EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2010-0073 **Date: 15 April 2010** 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.

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].

Type Approval Holder's Name :	**Type/Model designation(s) :**
DASSAULT AVIATION	FALCON 7X

TCDS Number :	EASA.A.155
Foreign AD :	Not applicable
Supersedure :	None

ATA 24	**Electrical Power - Transient Voltage Suppressor Diodes – Inspection/Replacement**
Manufacturer(s):	Dassault Aviation
Applicability:	Falcon 7X aeroplanes, all serial numbers except those on which modification Dassault Aviation M724 is embodied.
Reason:	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.
Effective Date:	29 April 2010
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: (1) After the effective date of this AD, amend the F7X AFM sub-section abnormal procedures and the Quick Reference Handbook 2 (QRH 2) sub-sections abnormal ELEC and HYD as indicated below: o Upon display of ELEC:BUS MISCONFIG TIED in Crew Alerting System (Abnormal procedure 3-190-20), land at nearest suitable airport o Upon display of ELEC:LH ESS PWR LO or ELEC:LH ESS NO PWR (Abnormal procedure 3-190-40), land at nearest suitable airport o Upon display of ELEC:RH ESS PWR LO and ELEC:RH ESS NO PWR (Abnormal procedure 3-190-45), land at nearest suitable airport o 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. (2) Pending incorporation of these changes into the next revision of the AFM, compliance with paragraph (1) of this AD may be demonstrated inserting a copy of this AD into the AFM, subsection Abnormal Procedures 3-190-20, 3-190-40, 3-190-45 and 3-250-15, into the QRH2, subsections Abnormal ELEC and HYD. (3) For the aeroplane serial numbers included in the effectivity of Dassault Aviation Falcon 7X Service Bulletin (SB) n°133, within 9 months after the effective date of this AD inspect the PDCU and GCU cards in accordance with the instructions of the SB. In case of detection of faulty components, before further flight remove and replace the affected PDCU and GCU cards in accordance with the instructions of Dassault Aviation SB n°133. (4) Accomplishment of Goodrich Service Bulletins 80232190-24-01, 80232191-24-01 and 80232192-24-01 is also acceptable to comply with the requirements of paragraph (3) of this AD.
Ref. Publications:	- F7X AFM DGT105608 Rev 8. - Dassault Aviation Service Bulletin Falcon 7X n°133 original issue. - Goodrich Service Bulletin 80232190-24-01 original issue. - Goodrich Service Bulletin 80232191-24-01 original issue. - Goodrich Service Bulletin 80232192-24-01 original issue.

	The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.
Remarks :	1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. This AD was posted on 11 March 2010 as PAD 10-022 for consultation until 08 April 2010. No comments were received during the consultation period. 3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research Section, Certification Directorate, EASA. E-mail ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in this AD, please contact your Dassault Falcon Technical Assistance: • For Europe, Middle East and Africa based operators: Hot Line: (33) 1 47 11 37 37 / Fax: (33) 1 47 11 89 49 • For USA, Canada and Mexico based operators: Help Desk: (1) 800-2FALCON (2325266) / Fax: (1) 201 541 4740 • All other areas: Help Desk: (1) 201 541 4747 / Fax: (1) 201 541 4740