective date of this AD, replace the ECAM SGU with a new ECAM SGU (software standard W32 or W33), in accordance with the Accomplishment Instructions of the service information identified in paragraph (g)(1), (g)(2), or (g)(3) of this AD, as applicable.

(1) For Airbus Model A300 B4-601, B4-603, B4-620, and B4-622 airplanes; Model A300 B4-605R and B4-622R airplanes; and Model A300 C4-605R Variant F airplanes: Airbus Service Bulletin A300-31-6113, Revision 03, including Appendix 01, dated July 5, 2016; or Airbus Service Bulletin A300-31-6142, Revision 01, dated November 21, 2013.

(2) For Airbus Model A300 F4-605R and F4-622R airplanes: Airbus Service Bulletin A300-31-6124, Revision 01, dated July 4, 2016.

(3) For Airbus Model A310-203, -204, -221, -222, -304, -322, -324, and -325 airplanes: Airbus Service Bulletin A310-31-2123, Revision 01, including Appendix 01, dated July 1, 2016; or Airbus Service Bulletin A310-31-2145, Revision 01, dated November 13, 2013.

#### (h) Parts Installation Prohibition

(1) As of the effective date of this AD, for any airplane that has ECAM SGU software standard W32, part number 9612670332, or ECAM SGU software standard W33, part number 9612670333, installed, no person may install an ECAM SGU software standard prior to W32.

(2) For any airplane that has an ECAM SGU software standard prior to W32, after modification of that airplane, no person may install an ECAM SGU software standard prior to W32.

#### (i) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using the service information specified in paragraph (i)(1), (i)(2), (i)(3), (i)(4), or (i)(5) of this AD, as applicable.

(1) Airbus Service Bulletin A300-31-6113, Revision 02, including Appendix 01, dated September 4, 2014.

(2) Airbus Service Bulletin A300-31-6124, Revision 00, dated October 13, 2005.

(3) Airbus Service Bulletin A300-31-6142, Revision 00, dated August 13, 2013.

(4) Airbus Service Bulletin A310-31-2123, Revision 00, dated January 4, 2006.

(5) Airbus Service Bulletin A310-31-2145, Revision 00, dated August 13, 2013.

#### (j) Other FAA AD Provisions

The following provisions also apply to this AD:

(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 (k)(2) of this AD. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. 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.

(2) Contacting the Manufacturer: 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.

## (k) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2016-0195, dated September 30, 2016, 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-2017-0515.

(2) For more information about this AD, contact Dan Rodina, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone: 425-227-2125; fax: 425-227-1149.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (1)(3) and (1)(4) of this AD.

## (I) 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) Airbus Service Bulletin A300-31-6113, Revision 03, including Appendix 01, dated July 5, 2016.

(ii) Airbus Service Bulletin A300-31-6124, Revision 01, dated July 4, 2016.

(iii) Airbus Service Bulletin A300-31-6142, Revision 01, dated November 21, 2013.

(iv) Airbus Service Bulletin A310-31-2123, Revision 01, including Appendix 01, dated July 1, 2016.

(v) Airbus Service Bulletin A310-31-2145, Revision 01, dated November 13, 2013.

(3) For service information identified in this AD, contact Airbus SAS, Airworthiness Office– EAW, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone: +33 5 61 93 36 96; fax: +33 5 61 93 44 51; email: account.airworth-eas@airbus.com; Internet: http://www.airbus.com.

(4) You may view this service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued in Renton, Washington, on September 18, 2017. Dionne Palermo, Acting Director, System Oversight Division, Aircraft Certification Service.