

EASA	AIRWORTHINESS DIRECTIVE
	<p>AD No.: 2007 - 0309</p> <p>Date: 18 December 2007</p>
No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise agreed with the Authority of the State of Registry.	
Type Approval Holder's Name : AIRBUS	Type/Model designation(s) : A330 Aircraft
TCDS Number: EASA A.004	
Foreign AD: Not applicable	
Supersedure: DGAC AD F-2005-014 approved under EASA No 2005-497 dated January 12, 2005	
ATA 27	Flight Controls - Trimmable Horizontal Stabilizer Actuator (THSA) - Operational Life Limit
Manufacturer(s):	AIRBUS (formerly AIRBUS INDUSTRIE)
Applicability:	AIRBUS A330 aircraft, all certified models, all serial numbers.
Reason:	<p>The life limits of the aircraft flight controls actuators and in particular of the THSA are not addressed by the definition of the structural life limits of Safe Life items as defined in the Airworthiness Limitations Section Part 1.</p> <p>As a result, these life limits are addressed by the present Airworthiness Directive (AD) which supersedes DGAC AD F-2005-014 and takes into account the latest test results by:</p> <ul style="list-style-type: none"> - increasing the life limit for PN 47172-300, - adding the new life limits for the new PN 47172-500 and 47172-510.
Effective Date:	02 January 2008
Compliance:	The demonstrated life limits applicable to the last certified PN's are given in the here below table, pending a revision of this AD further to additional tests. A follow-up of the times accumulated (Flight Hours[FH]/Flight Cycles[FC]) by these THSA on aircraft since their origin and/or since their retrofit is necessary. These equipments have to be removed from aircraft if

the life limit is reached before an extended demonstrated life is available.

THSA PN	LIFE LIMITS ON A330
47147-500 (equipment originally manufactured as PN 47147-400 and retrofitted into –500 by SB A330-27-3093)	A330-200: Not applicable A330-300: 24 000 FC or 36 000 FH, accumulated since THSA first installation on aircraft, whichever occurs first.
47147-500 (equipment retrofitted into –500 by SB A330-27-3093 and previously retrofitted into PN 47147-400 by SB A330-27-3052)	A330-200: Not applicable A330-300: 24 000 FC or 36 000 FH, since THSA retrofit into PN 47147-400 through SB A330-27-3052, whichever occurs first.
47172-300 (equipment installed new or retrofitted by SB A330-27-3085)	A330-200/-300 40 000 FC or 60 000 FH accumulated since THSA first installation on aircraft, whichever occurs first.
47172-500 (equipment retrofitted by SB A330-27-3137)	A330-200/-300 40 000 FC or 60 000 FH accumulated since THSA first installation on aircraft, whichever occurs first.
47172-510 (new equipment installed in production as per MOD. 55780)	A330-200/-300 40 000 FC or 60 000 FH accumulated since THSA first installation on aircraft, whichever occurs first.

Note 1: For parts that have been used in several aircraft models or type configurations having different life limit values, calculate the remaining life potential in the present configuration (i) using the following formula:

where:

$$Tr_i = \left[1 - \sum \left(\frac{Ca_j}{Cp_j} \right) \right] \times Cp_i$$

Tr_i = remaining time (FC/FH) for configuration i (present configuration).

Ca_j = time (FC/FH) accumulated on previous configuration(s) j.

Cp_j = life limitation (FC/FH) in previous configuration(s) j.

	<p>Cp_i = life limitation (FC/FH) in present configuration i.</p> <p>Calculated total life potential = $(\sum Ca_j + Tr_i)$</p> <p>When using the above formula Tr_i, Ca_j, Cp_j, Cp_i are expressed in the same unit (FC or FH): units can not be mixed in the same calculation.</p> <p>After this calculation, if the life accumulated by the part in FC or in FH exceeds the calculated total life potential in FC or in FH, remove the part.</p> <p>If the life accumulated by the part both in FC and in FH does not exceed the calculated total life potential in FC and in FH, plan to remove the part in order to comply with both calculated total life potentials in FC and in FH.</p> <p>These calculations are required every time a part is moved from an installation to another having different limit values.</p> <p>Note 2: THSA Life limits applicable to A340 are indicated in EASA AD 2007-0308.</p>
Ref. Publications:	<p>AIRBUS Service Bulletin A330-27-3052; AIRBUS Service Bulletin A330-27-3085; AIRBUS Service Bulletin A330-27-3137; AIRBUS Service Bulletin A330-27-3093.</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 accept Alternative Methods of Compliance for this AD. 2. This AD was posted on 12 October 2007 as PAD 07-183 for consultation until 12 November 2007. No comments were received during the consultation period. 3. Enquiries regarding this Airworthiness Directive should be referred to the AD Focal Point - Certification 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 SAS – Airworthiness Office – E- mail: airworthiness.A330-A340@airbus.com .