




## 適航指令發布單

## Airworthiness Directive Issuance Form

民航局AD編號 AD Number	CAA-2014-11-015A	發布日期 Date issued	2015/6/3
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	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). 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.		
主旨摘要	Flight Controls – Trimmable Horizontal Stabilizer Actuator – Identification / Replacement		
民航局 CAA  <input type="checkbox"/> 本國產品 Native products  <input type="checkbox"/> 其他個案 Other	設計國民航主關機構 Original Authorities <input type="checkbox"/> FAA <input type="checkbox"/> Germany LBA <input checked="" type="checkbox"/> EASA <input type="checkbox"/> CAA-NL <input type="checkbox"/> Brazil <input type="checkbox"/> UK CAA <input type="checkbox"/> Transport Canada Civil Aviation <input type="checkbox"/> Japan CAB <input type="checkbox"/> DGAC <input type="checkbox"/> CAA of Israel <input type="checkbox"/> Other _____		
	設計國AD編號 Original AD number	2014-0257R1	
	1. 直接採用原AD之內容?(Is the original AD directly adopted?) <input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 否(No) ____ a. 生效日期另訂為(Re-specify the effective date as) : _____ b. 執行時限另訂為(Re-specify the compliance time or period as) : _____ 2. 使用人是否需要將AD執行結果向民航局提出報告?(Do Users need to report the status of compliance to the CAA?) <input type="checkbox"/> 是(Yes) <input checked="" type="checkbox"/> 否(No)		
備註 Note	ATA 27. This AD revises EASA AD 2014-0257(CAA-2014-11-015) dated 27 November 2014. Ref. Publications: Airbus SB A330-27-3199 dated 15 July 2014. and Airbus SB A340-27-4190 dated 15 July 2014. and Airbus SB A340-27-5062 dated 15 July 2014.		
註： 1. AD內容後附。 2. 航空器產品使用人得向民航局提出豁免、替代符合方法、執行時限之展延之申請。 3. 如有任何問題，請聯絡交通部民用航空局初始適航科。Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail：adcaa@mail.caa.gov.tw Note： 1. The AD text is enclosed. 2. Exemption, an alternative method of compliance or adjustment of the compliance time may be proposed to the CAA for approval. 3. For further information, please contact Civil Aeronautics Administration on Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail：adcaa@mail.caa.gov.tw			

<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No.: 2014-0257R1</b></p> <p><b>Date: 29 May 2015</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 EU 748/2012, Part 21.A.3B. In accordance with EU 1321/2014 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 [EU 1321/2014 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>Design Approval Holder's Name:</b></p> <p>AIRBUS</p>	<p><b>Type/Model designation(s):</b></p> <p>A330 and A340 aeroplanes</p>
<p>TCDS Numbers: EASA.A.004 and EASA.A.015</p>	
<p>Foreign AD: Not applicable</p>	
<p>Revision: This AD revises EASA AD 2014-0257 dated 27 November 2014.</p>	
<b>ATA 27</b>	<b>Flight Controls – Trimmable Horizontal Stabilizer Actuator – Identification / Replacement</b>
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 Trimmable Horizontal Stabilizer Actuator (THSA) of another Airbus aeroplane type, 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 partial loss of braking efficiency in some specific aerodynamic load conditions was due to polishing and auto-contamination of the NBB carbon friction disks.</p> <p>This condition, if not detected and corrected and in conjunction with the power 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.</p> <p>Since EASA AD 2013-0144R1 was issued, further assessment of the ageing / endurance issue has resulted in the conclusion that there is a need to replace the NBB installed on the THSA.</p> <p>Consequently, EASA issued AD 2014-0257, which retained the requirements of EASA AD 2013-0144R1, which was superseded, and required removal from service of affected THSA. THSA should be sent in shop for NBB carbon disk replacement. This AD affected additional THSA P/N when compared to EASA AD 2013-0144R1 and Airbus AOT A27L005-13.</p> <p>Since that AD was issued, it was determined that it is necessary to consider that the THSA removal for NBB disks replacement could also be calculated since last NBB disk replacement which was done in-shop.</p>							
Effective date:	<p>Revision 1: 05 June 2015</p> <p>Original issue: 11 December 2014</p>							
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 in Table 1 of this AD.</p> <p style="text-align: center;">Table 1 – Affected THSA P/N</p> <table border="1"> <thead> <tr> <th>Aeroplane</th><th>THSA P/N</th></tr> </thead> <tbody> <tr> <td rowspan="2">A330 and A340-200/-300</td><td>47147-500, 47147-700</td></tr> <tr> <td>47172-300, 47172-500, 47172-510, 47172-520</td></tr> <tr> <td>A340-500/-600</td><td>47175-200, 47175-300, 47175-500, 47175-520</td></tr> </tbody> </table> <p>Note 2: For the purpose of this AD, a serviceable THSA is a THSA having a P/N as identified in Table 1 of this AD and which 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 THSA life limits as specified in the current revision of ALS Part 4 are still relevant, as applicable to aeroplane model and THSA P/N.</p> <p>Note 4: A review of the aeroplane delivery or maintenance records is acceptable for the P/N determination in lieu of the inspection as specified in the applicable Airbus SB, provided that the aeroplane configuration and installed components can be conclusively determined from that review.</p> <p><b>Part A - For A330 and A340-200/-300 aeroplanes</b></p> <p>(1) Within the compliance time as specified in Table 2 of this AD, depending on the FC accumulated by the THSA on 31 July 2013 [the effective date of EASA AD 2013-0144 at original issue], but not later than the thresholds specified in Table 3 of this AD, depending on the FC accumulated by the THSA on <u>each</u> corresponding date specified in Table 3 of this AD, replace each affected THSA with a serviceable unit in accordance with the instructions of Airbus SB A330-27-3199 or SBA340-27-4190 as applicable to aeroplane type and model.</p>	Aeroplane	THSA P/N	A330 and A340-200/-300	47147-500, 47147-700	47172-300, 47172-500, 47172-510, 47172-520	A340-500/-600	47175-200, 47175-300, 47175-500, 47175-520
Aeroplane	THSA P/N							
A330 and A340-200/-300	47147-500, 47147-700							
	47172-300, 47172-500, 47172-510, 47172-520							
A340-500/-600	47175-200, 47175-300, 47175-500, 47175-520							

Table 2

FC accumulated by the THSA on 31 July 2013 (the effective date of the original issue of EASA AD 2013-0144) since first installation on an aeroplane, or since last NBB replacement, whichever is later	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 3 of this AD, as applicable, for THSA having reached or exceeded on that date the corresponding number of FC as specified in Table 3 of this AD, replace the THSA with a serviceable unit in accordance with the instructions of Airbus SB A330-27-3199, or SB A340-27-4190, as applicable to aeroplane type and model.

Table 3 – THSA Removal for NBB Disks Replacement

Date	THSA FC Limit (since first installation on an aeroplane, or since last NBB replacement, whichever is later)
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 4 of this AD, as applicable, for THSA having reached or exceeded on that date the corresponding number of FC specified in Table 4 of this AD, replace the THSA with a serviceable unit in accordance with the instructions of Airbus SB A340-27-5062.

Table 4 – THSA Removal for NBB Disks Replacement

Date	THSA FC Limit (since first installation on an aeroplane, or since last NBB replacement, whichever is later)
31 October 2015	6 000 FC
30 April 2017	5 200 FC
30 April 2018	4 400 FC
30 April 2019	3 500 FC

	<p><b>Part C – For all aeroplanes affected by this AD</b></p> <p>(4) From the date as specified in Table 3 or Table 4 of this AD, as applicable to aeroplane type and model, and before exceeding the FC limit corresponding to each date, as applicable, replace each affected THSA with a serviceable unit (see also paragraph (5) 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.</p> <p><b>Conditions for the installation of an affected THSA on an aeroplane:</b></p> <p>(5) From each date specified in Table 3 or Table 4 of this AD, as applicable, it is allowed to install a THSA on an aeroplane, provided the unit has not exceeded the corresponding number of FC specified in Table 3 or Table 4 of this AD, as applicable to aeroplane type/model.</p>
Ref. Publications:	<p>Airbus SB A330-27-3199 dated 15 July 2014.</p> <p>Airbus SB A340-27-4190 dated 15 July 2014.</p> <p>Airbus SB A340-27-5062 dated 15 July 2014.</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. The original issue of this AD was posted on 25 July 2014 as PAD 14-121 and republished as PAD 14-121R1 on 06 November 2014 for consultation until 20 November 2014. 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, Certification 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 AD, please contact: AIRBUS – Airworthiness Office – EIAL; E-mail: <a href="mailto:airworthiness.A330-A340@airbus.com">airworthiness.A330-A340@airbus.com</a>.</li> </ol>