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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0829; Directorate Identifier 2013-NM-085-AD; Amendment 39-17814; AD 2014-06-10]

RIN 2120-AA64

Airworthiness Directives; Airbus Airplanes

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

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 2010-23-12 for certain Airbus Model A330 and Model A340 series airplanes. AD 2010-23-12 required inspecting to determine the part number for Thales Avionics Angle of Attack (AoA) probes, and replacing any affected probe with a serviceable probe. This new AD adds airplanes to the applicability and, for certain airplanes, requires that those affected probes be replaced. This AD was prompted by reports that the AoA sensors on certain airplanes were modified and re-identified without performing the inspection to determine the part number; therefore, the affected probes were not replaced with serviceable probes. We are issuing this AD to prevent erroneous AoA information and consequent delayed activation or non-activation of the AoA protection systems, which, in combination with flight at a high angle of attack, could result in reduced controllability of the airplane.

DATES: This AD becomes effective May 8, 2014.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of May 8, 2014.

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of December 14, 2010 (75 FR 68698, November 9, 2010).

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

For Airbus 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; Internet <http://www.airbus.com>. You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington.

For Thales Avionics service information identified in this AD, contact Thales–Aerospace Division, 105, avenue du General Eisenhower– BP 63647, 31036 Toulouse Cedex 1, France; telephone +33 (0)5 61 19 65 00; fax +33 (0)5 61 19 66 00; Internet <http://www.thalesgroup.com/aerospace>. You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

FOR FURTHER INFORMATION CONTACT: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 227-1138; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010). AD 2010-23-12 applied to certain Airbus Model A330 and Model A340 series airplanes. The NPRM published in the Federal Register on September 26, 2013 (78 FR 59295). The NPRM was prompted by reports that the AoA sensors on certain airplanes were modified and re-identified without performing the inspection to determine the part number; therefore, the affected probes were not replaced with serviceable probes. The NPRM proposed to require inspecting to determine the part number for Thales Avionics Angle of Attack (AoA) probes, and replacing any affected probe with a serviceable probe. We are issuing this AD to prevent erroneous AoA information and consequent delayed activation or non-activation of the AoA protection systems, which, in combination with flight at a high angle of attack, could result in reduced controllability of the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2013-0068, dated March 15, 2013 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

During Airbus Final Assembly Line reception flight tests, Angle of Attack (AoA) data from two different aeroplanes were found inaccurate, which was confirmed by flight data analysis.

The results of the investigation conducted by Airbus and Thales on the removed sensors revealed oil residue between the stator and the rotor parts of the AoA vane position resolvers. This oil residue was the result of incorrect removal of machining oil during the manufacturing process of the AoA resolvers. At low temperatures, this oil residue becomes viscous (typically in cruise) causing delayed and/or reduced AoA vane movement. Multiple AoA sensors could be simultaneously affected, providing incorrect indications of the AoA of the aeroplane.

This condition, if not corrected, could lead to erroneous AoA information and consequent delayed activation or non-activation of the AoA protection systems which, if during flight at a high angle of attack, could result in reduced control of the aeroplane.

To address this unsafe condition, EASA issued AD 2010-0016R1 [http://ad.easa.europa.eu/blob/easa_ad_2013_0068.pdf/AD_2011-0007R1_1] [which corresponds to FAA AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010)] to require the identification of the serial number (S/N) of each installed

Thales Avionics (formerly SEXTANT), Part Number (P/N) C16291AA AoA sensor and the replacement of all suspect units with serviceable one. EASA AD 2010-0016R1 also prohibited the (re) installation of these same S/N AoA sensors on any aeroplane, unless corrective measures had been accomplished.

Since that [EASA] AD was issued, it was discovered that a part of the affected population of AoA sensors may have been modified and re-identified from P/N C16291AA to P/N C16291AB, in accordance with the instructions of Airbus Service Bulletin (SB) A330-34-3228 or SB A340-34-5070, as applicable to aeroplane type, without having passed the inspection in accordance with the instructions of Thales Avionics SB C16291A-34-007, Revision 01.

For the reasons described above, this new [EASA] AD retains the requirements of EASA AD 2010-0016R1, which is superseded, [adds airplanes to the applicability, and requires, for the affected population that was not addressed by EASA AD 2010-0016R1, the replacement of the suspect units with serviceable ones.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov>.

Revised Service Information

Since the NPRM (78 FR 59295, September 26, 2013) was published, we have received the following service information:

- Airbus Mandatory Service Bulletin A330-34-3232, Revision 01, dated September 17, 2013 (for Model A330-200 and A330-300 series airplanes);
- Airbus Mandatory Service Bulletin A340-34-4239, Revision 01, dated September 17, 2013 (for Model A340-200 and A340-300 series airplanes); and
- Airbus Mandatory Service Bulletin A340-34-5072, Revision 01, dated September 17, 2013 (for Model A340-500, and A340-600 series airplanes).

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comment received.

Request To Include Revised Service Information

Airbus asked that we include the service information identified previously under "Revised Service Information" as a means of compliance for accomplishing the required actions.

We agree with the commenter and have included this new service information in paragraph (i) of this AD. We have also given credit for previous revisions of the service information by adding a new paragraph (k) to this AD and redesignating subsequent paragraphs accordingly.

Change to Paragraph (g) of This AD

The NPRM (78 FR 59295, September 26, 2013) contained a typographical error in paragraph (g) of the NPRM. The last sentence of paragraph (g) of the NPRM referred to "paragraph (l) of this AD." Paragraph (l) of the NPRM contained the "Other FAA AD Provisions" text. The last sentence of paragraph (g) of the NPRM should have referred to the "Parts Installation Limitations" text, which was in paragraph (k) of the NPRM. However, we have not changed the last sentence in paragraph (g) of this AD to refer to paragraph (k) of this AD, because the reference to paragraph (l) of this AD is

now correct. As stated previously, a new paragraph (k) was added to this AD and, therefore, paragraph (k) of the NPRM is now referred to as paragraph (l) in this AD.

Conclusion

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting this AD with the changes described previously. We have determined that these changes:

- Are consistent with the intent that was proposed in the NPRM (78 FR 59295, September 26, 2013) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 59295, September 26, 2013).

Costs of Compliance

We estimate that this AD affects about 70 products of U.S. registry.

The actions that were required by AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010), and are retained in this AD take about 3 work-hours per product, at an average labor rate of \$85 per work hour. Based on these figures, the estimated cost of the retained required actions is \$255 per product.

We estimate that it takes about 9 work-hours per product to comply with the new basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts cost about \$0 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of the AD on U.S. operators to be \$53,550, or \$765 per product.

We have received no definitive data that would enable us to provide cost estimates for the optional terminating action specified in this AD.

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.

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.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2013-0597>; or in person at the Docket Operations office 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 Operations office (telephone (800) 647-5527) is in the ADDRESSES section.

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 removing airworthiness directive (AD) 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010), and adding the following new AD:



2014-06-10 Airbus: Amendment 39-17814. Docket No. FAA-2013-0829; Directorate Identifier 2013-NM-085-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective May 8, 2014.

(b) Affected ADs

This AD supersedes AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010).

(c) Applicability

This AD applies to Airbus airplanes, certificated in any category, as identified in paragraphs (c)(1) and (c)(2) of this AD,

(1) Model A330-201, A330-202, A330-203, A330-223, A330-223F, A330-243, A330-243F, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342, and A330-343 airplanes; all manufacturer serial numbers.

(2) Model A340-211, A340-212, A340-213, A340-311, A340-312, A340-313, A340-541, and A340-642 airplanes; all manufacturer serial numbers.

(d) Subject

Air Transport Association (ATA) of America Code 34: Navigation.

(e) Reason

This AD was prompted by reports that the Angle of Attack (AoA) sensors on certain airplanes were modified and re-identified without performing the inspection to determine the part number; therefore, the affected probes were not replaced with serviceable probes. We are issuing this AD to prevent erroneous AoA information and consequent delayed activation or non-activation of the AoA protection systems, which, in combination with flight at a high angle of attack, could result in reduced controllability of the airplane.

(f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

(g) Retained Inspection of AoA Probes

This paragraph restates the requirements of paragraph (g) of AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010). For airplanes on which an AoA sensor having part number (P/N) C16291AA is installed, except as provided by paragraph (l) of this AD: Within 3 months after December 14, 2010 (the effective date of AD 2010-23-12), perform a detailed inspection of the

Thales Avionics AoA probes having P/N C16291AA for a serial number identification, in accordance with the Accomplishment Instructions of the applicable service information identified in paragraphs (g)(1), (g)(2), and (g)(3) of this AD. A review of airplane maintenance records is acceptable in lieu of this inspection if the serial number of the AoA probe can be conclusively determined from that review. If no AoA probe having P/N C16291AA and a serial number identified in Thales Service Bulletin C16291A-34-007, Revision 01, dated December 3, 2009, is identified during the inspection required by this paragraph of this AD, no further action is required by this AD, except as provided by paragraph (l) of this AD.

(1) Airbus Mandatory Service Bulletin A330-34-3232, dated January 20, 2010 (for Model A330-200 and A330-300 series airplanes).

(2) Airbus Mandatory Service Bulletin A340-34-4239, dated January 20, 2010 (for Model A340-200 and A340-300 series airplanes).

(3) Airbus Mandatory Service Bulletin A340-34-5072, dated January 20, 2010 (for Model A340-500, and A340-600 series airplanes).

(h) Retained Replacement of Identified AoA Probes

This paragraph restates the requirements of paragraph (h) of AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010), with clarified procedures. If the serial number of the AoA probe identified during the inspection required by paragraph (g) of this AD corresponds to a suspect AoA probe specified in Thales Service Bulletin C16291A-34-007, Revision 01, dated December 3, 2009: At the applicable time specified in paragraph (h)(1) or (h)(2) of this AD, replace the affected AoA probe with a serviceable AoA probe, in accordance with one of the four options and associated Accomplishment Instructions specified in the applicable service bulletin identified in paragraphs (g)(1), (g)(2), and (g)(3) of this AD.

(1) For airplanes on which Airbus Modification 53368 (back-up speed scale) has been embodied in production or Airbus Service Bulletin A330-34-3213, Airbus Service Bulletin A340-34-4213, or Airbus Service Bulletin A340-34-5060, as applicable, has been embodied in service: Within 3 months after December 14, 2010 (the effective date of AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010)).

(2) For airplanes on which Airbus Modification 53368 (back-up speed scale) has not been embodied in production and Airbus Service Bulletin A330-34-3213, Airbus Service Bulletin A340-34-4213, or Airbus Service Bulletin A340-34-5060, as applicable, has not been embodied in service: Within 15 months after December 14, 2010 (the effective date of AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010)).

(i) New Replacement of AoA Probes

For airplanes on which an AoA probe having P/N C16291AA or C16291AB, with a serial number identified in Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012, is installed, except as provided by paragraph (l) of this AD: Within 6 months after the effective date of this AD, replace any AoA probe having P/N C16291AA or C16291AB with a serviceable AoA probe, in accordance with the Accomplishment Instructions of the applicable service information identified in paragraph (i)(1), (i)(2), or (i)(3) of this AD. A review of airplane maintenance records is acceptable for compliance with the requirements of this paragraph if the records clearly demonstrate that the affected AoA probe has passed the inspection specified in Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012.

(1) Airbus Mandatory Service Bulletin A330-34-3232, Revision 01, dated September 17, 2013.

(2) Airbus Mandatory Service Bulletin A340-34-4239, Revision 01, dated September 17, 2013.

(3) Airbus Mandatory Service Bulletin A340-34-5072, Revision 01, dated September 17, 2013.

(j) Exception to AD Requirements

Airplanes on which Airbus Modification 58555 (installation of AoA sensors with P/N C16291AB) or Airbus Modification 46921 (installation of AoA sensors with P/N 0861ED) has been embodied in production are not affected by the requirements in paragraphs (g), (h) and (i) of this AD, provided that no AoA sensor has been replaced since first flight.

(k) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (i) of this AD, if those actions were performed before the effective date of this AD using the service information identified in paragraph (k)(1), (k)(2), or (k)(3) of this AD, as applicable, which is not incorporated by reference in this AD.

(1) Airbus Mandatory Service Bulletin A330-34-3232, dated January 20, 2010 (for Model A330-200 and A330-300 series airplanes).

(2) Airbus Mandatory Service Bulletin A340-34-4239, dated January 20, 2010 (for Model A340-200 and A340-300 series airplanes).

(3) Airbus Mandatory Service Bulletin A340-34-5072, dated January 20, 2010 (for Model A340-500, and A340-600 series airplanes).

(l) Parts Installation Limitations

(1) For airplanes on which an AoA sensor having part number (P/N) C16291AA is installed: As of December 14, 2010 (the effective date of AD 2010-23-12, Amendment 39-16501 (75 FR 68698, November 9, 2010)) and until the effective date of this AD, no person may install, on any airplane, a Thales Avionics AoA probe having P/N C16291AA and a serial number identified in Thales Service Bulletin C16291A-34-007, Revision 01, dated December 3, 2009, unless the AoA is fitted with an inspection label stating that Thales Service Bulletin C16291A-34-007, has been accomplished.

(2) As of the effective date of this AD, no person may install, on any airplane, a Thales Avionics AoA probe having P/N C16291AA or P/N C16291AB and a serial number identified in Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012, unless the AoA is fitted with an inspection label stating that Thales Service Bulletin C16291A-34-007, has been accomplished.

(m) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, 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 Branch, send it to ATTN: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone (425) 227-1138; fax (425) 227-1149. 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. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(n) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information Airworthiness Directive 2013-0068, dated March 15, 2013, for related information. You may examine the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0829-0002>.

(2) Service information identified in this AD that is not incorporated by reference may be viewed at the address specified in paragraphs (o)(5) and (o)(7) of this AD.

(o) 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.

(3) The following service information was approved for IBR on May 8, 2014.

(i) Airbus Mandatory Service Bulletin A330-34-3232, Revision 01, dated September 17, 2013.

(ii) Airbus Mandatory Service Bulletin A340-34-4239, Revision 01, dated September 17, 2013.

(iii) Airbus Mandatory Service Bulletin A340-34-5072, Revision 01, dated September 17, 2013.

(iv) Thales Service Bulletin C16291A-34-007, Revision 04, dated October 11, 2012.

(4) The following service information was approved for IBR on December 14, 2010 (75 FR 68698, November 9, 2010).

(i) Airbus Mandatory Service Bulletin A330-34-3232, excluding Appendix 01, dated January 20, 2010.

(ii) Airbus Mandatory Service Bulletin A340-34-4239, excluding Appendix 01, dated January 20, 2010.

(iii) Airbus Mandatory Service Bulletin A340-34-5072, excluding Appendix 01, dated January 20, 2010.

(iv) Thales Service Bulletin C16291A-34-007, Revision 01, dated December 3, 2009.

(5) For Airbus 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; Internet <http://www.airbus.com>.

(6) For Thales Avionics service information identified in this AD, contact Thales—Aerospace Division, 105, avenue du General Eisenhower—BP 63647, 31036 Toulouse Cedex 1, France; telephone +33 (0)5 61 19 65 00; fax +33 (0)5 61 19 66 00; Internet <http://www.thalesgroup.com/aerospace>.

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

(8) 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 March 17, 2014.

Dionne Palermo,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.