
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/A330/38 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/A330/38
Amdt 1

Liquid Crystal Display Units

8/2005

Applicability: Airbus A330 series aeroplanes, all serial numbers, that have EIS2 (Electronic Instrument System) LCD (Liquid Crystal Display) Display Units (DU) installed in accordance with Airbus modification 47524, 50161, 50183, 50616 or 51153 during production or in accordance with Airbus Service Bulletin (SB) A330-31-3056 or A330-31-3057 or later DGAC approved revision whilst in service.

This Directive is not applicable to aeroplanes with Airbus modification 51974 or SB A330-31-3069 and modification 53923 or SB A330-31A3080 or later DGAC approved revisions to either SB incorporated.

Requirement: 1. The following dispatch limitations are mandatory for all flights:

MMEL REPERCUSSIONS:

For aircraft equipped with EIS2 LCD Display Units and with conventional standby instruments:

- Dispatch with the standby IAS (Indicated Airspeed) indicator inoperative (MMEL 34-21-01) is no longer authorised.

- Dispatch with inoperative standby horizon or inoperative standby altimeter may be authorised provided that the crew maintains VMC conditions during the entire flight and day-light conditions.

For aircraft equipped with EIS2 LCD Display Units and with the Integrated Standby Instrument System (ISIS):

- Dispatch with the ISIS airspeed function inoperative (MMEL 34-22-03-C) is no longer authorised.

- Dispatch with inoperative ISIS horizon function or inoperative ISIS altitude function may be authorised provided that the crew maintains VMC conditions during the entire flight and day-light conditions.

Reminder: For dispatch with one Display Unit inoperative as per MMEL 31-63-01, it is reminded that the subject Display Unit must be switched-off as per associated MMEL operational procedure.

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Incorporation of the Master Minimum Equipment List (MMEL) changes or a copy of this Directive in the Aircraft Operations Manual is a satisfactory method of compliance with this Requirement.

2. The following operational limitations are mandatory for all flights:

Aircraft not equipped with FWC STD K7/486 (MOD 49193)

LOSS OF ALL DISPLAY UNITS

This Temporary Revision gives the procedure to be followed in case of loss of all Display Units (DU).

Autopilot, autothrust and MCDU navigation data are still available and may be used.

Monitor the flight by using standby instruments.

Wait at least 40 seconds for automatic DU recovery.

- *If one or more DU is not automatically recovered after 40 seconds:*

Set the non-recovered DUs to OFF.

After 40 seconds, sequentially switch them back to ON.

- *If all DUs are lost again when switching a given DU back to ON:*

Set all the DUs to OFF.

After 40 seconds, switch them back to ON except the given DU which must be left permanently OFF.

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- *If one or more ECAM DU must remain OFF:*
 - *If ECAM DUAL DU reconfiguration is possible:*
Set the ECAM/ND selector to CAPT or F/O.
 - *If ECAM DUAL DU reconfiguration is not possible or if the possible DU configuration is not appropriate for the type of approach:*
Both FWC will be lost during approach so monitor systems on overhead panel.

Note: ECAM cautions and warnings, aural warnings, master caution, warning lights, auto callouts and altitude alerts are lost during approach. Only CAT I approach is allowed.”

Incorporation of Aircraft Flight Manual (AFM) Temporary Revision TR 4.02.00/23, TR 4.02.00/24 or a copy of this Directive in the Aircraft Operations Manual is a satisfactory method of compliance with this Requirement.

Note: DGAC AD F-2004-117 R1 (EASA Approval 2005-4752) refers.

Compliance: For Requirements 1 and 2 - Remains unchanged as “After 4 August 2004”.

This Amendment becomes effective on 4 August 2005.

Background: The Direction Générale de l’Aviation Civile of France has advised that an A320 operator reported the erratic behavior of all EIS2 LCD DUs in cruise for duration of three minutes with a total loss LCD DUs for 30 seconds. As a precaution the pilot disconnected the autopilot and standby instruments were used. All DUs were finally recovered and the flight continued normally.

Analysis confirmed that the three Display Management Computers have received erroneous data from one LCD Unit.

Airbus issued Operators Information Telex (OIT) and Flight Operations Telex (FOT) SE 999.0114/03/VHR Revision 1, which gives the Master Minimum Equipment List (MMEL) changes resulting from this event and operational recommendations to be followed in case of all DUs failed with INVALID DATA display.

Several similar events have been reported on the Airbus Single Aisle fleet since the issue of the OIT, showing the need to make sure that the crew is well informed of the procedure to apply in similar situations. This procedure “Loss of all display units” is detailed in A330 AFM TR 4.02.00/23. An equivalent procedure detailed in AFM TR 4.02.00/24 and 4.02.00/39 has also been developed for A330 aircraft fitted with FWC STD K7/486 (Hardware - 486).

Airbus Industrie A330 Series Aeroplanes

AD/A330/38 Amdt 1 (continued)

This Amendment continues the requirements of the original issue of the Directive. However, the Amendment provides relief for operators who have incorporated the new EIS2 standard 'L5' together with the associated activation of a monitoring function (CRC) either by way of modification during production or incorporation of service bulletins. This allows cancellation of the operational limitations (both AFM and MMEL TR).

The original issue of this Directive became effective on 4 August 2004.



James Coyne
Delegate of the Civil Aviation Safety Authority

24 June 2005