
AIRWORTHINESS DIRECTIVE

On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/A330/23 Amdt 1 and issues the following AD under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Airbus Industrie A330 Series Aeroplanes

AD/A330/23 Elevator Servo Control Transducer Attachment 6/2007 Amdt 2 lug Inspection and FCOM Amendment

Applicability: AIRBUS aircraft A330-200 and A330-300, series, all certified models and all serial numbers except those on which AIRBUS modification 50394 or 52195 or 53969 or 54833 has been embodied in production or AIRBUS Service Bulletin (SB) A330-27-3128 or Goodrich VSB 4800-27-16 Revision 03 or SB A330-27-3136 has been embodied in service.

Reminder: It is the responsibility of the operator to ensure that any spare part that has been installed on the aircraft **after delivery** does not invalidate the compliance of the aircraft with the requirements of this Airworthiness Directive (AD).

Requirement: 1. Operational procedures

Amend the current flight control check procedures as follows for one or both damping servo controls that have accumulated more than 1,000 flight cycles (FC) since new:

PRIOR OR DURING TAXI :
FLIGHT CONTROLSCHECK

“1. AT A CONVENIENT STAGE, PRIOR TO OR DURING TAXI, AND BEFORE ARMING THE AUTOBRAKE, THE PF SILENTLY APPLIES FULL LONGITUDINAL AND LATERAL SIDESTICK DEFLECTION. ON THE F/CTL PAGE, THE PNF CHECKS FULL TRAVEL OF ALL ELEVATORS AND ALL AILERONS, AND THE CORRECT DEFLECTION AND RETRACTION OF ALL SPOILERS. THE PNF CALLS OUT "FULL UP", "FULL DOWN", "NEUTRAL", "FULL LEFT", "FULL RIGHT", "NEUTRAL", AS EACH FULL TRAVEL/NEUTRAL POSITION IS REACHED.

THE PF SILENTLY CHECKS THAT THE PNF CALLS ARE IN ACCORDANCE WITH THE SIDESTICK ORDER.

NOTE: IN ORDER TO REACH FULL TRAVEL, FULL SIDESTICK MUST BE HELD FOR A SUFFICIENT PERIOD OF TIME.

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2. THE PF PRESSES THE PEDAL DISC PUSHBUTTON ON THE NOSEWHEEL TILLER, AND SILENTLY APPLIES FULL LEFT RUDDER, FULL RIGHT RUDDER, AND NEUTRAL. THE PNF CALLS OUT "FULL LEFT", "FULL RIGHT", "NEUTRAL", AS EACH FULL TRAVEL/NEUTRAL POSITION IS REACHED.

3. THE PNF APPLIES FULL LONGITUDINAL AND LATERAL SIDESTICK DEFLECTION, AND SILENTLY CHECKS FULL TRAVEL AND CORRECT SENSE OF ALL ELEVATORS AND ALL AILERONS, AND CORRECT DEFLECTION AND RETRACTION OF ALL SPOILERS, ON THE ECAM F/CTL PAGE.”

Note 1: The task sharing between the PF and the PNF for the above flight control checks can be amended by each operator depending on its operational policy and local airworthiness requirements.

Note 2: The above listed procedure is included in A330 FCOM Vol.3 Rev.19 / Standard Operating Procedures 3.03.10 p3 can be used to amend the flight control check procedure:

2. Inspection of each elevator servo control in damping position 3CS1 and 3CS2
 - a. Perform a dye penetrant inspection of the mode selector valve position transducer attachment lugs in accordance with the instructions of Airbus Service Bulletin (SB) A330-27A3115 Rev 02.
 - b. Repeat the inspection in Requirement 2a. of this AD.

Note 3: Requirement 1 of this AD is no longer required once both damping servo controls are repetitively inspected as required by Requirement 2b. However, it is recommended to follow flight control check as procedure given in § 1. which has been introduced in FCOM documentation.

3. In case of any crack finding, replace the transducer by a spare one or replace the elevator servo control in accordance with the instructions of Airbus SB A330-27A3115 Rev 02.
4. Inspection of spare transducer or elevator servo control

Do not install a spare transducer or a transducer fitted on a spare elevator servo control as replacement part on an aircraft, unless it has been inspected in accordance with the instructions of Airbus SB A330 27A3115 Rev 02.

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5. Elevator servo-controls PN SC4800-7A and PN SC4800-9

Modify the four elevator servo-controls in accordance with instructions defined in Airbus SB A330-27-3128. Mode valve transducer MVT100 removed from servo-controls as required by this Requirement must be discarded.

6. Elevator servo-controls PN SC4800-10 and PN SC4800-11

Identify the serial number (SN) of elevator servo controls Part Number (PN) SC4800-10 and SC4800-11.

If SN is 2324 or below, modify the elevator servo controls (active and damping) of both elevators (LH and RH) in accordance with instructions of Goodrich VSB 4800-27-16 Rev.03. Mode valve transducer MVT100 removed from servo-controls as required by this Requirement must be discarded.

The installation of the new reinforced mode valve transducer (MVT200) in the elevator servo controls as listed in Requirements 5 and/or 6 cancels the repetitive inspections required by this AD.

Later approved revisions of the referenced documents may be used in lieu of those listed in this AD.

Note 4: EASA AD 2007-0011 dated 9 January 2007 refers. This AD supersedes DGAC AD F-2003-460.

Compliance:

1. Remains unchanged as 18 March 2004 (the effective date of Amendment 1 of this AD).
2. a. For each elevator servo control not yet dye penetrant inspected per Airbus All Operator Telex (AOT) A330-27A3115 Rev 01, prior to the accumulation of 1,000 FC since new or within 350 FC after 18 March 2004 the effective date of Amendment 1 of this AD, whichever occurs later.

For each elevator servo control already dye penetrant inspected as per Airbus AOT A330-27A3115 Rev 01, prior to the accumulation of 700 FC since the last dye penetrant inspection or prior to the accumulation of 1,350 FC since new, whichever occurs later.
2. b. At intervals not exceeding 350 FC.
3. Before further flight after the effective date of this AD.
4. From the effective date of this AD.
5. Unless already accomplished, not later than 30 June 2008.

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6. Unless already accomplished, not later than 30 June 2008.

This Amendment becomes effective on 7 June 2007.

Background: Two cases have been reported of the elevator dropping to the full down position, without ECAM warning, while the flight crew was carrying out pre-flight controls check. This occurred after hydraulic power-up and prior to engine start. The cause has been identified as cracking of the elevator servo control mode selector valve position transducer body attachment lugs. This resulted in displacement of the transducer, external hydraulic fluid leakage and subsequent loss of the corresponding hydraulic circuit.

Amendment 1 of this AD introduced repetitive inspection of the transducer attachment and simplified the flight control check procedures.

Amendment 2 mandates the replacement of the Mode Valve Transducer and excludes from the applicability aircraft fitted with P/N SC4800-113 or SC4800-114 or SC4800-xx4 servo controls.

The original issue of this Directive became effective on 1 October 2003 and was based on DGAC Emergency AD U2003-371(B).

Amendment 1 of this AD became effective on 18 March 2004.



David Punshon
Delegate of the Civil Aviation Safety Authority

24 April 2007