	AIRWORTHINESS DIRECTIVE No F-2004-104 R1	Distribution: B	Issue date: August 18, 2004	Page : 1/3
Direction générale de l'aviation civile France GSAC publication	This Airworthiness Directive is published by the DGAC on behalf of EASA, Airworthiness Authority of the State of Design for the affected product, part or appliance.		<i>Translation of « Consigne de Navigabilité » of same number. In case of difficulty, reference should be made to the French issue.</i>	
	<p style="text-align: center;">No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive, unless otherwise agreed with the Authority of the State of Registry.</p>			
Corresponding foreign Airworthiness Directive(s): Not applicable		Airworthiness Directive(s) replaced: F-2004-104 original issue		
Person in charge of airworthiness: AIRBUS SAS		Type(s): A318, A319, A320 and A321 aircraft		
Type certificate(s) No. 180 TCDS No 180				
ATA chapter: 31, 34	Subject: Temporary loss of all display units			

1. EFFECTIVITY:

AIRBUS aircraft A318, A319, A320, A321, all certified models, all serial numbers that have embodied:

- AIRBUS modification 30368 or 31495 in production,
- or
- AIRBUS Service Bulletin (SB) A320-31-1193 or A320-31-A1198 in service,

for the installation of EIS2 (Electronic Instrument System) LCD (Liquid Crystal Display) Display Units.

2. REASONS:


An A320 operator reported the misbehavior of all EIS2 LCD Display Units in cruise for duration of 3 minutes with a total loss LCD Display Units for 30 seconds. The autopilot was disconnected as a precaution by the pilot and standby instruments were used. All Display Units were finally recovered and the flight continued normally.

Analysis confirmed that the 3 Display Management Computers have received an 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) repercussions of this event and operational recommendations to be followed in case of all Display Units failed with INVALID DATA display.

Airworthiness Directive (AD) 2003-373 mandated the MMEL repercussions given in the OIT/FOT referenced here-above.

Since, several similar events have been reported on the Airbus Single Aisle fleet, showing the need to make the crew well informed of the procedure to apply in such situation. This procedure "Loss of all display units" is detailed in A318/319/329/321 Flight Manual Temporary Revision (AFM TR) 4.02.00/22.

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This AD recalls the requirements of AD 2003-373 and mandates AFM TR 4.02.00/22.

A new EIS2 standard, 4.2, has been developed to clear the problem of loss of Display Units. Revision 1 of this AD allows canceling AFM TR 4.02.00/22 on aircraft with EIS2 standard 4.2.

Note: After satisfactory in-service experience of EIS2 standard 4.2, the MMEL limitations will be cancelled on aircraft equipped with this standard.

3. **MANDATORY ACTIONS AND COMPLIANCE TIMES:**

3.1. From September 24, 2003 (the effective date of AD 2003-373), the following operational limitations are rendered 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 authorized.
- Dispatch with inoperative standby horizon or inoperative standby altimeter may be authorized 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 authorized.
- Dispatch with inoperative ISIS horizon function or inoperative ISIS altitude function may be authorized 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."

Incorporation of the MMEL repercussions or a copy of this AD in the Aircraft Operations Manual and strict adherence to MMEL repercussions by the crew allows complying with the paragraph 3.1. of this AD.

3.2. For aircraft that have not received AIRBUS modification 34571 or SB A320-31A1220 (EIS 2 standard 4.2), from July 17, 2004 [effective date of this AD at original issue], the following operational limitations are rendered mandatory for all flights:

"LOSS OF ALL DISPLAY UNITS


This Temporary Revision of the Aircraft Flight Manual 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.

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- *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."*

Incorporation of the AFM TR 4.02.00/22 or a copy of this AD in the Aircraft Operations Manual as well as in the Aircraft Flight Manual and strict adherence by the crew allows complying with the paragraph 3.2. of this AD.

4. REFERENCE PUBLICATIONS:

Operators Information Telex and Flight Operations Telex SE 999.0114/03/VHR
Revision 1 dated September 19, 2003.
A318/319/320/321 Flight Manual Temporary Revision 4.02.00/22
AIRBUS Service Bulletin A320-31A1220
Any later approved revision of these documents is acceptable.

5. EFFECTIVE DATE:

Original Issue : July 17, 2004
Revision 1 : August 28, 2004.

6. REMARK:

For questions concerning the technical contents of this AD's requirements, contact:
AIRBUS SAS - Fax 33 5 61 93 44 51.

7. APPROVAL:

This AD is approved under EASA reference No 2004-8606 dated August 10, 2004.