


EASA	AIRWORTHINESS DIRECTIVE
	<p>AD No.: 2008-0017R1</p> <p>Date: 17 June 2008</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 EC 1702/2003, Part 21A.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>	
<p>Type Approval Holder's Name :</p> <p>AIRBUS</p>	<p>Type/Model designation(s) :</p> <p>A330 and A340 aircraft</p>
<p>TCDS Number : EASA A.004, EASA A.015</p>	
<p>Foreign AD : Not applicable</p>	
<p>Revision : This AD revises and replaces AD 2008-0017 dated 22 January 2008.</p>	
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ATA 24 & 49	Electrical Power / Auxiliary Power Unit (APU) – APU Generator - Inspection
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<p>Manufacturer(s):</p>	<p>AIRBUS (formerly AIRBUS INDUSTRIE).</p>
<p>Applicability:</p>	<p>AIRBUS A330 aircraft, models -201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342 and -343, all serial numbers.</p> <p>AIRBUS A340 aircraft, models -211, -212, -213, -311, -312, -313, -541, -542, -642 and -643, all serial numbers.</p>
<p>Reason:</p>	<p>Uncontained APU Generator failures on ground have occurred on Airbus A330 aircraft in service.</p> <p>Preliminary investigations confirmed uncontained APU Generator failures with subsequent aircraft structural damages to the APU compartment and, in one case, to the stabiliser compartment.</p> <p>Loose APU generator parts can lead to damage to the APU firewall which might reduce its fire extinguishing capability, possibly leading to a temporary uncontrolled fire, which constitutes an unsafe condition.</p> <p>Further detailed investigations are ongoing to determine the root cause. It has been evidenced that this unknown root cause initiates a collapse of the Drive End Bearing (DEB) leading to an uncontained failure. Evidence has shown also that the DEB failures are not instantaneous, and therefore, the detection of small debris could indicate early stage of a DEB failure.</p> <p>The original Emergency Airworthiness Directive (AD) 2007-0188-E mandated a repetitive inspection of the APU Generator Scavenge filter</p>

	<p>element and filter housing and of the APU Generator Drain plug for signs of small debris coming from the APU Generator and therefore allowed to detect APU Generators in an early stage of failure.</p> <p>The Revision 1 of AD 2007-0188 extended the compliance date for the accomplishment of the first inspection from 26 July 2007 to 10 August 2007 and provided an option to perform the repetitive inspection every 450 Aircraft Flight Hours or every 200 APU operating hours, whichever occurs later.</p> <p>One APU Generator uncontained failure occurred on ground on an A330 aircraft previously flying under MMEL 36-11-01, with similar structural damages as the previous APU Generator burst events.</p> <p>Investigations of this event revealed that :</p> <ul style="list-style-type: none"> - the inspection required by the paragraph 4 of AD 2007-0188R1 before the first flight under the MMEL rectification interval had not been performed, and - the APU Generator had been mis-installed (two seal plates installed instead of one). <p>Consequently, the AD 2008-0017 superseded the AD 2007-0188R1 and required the following additional actions:</p> <ul style="list-style-type: none"> - a visual inspection of the APU Generator seal plate fitting, - an additional inspection for A330 aircraft under MMEL item 36-11-01 or 24-22-01 before the first flight following the MMEL item rectification, - an additional inspection at each time a (new or serviceable) APU Generator or APU is installed on aircraft. <p>The inspection required by paragraph 1.1 of AD 2007-0188R1 for aircraft delivered before 01 July 2007 was removed as the compliance time of 10 August 2007 was overdue.</p> <p>This AD 2008-0017R1 is issued to cancel the requirements of paragraph 4 of AD 2008-0017 for A330 aircraft flying under MMEL item 36-11-01 further to ETOPS certification of A330 APU.</p>
Effective Date:	05 February 2008
Required action(s) and Compliance Time(s):	<p>1. Unless already accomplished,</p> <p>Within 450 Aircraft Flight Hours (FH) or 200 APU operating hours, whichever occurs later, after :</p> <ul style="list-style-type: none"> - the last inspection performed as per paragraph 1.1 or 1.2 or 2.1 of the AD 2007-0188R1, or - the original aircraft delivery date, <p>in accordance with instructions defined in paragraph 4.2.2 of the relevant AIRBUS AOT A330-24A3044 Revision 02 or AOT A340-24A4057 Revision 03 or AOT A340-24A5021 Revision 02 :</p> <ul style="list-style-type: none"> - inspect the APU Generator scavenge oil filter element and housing for detection of magnetic metallic debris, <p>and</p> <ul style="list-style-type: none"> - inspect the APU Generator drain plug for detection of metallic debris, <p>and</p> <ul style="list-style-type: none"> - inspect the APU Generator seal plate fitting for correct installation, <p>and</p>

	<p>- apply the associated corrective actions.</p> <p>2. Repeat these inspections defined in paragraph 1 of this AD at interval not exceeding 450 AFH or 200 APU operating hours, whichever occurs later, and apply the associated corrective actions.</p> <p>3. <u>At each time an APU Generator or an APU is installed on aircraft:</u></p> <p>3.1. From the effective date of this AD, perform the inspection in accordance with paragraph 4.2.1 of AOT A330-24A3044 Revision 02 or AOT A340-24A4057 Revision 03 or AOT A340-24A5021 Revision 02.</p> <p>3.2. Within 450 Aircraft FH or 200 APU operating hours, whichever occurs later, after the inspection performed as per paragraph 3.1 of this AD, apply the requirements of paragraph 2 of this AD.</p> <p>4. <u>For A330 aircraft under MMEL item 24-22-01'AC Main Generation':</u></p> <p>When the aircraft is dispatched with APU operating during the entire flight in accordance with MMEL requirement, perform the inspection required in paragraph 1. of this AD:</p> <ul style="list-style-type: none"> - before the first flight of the MMEL rectification interval and - before the first flight following MMEL rectification, <p>unless the APU Generator is removed or deactivated (quill shaft removed) as per MMEL item.</p> <p>5. <u>Alternative to postpone the inspection defined in paragraph 1. or 2. of this AD:</u></p> <p>Aircraft dispatch is authorised provided one of the options (APU Gen removal, APU Gen deactivation or APU inoperative) described in paragraph 4.3 of the relevant AIRBUS AOT A330-24A3044 Revision 02 or AOT A340-24A4057 Revision 03 or AOT A340-24A5021 Revision 02 is applied. The deferred inspection must be performed before the first flight after reactivation of the system.</p>
Ref. Publications:	<p>AIRBUS All Operators Telex (AOT) A330-24A3044 Revision 02; AIRBUS AOT A340-24A4057 Revision 03; AIRBUS AOT A340-24A5021 Revision 02.</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 approve Alternative Methods of Compliance for this AD. 2. Required actions and the risk assessment have warranted the immediate adoption of this Final AD with request for comments. 3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research Section, 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 – EAL, E- mail: airworthiness.A330-A340@airbus.com.