


<b>EASA</b>	<b>NOTIFICATION OF A PROPOSAL TO ISSUE AN AIRWORTHINESS DIRECTIVE</b>	
	<p><b>PAD No.: 12-093</b></p> <p><b>Date: 30 July 2012</b></p> <p>Note: This Proposed Airworthiness Directive (PAD) 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>In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below. All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation closing date indicated.</p>		
<b>Design Approval Holder's Name:</b>		<b>Type/Model designation(s):</b>
AIRBUS		A318, A319, A320 and A321 aeroplanes
TCDS Number:	EASA.A.064	
Foreign AD:	Not applicable	
Supersedure:	This AD supersedes EASA AD 2011-0203 dated 13 October 2011.	
<b>ATA 34</b>	<b>Navigation – Angle of Attack (AoA) Sensors – Replacement / Modification</b>	
Manufacturer(s):	Airbus (formerly Airbus Industrie)	
Applicability:	Airbus A318-111, A318-112, A318-121, A318-122, A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132, A319-133, A320-111, A320-211, A320-212, A320-214, A320-215, A320-216, A320-231, A320-232, A320-233, A321-111, A321-112, A321-131, A321-211, A321-212, A321-213, A321-231 and A321-232 aeroplanes, all manufacturer serial numbers.	
Reason:	<p>During Airbus Final Assembly Line flight tests, AoA data from two different aeroplanes was found inaccurate, which was confirmed by flight data analysis.</p> <p>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.</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 2011-0203 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</p>	

	<p>replacement of all suspect units with serviceable ones. EASA AD 2011-0203 also prohibits the (re)installation of these same s/n sensors on any aeroplane, unless corrective measures have been accomplished.</p> <p>Since that AD was issued, new conic plates have been developed to improve the protection of AoA sensors from ice crystals and to anticipate compliance with new airworthiness regulations concerning icing. It was also 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) A320-34-1444 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 2011-0203, which is superseded, and requires, for the affected population that was not addressed by EASA AD 2011-0203, the replacement of the suspect units with serviceable ones, and modification of all AoA sensor plates by replacement of the current AoA flat plates with the new conic plates for all Thales Avionics (formerly SEXTANT) Part Number (P/N) C16291AA, P/N C16291AB and Goodrich P/N 0861ED AoA sensors.</p>
Effective Date:	[TBD: 14 days after final AD issue date]
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <ol style="list-style-type: none"> <li>(1) For aeroplanes fitted with P/N C16291AA AoA sensors: within 12 months after 27 October 2011 [the effective date of EASA AD 2011-0203], replace each P/N C16291AA AoA sensor installed on the aeroplane, if identified to have a s/n as listed in Thales Avionics SB C16291A-34-007 Revision 01, in accordance with the instructions of Airbus SB A320-34-1452. <ul style="list-style-type: none"> <li>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.</li> </ul> </li> <li>(2) For aeroplanes fitted with P/N C16291AB AoA sensors: within 3 months after the effective date of this AD, replace each P/N C16291AB AoA sensor installed on the aeroplane, unless it can be demonstrated by maintenance records that the affected AoA sensor: <ul style="list-style-type: none"> <li>- has not been modified and re-identified from P/N C16291AA with a s/n as listed in Thales Avionics SB C16291A-34-007 Revision 01 to P/N C16291AB in accordance with the instructions of Airbus SB A320-34-1444 or Thales Avionics SB C16291A-34-009 at original issue, or</li> <li>- has passed the inspection in accordance with the instructions of Thales Avionics SB C16291A-34-007 Revision 01.</li> </ul> </li> <li>(3) Aeroplanes on which Airbus modification (mod.) 150006 (installation of AoA sensors P/N C16291AB) or mod. 26934 (installation of AoA sensors P/N 0861ED) has been embodied in production and on which no AoA sensor replacements have been made since first flight are not affected by the requirements of paragraphs (1) and (2) of this AD.</li> <li>(4) For all aeroplanes, within 36 months after the effective date of this AD, modify each AoA sensor (replacement of the flat plate with a conic plate and/or replacement of the AoA protection covers in the flight kit n°2, as applicable to aeroplane configuration) in accordance with the instructions of Airbus SB A320-34-1521.</li> <li>(5) Concurrent with the requirements of paragraph (4) of this AD, depending on the P/N of the AoA sensors installed on the aeroplane, accomplish the actions contained by reference in the concurrent requirements section of Airbus SB A320-34-1521.</li> <li>(6) From the effective date of this AD, do not install on an aeroplane a P/N</li> </ol>

	<p>C16291AA AoA sensor having a s/n as listed in Thales SB C16291A-34-007 Revision 01, or a P/N C16291AB AoA sensor that has been modified and re-identified from P/N C16291AA with a s/n as listed in Thales Avionics SB C16291A-34-007 Revision 01 to P/N C16291AB, unless it has passed the inspection in accordance with the instructions of Thales Avionics SB C16291A-34-007 Revision 01 as specified in Thales Avionics SB C16291A-34-009 Revision 1 (or later revisions).</p> <p>(7) Aeroplanes on which Airbus mod. 153214 (installation of conic plates associated to sensors P/N C16291AA and P/N C16291AB) or mod. 153213 (installation of conic plates associated to AoA sensors P/N 0861ED) has been embodied in production and on which no AoA conic plates replacements with respectively a flat plate P/N D3411007620000 or D3411013520000 have been made since first flight are not affected by the requirement of paragraph (3) of this AD.</p> <p>(8) After modification of an aeroplane as required by paragraph (4) of this AD, or from the effective date of this AD for an aeroplane that has had Airbus mod. 153214 or 153213 embodied in production as specified in paragraph (7) of this AD associated with mod. 153491 (AOA protection cover P/N 98A10001500000), do not install on that aeroplane:</p> <ul style="list-style-type: none"> <li>• any AoA sensor flat plate P/N D3411007620000, or P/N D3411013520000,</li> <li>• any AoA protection cover P/N 98A10001500000, or</li> <li>• any Thales (formerly Sextant) AoA sensor P/N 45150320, or P/N 16990568.</li> </ul>
Ref. Publications:	<p>Airbus SB A320-34-1452 original issue dated 29 January 2010.</p> <p>Airbus SB A320-34-1521 original issue dated 07 May 2012.</p> <p>Airbus SB A320-34-1444 original issue dated 07 October 2009.</p> <p>Thales SB C16291A-34-007 Revision 01 dated 03 December 2009.</p> <p>Thales SB C16291A-34-009 original issue dated 10 September 2009.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p>
Remarks:	<ol style="list-style-type: none"> <li>1. This Proposed AD will be closed for consultation on 27 August 2012.</li> <li>2. Enquiries regarding this PAD 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>3. For any question concerning the technical content of the requirements in this PAD, please contact: AIRBUS – Airworthiness Office – EIAS; Fax +33 5 61 93 44 51; E-mail: <a href="mailto:account.airworth-eas@airbus.com">account.airworth-eas@airbus.com</a>.</li> </ol>