



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 17-176

Issued: 22 December 2017

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

Design Approval Holder's Name:

FOKKER SERVICES B.V.

Type/Model designation(s):

F27 aeroplanes

Effective Date: [TBD - standard: 14 days after AD issue date]

TCDS Number(s): EASA.A.036

Foreign AD: Not applicable

Supersedure: None

ATA 32 – Landing Gear – Main Landing Gear Drag Stay Units – Inspection / Replacement

Manufacturer(s):

Fokker Aircraft B.V.

Applicability:

F27 Mark 050, Mark 0502 and Mark 0604 aeroplanes, all serial numbers.

Definitions:

For the purpose of this AD, the following definitions apply:

Affected drag stay unit: SAFRAN Landing Systems (previously Messier-Dowty, Dowty Aerospace) main landing gear (MLG) drag stay units, Part Number (P/N) 200261001, P/N 200261002, P/N 200261003, P/N 200261004, P/N 200485001, P/N 200485002, P/N 200485003, P/N 200485004, P/N 200684001, P/N 200684002, P/N 200684003 and P/N 200684004.

Affected drag stay tube: SAFRAN Landing Systems (previously Messier-Dowty, Dowty Aerospace) MLG drag stay tubes, P/N 200259300, which have a change in section (stepped bore).

The SB: Fokker Services Service Bulletin (SB) SBF50-32-040.



The applicable CMM: SAFRAN Landing Systems (SLS), previously known as Messier-Dowty, Dowty Aerospace Landing Gear (DALG), MLG Component Maintenance Manual (CMM) 32-10-55 Rev. 6.

Serviceable Part: MLG drag stay units, P/N 200684004, for which it is confirmed, in accordance with the instructions of Section 4, step H, of the SB, that no affected drag stay tube is installed.

Reason:

In 1993, an occurrence was reported concerning a MLG collapse due to a broken drag stay on a Fokker F27 Mark 500 RFV (rough field version/configuration). The investigation revealed that the drag stay failure was due to fatigue cracks, introduced by incorrect machining (not smooth, with a notch) of the affected drag stay tube bore during production. As the same MLG are part of the Model F27 Mark 050, 0502 and 0604 design definitions, this also affects those aeroplanes.

This condition, if not detected and corrected, could lead to MLG collapse, possibly resulting in damage to the aeroplane during landing and consequent injury to occupants.

To address this unsafe condition, DALG issued SB F50-32-50, and Fokker Services issued SBF50-32-029, to provide inspection instructions. Consequently, the Civil Aviation Authority of the Netherlands (CAA-NL) issued AD (BLA) 93-169 (later revised), requiring a one-time ultrasonic inspection to identify the type of drag stay tube installed (with stepped or straight bore) on each affected drag stay unit, and, for F27 Mark 050 aeroplanes, replacement of affected drag stay tubes with straight-bore drag stay tubes, P/N 200485300.

Since AD (BLA) 93-169/2 was issued, the applicable CMM was changed, although with incorrect P/N information, as a result of which an affected drag stay tube with a stepped bore may inadvertently have been installed on an aeroplane. Prompted by these findings, the applicable CMM was corrected and re-issued, and SLS issued Service Letter (SL) F27-W-8 to inform the operators. Fokker Services introduced the relevant corrections in the F27 Mk 050, 0502 and 0604 Illustrated Parts Catalogue (IPC) in June 2017. Installation on an aeroplane of an affected drag stay unit with an affected drag stay tube, having a non-straight bore, would reintroduce the unsafe condition on that aeroplane. To address this potential unsafe condition, Fokker Services issued the SB to provide instructions to inspect and replace the affected drag stay tubes.

For the reasons described above, this AD requires a one-time inspection of the affected drag stay units to determine whether an affected drag stay tube is installed, and, depending on findings, accomplishment of applicable corrective action(s).

It is expected that, once the Final AD for this PAD and the Final AD for [PAD 17-175](#) are published, CAA-NL [AD \(BLA\) 81-50-32](#) dated 04 September 1981, [AD \(BLA\) 93-169/2](#) dated 29 April 1994 and [AD NL-2005-003](#) (EASA approval 2005-3869) dated 29 April 2005, will be cancelled.



Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Identification:

- (1) Within 12 months after the effective date of this AD, inspect each affected drag stay unit in accordance with the instructions of Section 4, step E. of the SB.

Replacement:

- (2) If, during the inspection as required by paragraph (1) of this AD, an affected drag stay unit, having P/N 200261001, P/N 200261002, P/N 200261003, P/N 200261004, P/N 200485001, P/N 200485002, P/N 200485003 or P/N 200485004 is found to be installed, before next flight, remove that drag stay unit and replace it with a serviceable part, in accordance with the instructions of Section 4, step G. of the SB.

Corrective Action(s):

- (3) If, during the inspection as required by paragraph (1) of this AD, an affected drag stay unit, having P/N 200684001, P/N 200684002, P/N 200684003 or P/N 200684004 is found to be installed, before next flight, verify the P/N of the drag stay tube installed on the affected drag stay unit in accordance with the instructions of Section 4, step E.(b) of the SB.
- (4) If, during the verification action as required by paragraph (3) of this AD, it cannot be confirmed that a tube P/N 200485300 (with a straight bore) is installed, within 12 months after the effective date of this AD, accomplish a non-destructive test (NDT) inspection of the affected drag stay unit in accordance with the instructions of Section 4, step F.(1) and F.(2) of the SB.
- (5) If, during the NDT inspection as required by paragraph (4) of this AD, an NDT signal is detected, before next flight, remove that drag stay unit and replace it with a serviceable part, in accordance with the instructions of Section 4, step G. of the SB.

Re-identification:

- (6) For affected drag stay units P/N 200684001, P/N 200684002 and P/N 200684003: If, during the verification action as required by paragraph (3) of this AD, no affected drag stay tube is found to be installed, before next flight, re-identify the affected drag stay unit in accordance with the instructions of Section 4, step I.(2) of the SB.
- (7) For affected drag stay units P/N 200684001, P/N 200684002 and P/N 200684003: If, during the inspection as required by paragraph (4) of this AD, no NDT signal is detected, before next flight, re-identify the affected drag stay unit in accordance with the instructions of Section 4, step I.(2) of the SB.

Parts Installation:

- (8) From the effective date of this AD, do not install an affected drag stay unit on an aeroplane (which includes installation of a replacement MLG), unless it is a serviceable part as defined in this AD. For the purpose of this requirement, removal of a MLG or an affected drag stay unit from an aeroplane and re-installing that MLG or drag stay unit on the same aeroplane is not 'installation'.



Ref. Publications:

Fokker Services SBF50-32-040 original issue dated 30 November 2017.

DALG SB F50-32-50 original issue dated 16 August 1993.

The use of later approved revisions of the above-mentioned documents is acceptable for compliance with the requirements of this AD.

Remarks:

1. This Proposed AD will be closed for consultation on 19 January 2018.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. For any question concerning the technical content of the requirements in this PAD, please contact: Fokker Services B.V., Technical Services Dept., P.O. Box 1357, 2130 EL, Hoofddorp, The Netherlands, Telephone +31-88-6280-350, Fax +31-88-6280-111, E-mail: technicalservices@fokker.com.
The referenced publication can be downloaded from www.myfokkerfleet.com.

