EASA

AIRWORTHINESS DIRECTIVE

AD No.: 2009-0175R1

Date: 25 September 2012

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 EU 748/2012, 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].

Design Approval Holder's Name :

Type/Model designation(s) :

Dassault Aviation

Mystère-Falcon 20 series aeroplanes

TCDS Number : DGAC France TC No.103 TER

Foreign AD : Not applicable

Revision: This AD revises EASA AD 2009-0175 dated 13 August 2009.

ATA 72	Engine - First Stage Low Pressure Turbine (LPT1) Blades / Vibration Monitoring
Manufacturer(s):	Dassault Aviation (formerly Avions Marcel Dassault-Bréguet Aviation)
Applicability:	Mystère-Falcon 20 aeroplanes, all Models, all serial numbers, if fitted with Honeywell (formerly Allied-Signal, Garrett AirResearch) TFE731-5AR-2C or TFE731-5BR-2C turbofan engines.
Reason:	Several instances of shifted LPT1 blades were discovered after troubleshooting reports of high vibration, short N1 roll-down time, or abnormal engine noise on Honeywell TFE731-5()R-2C turbofan engines. The shifting of LPT1 blade(s) could result in high stress loading of the LPT1
	disc which could lead to an uncontained LPT1 disc rim separation. Because of the engine/aircraft configuration of the Mystère-falcon 20 series aeroplanes, the released parts could penetrate the tail fuel tanks. Honeywell confirmed that early detection of LPT1 blade shifting can be achieved by monitoring the engine vibrations.
	As a consequence, pending the introduction of a redesigned LPT1 disk assembly, EASA issued AD 2009-0175 to require repetitive on-wing vibration inspections and applicable corrective actions when vibratory levels exceed the design tolerances.
	Since that AD was issued, Honeywell International Inc. developed improved LPT1 rotor assemblies. Accomplishment of the associated engine modification is required by Federal Aviation Administration AD 2012-17-05.
	Revision 1 of this AD is issued to specify that installation of LPT1 rotor assemblies on the affected engines, as required by FAA AD 2012-17-05,

	constitutes terminating action for the repetitive vibration surveys required by this AD. In addition, some editorial changes have been introduced to improve the readability of the AD.
Effective Date:	Revision 1: 09 October 2012 Original issue: 27 August 2009
Required Action(s) and Compliance Time(s):	 Required as indicated, unless already accomplished: (1) At the next scheduled A-check or within 330 flight hours (FH), whichever occurs first after 27 August 2009 [the effective date of this AD at original issue], do an on-wing engine vibration survey in accordance with the accomplishment instructions of Honeywell Service Bulletin TFE731-72-3750 revision 0 (the service bulletin). If the vibratory levels are above the limits defined in the applicable engine maintenance manual - see table 4 of the service bulletin - before further flight, use the normal troubleshooting procedures to determine the source(s) of the vibratory levels. (2) Thereafter, at intervals not to exceed 630 FH, do an on-wing engine vibration survey in accordance with the accomplishment instructions of the service bulletin and, when vibratory levels are found above the limits defined in the applicable corrective actions to restore the acceptable corrective actions to restore the applicable engine maintenance manual, before further flight, do all applicable corrective actions to restore the acceptable vibratory levels are found above the limits defined in the applicable engine maintenance manual, before further flight, do all applicable corrective actions to restore the acceptable vibratory levels. (3) Installation of LPT1 rotor assemblies on the installed engines in accordance with the accomplishment instructions of Honeywell Service Bulletin TFE731-72-3769 constitutes terminating action for the repetitive vibration surveys required by paragraph (2) of this AD.
Ref. Publications:	Honeywell International Inc. Service Bulletin TFE731-72-3750 revision 0, dated 29 August 2008. Honeywell International Inc. Service Bulletin TFE731-72-3769 revision 0, dated 29 June 2011. The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.
Remarks:	 If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. The original issue of this AD was posted on 06 July 2009 as PAD 09-088 for consultation until 05 August 2009. No comments were received during the consultation period. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA; E-mail: <u>ADs@easa.europa.eu</u>. For any question concerning the technical contents 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