


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No.: 2009-0176</b></p> <p><b>Date: 06 August 2009</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>
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].	
<b>Type Approval Holder's Name :</b> Fokker Services B.V.	<b>Type/Model designation(s) :</b> F28 Mark 0070 and Mark 0100 aeroplanes
TCDS Number : EASA.A.037	
Foreign AD : Not applicable	
Supersedure : None	
<b>ATA 32</b>	<b>Landing Gear – Brake Quick Disconnect Couplings – Inspection / Replacement</b>
Manufacturer(s):	Fokker Aircraft B.V.
Applicability:	F28 Mark 0070 and Mark 0100 aeroplanes, all serial numbers, if Part Number (P/N) AE70690E, P/N AE70691E, P/N AE99111E or P/N AE99119E brake Quick-Disconnect (QD) couplings are installed.
Reason:	<p>During 1995, several reports were received of brake QD couplings loosened and/or disconnected during operation. In a few cases, residual brake pressure was trapped in the affected brake, causing asymmetric braking and/or resulting in hot brakes. Loosened couplings may cause a hydraulic leak with the risk of a brake fire. Investigation revealed that the installation of the brake QD couplings must be done with care and that the locking teeth on the light alloy sleeve are prone to wear. The Fokker 70/100 Aircraft Maintenance Manual (AMM) has been revised to include additional information to ensure correct removal and installation of the couplings.</p> <p>In 1997, Fokker Services issued SBF100-32-106, recommending the introduction of QD couplings with corrosion resistant steel (CRES) sleeves that would prevent excessive wear of the locking teeth on the light alloy sleeve. In response to more reported cases of loosened QD couplings resulting in brake problems, further improved QD couplings were introduced in 2001 through SBF100-32-127. These couplings increase the reliability of the brake system.</p> <p>Recently, a brake fire was reported which was caused by a ruptured brake piston. The fire was quickly extinguished but caused damage to the paint and hydraulic/electrical harness and its components. Detailed investigation</p>

	<p>showed that a hydraulic lock must have been present close to the affected brake creating enough internal pressure to rupture the piston. The most probable scenario for the hydraulic lock is a loosened (not necessarily disconnected) brake QD coupling. Further investigation of the service experience files at Fokker Services showed that more brake fires have occurred on aeroplanes in a pre-mod SBF100-32-127 configuration.</p> <p>In order to reduce the probability of a fluid fire as described in CS 25.863, additional action is deemed necessary.</p> <p>For the reasons described above, this AD requires repetitive inspections of the affected brake QD couplings and replacement of the QD couplings with improved units. Installation of the improved QD couplings terminates the repetitive inspections requirements.</p>
Effective Date:	20 August 2009
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously.</p> <ol style="list-style-type: none"> <li>(1) Within 6 months after the effective date of this AD, inspect the brake QD couplings in accordance with Part 1 of the Accomplishment Instructions of Fokker Services SBF100-32-156 (the SB).</li> <li>(2) Thereafter, at intervals determined by the amount of wear found, as defined in the SB, repeat the inspection in accordance with Part 1 of the Accomplishment Instructions of the SB.</li> <li>(3) If, during any inspection as required by paragraph (1) or (2) of this AD, the wear found on any QD coupling exceeds the definition as specified in the SB, before next flight, replace the affected QD coupling with an improved unit with P/N AE73059E or P/N AE73091E, as applicable, in accordance with Part 2 of the Accomplishment Instructions of the SB.</li> <li>(4) Within 24 months after the effective date of this AD, replace all remaining P/N AE70690E, P/N AE70691E, P/N AE99111E and P/N AE99119E brake QD couplings with the improved units in accordance with Part 2 of the Accomplishment Instructions of the SB.</li> <li>(5) Modification of an aeroplane by installation of improved QD couplings P/N AE73059E and P/N AE73091E at all locations terminates the repetitive inspection requirements of this AD for that aeroplane. Previous replacement of the QD couplings on an aeroplane at all locations in accordance with Fokker SBF100-32-127 (at any revision) also terminates the repetitive inspection requirements of this AD for that aeroplane.</li> <li>(6) After 20 August 2011, do not install P/N AE70690E, P/N AE70691E, P/N AE99111E or P/N AE99119E brake QD couplings on any aeroplane.</li> </ol>
Ref. Publications:	<p>Fokker Services SBF100-32-127 dated 20 July 2001, now at Revision 1 dated 06 March 2009 and superseded/replaced by:</p> <p>Fokker Services SBF100-32-156 dated 06 March 2009.</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. This AD was posted on 19 June 2009 as PAD 09-083 for consultation until 17 July 2009. The Comment Response Document can be found at <a href="http://ad.easa.europa.eu">http://ad.easa.europa.eu</a>.</li> <li>3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management &amp; Research Section, Certification Directorate, EASA. E-mail <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</li> </ol>

	<p>4. For any question concerning the technical content of the requirements in this AD, please contact: Fokker Services B.V., Technical Services Dept., P.O.Box 231, 2150 AE Nieuw-Vennep, The Netherlands; telephone (31) 252-627-350; facsimile (31) 252-627-211; e-mail: <a href="mailto:technicalservices.fokkerservices@stork.com">technicalservices.fokkerservices@stork.com</a> The referenced publication can be downloaded from <a href="http://www.myfokkerfleet.com">www.myfokkerfleet.com</a></p>
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