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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0129; Directorate Identifier 2009-NM-245-AD; Amendment 39-16287; AD 2010-10-08]

RIN 2120-AA64

Airworthiness Directives; Airbus A318, A319, A320, A321 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

Several occurrences of loss of the AC [alternating current] BUS 1 have been reported which led in some instances to the loss of the AC ESS [essential] BUS and DC [direct current] ESS BUS and connected systems. The affected systems include multiple flight deck Display Units (Primary Flight Display, Navigation Display and Upper Electronic Centralised Aircraft Monitoring display). * * * * *

The loss of multiple display units, if not corrected expediently during a high workload period, potentially affects the capability of the flight crew and could contribute to a loss of situational awareness and consequent control of the aeroplane, which would constitute an unsafe condition. * * * * * We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective June 21, 2010.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of June 21, 2010.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Tim Dulin, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2141; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on February 23, 2010 (75 FR 8003). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

Several occurrences of loss of the AC [alternating current] BUS 1 have been reported which led in some instances to the loss of the AC ESS [essential] BUS and DC [direct current] ESS BUS and connected systems. The affected systems include multiple flight deck Display Units (Primary Flight Display, Navigation Display and Upper Electronic Centralised Aircraft Monitoring display).

The reasons for these events have been investigated but have not been fully established for all cases.

Due to the range of system losses some crews reported difficulty in establishing the failure cause during the events and, consequently, the appropriate actions to be taken may not be completed in a timely manner.

The loss of multiple display units, if not corrected expediently during a high workload period, potentially affects the capability of the flight crew and could contribute to a loss of situational awareness and consequent control of the aeroplane, which would constitute an unsafe condition.

This AD therefore mandates the modification of the electrical network configuration management logic consisting in adding an automatic switching of the AC and DC ESS BUS power supply such that upon the loss of the AC BUS 1, the AC BUS 2 will automatically take over the power supply. On pre-MOD aeroplanes, this power supply switching can only be accomplished manually from the cockpit and is covered by an Electronic Centralized Aircraft Monitoring (ECAM) procedure.

The modification of the electrical power distribution system includes, depending on the configuration, adding a new circuit breaker and new relay to the AC/DC ESS BUS circuit, and adding a diode between a certain relay and terminal block. You may obtain further information by examining the MCAI in the AD docket.

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comment received.

Support and Request to Reduce Compliance Time

The Airline Pilots Association, International (ALPA) supports this AD, and asks that the 48-month compliance time proposed in the NPRM be reduced to 24 months. ALPA states that, given the

potentially serious consequences of the flightcrew experiencing a very high workload during a critical phase of flight, the compliance time should be reduced based on the number of events and the safety risk associated with BUS failures.

We do not agree that the compliance time should be reduced. In developing the compliance time for this AD action, we considered not only the safety implications of the identified unsafe condition, but the average utilization rate of the affected fleet, the practical aspects of modifying the fleet during the compliance time, and the availability of required parts. In addition, we have coordinated with the European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community. We have determined that the 48-month compliance time to do the modification addresses the identified unsafe condition and ensures an adequate level of safety for the affected fleet. We have made no change to the AD in this regard.

Conclusion

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD as proposed.

Differences Between This AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have required different actions in this AD from those in the MCAI in order to follow our FAA policies. Any such differences are highlighted in a NOTE within the AD.

Costs of Compliance

We estimate that this AD will affect 633 products of U.S. registry. We also estimate that it will take about 46 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$2,200 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$3,867,630, or \$6,110 per product.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new AD:



2010-10-08 Airbus: Amendment 39-16287. Docket No. FAA-2010-0129; Directorate Identifier 2009-NM-245-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective June 21, 2010.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Airbus Model A318-111, -112, -121, and -122 airplanes; Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes; Model A320-111, -211, -212, -214, -231, -232, and -233 airplanes; and Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes; certificated in any category; all manufacturer serial numbers; except airplanes that have received Airbus modification 37317 in production.

Subject

- (d) Air Transport Association (ATA) of America Code 24: Electrical power.

Reason

- (e) The mandatory continuing airworthiness information (MCAI) states:

Several occurrences of loss of the AC [alternating current] BUS 1 have been reported which led in some instances to the loss of the AC ESS [essential] BUS and DC [direct current] ESS BUS and connected systems. The affected systems include multiple flight deck Display Units (Primary Flight Display, Navigation Display and Upper Electronic Centralised Aircraft Monitoring display).

The reasons for these events have been investigated but have not been fully established for all cases.

Due to the range of system losses some crews reported difficulty in establishing the failure cause during the events and, consequently, the appropriate actions to be taken may not be completed in a timely manner.

The loss of multiple display units, if not corrected expediently during a high workload period, potentially affects the capability of the flight crew and could contribute to a loss of situational awareness and consequent control of the aeroplane, which would constitute an unsafe condition.

This AD therefore mandates the modification of the electrical network configuration management logic consisting in adding an automatic switching of the AC and DC ESS BUS power supply such that upon the loss of the AC BUS 1, the AC BUS 2 will automatically take over the power supply. On pre-MOD aeroplanes, this power supply switching can only be accomplished manually from the cockpit and is covered by an Electronic Centralized Aircraft Monitoring (ECAM) procedure.

The modification of the electrical power distribution system includes, depending on the configuration, adding a new circuit breaker and new relay to the AC/DC ESS BUS circuit, and adding a diode between a certain relay and terminal block.

Compliance

(f) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Actions

(g) Within 48 months after the effective date of this AD, modify the electrical power distribution system, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-24-1120, Revision 03, dated July 10, 2009.

(h) Actions accomplished before the effective date of this AD, in accordance with any service bulletin identified in Table 1 of this AD, are considered acceptable for compliance with the corresponding actions specified in this AD.

Table 1 – Credit service information

Airbus Service Bulletin –	Revision –	Dated –
A320-24-1120	Original	May 31, 2007
A320-24-1120	01	December 19, 2007
A320-24-1120	02	July 8, 2008

FAA AD Differences

Note 1: This AD differs from the MCAI and/or service information as follows:
No differences.

Other FAA AD Provisions

(i) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to Attn: Tim Dulin, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2141; fax (425) 227-1149. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

Related Information

(j) Refer to MCAI European Aviation Safety Agency (EASA) Airworthiness Directive 2009-0235, dated October 29, 2009; and Airbus Service Bulletin A320-24-1120, Revision 03, dated July 10, 2009; for related information.

Material Incorporated by Reference

(k) You must use Airbus Service Bulletin A320-24-1120, Revision 03, dated July 10, 2009, to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Airbus, Airworthiness Office–EAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; e-mail: account.airworth-eas@airbus.com; Internet <http://www.airbus.com>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on April 27, 2010.

Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.