FAA
Aviation Safety

# EMERGENCY AIRWORTHINESS DIRECTIVE

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**DATE: December 17, 2012**
**AD #: 2012-26-51**

Emergency airworthiness directive (AD) 2012-26-51 is sent to owners and operators of Airbus Model A318, A319, A320, and A321 series airplanes.

## Background

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Emergency Airworthiness Directive 2012-0264-E, dated December 17, 2012 (referred to after this as the Mandatory Continuing Airworthiness Information or "the MCAI"), to correct an unsafe condition for the specified products.

EASA has advised that an Airbus Model A330 airplane equipped with Angle of Attack (AoA) sensors installed with conic plates recently experienced blockage of all sensors during climb, leading to autopilot disconnection and activation of the alpha protection (Alpha Prot) when Mach number was increased. Based on the results of subsequent analysis, it is suspected that these conic plates may have contributed to the event. Investigations are ongoing to determine what caused the blockage of these AoA sensors.

Blockage of two or three AoA sensors at the same angle may cause the Alpha Prot of the normal law to activate. Under normal flight conditions (in normal law), if the Alpha Prot activates and Mach number increases, the flight control laws order a pitch down of the airplane that the flight crew might not be able to counteract with a side stick deflection, even in the full backward position. This condition, if not corrected, could result in reduced control of the airplane.

EASA also issued Emergency AD 2012-0258-E, dated December 4, 2012, for Airbus Model A330 and A340 airplanes to require an amendment of the AFM to ensure that flight crews apply the applicable emergency procedure.

AoA sensor conic plates of similar design are also installed on Model A320 series airplanes. Installation of these AoA sensor conic plates was required for Model A318, A319, A320, and A321 series airplanes by EASA AD 2012-0236, dated November 9, 2012 (corrected November 12, 2012). Subsequently, EASA issued AD 2012-0236R1, dated December 17, 2012, to remove the requirement to install AoA sensor conic plates.

## Relevant Service Information

We reviewed Airbus A318/A319/A320/A321 Temporary Revision TR286, Issue 1.0, dated December 17, 2012. The TR provides information to advise the flight crew of emergency procedures for addressing AoA sensor blockage.

## FAA's Determination

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 referenced above. We are issuing this AD because we evaluated all pertinent information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

**AD Requirements**

This AD requires revising the Emergency Procedures section of the Airbus A318/A319/A320/A321 Airplane Flight Manual (AFM) to incorporate Airbus A318/A319/A320/A321 Temporary Revision TR286, Issue 1.0, dated December 17, 2012, to advise the flight crew of emergency procedures for addressing AOA sensor blockage. This AD also provides for optional terminating action for the AFM revision, which involves replacing AoA sensor conic plates with AoA sensor flat plates.

**Interim Action**

We consider this AD to be an interim measure to mitigate risks associated with the installation of AoA sensor conic plates. Further AD action might follow.

**Differences Between the AD and the MCAI or Service Information**

The applicability of EASA Emergency AD 2012-0264-E, dated December 17, 2012, is limited to airplanes having an AoA sensor conic plate installed either in production or in service. However, this emergency AD applies to all of the affected airplane models; and this AD prohibits installation of an AoA sensor conic plate in service as specified in Airbus Mandatory Service Bulletin A320-32-1521, dated May 7, 2012; and Revision 01, dated September 12, 2012; on any airplane as of receipt of the emergency 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.

**Presentation of the Actual AD**

We are issuing this AD under 49 U.S.C. Section 44701 according to the authority delegated to me by the Administrator.

**2012-26-51 Airbus**: Directorate Identifier 2012-NM-227-AD.

**(a) Effective Date**

This Emergency AD is effective upon receipt.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Airbus Model A318-111, -112, -121, and -122 airplanes; Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes; Model A320-111, -211, -212, -214, -231, -232, and -233 airplanes; and Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes; certificated in any category, all serial numbers.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 34: Navigation.

**(e) Unsafe Condition**

This AD was prompted by a report indicating that an airplane equipped with Angle of Attack (AoA) sensors (with conic plates installed) recently experienced blockage of all sensors during climb, leading to autopilot disconnection and activation of the alpha protection (Alpha Prot) when Mach number was increased. We are issuing this AD to prevent reduced control of the airplane.

**(f) Compliance**

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

**(g) Airplane Flight Manual Revision**

For airplanes on which an AoA sensor conic plate is installed in production by Airbus modification 153213 or 153214, or in-service as specified in Airbus Mandatory Service Bulletin A320-34-1521, dated May 7, 2012, or Revision 01, dated September 12, 2012: Within 5 days after receipt of this AD, revise the Emergency Procedures of the Airbus A318/A319/A320/A321 Airplane Flight Manual (AFM) by inserting Airbus A318/A319/A320/A321 Temporary Revision TR286, Issue 1.0, dated December 17, 2012, to advise the flight crew of emergency procedures for addressing AoA sensor blockage. When the information in Airbus A318/A319/A320/A321 Temporary Revision TR286, Issue 1.0, dated December 17, 2012, is included in the general revisions of the AFM, the general revisions may be inserted in the AFM, and the temporary revision may be removed.

**(h) Optional Terminating Action**

Modification of an airplane by replacing AoA sensor conic plates with AoA sensor flat plates, in accordance with a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, constitutes terminating action for the AFM revision required by paragraph (g) of this AD; and after the modification has been done, Airbus A318/A319/A320/A321 Temporary Revision TR286, Issue 1.0, dated December 17, 2012, may be removed from the AFM.

**(i) Parts Installation Prohibition**

As of receipt of this AD, no person may install an AoA sensor conic plate in service using Airbus Mandatory Service Bulletin A320-34-1521, dated May 7, 2012; or Revision 01, dated September 12, 2012; on any airplane.

**(j) Special Flight Permit**

Special flight permits, as described in Section 21.197 and Section 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199), are not allowed.

**(k) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, International Branch, ANM-116, 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 manager of the International Branch, send it to the attention of the person identified in the Related Information section of this AD. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov.

(2) 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.

**(l) Related Information**

(1) For further information about this AD, contact: Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-227-1405; fax: 425-227-1149; email: sanjay.ralhan@faa.gov.

(2) For copies of the service information referenced in this AD, contact: Airbus, Airworthiness Office – EAS, 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 review copies of the referenced 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.

(3) Refer to Mandatory Continuing Airworthiness Information European Aviation Safety Agency Emergency Airworthiness Directive 2012-0264-E, dated December 17, 2012, for related information.

Issued in Renton, Washington, on December 17, 2012.

Original signed by

KC Yanamura
Assistant Manager, Transport Airplane Directorate,
Aircraft Certification Service.