


EASA	NOTIFICATION OF A PROPOSAL TO ISSUE AN AIRWORTHINESS DIRECTIVE
	<p>PAD No.: 14-121</p> <p>Date: 25 July 2014</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.</p> <p>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>	
Design Approval Holder's Name: AIRBUS	Type/Model designation(s): A330 and A340 aeroplanes
TCDS Numbers: EASA.A.004 and EASA.A.015	
Foreign AD: Not applicable	
Supersedure: This AD supersedes EASA AD 2013-0144R1 dated 27 August 2013.	
ATA 27	Flight Controls – Trimmable Horizontal Stabilizer Actuator – Identification / Replacement
Manufacturer(s):	Airbus (formerly Airbus Industrie)
Applicability:	<p>Airbus A330-201, A330-202, A330-203, A330-223, A330-223F, A330-243, A330-243F, 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).</p> <p>Airbus A340-211, A340-212, A340-213, A340-311, A340-312, A340-313, A340-541, A340-542, A340-642 and A340-643 aeroplanes, all MSN.</p>
Reason:	<p>During endurance qualification tests on an A380 Trimmable Horizontal Stabilizer Actuator (THSA), a partial loss of the no-back brake (NBB) efficiency was experienced. Due to THSA design similarity on the A330/A340 fleet, a similar partial loss of the NBB efficiency was identified on THSA Part Number (P/N) 47147 as installed on A330-300 and A340-200/-300 aeroplanes, on THSA P/N 47172 as installed on A330-200/-300 and A340-200/-300 aeroplanes, and on THSA P/N 47175 as installed on A340-500/600 aeroplanes.</p> <p>Investigation results concluded that this particular malfunction was due to an 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 and in conjunction with the power</p>

	<p>gear train not able to keep the ball screw in its last commanded position, could lead to uncommanded movements of the THS, possibly resulting in loss of control of the aeroplane.</p> <p>To address this potential unsafe condition, EASA issued AD 2013-0144 to require replacement of each THSA that has exceeded 16 000 flight cycles (FC) in service, to be sent in shop for NBB carbon disk replacement.</p> <p>Since that AD was issued, a need for clarification has been demonstrated, regarding the identification of the THSA 'affected' by this requirement.</p> <p>For this reason, EASA AD 2013-0144 was revised, confirming that this AD only affected those THSA identified by Part Number (P/N) in Airbus Alert Operator Transmission (AOT) A27L005-13. In addition, a note was added to make clear that the life limits as specified in the current revision of ALS Part 4 are still relevant for the affected THSA, as applicable to aeroplane model and THSA P/N. This AD addressed the life limit for the NBB installed on the THSA, not the life limit for the THSA itself.</p> <p>Since EASA AD 2013-0144R1 was issued, the phenomenon of polishing and auto-contamination of the carbon friction disks is confirmed to be an ageing / endurance issue. Further assessment has resulted in the conclusion that there is a need to reduce the life limit of the NBB carbon disks to 12 000 FC when the THSA is installed on an A330 aeroplane or an A340-200/-300 aeroplane and to 3 500 FC when the THSA is installed on an A340-500/-600 aeroplane. This AD affects additional THSA P/N when compared to EASA AD 2013-0144R1 and Airbus AOT A27L005-13.</p> <p>For the reasons described above, this AD retains the requirements of EASA AD 2013-0144R1, which is superseded, and requires replacement of the THSA before exceeding the applicable life limit.</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> <p>Note 1: The THSA affected by the requirements of this AD are those identified by P/N in Airbus Service Bulletin (SB) A330-27-3199, SB A340-27-4190 and SB A340-27-5062, as applicable to aeroplane type and model.</p> <p>Note 2: For the purpose of this AD, a serviceable THSA is a THSA having a P/N as identified in the Airbus SBs (as listed in Note 1 of this AD) and whose NBB has not exceeded the limits identified in this AD, or a THSA with a different P/N, not affected by the requirements of this AD.</p> <p>Note 3: The life limits as specified in the current revision of ALS Part 4 are still relevant for the affected THSA, as applicable to aeroplane model and THSA P/N, until the new life limits (see paragraph (4) of this AD) come into force, or the ALS is revised to include those limits.</p> <p>Part A - For A330 and A340-200/-300 aeroplanes</p> <p>(1) Within the compliance time as specified in Table 1 of this AD, depending on the FC accumulated by the THSA NBB on 31 July 2013 [the effective date of EASA AD 2013-0144 at original issue], but not later than the thresholds specified in Table 2 of this AD, depending on the FC accumulated by the THSA NBB on <u>each</u> corresponding date specified in Table 2 of this AD, replace each affected THSA with a serviceable part in accordance with the instructions of Airbus SB A330-27-3199, or SB A340-27-4190, or SB A340-27-5062, as applicable to aeroplane type and model.</p>

Table 1

FC accumulated by the THSA NBB on 31 July 2013 (the effective date of the original issue of EASA AD 2013-0144) since first installation on an aeroplane	Compliance Time
20 000 FC or more	within 1 500 FC after 31 July 2013
16 000 FC or more, but less than 20 000 FC	A330: within 4 000 FC after 31 July 2013
	A340: within 3 000 FC after 31 July 2013
Less than 16 000 FC	as specified in paragraph (2) of this AD

- (2) Not later than the date specified in Table 2 of this AD, as applicable, determine the FC accumulated by each affected THSA NBB since first installation on an aeroplane and replace those having reached or exceeded on that date the corresponding number of FC as specified in Table 2 of this AD in accordance with the instructions of Airbus SB A330-27-3199, or SB A340-27-4190, or SB A340-27-5062, as applicable to aeroplane type and model.

Table 2 – Life Limit Reduction

Date	Life Limit
31 July 2014	20 000 FC
31 January 2016	16 000 FC
31 July 2017	14 000 FC
31 July 2018	12 000 FC

Part B – For A340-500/-600 aeroplanes

- (3) Not later than the date specified in Table 3 of this AD, as applicable, determine the FC accumulated by each affected THSA NBB since first installation on an aeroplane and replace those having reached or exceeded on that date the corresponding number of FC specified in Table 3 of this AD in accordance with the instructions of Airbus SB A330-27-3199 or SB A340-27-4190 or SB A340-27-5062, as applicable to aeroplane type and model.

Table 3 – Life Limit Reduction

Date	Life Limit
31 October 2015	6 000 FC
30 April 2017	5 200 FC
30 April 2018	4 400 FC
30 April 2019	3 500 FC

Part C – For all aeroplanes affected by this AD

- (4) From the date, and before exceeding the life limit, as specified in Table 4 of this AD, as applicable, replace each affected THSA with a serviceable part

in accordance with the instructions of Airbus SB A330-27-3199, or SB A340-27-4190, or SB A340-27-5062, as applicable to aeroplane type and model.

Table 4 – THSA NBB Life Limit Implementation

Aeroplane type/model	Date	Life Limit (FC accumulated by the THSA NBB since first installation on an aeroplane)
A330 A340-200 A340-300	01 August 2018	12 000 FC
A340-500 A340-600	01 May 2019	3 500 FC

Conditions for the installation of an affected THSA on an aeroplane:

- (5) From each date specified in Table 5 of this AD, as applicable, it is allowed to install a THSA on an aeroplane, provided the part has not exceeded the corresponding number of FC specified in Table 5, as applicable to aeroplane type/model.

Table 5

Aeroplane type/model	Date	FC accumulated by the THSA NBB (since first installation on an aeroplane)
A330 A340-200 A340-300	01 August 2014	20 000 FC
	01 February 2016	16 000 FC
	01 August 2017	14 000 FC
	01 August 2018	12 000 FC
A340-500 A340-600	01 November 2015	6 000 FC
	01 May 2017	5 200 FC
	01 May 2018	4 400 FC
	01 May 2019	3 500 FC

Ref. Publications:

Airbus SB A330-27-3199 dated 15 July 2014.
 Airbus SB A340-27-4190 dated 15 July 2014.
 Airbus SB A340-27-5062 dated 15 July 2014.
 The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.

Remarks:

1. This Proposed AD will be closed for consultation on 08 August 2014.
2. Enquiries regarding this PAD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu.
3. For any question concerning the technical content of the requirements in this PAD, please contact: AIRBUS – Airworthiness Office – EIAL; E-mail: airworthiness.A330-A340@airbus.com.