


<b>EASA</b>	<b>PROPOSED AIRWORTHINESS DIRECTIVE</b>	
	<p><b>PAD No.: 07 - 184</b></p> <p><b>Date: 12 October 2007</b></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.		
<b>Type Approval Holder's Name :</b>		<b>Type/Model designation(s) :</b>
AIRBUS		A340 Aircraft
TCDS Number: EASA A.015		
Foreign AD: Not applicable		
Supersedure: DGAC AD F-2005-015 approved under EASA No 2005-498 dated January 12, 2005		
<b>ATA 27</b>	<b>Flight Controls - Trimmable Horizontal Stabilizer Actuator (THSA) - Operational Life Limit</b>	
Manufacturer(s):	AIRBUS (formerly AIRBUS INDUSTRIE)	
Applicability:	AIRBUS A340 aircraft, models -211, -212, -213, -311, -312, -313, -541, -542, -642 and -643, 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-2005-015 and takes into account the latest test results by:</p> <ul style="list-style-type: none"> <li>- increasing the life limit for PN 47175-200,</li> <li>- adding the new life limits for the new PN 47172-500, 47172-510, 47175-300 and 47175-500.</li> </ul>	
Effective Date:	TBD:14 days after final AD issue date	
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 A340
47147-500 (for equipment originally manufactured as PN 47147-400 or retrofitted into PN 47147-400 by SB A340-27-4059)and retrofitted into –500 by A340-27-4099	A340-200/-300 20,000 FC or 80,000 FH, accumulated since THSA first installation on aircraft, whichever occurs first.
47172-300 (equipment installed new or retrofitted by SB A340-27-4089)	A340-200/-300 20,000 FC or 80,000 FH, accumulated since THSA first installation on aircraft, whichever occurs first.
47172-500 (equipment retrofitted by SB A340-27-4136)	A340-200/-300 20,000 FC or 80,000 FH, accumulated since THSA first installation on aircraft, whichever occurs first.
47172-510 (equipment installed new in production as per MOD. 55780)	A340-200/-300 20,000 FC or 80,000 FH, accumulated since THSA first installation on aircraft, whichever occurs first.
47175-200 (equipment installed new in production as per MOD. 50487)	A340-500/-600 4730 FC accumulated since THSA first installation on aircraft.
47175-300 (equipment installed new in production as per MOD. 52274)	TEMPORARY* LIFE LIMITS ON A340-500/-600 10,000 FC or 50,000 FH, accumulated since THSA first installation on aircraft, whichever occurs first.
47175-500 (equipment installed new in production as per MOD. 54882 or retrofitted by SB A340-27-5030)	TEMPORARY* LIFE LIMITS ON A340-500/-600 10,000 FC or 50,000 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:

	$Tr_i = \left[ 1 - \sum \left( \frac{Ca_j}{Cp_j} \right) \right] \times Cp_i$ <p> <math>Tr_i</math> = remaining time (FC/FH) for configuration i (present configuration).  <math>Ca_j</math> = time (FC/FH) accumulated on previous configuration(s) j.  <math>Cp_j</math> = life limitation (FC/FH) in previous configuration(s) j.  <math>Cp_i</math> = life limitation (FC/FH) in present configuration i. </p> <p>Calculated total life potential = <math>(\sum Ca_j + Tr_i)</math></p> <p>When using the above formula <math>Tr_i</math>, <math>Ca_j</math>, <math>Cp_j</math>, <math>Cp_i</math> 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><b>Note 2:</b> THSA Life limits applicable to A330 are indicated in EASA PAD 07-183.</p>
Ref. Publications:	AIRBUS Service Bulletin A340-27-4059; AIRBUS Service Bulletin A340-27-4089; AIRBUS Service Bulletin A340-27-4136; AIRBUS Service Bulletin A340-27-4099; AIRBUS Service Bulletin A340-27-5030 or later approved revisions of these documents.
Remarks :	<ol style="list-style-type: none"> <li>1. If requested and appropriately substantiated, EASA can accept Alternative Methods of Compliance for this AD.</li> <li>2. The closing date for comments is 12 November 2007.</li> <li>3. Enquiries regarding this Airworthiness Directive should be referred to the AD Focal Point - 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 SAS – Airworthiness Office – E- mail: <a href="mailto:airworthiness.A330-A340@airbus.com">airworthiness.A330-A340@airbus.com</a> .</li> </ol>