


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No.: 2012-0175</b></p> <p><b>Date: 07 September 2012</b></p> <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 EC 1702/2003, Part 21A.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>	
<p><b>Type Approval Holder's Name :</b></p> <p>AIRBUS</p>	<p><b>Type/Model designation(s) :</b></p> <p>A318, A319, A320 and A321 aeroplanes</p>
TCDS Number:	EASA.A.064
Foreign AD:	Not applicable
Supersedure:	None
<b>ATA 27</b>	<b>Flight Controls – Trimmable Horizontal Stabilizer Actuator Ballscrew Lower Splines – Inspection / Replacement</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>Some Trimmable Horizontal Stabilizer Actuators (THSA), Part Number (P/N) 47147-500 fitted on A330/A340 aeroplanes have been found with corrosion, affecting the ballscrew lower splines between the tie bar and the screw-jack. The affected ballscrew is made of steel and anti-corrosion protection is ensured, except on both extremities (upper and lower splines) where Molykote is applied.</p> <p>The results of the technical investigations have identified that the corrosion was caused by a combination of:</p> <ul style="list-style-type: none"> <li>- contact/friction between the tie bar and the inner surface of the ballscrew leading to the removal of Molykote (corrosion protection) at the level of the tie bar splines,</li> <li>- humidity ingress initiating surface oxidation starting from areas where Molykote is removed, and</li> <li>- water retention in THSA lower part leading to corrosion spread out and to the creation of a brown deposit (iron oxide).</li> </ul> <p>The results of the technical investigations have also concluded that A320 family THSA P/N 47145-XXX (where XXX stands for any numerical value) ballscrews might be affected by this corrosion issue.</p> <p>This condition, if not detected and corrected, may lead, in case of ballscrew rupture,</p>

	<p>to loss of transmission of THSA torque loads from the ballscrew to the tie-bar, prompting THSA blowback, possibly resulting in loss of control of the aeroplane.</p> <p>For the reasons described above, this AD requires repetitive detailed inspections of the ballscrew lower splines of THSA having P/N 47145-XXX to detect corrosion and, depending on findings, the accomplishment of applicable corrective actions.</p>						
Effective Date:	21 September 2012						
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>(1) Initially, within the compliance time indicated in Table 1 of this AD, and thereafter at intervals not to exceed 24 months, perform a detailed inspection of the THSA ballscrew having a P/N 47145-XXX in accordance with the instructions of Airbus Service Bulletin (SB) A320-27-1214.</p> <p style="text-align: center;">Table 1 – Initial THSA inspection</p> <table border="1"> <tr> <td></td><td><b>Compliance time</b>, whichever occurs later, A or B</td></tr> <tr> <td><b>A</b></td><td>Before accumulating 22 years, but not before 20 years since THSA first flight (see Note)</td></tr> <tr> <td><b>B</b></td><td>Within 3 months after the effective date of this AD</td></tr> </table> <p>Note: For the purpose of this AD, the definition of THSA first flight is the THSA “entry into service date” as listed in Goodrich SB 47145-27-16. If the THSA P/N is not listed in Goodrich SB 47145-27-16, the THSA first flight is the manufacturing date engraved on the THSA identification plate.</p> <p>(2) If, during any inspection as required by paragraph (1) of this AD, corrosion is found, within the applicable compliance time as defined in Paragraph 1.E.(2) of Airbus SB A320-27-1214, accomplish the applicable corrective actions (additional inspections of the affected THSA ballscrew, followed by replacement of the affected THSA) in accordance with the instructions of Airbus SB A320-27-1214. Within 90 days after an inspection where corrosion is found, report the results to Airbus.</p> <p>(3) Replacement of a THSA as required by paragraph (2) of this AD does not constitute terminating action for the repetitive inspections as required by paragraph (1) of this AD.</p> <p>(4) From the effective date of this AD, do not install a THSA having P/N 47145-XXX on an aeroplane, unless the THSA has not yet accumulated 20 years since its first flight, or unless it has been determined that the THSA is classified as Type 1 (no corrosion) at the time of installation, in accordance with criteria defined in Airbus SB A320-27-1214, and on the conditions that the THSA is thereafter inspected and, depending on findings, corrected, in compliance with the requirements of this AD.</p>		<b>Compliance time</b> , whichever occurs later, A or B	<b>A</b>	Before accumulating 22 years, but not before 20 years since THSA first flight (see Note)	<b>B</b>	Within 3 months after the effective date of this AD
	<b>Compliance time</b> , whichever occurs later, A or B						
<b>A</b>	Before accumulating 22 years, but not before 20 years since THSA first flight (see Note)						
<b>B</b>	Within 3 months after the effective date of this AD						
Ref. Publications:	<p>Airbus SB A320-27-1214 original issue dated 23 February 2012.</p> <p>Goodrich SB 47145-27-16 original issue dated 07 November 2011.</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. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li> <li>2. This AD was posted on 04 June 2012 as PAD 12-057 for consultation until 18 June 2012. The Comment Response Document can be found at <a href="http://ad.easa.europa.eu">http://ad.easa.europa.eu</a>.</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</li> </ol>						

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