

EASA	AIRWORTHINESS DIRECTIVE	
	<p><b>AD No.: 2011-0199</b></p> <p><b>Date: 27 October 2011</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 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><b>Type Approval Holder's Name :</b></p> <p>AIRBUS</p>	<p><b>Type/Model Designation(s)</b></p> <p>A330 and A340-200/300 aeroplanes</p>	
<p>TCDS Number : EASA.A.004 and EASA.A.015</p>		
<p>Foreign AD : Not applicable</p>		
<p>Supersedure : None</p>		
<p><b>ATA 22, 27</b></p>	<p><b>Auto Flight / Flight Control – Flight Control Primary Computer (FCPC) – Modification / Replacement</b></p>	
<p>Manufacturer(s):</p>	<p>Airbus (formerly Airbus Industrie)</p>	
<p>Applicability:</p>	<p>Airbus A330-201, A330-202, A330-203, A330-223, A330-223F, A330-243, A330-243F, A330-300, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342 and A330-343 aeroplanes, all manufacturer serial numbers, except those on which Airbus modification 201654 has been embodied in production or Airbus Service Bulletin (SB) A330-27-3156 has been incorporated in service; and</p> <p>Airbus A340-211, A340-212, A340-213, A340-311, A340-312 and A340-313 aeroplanes, all manufacturer serial numbers.</p>	
<p>Reason:</p>	<p>It has been determined that, when there are significant differences between all airspeed sources, the flight controls of an Airbus A330 or A340 aeroplane will revert to alternate law, the autopilot (AP) and the auto-thrust (A/THR) automatically disconnect, and the Flight Directors (FD) bars are automatically removed.</p> <p>Further analyses have shown that, after such an event, if two airspeed sources become similar while still erroneous, the flight guidance computers will display the FD bars again, and enable the re-engagement of AP and A/THR. However, in some cases, the AP orders may be inappropriate, such as possible abrupt pitch command.</p> <p>In order to prevent such events which may, under specific circumstances, constitute an unsafe condition, EASA issued AD 2010-0271 to require an amendment of the Flight Manual to ensure that flight crews apply the appropriate operational procedure.</p>	

	<p>Since that AD was issued, new FCPC software standards have been developed that will inhibit autopilot engagement under unreliable airspeed conditions.</p> <p>This AD requires software standard upgrade of the three FCPCs by either modification or replacement, as follows:</p> <ul style="list-style-type: none"> <li>- software standard P11A/M20A on FCPC 2K2 hardware for A330-200/-300 aeroplanes with electrical rudder, through Airbus Service Bulletin (SB) A330-27-3176,</li> <li>- software standard P12A/M21A on FCPC 2K1 hardware <b>and</b> M21A on FCPC 2K0 hardware for A330-200/-300 aeroplanes with mechanical rudder, through Airbus SB A330-27-3177,</li> <li>- software standard L22A on FCPC 2K1 hardware <b>and</b> L21A on FCPC 2K0 hardware for A340-200/-300 aeroplanes with mechanical rudder, through Airbus SB A340-27-4174, and</li> <li>- software standard L21A on FCPC 2K2 hardware for A340-300 aeroplanes with electrical rudder, through Airbus SB A340-27-4162.</li> </ul> <p>Embodiment of these FCPC software standards constitutes terminating action for the A330 Airplane Flight Manual (AFM) temporary provisions (TR 149 and A340 AFM TR 150 required by EASA AD 2010-0271.</p> <p>Some of the Airbus SBs listed above may not be available on the expected date of issuance of the Final AD for this subject. It is expected that this AD will be revised when all the related SBs have been published. Due to the time needed for certification of the remaining FCPC software standards and the associated non-availability of some SBs, the remaining parts of EASA AD 2010-0271 will not be cancelled yet.</p>															
<p>Effective Date:</p>	<p>10 November 2011</p>															
<p>Required Action(s) and Compliance Time(s):</p>	<p>Required as indicated, unless accomplished previously:</p> <p>Within 10 months after the effective date of this AD, modify or replace the three FCPCs, as specified in Table 1 of this AD, in accordance with the instructions of Airbus SB A330-27-3176, or SB A330-27-3177, or SB A340-27-4162, or SB A340-27-4174, as applicable to aeroplane type and model.</p> <p>Table 1 – Software Standard updates</p> <table border="1" data-bbox="507 1361 1469 2018"> <thead> <tr> <th data-bbox="507 1361 775 1458">Affected aeroplanes</th> <th data-bbox="775 1361 1225 1458">Software Standard update(s)</th> <th data-bbox="1225 1361 1469 1458">Airbus SB</th> </tr> </thead> <tbody> <tr> <td data-bbox="507 1458 775 1585">A330-200/-300 aeroplanes with electrical rudder</td> <td data-bbox="775 1458 1225 1585">software standard P11A/M20A on FCPC 2K2 hardware</td> <td data-bbox="1225 1458 1469 1585">SB A330-27-3176</td> </tr> <tr> <td data-bbox="507 1585 775 1742">A330-200/-300 aeroplanes with mechanical rudder</td> <td data-bbox="775 1585 1225 1742">software standard P12A/M21A on FCPC 2K1 hardware, <b>and</b> software standard M21A on FCPC 2K0 hardware</td> <td data-bbox="1225 1585 1469 1742">SB A330-27-3177 [to be issued]</td> </tr> <tr> <td data-bbox="507 1742 775 1899">A340-200/-300 aeroplanes with mechanical rudder</td> <td data-bbox="775 1742 1225 1899">software standard L22A on FCPC 2K1 hardware, <b>and</b> software standard L22A on FCPC 2K0 hardware</td> <td data-bbox="1225 1742 1469 1899">SB A340-27-4162 [to be issued]</td> </tr> <tr> <td data-bbox="507 1899 775 2018">A340-300 aeroplanes with electrical rudder</td> <td data-bbox="775 1899 1225 2018">software standard L21A on FCPC 2K2 hardware</td> <td data-bbox="1225 1899 1469 2018">SB A340-27-4174 [to be issued]</td> </tr> </tbody> </table>	Affected aeroplanes	Software Standard update(s)	Airbus SB	A330-200/-300 aeroplanes with electrical rudder	software standard P11A/M20A on FCPC 2K2 hardware	SB A330-27-3176	A330-200/-300 aeroplanes with mechanical rudder	software standard P12A/M21A on FCPC 2K1 hardware, <b>and</b> software standard M21A on FCPC 2K0 hardware	SB A330-27-3177 [to be issued]	A340-200/-300 aeroplanes with mechanical rudder	software standard L22A on FCPC 2K1 hardware, <b>and</b> software standard L22A on FCPC 2K0 hardware	SB A340-27-4162 [to be issued]	A340-300 aeroplanes with electrical rudder	software standard L21A on FCPC 2K2 hardware	SB A340-27-4174 [to be issued]
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Ref. Publications:	<p>Airbus SB A330-27-3176 original issue dated 26 July 2011.</p> <p>Airbus SB A330-27-3177 [to be issued]</p> <p>Airbus SB A340-27-4162 [to be issued]</p> <p>Airbus SB A340-27-4174 [to be issued]</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. This AD was posted on 02 August 2011 as PAD 11-01 for consultation until 30 August 2011. 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, Executive 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 – EAL, E-mail: <a href="mailto:airworthiness.A330-A340@airbus.com">airworthiness.A330-A340@airbus.com</a></li> </ol>