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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-25086; Directorate Identifier 2006-NM-019-AD; Amendment 39-14847; AD 2006-25-06]

RIN 2120-AA64

Airworthiness Directives; Fokker Model F27 Mark 500 Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Fokker Model F27 Mark 500 airplanes. This AD requires an inspection to determine whether certain main landing gear (MLG) drag stay units (DSUs) are installed. This AD also requires an ultrasonic inspection to determine if certain tubes are installed in the affected DSUs of the MLG, and related investigative/corrective actions if necessary. This AD results from a report that, due to fatigue cracking from an improperly machined radius of the inner tube, a drag stay broke, and, consequently, led to the collapse of the MLG during landing. We are issuing this AD to prevent such fatigue cracking, which could result in reduced structural integrity or collapse of the MLG.

DATES: This AD becomes effective January 16, 2007.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of January 16, 2007.

ADDRESSES: You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC.

Contact Fokker Services B.V., P.O. Box 231, 2150 AE Nieuw-Vennep, the Netherlands, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1137; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the airworthiness directive (AD) docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the street address stated in the ADDRESSES section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to all Fokker Model F27 Mark 500 airplanes. That NPRM was published in the Federal Register on June 21, 2006 (71 FR 35572). That NPRM proposed to require an inspection to determine whether certain main landing gear (MLG) drag stay units (DSUs) are installed. That NPRM also proposed to require an ultrasonic inspection to determine if certain tubes are installed in the affected DSUs of the MLG, and related investigative/corrective actions if necessary.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comment received.

Request To Change Incorporation of Certain Information

The Modification and Replacement Parts Association (MARPA) states that, typically, airworthiness directives are based on service information originating with the type certificate holder or its suppliers. MARPA adds that manufacturer service documents are privately authored instruments generally having copyright protection against duplication and distribution. MARPA notes that when a service document is incorporated by reference into a public document, such as an airworthiness directive, it loses its private, protected status and becomes a public document. MARPA adds that if a service document is used as a mandatory element of compliance, it should not simply be referenced, but should be incorporated into the regulatory document; by definition, public laws must be public, which means they cannot rely upon private writings.

MARPA adds that incorporated by reference service documents should be made available to the public by publication in the Docket Management System (DMS), keyed to the action that incorporates them. MARPA notes that the stated purpose of the incorporation by reference method is brevity, to keep from expanding the Federal Register needlessly by publishing documents already in the hands of the affected individuals; traditionally, "affected individuals" means aircraft owners and operators, who are generally provided service information by the manufacturer. MARPA adds that a new class of affected individuals has emerged, since the majority of aircraft maintenance is now performed by specialty shops instead of aircraft owners and operators. MARPA notes that this new class includes maintenance and repair organizations, component servicing and repair shops, parts purveyors and distributors, and organizations manufacturing or servicing alternatively certified parts under section 21.303 ("Replacement and modification parts") of the Federal Aviation Regulations (14 CFR 21.303). MARPA adds that the concept of brevity is now nearly archaic as documents exist more frequently in electronic format than on paper. Therefore, MARPA asks that the service documents deemed essential to the accomplishment of the NPRM be incorporated by reference into the regulatory instrument, and published in the DMS.

We do not agree that documents should be incorporated by reference during the NPRM phase of rulemaking. The Office of the Federal Register (OFR) requires that documents that are necessary to accomplish the requirements of the AD be incorporated by reference during the final rule phase of rulemaking. This final rule incorporates by reference the document necessary for the accomplishment of the requirements mandated by this AD. Further, we point out that while documents that are incorporated by reference do become public information, they do not lose their copyright protection. For that reason, we advise the public to contact the manufacturer to obtain copies of the referenced service information.

In regard to the commenter's request that service documents be made available to the public by publication in the Federal Register, we agree that incorporation by reference was authorized to reduce the volume of material published in the Federal Register and the Code of Federal Regulations. However, as specified in the Federal Register Document Drafting Handbook, the Director of the OFR decides when an agency may incorporate material by reference. As the commenter is aware, the OFR files documents for public inspection on the workday before the date of publication of the rule at its office in Washington, DC. As stated in the Federal Register Document Drafting Handbook, when documents are filed for public inspection, anyone may inspect or copy file documents during the OFR's hours of business. Further questions regarding publication of documents in the Federal Register or incorporation by reference should be directed to the OFR.

In regard to the commenter's request to post service bulletins on the Department of Transportation's DMS, we are currently in the process of reviewing issues surrounding the posting of service bulletins on the DMS as part of an AD docket. Once we have thoroughly examined all aspects of this issue and have made a final determination, we will consider whether our current practice needs to be revised. No change to the final rule is necessary in response to this comment.

Conclusion

We have carefully reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD as proposed.

Costs of Compliance

The following table provides the estimated costs for U.S. operators to comply with this AD.

Estimated Costs					
Action	Work hours	Average labor rate per hour	Cost per airplane	Number of U.S.-registered airplanes	Fleet cost
Inspection	2	\$80	\$160	7	\$1,120

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):



2006-25-06 Fokker Services B.V.: Amendment 39-14847. Docket No. FAA-2006-25086;
Directorate Identifier 2006-NM-019-AD.

Effective Date

- (a) This AD becomes effective January 16, 2007.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to all Fokker Model F27 Mark 500 airplanes, certificated in any category.

Unsafe Condition

(d) This AD results from a report that, due to fatigue cracking from an improperly machined radius of the inner tube, a drag stay broke, and, consequently, led to the collapse of the main landing gear (MLG) during landing. We are issuing this AD to prevent such fatigue cracking, which could result in reduced structural integrity or collapse of the MLG.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Inspections of the Drag Stay Units

(f) Within 60 days after the effective date of this AD: Inspect the MLG drag stay units (DSUs) to determine whether Dowty Aerospace is the manufacturer and, before further flight, inspect Dowty Aerospace MLG DSUs to determine whether part number (P/N) 200261001, 200261002, 200485001, 200485002, 200684001, or 200684002 is installed. A review of the airplane maintenance records is acceptable in lieu of these inspections if the manufacturer and the part number of the MLG DSU can be conclusively determined from that review. For airplanes equipped with MLG DSUs other than Dowty Aerospace MLG DSUs, and for airplanes equipped with Dowty Aerospace MLG DSUs having part numbers other than P/N 200261001, 200261002, 200485001, 200485002, 200684001, and 200684002, no further action is required by this AD, except as specified in paragraph (k) of this AD.

(g) For airplanes equipped with DSUs having P/N 200261001, 200485001, or 200684001: Within 60 days after the effective date of this AD, perform an ultrasonic inspection to determine if a tube having P/N 200485300 with a straight bore, or a tube having P/N 200259300 with a change in

section (stepped bore), is installed on the DSUs of the MLG, in accordance with the Accomplishment Instructions of Fokker Service Bulletin F27/32-171, dated December 16, 2004.

Note 1: Fokker Service Bulletin F27/32-171, dated December 16, 2004, refers to Dowty Aerospace Landing Gear Service Bulletin 32-82W, Revision 2, including Appendix A, dated July 29, 1994, and including Appendix B, Revision 1, dated November 10, 1993; and Dowty Aerospace Landing Gear Service Bulletin 32-169B, Revision 2, including Appendix A, dated July 29, 1994, and including Appendix B, Revision 1, dated November 10, 1993; as applicable, as appropriate sources of service information for inspecting MLG DSUs.

(h) If any tube having P/N 200485300 with a straight bore is found installed during the inspection required by paragraph (g) of this AD: Before further flight, re-identify the DSU with P/N 200261004, 200485004, or 200684004, in accordance with the Accomplishment Instructions of Dowty Aerospace Landing Gear Service Bulletin 32-82W, Revision 2, including Appendix A, dated July 29, 1994, and including Appendix B, Revision 1, dated November 10, 1993; or Dowty Aerospace Landing Gear Service Bulletin 32-169B, Revision 2, including Appendix A, dated July 29, 1994, and including Appendix B, Revision 1, dated November 10, 1993; as applicable. After re-identifying the DSU, no further action is required by this AD for that DSU; however airplanes are still subject to the requirements specified in paragraph (k) of this AD.

(i) If any tube having P/N 200259300 with a change in section (stepped bore) is found installed during the inspection required by paragraph (g) of this AD: Before further flight, re-identify the DSU in accordance with paragraphs 2.A.(4)(a) and 2.A.(4)(b) of the Accomplishment Instructions of Dowty Aerospace Landing Gear Service Bulletin 32-82W, Revision 2, including Appendix A, dated July 29, 1994, and including Appendix B, Revision 1, dated November 10, 1993; or Dowty Aerospace Landing Gear Service Bulletin 32-169B, Revision 2, including Appendix A, dated July 29, 1994, and including Appendix B, Revision 1, dated November 10, 1993; as applicable. Following accomplishment of the re-identification, before further flight, do the inspection specified in paragraph (j) of this AD.

Ultrasonic Inspection for Cracking

(j) For airplanes equipped with re-identified DSUs having P/N 200261002, 200485002, 200684002, 200261003, 200485003, or 200684003: Within 60 days after the effective date of this AD, perform an ultrasonic inspection to detect cracking in the re-identified DSUs, in accordance with the Accomplishment Instructions of Dowty Aerospace Landing Gear Service Bulletin 32-82W, Revision 2, including Appendix A, dated July 29, 1994, and including Appendix B, Revision 1, dated November 10, 1993; or Dowty Aerospace Landing Gear Service Bulletin 32-169B, Revision 2, including Appendix A, dated July 29, 1994, and including Appendix B, Revision 1, dated November 10, 1993; as applicable.

(1) For airplanes equipped with any DSU re-identified as P/N 200684003, 200261003, or 200485003: If no crack is detected, no further action is required by this AD for that DSU; however airplanes are still subject to the requirements specified in paragraph (k) of this AD.

(2) For airplanes equipped with any DSU re-identified as P/N 200684002, 200261002, or 200485002: If no crack is detected, do the actions specified in paragraphs (j)(2)(i) and (j)(2)(ii) of this AD.

(i) Repeat the ultrasonic inspection required by paragraph (j) of this AD thereafter at intervals not to exceed 1,500 flight cycles until the actions specified in paragraph (j)(2)(ii) of this AD are done.

(ii) At the next MLG overhaul but no later than 12,000 flight cycles after the effective date of this AD, rework and re-identify the DSU as P/N 200261003, 200485003, or 200684003, as applicable, in accordance with the applicable service bulletin.

(3) If any crack is detected and the crack signal indication of any DSU tube is greater than or equal to 80 percent, before further flight, replace the DSU with a re-identified DSU having P/N 200261004, 200485004, 200684004, 200261003, 200485003, or 200684003, in accordance with the applicable service bulletin.

(4) If any crack is detected and the crack signal indication of any DSU tube is greater than zero percent but less than 80 percent, do the actions specified in paragraphs (j)(4)(i) and (j)(4)(ii) of this AD.

(i) Repeat the ultrasonic inspection required by paragraph (j) of this AD thereafter at intervals not to exceed 1,500 flight cycles until the actions specified in paragraph (j)(4)(ii) of this AD are done.

(ii) At the next MLG overhaul but no later than 12,000 flight cycles after the effective date of this AD, replace the DSU with a DSU having P/N 200261004, 200485004, 200684004, 200261003, 200485003, or 200684003, in accordance with the applicable service bulletin.

Parts Installation

(k) As of the effective date of this AD, no person may install a MLG DSU, P/N 200261001, 200261002, 200485001, 200485002, 200684001, or 200684002, on any airplane, except as specified in paragraph (i) of this AD.

Alternative Methods of Compliance (AMOCs)

(1)(1) The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) Before using any AMOC approved in accordance with § 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

Related Information

(m) Dutch airworthiness directive NL-2005-003, dated April 29, 2005, also addresses the subject of this AD.

Material Incorporated by Reference

(n) You must use the applicable service bulletin listed in Table 1 of this AD to perform the actions that are required by this AD, unless the AD specifies otherwise.

Table 1 – Material Incorporated by Reference

Service Bulletin	Revision Level	Date
Dowty Aerospace Landing Gear Service Bulletin 32-169B, Revision 2, including Appendix A, dated July 29, 1994, and including Appendix B, Revision 1, dated November 10, 1993	2	July 29, 1994
Dowty Aerospace Landing Gear Service Bulletin 32-82W, Revision 2, including Appendix A, dated July 29, 1994, and including Appendix B, Revision 1, dated November 10, 1993	2	July 29, 1994
Fokker Service Bulletin F27/32-171	Original	December 16, 2004

Dowty Aerospace Landing Gear Service Bulletin 32-169B, Revision 2, including Appendix A, dated July 29, 1994, and including Appendix B, Revision 1, dated November 10, 1993, contains the following effective pages:

Page No.	Revision level shown on page	Date shown on page
1	2	July 29, 1994.
2, 3	Original	September 10, 1993.
4	1	November 10, 1993.
Appendix A		
1, 5, 7	2	July 29, 1994.
2, 6	Original	September 10, 1993.
3, 4	1	November 10, 1993.
Appendix B		
1-5	1	November 10, 1993.

Dowty Aerospace Landing Gear Service Bulletin 32-82W, Revision 2, including Appendix A, dated July 29, 1994, and including Appendix B, Revision 1, dated November 10, 1993, contains the following effective pages:

Page No.	Revision level shown on page	Date shown on page
1	2	July 29, 1994
2, 3	Original	September 10, 1993.
4	1	November 10, 1993.
Appendix A		
1, 5, 7	2	July 29, 1994.
2, 6	Original	September 10, 1993.
3, 4	1	November 10, 1993.
Appendix B		
1-5	1	November 10, 1993.

The Director of the Federal Register approved the incorporation by reference of these documents in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Fokker Services B.V., P.O. Box 231, 2150 AE Nieuw-Vennep, the Netherlands, for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on November 24, 2006.
Ali Bahrami,
Manager, Transport Airplane Directorate, Aircraft Certification Service.
[FR Doc. E6-20861 Filed 12-8-06; 8:45 am]