

EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2012-0061R1 Date: 30 November 2012 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.
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].	
Design Approval Holder's Name :	Type/Model designation(s) :
AIRBUS	A330-300 and A340-200/-300 aeroplanes
TCDS Numbers: EASA.A.004 and EASA.A.015	
Foreign AD: Not applicable	
Revision: This AD revises AD 2012-0061 dated 11 April 2012, including the Correction dated 12 April 2012.	
ATA 27	Flight Controls – Trimmable Horizontal Stabilizer Actuator Ballscrew Lower Splines – Inspection / Replacement
Manufacturer(s):	Airbus (formerly Airbus Industrie)
Applicability:	Airbus 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). Airbus A340-211, A340-212, A340-213, A340-311, A340-312 and A340-313 aeroplanes, all MSN.
Reason:	Some Trimmable Horizontal Stabilizer Actuators (THSA), Part Number (P/N) 47147-500, have been found with corrosion, affecting the ballscrew lower splines between the tie bar and the screw-jack. The results of the technical investigations have identified that the corrosion was caused by a combination of: - 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). The results of the technical investigations have also concluded that THSA P/N 47147-500 and P/N 47147-700 ballscrews might be affected by this corrosion issue.

	THSA P/N 47147-400 ballscrews might be affected as well, but should no longer be in service, and modified into P/N 47147-500, as required by EASA AD 2010-0192 and EASA AD 2010-0193. 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. To correct this potential unsafe condition, EASA issued AD 2012-0061 to require repetitive visual inspections of the ballscrew lower splines of THSA having P/N 47147-500 or P/N 47147-700 to detect corrosion and, depending on findings, the accomplishment of applicable corrective actions. Since that AD was issued, Airbus published new Service Bulletin (SB) A330-27-3194 or Airbus SB A340-27-4187 (Airbus modification 202802), which allow installation in service of an improved THSA P/N 47172-530. For the reasons described above, this AD is revised to specify that installation of THSA P/N 47172-530 is an alternative (optional) terminating action to the repetitive inspections required by this AD.						
Effective Date:	Revision 1: 07 December 2012 Original Issue: 25 April 2012						
Required action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: (1) Initially, within the compliance time indicated in Table 1 of this AD, as applicable, and thereafter, at intervals not to exceed 24 months, accomplish a visual inspection of the gaps between screw shaft and tie rod teeth of the THSA having P/N 47147-500 and P/N 47147-700, in accordance with the instructions of Airbus SB A330-27-3179 or SB A340-27-4175, as applicable to aeroplane type. Table 1 – Initial THSA inspection <table border="1"> <thead> <tr> <th>Calendar time accumulated by the THSA, on 25 April 2012 [the effective date of the original issue of this AD] (See Note 1)</th><th>Compliance time</th></tr> </thead> <tbody> <tr> <td>Less than 13 years since first flight on an aeroplane as THSA P/N 47147-400, or since the THSA first flight after its modification in accordance with the instructions of Airbus SB A330-27-3052 or Airbus SB A340-27-4059</td><td>Before accumulating 13 years, but not before accumulating 11 years since first flight on an aeroplane as THSA P/N 47147-400 or since the THSA first flight after its modification in accordance with the instructions of Airbus SB A330-27-3052 or Airbus SB A340-27-4059 (See Note 1)</td></tr> <tr> <td>Equal to or more than 13 years since first flight on an aeroplane as THSA P/N 47147-400 or since the THSA first flight after its modification in accordance with the instructions of Airbus SB A330-27-3052 or Airbus SB A340-27-4059</td><td>Within 3 months after 25 April 2012 [the effective date of the original issue of this AD]</td></tr> </tbody> </table> Note 1: Some THSA P/N 47147-500 (and further derivative with P/N 47147-700) were originally THSA P/N 47147-400 and were subsequently modified in service. In this case, the time accumulated by the THSA needs to be calculated from the first installation on aeroplane as THSA P/N 47147-400.	Calendar time accumulated by the THSA, on 25 April 2012 [the effective date of the original issue of this AD] (See Note 1)	Compliance time	Less than 13 years since first flight on an aeroplane as THSA P/N 47147-400, or since the THSA first flight after its modification in accordance with the instructions of Airbus SB A330-27-3052 or Airbus SB A340-27-4059	Before accumulating 13 years, but not before accumulating 11 years since first flight on an aeroplane as THSA P/N 47147-400 or since the THSA first flight after its modification in accordance with the instructions of Airbus SB A330-27-3052 or Airbus SB A340-27-4059 (See Note 1)	Equal to or more than 13 years since first flight on an aeroplane as THSA P/N 47147-400 or since the THSA first flight after its modification in accordance with the instructions of Airbus SB A330-27-3052 or Airbus SB A340-27-4059	Within 3 months after 25 April 2012 [the effective date of the original issue of this AD]
Calendar time accumulated by the THSA, on 25 April 2012 [the effective date of the original issue of this AD] (See Note 1)	Compliance time						
Less than 13 years since first flight on an aeroplane as THSA P/N 47147-400, or since the THSA first flight after its modification in accordance with the instructions of Airbus SB A330-27-3052 or Airbus SB A340-27-4059	Before accumulating 13 years, but not before accumulating 11 years since first flight on an aeroplane as THSA P/N 47147-400 or since the THSA first flight after its modification in accordance with the instructions of Airbus SB A330-27-3052 or Airbus SB A340-27-4059 (See Note 1)						
Equal to or more than 13 years since first flight on an aeroplane as THSA P/N 47147-400 or since the THSA first flight after its modification in accordance with the instructions of Airbus SB A330-27-3052 or Airbus SB A340-27-4059	Within 3 months after 25 April 2012 [the effective date of the original issue of this AD]						

	Some THSA P/N 47147-500 (and further derivative with P/N 47147-700) were originally THSA P/N 47147-200, -210, -213, -300, -303 or -350 and were subsequently modified in service in accordance with the instructions of Airbus SB A330-27-3052 or Airbus SB A340-27-4059. In this case, the time accumulated by the THSA needs to be calculated from the first flight on aeroplane after its modification in accordance with the instructions of Airbus SB A330-27-3052 or Airbus SB A340-27-4059. (2) If, during any of the inspections as required by paragraph (1) of this AD, corrosion is found, replace the affected THSA with a serviceable part within the applicable compliance time as defined in Paragraph 1.E.(2) of Airbus SB A330-27-3179 or Airbus SB A340-27-4175, as applicable to aeroplane type. (3) Replacement of a THSA with a THSA having P/N 47147-500 or P/N 47147-700 does not constitute terminating action for the repetitive inspections as required by paragraph (1) of this AD. (4) Modification of an aeroplane (installation of an improved THSA) in accordance with the instructions of: - Airbus SB A330-27-3182 or Airbus SB A340-27-4178 (Airbus modification 200238), or - Airbus SB A330-27-3194 or Airbus SB A340-27-4187 (Airbus modification 202802), as applicable to aeroplane type, constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD for that aeroplane. (5) Within 90 days after accomplishment of each inspection as required by paragraph (1) of this AD, as applicable, report the results, including no findings, to Airbus. (6) After 25 April 2012 [the effective date of the original issue of this AD], do not install a THSA having P/N 47147-500 or P/N 47147-700, unless the THSA is classified as Type 1 (no corrosion) in accordance with criteria defined in Airbus SB A330-27-3179 or Airbus SB A340-27-4175, and thereafter inspected and, depending on findings, corrected in compliance with the requirements of this AD.
Ref. Publications:	Airbus SB A330-27-3179 at Original issue dated 14 February 2012. Airbus SB A330-27-3052 at Original issue dated 9 July 1998. Airbus SB A330-27-3182 at Original issue dated 14 February 2012. Airbus SB A330-27-3194 at Original issue dated 08 October 2012. Airbus SB A340-27-4175 at Original issue dated 14 February 2012. Airbus SB A340-27-4059 at Original issue dated 28 July 1998. Airbus SB A340-27-4178 at Original issue dated 14 February 2012. Airbus SB A340-27-4187 at Original issue dated 08 October 2012. The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.
Remarks :	1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication. 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 – EIAL; E-mail: airworthiness.A330-A340@airbus.com.