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[Page 63042-63045]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0479; Directorate Identifier 2009-NM-220-AD; Amendment 39-16472; AD 2010-21-12]

RIN 2120-AA64

Airworthiness Directives; Fokker Services B.V. Model F.28 Mark 0070 and 0100 Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

* * * * *

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 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 [quick-disconnect] 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.

* * * * *

The unsafe condition is loss of braking capability and possible brake fires, which could reduce the ability of the flightcrew to safely land the airplane. We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective November 18, 2010.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of November 18, 2010.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC.

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

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on May 19, 2010 (75 FR 27961). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

During 1995, several reports were received of brake QD [quick-disconnect] 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.

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.

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 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.

In order to reduce the probability of a fluid fire as described in CS (certification specification) 25.863, additional action is deemed necessary.

For the reasons described above, this [European Aviation Safety Agency] AD requires repetitive [detailed] inspections [for wear] 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.

The unsafe condition is loss of braking capability and possible brake fires, which could reduce the ability of the flightcrew to safely land the airplane. You may obtain further information by examining the MCAI in the AD docket.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

We reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

Differences Between This AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have required different actions in this AD from those in the MCAI in order to follow our FAA policies. Any such differences are highlighted in a NOTE within the AD.

Costs of Compliance

We estimate that this AD will affect 16 products of U.S. registry. We also estimate that it will take about 4 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$4,814 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$82,464, or \$5,154 per product.

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 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 this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the 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.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal

holidays. The AD docket contains the NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

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 FAA amends § 39.13 by adding the following new AD:



2010-21-12 Fokker Services B.V.: Amendment 39-16472. Docket No. FAA-2010-0479; Directorate Identifier 2009-NM-220-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective November 18, 2010.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to Fokker Services B.V. Model F.28 Mark 0070 and 0100 airplanes, certificated in any category, all serial numbers, with any brake quick-disconnect (QD) coupling having part number (P/N) AE70690E, AE70691E, AE99111E, or AE99119E installed.

Subject

- (d) Air Transport Association (ATA) of America Code 32: Landing Gear.

Reason

- (e) The mandatory continuing airworthiness information (MCAI) states:

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.

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.

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 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.

In order to reduce the probability of a fluid fire as described in CS (certification specification) 25.863, additional action is deemed necessary.

For the reasons described above, this [European Aviation Safety Agency] AD requires repetitive [detailed] inspections [for wear] 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.

The unsafe condition is loss of braking capability and possible brake fires, which could reduce the ability of the flightcrew to safely land the airplane.

Compliance

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

Actions

(g) Do the following actions.

(1) Within 6 months after the effective date of this AD, do a detailed inspection for wear of the brake QD couplings by measuring dimension "A," in accordance with Part 1 of the Accomplishment Instructions of Fokker Service Bulletin SBF100-32-156, Revision 1, dated June 29, 2009. Repeat the inspection thereafter at the applicable intervals specified in Table 1 of this AD, except as required by paragraph (g)(2) of this AD.

Table 1–Repetitive Inspection Intervals

If Dimension "A" is –	Repeat the inspection at intervals not to exceed –
Greater than or equal to 0.76 mm	6 months
Less than 0.76 mm but greater than or equal to 0.72 mm	3 months
Less than 0.72 mm but greater than or equal to 0.68 mm	30 days
Less than 0.68 mm but greater than or equal to 0.61 mm	7 days
Less than 0.61 mm but greater than 0.53 mm	24 hours

(2) If, during any inspection required by paragraph (g)(1) of this AD, dimension "A" on any brake QD coupling is less than or equal to 0.53 mm, before further flight, replace the affected brake QD coupling with an improved unit having P/N AE73059E or P/N AE73091E, as applicable, in accordance with Part 2 of the Accomplishment Instructions of Fokker Service Bulletin SBF100-32-156, Revision 1, dated June 29, 2009.

(3) Within 24 months after the effective date of this AD, replace all remaining brake QD couplings having P/N AE70690E, P/N AE70691E, P/N AE99111E, and P/N AE99119E with improved units, in accordance with Part 2 of the Accomplishment Instructions of Fokker Service Bulletin SBF100-32-156, Revision 1, dated June 29, 2009.

(4) Installation of brake QD couplings with an improved unit having P/N AE73059E or P/N AE73091E at all locations terminates the repetitive inspections required by paragraph (g)(1) of this AD.

(5) Replacing the brake QD couplings is also acceptable for compliance with the corresponding requirements of paragraphs (g)(1), (g)(2), and (g)(3) of this AD if done before the effective date of this AD, in accordance with any of the service bulletins specified in Table 2 of this AD:

Table 2–Fokker Credit Service Bulletins

Fokker Service Bulletins	Revision	Date
Fokker Performa Service Bulletin SBF100-32-127, including Appendix XIV, dated February 1, 2006	Original	July 20, 2001
Fokker Performa Service Bulletin SBF100-32-127, including Appendix XIV, dated February 1, 2006	1	March 6, 2009
Fokker Service Bulletin SBF100-32-156	Original	March 6, 2009

FAA AD Differences

Note 1: This AD differs from the MCAI and/or service information as follows: No differences.

Other FAA AD Provisions

(h) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1137; fax (425) 227-1149. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

Related Information

(i) Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2009-0176, dated August 6, 2009; and Fokker Service Bulletin SBF100-32-156, Revision 1, dated June 29, 2009; for related information.

Material Incorporated by Reference

(j) You must use Fokker Service Bulletin SBF100-32-156, Revision 1, dated June 29, 2009, to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Fokker Services B.V., Technical Services Dept., P.O. Box 231, 2150 AE Nieuw-Vennep, the Netherlands; telephone +31 (0)252-627-350; fax +31 (0)252-627-211; e-mail technicalservices.fokkerservices@stork.com; Internet <http://www.myfokkerfleetcom>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at 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 September 29, 2010.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2010-25449 Filed 10-13-10; 8:45 am]

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