


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>	
	<b>AD No.: 2013-0068</b>	
	<b>Date: 15 March 2013</b>	
<p>Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.</p>		
<p>This AD is issued in accordance with EU 748/2012, Part 21.A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].</p>		
<b>Design Approval Holder's Name:</b>	<b>Type/Model designation(s):</b>	
AIRBUS	A330 and A340 aeroplanes	
TCDS Number:	EASA.A.004, EASA.A.015	
Foreign AD:	Not applicable	
Supersedure:	This AD supersedes EASA AD 2010-0016R1 dated 09 February 2010.	
<b>ATA 34</b>	<b>Navigation – Angle of Attack Sensors – Replacement</b>	
Manufacturer(s):	Airbus (formerly Airbus Industrie)	
Applicability:	<p>Airbus 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 aeroplanes, all manufacturer serial numbers (MSN).</p> <p>Airbus A340-211, A340-212, A340-213, A340-311, A340-312, A340-313, A340-541, A340-542, A340-642 and A340-643 aeroplanes, all MSN.</p>	
Reason:	<p>During Airbus Final Assembly Line flight tests, Angle of Attack (AoA) data from two different aeroplanes was found inaccurate, which was confirmed by flight data analysis.</p> <p>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 temperature, 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.</p> <p>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.</p> <p>To address this unsafe condition, EASA issued AD 2010-0016R1 to require the</p>	

	<p>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 ones. 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.</p> <p>Since that 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 A340-34-4234 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.</p> <p>For the reasons described above, this new AD retains the requirements of EASA AD 2010-0016R1, which is superseded, and requires, for the affected population that was not addressed by EASA AD 2010-0016R1, the replacement of the suspect units with serviceable ones.</p>
Effective Date:	29 March 2013
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously: Restatement of the requirements of EASA AD 2010-0016R1.</p> <p>(1) <u>For aeroplanes fitted with P/N C16291AA AoA sensors</u>, within the compliance time specified in paragraph (1.1) or (1.2), as applicable, replace each P/N C16291AA AoA sensor, if identified to have a s/n as listed in Thales Avionics SB C16291A-34-007 Revision 04, in accordance with the instructions of Airbus SB A330-34-3232 or SB A340-34-4239 or SB A340-34-5072, as applicable, depending on the aeroplane type:</p> <p>(1.1) <b>No later than 30 April 2010</b>, for aeroplanes on which Airbus modification 53368 (Back Up Speed Scale) has been embodied in production, or Airbus SB A330-34-3213 or SB A340-34-4213 or SB A340-34-5060, as applicable, depending on the aeroplane type, has been embodied in service.</p> <p>or</p> <p>(1.2) <b>No later than 30 April 2011</b>, for aeroplanes on which Airbus modification 53368 ((Back Up Speed Scale) has NOT been embodied in production, and Airbus SB A330-34-3213 or SB A340-34-4213 or SB A340-34-5060, as applicable, depending on the aeroplane type, has NOT been embodied in service.</p> <p>A review of aeroplane maintenance records is acceptable to determine the P/N and s/n of the installed AoA sensors, provided the P/N and s/n of the installed AoA sensors can be conclusively identified from that review.</p> <p>(2) From 10 February 2010 [the effective date of EASA AD 2010-0016R1], do not install on an aeroplane a P/N C16291AA or a P/N C16291AB AoA sensor with a s/n as listed in Thales Avionics SB C16291A-34-007 Revision 04, unless it has passed the inspection in accordance with the instructions of Thales Avionics SB C16291A-34-007 Revision 01.</p> <p>New requirements of this AD.</p> <p>(3) <u>For aeroplanes fitted with P/N C16291AB AoA sensors</u> with a s/n listed in Thales Avionics SB C16291A-34-007 Revision 04: within 6 months after the effective date of this AD, replace each P/N C16291AB AoA sensor, in accordance with the instructions of Airbus SB A330-34-3232 or SB A340-34-4239 or SB A340-34-5072, as applicable, depending on the aeroplane type, unless it can be demonstrated by maintenance records that the affected AoA sensor has passed the inspection in accordance with the instructions of Thales Avionics SB C16291A-34-007 Revision 01.</p>

	<p>(4) Aeroplanes on which Airbus modification (mod.) 58555 (installation of AoA sensors P/N C16291AB) or mod. 46921 (installation of AoA sensors P/N 0861ED) has been embodied in production are not affected by the requirements of paragraphs (1) and (3) of this AD, provided no AoA sensor replacement has been made since first flight.</p>
<p>Ref. Publications:</p>	<p>Airbus SB A330-34-3232 at original issue dated 20 January 2010.  Airbus SB A340-34-4239 at original issue dated 20 January 2010.  Airbus SB A340-34-5072 at original issue dated 20 January 2010.  Thales SB C16291A-34-007 Revision 01 dated 03 December 2009, or Revision 02 dated 16 December 2011, or Revision 03 dated 10 April 2012, or Revision 04 dated 11 October 2012.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p>
<p>Remarks:</p>	<ol style="list-style-type: none"> <li>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li> <li>2. This AD was posted on 06 February 2013 as PAD 13-032 for consultation until 06 March 2013. No comments were received during the consultation period.</li> <li>3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</li> <li>4. For any question concerning the technical content of the requirements in this AD, please contact:  AIRBUS – Airworthiness Office – EIAL;  E-mail: <a href="mailto:airworthiness.A330-A340@airbus.com">airworthiness.A330-A340@airbus.com</a>.</li> </ol>