

EASA	AIRWORTHINESS DIRECTIVE	
	<p>AD No.: 2013-0074</p> <p>Date: 20 March 2013</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>		
Design Approval Holder's Name:		Type/Model designation(s):
AIRBUS		A340-500/-600 aeroplanes
TCDS Number:	EASA.A.015	
Foreign AD:	Not applicable	
Supersedure:	None	
ATA 27	Flight Controls – Trimmable Horizontal Stabilizer Actuator – Operational and Functional Tests / Replacement	
Manufacturer(s):	Airbus (formerly Airbus Industrie)	
Applicability:	Airbus A340-541, A340-542, A340-642 and A340-643 aeroplanes, all manufacturer serial numbers.	
Reason:	<p>During endurance qualification tests on A380 Trimmable Horizontal Stabilizer Actuator (THSA), a partial loss of the no-back brake (NBB) efficiency was experienced. Due to design similarity, the same tests were initiated by the supplier on the THSA type fitted on A330/A340 fleet. During these tests, a similar partial loss of the NBB efficiency was identified on one THSA part number (P/N) 47175, installed only on A340-500/-600 aeroplanes.</p> <p>The THSA non-reversibility is ensured by the power gear-train from the hydraulic motors, where pressure-off brakes (POB) are installed, to the ball screw and the NBB. In addition, an Enhanced Runaway Protection (ERP) device specific to the THSA P/N 47175 cuts off both hydraulic supplies to the motors when flight control primary computer(s) detect a runaway of the THSA.</p> <p>Investigation results concluded that this particular malfunction was due to auto-contamination (ageing/endurance issue) of the surfaces of the NBB carbon friction disks, leading to a partial loss of braking efficiency in some specific aerodynamic load conditions.</p> <p>This condition, if not detected and corrected, could lead, in case the hydraulic motors cannot keep the ball screw in its last commanded position, to an uncommanded movement of the THS, possibly resulting in reduced control of the aeroplane under specific aerodynamic loads.</p> <p>A330 and A340-200/-300 series aeroplanes are not affected by this issue</p>	

	<p>because they are fitted with a different THSA P/N.</p> <p>For the reasons described above, this AD requires repetitive operational tests of the THSA ERP, repetitive functional tests of the THSA POB and, depending on findings, accomplishment of applicable corrective actions.</p>												
Effective Date:	03 April 2013												
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>(1) Operational tests of the THSA ERP: Before the accumulation of 10 000 flight hours (FH) since aeroplane first flight, or within 24 months after the effective date of this AD, whichever occurs later and, thereafter, at intervals not to exceed 10 000 FH, accomplish an operational test of the THSA ERP in accordance with the instructions of Airbus Alert Operators Transmission (AOT) A27L004-13.</p> <p>(2) Functional tests of the THSA POB: Initially, within the compliance time defined in Table 1 of this AD, as applicable, and thereafter at intervals not to exceed 4 000 FH, accomplish a functional test of the THSA POB in accordance with the instructions of Airbus AOT A27L004-13.</p> <p style="text-align: center;">Table 1 - Initial Functional Test</p> <table border="1"> <thead> <tr> <th></th> <th>Compliance time (whichever occurs later, A or B)</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Before the THSA accumulates 2 000 FC since first installation on an aeroplane</td> </tr> <tr> <td>B</td> <td>within 2 000 FH after the effective date of this AD</td> </tr> </tbody> </table> <p>(3) If, during any test as required by paragraph (1) or (2) of this AD, an ERP or POB fails, before next flight, accomplish the applicable corrective actions in accordance with the instructions of Airbus AOT A27L004-13.</p> <p>(4) Replacement of the THSA, or accomplishment of corrective actions as required by paragraph (3) of this AD does not constitute terminating action for the repetitive tests required by this AD.</p> <p>(5) From the effective date of this AD, after installation of a replacement THSA: the initial operational test of the THSA ERP as required by paragraph (1) of this AD must be accomplished before the THSA accumulates 10 000 FH since installation of the replacement THSA, and the initial functional tests of the THSA POB, as required by paragraph (2) of this AD, must be accomplished within the compliance time defined in Table 2 of this AD, as applicable,</p> <p style="text-align: center;">Table 2 - Initial Functional Test Post Replacement</p> <table border="1"> <thead> <tr> <th></th> <th>Compliance time (whichever occurs later, A or B)</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Before the THSA accumulates 2 000 FC since first installation on an aeroplane</td> </tr> <tr> <td>B</td> <td>within 4 000 FH since installation of the replacement THSA</td> </tr> </tbody> </table> <p>and the repetitive tests must be accomplished within the intervals as specified in paragraph (1) or (2) of this AD, as applicable.</p> <p>(6) Accomplishment of A340 Maintenance Review Board Report (MRBR) task 27.90.00/17 is an acceptable alternative for compliance with the</p>		Compliance time (whichever occurs later, A or B)	A	Before the THSA accumulates 2 000 FC since first installation on an aeroplane	B	within 2 000 FH after the effective date of this AD		Compliance time (whichever occurs later, A or B)	A	Before the THSA accumulates 2 000 FC since first installation on an aeroplane	B	within 4 000 FH since installation of the replacement THSA
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	<p>requirements of paragraph (1) of this AD.</p> <p>(7) Accomplishment of A340 MRBR task 27.40.00/15 is an acceptable alternative for compliance with the requirements of paragraph (2) of this AD.</p>
Ref. Publications:	<p>Airbus AOT A27L004-13 dated 04 March 2013.</p> <p>The use of later approved revisions of this document 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. 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

Superseded