

EASA	AIRWORTHINESS DIRECTIVE
	<p>AD No.: 2012-0175R1</p> <p>Date: 07 January 2014</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 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>	
<p>Design Approval Holder's Name :</p> <p>AIRBUS</p>	<p>Type/Model designation(s) :</p> <p>A318, A319, A320 and A321 aeroplanes</p>
TCDS Number:	EASA.A.064
Foreign AD:	Not applicable
Revision:	This AD revises EASA AD 2012-0175 dated 07 September 2012.
ATA 27	Flight Controls – Trimmable Horizontal Stabilizer Actuator Ballscrew Lower Splines – Inspection / Replacement
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, A320-211, 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"> - 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, - humidity ingress initiating surface oxidation starting from areas where Molykote is removed, and - water retention in THSA lower part leading to corrosion spread out and to the creation of a brown deposit (iron oxide). <p>The results of the technical investigations have also concluded that the ballscrews of THSA P/N 47145-XXX (where XXX stands for a specific</p>

	<p>numerical value), installed on A320 family aeroplanes, might be affected by this corrosion issue.</p> <p>This condition, if not detected and corrected, may lead, in case of ballscrew rupture, 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>Prompted by these findings, EASA issued AD 2012-0175 to require repetitive detailed inspections of the ballscrew lower splines of certain THSA to detect corrosion and, depending on findings, the accomplishment of applicable corrective actions.</p> <p>Since that AD was issued, a new THSA P/N 47145-168 has been developed, which is not affected by the inspection requirements of this AD.</p> <p>For the reason described above, this AD is revised to confirm that installing the new P/N 47145-168 THSA constitutes terminating action for the repetitive inspections required by this AD. It is anticipated that this AD could be further revised to add other non-affected THSA P/Ns.</p>						
Effective Date:	<p>Revision 1: 21 January 2014</p> <p>Original issue: 21 September 2012</p>						
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, accomplish a detailed inspection of the ballscrew of each THSA 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> <th></th><th>Compliance time, whichever occurs later, A or and B</th></tr> <tr> <td>A</td><td>Before accumulating 22 years, but not before 20 years since THSA first flight (see Note)</td></tr> <tr> <td>B</td><td>Within 3 months after the 21 September 2012 [the effective date of the original issue 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, except as specified in paragraph (5) of this AD.</p> <p>(4) From 21 September 2012 [the effective date of the original issue of this AD], except as specified in paragraph (5) of this AD, do not install a THSA having P/N 47145-XXX on any aeroplane, unless the part 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</p>		Compliance time , whichever occurs later, A or and B	A	Before accumulating 22 years, but not before 20 years since THSA first flight (see Note)	B	Within 3 months after the 21 September 2012 [the effective date of the original issue of this AD]
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	<p>requirements of this AD.</p> <p>(5) Modification of an aeroplane in accordance with an approved Airbus method to install a THSA P/N 47145-168 constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD for that aeroplane.</p> <p>AMM task 27-44-51-000-001 and task 27-44-51-400-001 to remove/install a THSA is considered an acceptable method.</p> <p>(6) An aeroplane on which Airbus modification 154170 has been embodied in production (installation of THSA PN 47145-168 fitted with improved ballscrew design) is not affected by the requirements of paragraphs (1) and (4) of this AD, provided that it has been determined that no THSA with a P/N as defined in paragraph (1) of this AD has been reinstalled on that aeroplane since first flight.</p>
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"> 1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. The original issue of 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 http://ad.easa.europa.eu. 3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS – Airworthiness Office – EIAS, Fax +33 5 61 93 44 51, E-mail: account.airworth-eas@airbus.com.