


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No.: 2011-0142</b></p> <p><b>Date: 25 July 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>A318, A319, A320 and A321 aeroplanes</p>
TCDS Number:	EASA.A.064
Foreign AD:	Not applicable
Supersedure:	This AD supersedes EASA AD 2006-0280 dated 12 September 2006.
<b>ATA</b>	<b>Aircraft Flight Manual – Display Unit Failure – Operational Procedure</b>
Manufacturer(s):	Airbus (formerly AIRBUS INDUSTRIE)
Applicability:	Airbus A318-111, A318-112, A318-121, A318-122, A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132, A319-133, A320-111, A320-211, A320-212, A320-214, A320-215, A320-216, A320-231, A320-232, A320-233, A321-111, A321-112, A321-131, A321-211, A321-212, A321-213, A321-231 and A321-232 aeroplanes models, all manufacturer serial numbers.
Reason:	<p>In service experience has shown a number of events of pin to socket arcing at the Integrated Drive Generator (IDG) feeder cable pylon/nacelle interface connector. The fretting corrosion phenomenon was identified to be the root cause of the pin to socket arcing.</p> <p>Investigation has identified a non-optimised electrical harness installation as a contributing factor to this phenomenon that could lead to electrical arcs with possible electrical flickering.</p> <p>These incidents may cause the following symptoms during flight:</p> <ul style="list-style-type: none"> <li>- Intermittent flickering of display units, e.g. primary flight display, navigation display, electronic centralized aircraft monitoring (ECAM) and / or multipurpose control display unit (MCDU),</li> <li>- Transient disconnection of several systems (auto pilot, yaw damper, auto throttle), triggering of aircraft system warnings and/or flags,</li> <li>- Loss of IDG power supply on the affected engine, and/or</li> <li>- Flickering of cabin lights.</li> </ul> <p>The Aircraft Flight Manual (AFM) Temporary Revision (TR) 4.02.00/20 was issued as a procedure to be applied in such case. Consequently, EASA AD</p>

	<p>2006-0280, which superseded the DGAC France AD F-2004-074, required the amendment of the AFM to impose the limitations as detailed in AFM TR 4.02.00/20 for aeroplanes with certain engines (limited batch of engines, identified by serial number) installed.</p> <p>After the introduction of this AFM TR, some operators reported cases of Display Unit (DU) flickering, despite the fact that the engines installed did not belong to the affected batch, and that these aeroplanes had been modified to incorporate one of the two terminating actions, Airbus Service Bulletin (SB) A320-71-1030 (Airbus modification (mod.) 34982) and SB A320-71-1034 (Airbus mod. 32943). The investigations of these occurrences revealed some intermittent electrical power supply interruptions. Analysis showed that these interruptions may fluctuate within the electrical protection limits and in some rare occasions, may affect some of the connected aeroplanes systems.</p> <p>As a consequence, some intermittent electrical power supply interruptions may not be detectable by the electrical power monitoring system, thereby preventing an automatic disconnection of the failed generator.</p> <p>To address this issue, Airbus has issued a new AFM procedure, applicable to all aeroplanes. This “DISPLAY UNIT FAILURE” procedure, which replaces the one contained in AFM TR 4.02.00/20, allows the flight crew to determine the affected generator, select it OFF and reset the rudder trim.</p> <p>For the reasons described above, this AD, which supersedes EASA AD 2006-0280, requires amendment of the applicable AFM to ensure that the flight crew applies the appropriate operational procedure.</p>
Effective Date:	08 August 2011
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <ol style="list-style-type: none"> <li>(1) Within 10 days after the effective date of this AD, amend the applicable AFM to incorporate the operational procedure as detailed in Appendix 1 of this AD, and operate the aeroplane accordingly.</li> <li>(2) Incorporation of Airbus AFM TR112, or inserting a copy of Appendix 1 of this AD into the AFM, is an acceptable method to comply with the requirements of paragraph (1) of this AD.</li> <li>(3) Incorporation into the applicable AFM of a Normal AFM Revision that includes TR112 is an acceptable method to comply with the requirements of paragraph (1) of this AD.</li> </ol>
Ref. Publications:	<p>Airbus A318, A319, A320 and A321 AFM TR112 issue 1 “ABN-DISPLAY UNIT FAILURE”, approved by EASA on 03 December 2010.</p> <p>The use of later approved revisions of this document 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. The required actions and the risk allowance have granted the issuance of a Final AD with Request for Comments, postponing the public consultation process after publication.</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 – EIAS, Fax +33 5 61 93 44 51, E-mail: <a href="mailto:account.airworth-eas@airbus.com">account.airworth-eas@airbus.com</a>.</li> </ol>

## Appendix 1 – AFM Procedure

**DISPLAY UNIT FAILURE**

- **Affected DU blank or display distorted:**  
Turn off affected DU as required.
  - **If ECAM DUs affected:**  
Use ECAM/ND SEL
  - **If EFIS DUs affected:**  
Use PFD/ND XFR.
- **Diagonal line or "INVALID DATA" on affected DU:**  
Attempt to recover affected DU by using associated DMC switching.
  - **If unsuccessful:**  
Turn off then on affected DU.
- **Inversion of EWD and SD displays:**  
Turn off then on ECAM upper display.
- **Affected DU(s) or MCDU flashes intermittently:**
  - **If Captain PFD or ND, both ECAM DUs or upper ECAM DU, or MCDU 1 is (are) affected:**  
Turn off GEN 1.
    - **If DU(s) stop(s) flashing:**  
Keep GEN 1 off for the rest of the flight.  
Use the sideslip indication to verify if the rudder trim needs to be reset. If necessary, reset the rudder trim.  
*Note: Intermittent Electrical Power Supply Interruptions may cause offset in the rudder trim.*  
Select AP and/or autothrust as required.  
APU may be started (*Refer to NORM-49 Auxiliary Power Unit (APU)*) and APU generator may be used (if available).
    - **If DU(s) do(es) not stop flashing:**  
Restore GEN 1.
  - **If First Officer PFD or ND, lower ECAM DU, or MCDU 2 is (are) affected:**  
Turn off GEN 2.
    - **If DU(s) stop(s) flashing:**  
Keep GEN 2 off for the rest of the flight.  
Use the sideslip indication to verify if the rudder trim needs to be reset. If necessary, reset the rudder trim.  
*Note: Intermittent Electrical Power Supply Interruptions may cause offset in the rudder trim.*  
Select AP and/or autothrust as required.  
APU may be started (*Refer to NORM-49 Auxiliary Power Unit (APU)*) and APU generator may be used (if available).
    - **If DU(s) do(es) not stop flashing:**  
Restore GEN 2.

**Note:** This operational procedure has been introduced in the global AFM revision, approved by EASA on 05 April 2011.