EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2011-0159 **Date: 26 August 2011** 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) :**
Fokker Services B.V.	F28 Mark 0070 and Mark 0100 aeroplanes

TCDS Number:	EASA.A.037
Foreign AD:	Not applicable
Supersedure:	This AD supersedes EASA AD 2009-0221R1 dated 30 June 2010.

ATA 32	**Landing Gear – Main Landing Gear (MLG) Piston – Inspection / Modification**
Manufacturer(s):	Fokker Aircraft B.V.
Applicability:	F28 Mark 0070 and Mark 0100 aeroplanes, all serial numbers, if equipped with Goodrich (formerly Menasco, Colt Industries) MLG units, Part Number (P/N) 41050-7, P/N 41050-8, P/N 41050-9, P/N 41050-10, P/N 41050-11, P/N 41050-12, P/N 41050-13, P/N 41050-14, P/N 41050-15, P/N 41050-16, P/N 41060-1, P/N 41060-2, P/N 41060-3, P/N 41060-4, P/N 41060-5 or P/N 41060-6.
Reason:	During a normal walk around check on a F28 Mark 0100 aeroplane, a large crack was discovered in the lower portion of the right (RH) MLG piston. The affected MLG unit had accumulated 7 909 flight cycles (FC) at the time of detection. The piston was sent to Goodrich, the landing gear manufacturer, for detailed investigation, which revealed that the crack had been initiated by corrosion pits. The extent of the corrosion indicates that the initial crack existed for a substantial period before a high loading event caused the crack to grow further by ductile overload. This condition, if not detected and corrected, could lead to MLG failure during the landing roll-out, possibly resulting in damage to the aeroplane and injury to occupants. To address this potential unsafe condition, EASA issued AD 2009-0221 to require a one-time detailed visual inspection of the MLG pistons, the replacement of any MLG pistons on which cracks are detected, and the reporting of all findings to the aeroplane TC holder. No cracks were reported as a result of this inspection. Subsequently, a repetitive inspection was introduced in the Airworthiness

	Limitations Section (Fokker Services report SE-623 Issue 8) in Appendix 1 of the Maintenance Review Board (MRB) document to safeguard the integrity of the MLG assembly, pending the accomplishment of a terminating action. Goodrich issued Service Bulletin (SB) 41000-32-29 to introduce an improved surface protection (nickel plate) of the affected area of the MLG piston P/N 41141-3 and re-identification as P/N 41141-5, which is considered as a terminating action for the repetitive inspections. For the reasons described above, this AD requires repetitive visual inspections of the P/N 41141-3 MLG piston for cracks and, depending on findings, replacement or modification of the MLG piston. This AD also requires modification of the affected MLG by installing a piston P/N 41141-5.
Effective Date:	09 September 2011
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously. (1) Within 2 months after the effective date of this AD, or within 12 months after an inspection in accordance with the accomplishment instructions of Fokker SBF100-32-158, whichever occurs later, and thereafter at intervals not to exceed 12 months, visually inspect MLG piston P/N 41141-3 for cracks in accordance with the instructions of task 321100-01-16 of Fokker Services report SE-623 Issue 8, which are equal to the instructions of Fokker SBF100-32-158. (2) If, during any inspection as required by paragraph (1) of this AD, cracks are detected, before next flight, replace the affected MLG piston P/N 41141-3 with a serviceable piston, in accordance with the instructions of the applicable Goodrich Landing Gear Component Maintenance Manual. Replacement of a piston does not constitute terminating action for the repetitive inspection requirements of paragraph (1) of this AD. (3) Within 120 months, or during a scheduled overhaul of the MLG, whichever occurs first after the effective date of this AD, modify the MLG by installing a piston P/N 41141-5, in accordance with the Accomplishment Instructions of Fokker Services SBF100-32-161. Re-installation of a MLG piston, which has been modified and re-identified as a P/N 41141-5 MLG piston in accordance with the instructions of Goodrich SB 41000-32-29, is an acceptable method to comply with paragraph (3) of this AD. **Note**: It is allowed to operate an aeroplane with one MLG having a P/N 41141-5 piston installed and the other MLG having a P/N 41141-3 piston installed. (4) Modification of a MLG unit as required by paragraph (3) of this AD constitutes terminating action for the repetitive inspection requirements of paragraph (1) of this AD for that MLG unit. (5) After 09 September 2016, do not install a MLG piston P/N 41141-3, or a MLG unit equipped with a MLG piston P/N 41141-3, on any aeroplane. (6) Compliance with the requirements of paragraphs (1) and (2) of this AD can be demonstrated by: (6.1) Revising as follows the approved aircraft maintenance programme and standard practices on the basis of which the Operator or the Owner ensures the continuing airworthiness of each operated aeroplane: Incorporate task 321100-01-16 and associated thresholds and intervals described in Fokker Services report SE-623 issue 8, and (6.2) Complying with the approved Aircraft Maintenance Programme described in paragraph (6.1) of this AD.
Ref. Publications:	Fokker Services SBF100-32-158 dated 02 October 2009.Fokker Services

	SBF100-32-161 dated 07 April 2011. Goodrich SB 41000-32-29 dated 10 November 2010. Fokker Services report SE-623 Issue 8. 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 22 June 2011 as PAD 11-062 for consultation until 20 July 2011, republished as PAD 11-062R1 on 14 July 2011 for additional consultation and officially closed for comments on 03 August 2011. The Comment Response Documents can be found at http://ad.easa.europa.eu/. 3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA; E-mail ADs@easa.europa.eu. 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 (0)252-627-350; facsimile +31 (0)252-627-211; e-mail: technicalservices@fokker.com. The referenced publication can be downloaded from www.myfokkerfleet.com