



Airworthiness Directive

AD No.: 2015-0124R1

Issued: 02 February 2016

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (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 [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:

AIRBUS

Type/Model designation(s):

A330 and A340 aeroplanes

Effective Date: Revision 1: 09 February 2016
Original Issue: 01 July 2015

TCDS Numbers: EASA.A.004 and EASA.A.015

Foreign AD: Not applicable

Revision: This AD revises EASA AD 2015-0124 dated 26 June 2015.

ATA 27 – Flight Controls – Flight Control Primary Computer – Modification / Replacement

Manufacturer(s):

Airbus (formerly Airbus Industrie)

Applicability:

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), and

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.

Reason:

It was 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. 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. 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 Airplane Flight Manual (AFM) to ensure that flight crews apply the appropriate operational procedure.

Since EASA AD 2010-0271 was issued, new Flight Control Primary Computer (FCPC) software standards were developed that inhibit autopilot engagement under unreliable airspeed conditions. Consequently, EASA issued AD 2011-0199 (later revised) for A330 and A340-200/300 aeroplanes, and AD 2013-0107 for A340-500/600 aeroplanes, to require a software standard upgrade of the three FCPCs by either modification or replacement.

Since EASA AD 2011-0199R1 and AD 2013-0107 were issued, new FCPC software standards, as specified in Appendix 1 of this AD, were developed to correct aeroplane behaviour in case of undetected erroneous (Radio Altimeter) RA information and to introduce other improvements. In addition, the new FCPC software standards implement enhanced Angle of Attack (AOA) monitoring in order to better detect cases of AOA blockage, including multiple AOA blockage.

For the reasons described above, EASA issued AD 2015-0124 to require the latest software standard upgrade of the three FCPCs, by either modification or replacement.

At the time AD 2015-0124 was issued, some of the Airbus SBs listed in Appendix 1 were not available. Since, some have been published, and for this reason, this AD is revised to introduce the date of publication of these SBs.

There are still two SBs that remain unavailable at this time. It is expected that this AD will be revised again when these SBs are published.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

- (1) Within the compliance time defined in Appendix 1 of this AD, as applicable, modify or replace the three FCPCs, as specified in Appendix 1 of this AD, in accordance with the instructions of the applicable Airbus SB, as identified in Appendix 1 of this AD.
- (2) After modification of an aeroplane as required by paragraph (1) of this AD, the operational procedures as specified below are no longer required and can be removed from the AFM of that aeroplane.
 - A330 AFM Temporary Revisions (TR) 149 and A340 AFM TR 150, as required by EASA AD 2010-0271,
 - A330 AFM TR 4.02.00/46 Issue 3 and A340 AFM TR 4.02.00/54 Issue 3, as required by EASA AD 2009-0012-E, and
 - A330 AFM TR 37 Issue 1.0 and A340 AFM TR 38 Issue 1.0, as required by EASA AD 2012-0069.
- (3) After modification of an aeroplane as required by paragraph (1) of this AD, the operational procedures (TR to the Master Minimum Equipment List (MMEL) as previously required by EASA



AD 2010-0109R1, listed in paragraph (2) of that AD) are no longer required and can be removed from the MMEL of that aeroplane.

- (4) Installation of an upgraded software standard of the FCPC approved after the effective date of this AD is equal to compliance with the requirements of paragraph (1) of this AD, provided the conditions as specified in paragraphs (4.1) and (4.2) of this AD are met.
 - (4.1) The upgraded software standard of the FCPC must be approved by EASA, or approved under Airbus Design Organisation Approval (DOA); and
 - (4.2) The installation must be accomplished in accordance with aeroplane modification instructions approved by EASA, or approved under Airbus DOA.
- (5) An aeroplane modified as required by paragraph (1) of this AD, or as specified in paragraph (4) of this AD, as applicable, remains compliant with the modification requirement of paragraph (8) of EASA AD 2010-0081R1 for that aeroplane.
- (6) An aeroplane modified as required by paragraph (1) of this AD, or as specified in paragraph (4) of this AD, as applicable, remains compliant with the requirements of EASA AD 2011-0199R1 and EASA AD 2013-0107 for that aeroplane.
- (7) An A330 aeroplane modified in service in accordance with the instructions of Airbus SB A330-27-3156 (commercial designation MRTT), modified as required by paragraph (1) of this AD, or as specified in paragraph (4) of this AD, as applicable, remains compliant with the modification requirements of EASA AD 2012-0271 for that aeroplane.
- (8) An aeroplane with Airbus mod 202680 (installation of FCPC P13M22 2K2) embodied in production is not affected by the requirements of paragraph (1) of this AD, provided it is determined that no FCPC having an earlier standard has been installed on that aeroplane since its Airbus date of manufacture.

Ref. Publications:

Airbus SB A330-27-3205 original issue dated 09 March 2015.
 Airbus SB A330-27-3207 original issue dated 30 June 2015.
 Airbus SB A330-27-3208 [expected to be issued in April 2017].

Airbus SB A340-27-4195 original issue dated 24 November 2015.
 Airbus SB A340-27-4196 original issue dated 24 November 2015.
 Airbus SB A340-27-5064 [expected to be issued in July 2016].

The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.



2. The original issue of this AD was posted on 16 April 2015 as PAD 15-044 for consultation until 14 May 2015 and republished as PAD 15-044R1 on 01 June 2015 for consultation until 15 June 2015. The Comment Response Document can be found at <http://ad.easa.europa.eu>.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS – Airworthiness Office – Airworthiness Office, E-mail: airworthiness.A330-A340@airbus.com.

Revised



Appendix 1 - Software Standard updates and Compliance Time

Software Standard	Hardware Standard(s)	Airbus SB	Compliance Time (after 01 July 2015 [the effective date of this AD at original issue])
P13/M22	FCPC 2K2	SB A330-27-3205	Within 9 months
P14/M23	FCPC 2K1	SB A330-27-3207	
M23	FCPC 2K0	SB A330-27-3207	
MRTT 3	FCPC 2K2	SB A330-27-3208	Within 24 months
L24	FCPC 2K1 or 2K0	SB A340-27-4195	Within 15 months
L23	FCPC 2K2	SB A340-27-4196	
W13	FCPC 2K2	SB A340-27-5064	

Revised

