

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0800; Directorate Identifier 2010-NM-162-AD; Amendment 39-16416; AD 2010-18-03]

RIN 2120-AA64

Airworthiness Directives; Dassault-Aviation Model FALCON 7X Airplanes

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

ACTION: Final rule; request for comments.

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 in service events related to various electrical systems, have led to the discovery of a common root cause: A leakage failure mode of Transient Voltage Suppressor (TVS) diodes used on Power Distribution Control Units (PDCU) cards or Generator Control Unit (GCU) cards in the Primary Power Distribution Boxes (PPDB). Due to such TVS diode failure mode, operation of some electrical circuits is degraded and some control signals are set at unexpected levels. Further analysis indicated that combination of a TVS diode failure with other systems failures could significantly reduce flight safety.

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The unsafe condition is a leakage failure mode of TVS diodes used on PDCU cards or GCU cards in the PPDB, which in combination with other system failures could lead to loss of controllability of the airplane. This AD requires actions that are intended to address the unsafe condition described in the MCAI.

DATES: This AD becomes effective September 8, 2010.

We must receive comments on this AD by October 8, 2010.

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-40, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

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 this AD, 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.

FOR FURTHER INFORMATION CONTACT: Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1137; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2010-0073, dated April 15, 2010 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

Several in service events related to various electrical systems, have led to the discovery of a common root cause: A leakage failure mode of Transient Voltage Suppressor (TVS) diodes used on Power Distribution Control Units (PDCU) cards or Generator Control Unit (GCU) cards in the Primary Power Distribution Boxes (PPDB). Due to such TVS diode failure mode, operation of some electrical circuits is degraded and some control signals are set at unexpected levels. Further analysis indicated that combination of a TVS diode failure with other systems failures could significantly reduce flight safety.

To prevent and correct this condition, some Airplane Flight Manual (AFM) procedures have been modified to reduce the time of exposure to further failures whenever a TVS diode failure occurs. Additionally, a field tester has been developed to test all TVS diodes installed on the PDCU and GCU cards for the detection of components beyond acceptable tolerances. The criteria for PDCU or GCU card replacement in case of detection of faulty components have been identified.

This AD requires the accomplishment of the revised AFM procedures, the testing and, as necessary, the replacement of the affected PDCU and GCU cards.

Meanwhile, Dassault Aviation is developing a modification (M724), to improve PDCU and GCU cards, with TVS diodes having reduced susceptibility to the leakage failure mode.

The unsafe condition is a leakage failure mode of TVS diodes used on PDCU cards or GCU cards in the PPDB, which in combination with other system failures could lead to loss of controllability of the airplane. You may obtain further information by examining the MCAI in the AD docket.

Interim Action

This AD does not require the inspection of and on-condition replacement of the PDCU and GCU cards in paragraph (3) of EASA AD 2010-0073, dated April 15, 2010, and this AD does not provide credit for accomplishment of certain service bulletins in paragraph (4) of EASA AD 2010-0073, dated April 15, 2010. The planned compliance time for the inspection of and on-condition replacement of the PDCU and GCU cards in paragraph (3) of EASA AD 2010-0073, dated April 15, 2010, would allow enough time to provide notice and opportunity for prior public comment on the merits of those actions. Therefore, we are considering further rulemaking to address this issue.

FAA's Determination and Requirements of This AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all pertinent information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Differences Between the 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 FAA policies. Any such differences are highlighted in a NOTE within the AD.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because a leakage failure mode of TVS diodes used on PDCU cards or GCU cards in the PPDB, combined with other possible systems failures, could lead to loss of control of the airplane. Therefore, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in fewer than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2010-0800; Directorate Identifier 2010-NM-162-AD" at the

beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

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.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, 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:



2010-18-03 Dassault-Aviation: Amendment 39-16416. Docket No. FAA-2010-0800; Directorate Identifier 2010-NM-162-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective September 8, 2010.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Dassault-Aviation Model FALCON 7X airplanes, certificated in any category, all serial numbers except those on which Dassault-Aviation Modification M724 is embodied.

Subject

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

Reason

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

"Several in service events related to various electrical systems, have led to the discovery of a common root cause: a leakage failure mode of Transient Voltage Suppressor (TVS) diodes used on Power Distribution Control Units (PDCU) cards or Generator Control Unit (GCU) cards in the Primary Power Distribution Boxes (PPDB). Due to such TVS diode failure mode, operation of some electrical circuits is degraded and some control signals are set at unexpected levels. Further analysis indicated that combination of a TVS diode failure with other systems failures could significantly reduce flight safety."

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The unsafe condition is a leakage failure mode of TVS diodes used on PDCU cards or GCU cards in the PPDB, which in combination with other system failures could lead to loss of controllability of the airplane.

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 30 days after the effective date of this AD, revise the Abnormal Procedures and Limitations sections of the Dassault F7X Airplane Flight Manual (AFM) to include the following statement. This may be done by inserting copies of this AD into the AFM Limitations section and Abnormal Procedures section.

"Upon display of ELEC:BUS MISCONFIG TIED in Crew Alerting System (Abnormal procedure 3-190-20), land at nearest suitable airport

Upon display of ELEC:LH ESS PWR LO or ELEC:LH ESS NO PWR (Abnormal procedure 3-190-40), land at nearest suitable airport

Upon display of ELEC:RH ESS PWR LO and ELEC:RH ESS NO PWR (Abnormal procedure 3-190-45), land at nearest suitable airport

Upon display of HYD:BACKUP PUMP HI TEMP (Abnormal procedure 3-250-15), set off the pump and if the backup pump is still rotating (green) in hydraulic synoptic, descend to a safe altitude or below 15,000 ft

Caution: These temporary amendments take precedence over the same procedures displayed through the Electronic Check List (ECL) in the aeroplane."

Note 1: When a statement identical to that in paragraph (g) of this AD has been included in the Limitations section and Abnormal Procedures section in the general revisions of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed.

FAA AD Differences

Note 2: This AD differs from the MCAI and/or service information as follows:

(1) While the European Aviation Safety Agency (EASA) AD 2010-0073, dated April 15, 2010, has a compliance time of "after the effective date of this AD," this AD requires that the actions be done within 30 days after the effective date of this AD.

(2) This AD does not require the inspection of and on-condition replacement of the PDCU and GCU cards in paragraph (3) of EASA AD 2010-0073, dated April 15, 2010, and this AD does not provide credit for accomplishment of certain service bulletins in paragraph (4) of EASA AD 2010-0073, dated April 15, 2010.

Other FAA AD Provisions

(h) 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: Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1137; 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

(i) Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2010-0073, dated April 15, 2010, for related information.

Material Incorporated by Reference

(j) None.

Issued in Renton, Washington, on August 11, 2010.

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