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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-8138; Directorate Identifier 2014-NM-112-AD; Amendment 39-18552; AD 2016-12-03]

RIN 2120-AA64

Airworthiness Directives; Fokker Services B.V. Airplanes

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

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 2011-17-10, for all Fokker Services B.V. Model F.28 Mark 1000, 2000, 3000, and 4000 airplanes. AD 2011-17-10 required inspecting for a by-pass wire between the housing of each in-tank fuel quantity indication (FQI) cable plug and the cable shield, and corrective actions if necessary. AD 2011-17-10 also required revising the airplane maintenance program. This new AD removes certain airplanes from the applicability. This new AD applies only to Model F.28 Mark 1000 airplanes and also requires revising the airplane maintenance or inspection program by incorporating the instructions in revised service information. This AD was prompted by the issuance of revised service information to update the critical design configuration control limitations (CDCCLs) that address potential ignition sources inside fuel tanks. We are issuing this AD to prevent potential ignition sources inside the fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

DATES: This AD becomes effective July 15, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of July 15, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of September 16, 2011 (76 FR 50111, August 12, 2011).

ADDRESSES: For service information identified in this final rule, contact Fokker Services B.V., Technical Services Dept., P.O. Box 1357, 2130 EL Hoofddorp, the Netherlands; telephone +31 (0)88-6280-350; fax +31 (0)88-6280-111; email technicalservices@fokker.com; Internet <http://www.myfokkerfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket Number FAA-2015-8138.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket Number FAA-2015-8138; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, 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.

FOR FURTHER INFORMATION CONTACT: Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 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 supersede AD 2011-17-10, Amendment 39-16774 (76 FR 50111, August 12, 2011) ("AD 2011-17-10"). AD 2011-17-10 applied to all Model F.28 Mark 1000, 2000, 3000, and 4000 airplanes. The NPRM published in the Federal Register on January 4, 2016 (81 FR 34) ("the NPRM"). The NPRM was prompted by the issuance of revised service information to update the CDCCLs that address potential ignition sources inside fuel tanks. The NPRM proposed to retain the requirements of AD 2011-17-10, and to require revising the airplane maintenance or inspection program by incorporating the instructions in the revised service information. The NPRM also proposed to remove certain airplanes from the applicability. We are issuing this AD to prevent potential ignition sources inside the fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2014-0111, dated May 8, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition on certain Model F.28 Mark 1000 airplanes. The MCAI states:

[T]he FAA published Special Federal Aviation Regulation (SFAR) 88 [Amendment 21-78 (66 FR 23086, May 7, 2001). Subsequently, SFAR 88 was amended by: Amendment 21-82 (67 FR 57490, September 10, 2002; corrected at 67 FR 70809, November 26, 2002) and Amendment 21-83 (67 FR 72830, December 9, 2002; corrected at 68 FR 37735, June 25, 2003, to change "21-82" to "21-83")], and the Joint Aviation Authorities (JAA) published Interim Policy INT/POL/25/12.

The review conducted by Fokker Services on the F28 design, in response to these regulations, revealed that on certain aeroplanes, an interrupted shield contact may exist or develop between the housing of an in-tank Fuel Quantity Indication (FQI) cable plug and the cable shield of the shielded FQI system cables in the main and collector fuel tanks, which can, under certain conditions, form a spark gap.

This condition, if not detected and corrected, may create an ignition source in the fuel tank vapour space, possibly resulting in a wing fuel tank explosion and consequent loss of the aeroplane.

To address and correct this unsafe condition, Fokker Services published Service Bulletin (SB) SBF28-28-053 which provides instructions, for early production

aeroplanes, for a one-time inspection to check for the presence of a by-pass wire between the housing of each in-tank FQI cable plug and the cable shield and, depending on findings, for the installation of a by-pass wire. In addition, SBF28-28-053 provides a Critical Design Configuration Control Limitation (CDCCL) item to make certain that the by-pass wire remains installed on these aeroplanes.

On later production aeroplanes, an improved plug Part Number (P/N) 20P227-2 was introduced with a better shield connection to the housing of the plug. Therefore, SBF28-28-053 (original issue and Revision 1) also provided a CDCCL item to ensure that this type of plug remains installed on those aeroplanes.

EASA issued AD 2010-0217 [which corresponds to FAA AD 2011-17-10, Amendment 39-16774 (76 FR 50111, August 12, 2011)] to require accomplishment of the instructions related to the by-pass wire and implementation of the CDCCL items as specified in Fokker Services SBF28-28-053 Revision 1, as applicable to aeroplane s/n.

Since EASA AD 2010-0217 was issued, it was identified that P/N 20P227-1 and 20P228-1 plugs are also approved and can therefore be installed on the later production aeroplanes. Prompted by this finding, Fokker Services issued SBF28-28-055 to address the implementation of a CDCCL item to make certain that only approved plug types remain installed on the later production aeroplanes, while SBF28-28-053 Revision 2 was issued for early production aeroplanes to address the by-pass wire related actions only.

Consequently, EASA issued AD 2011-0184, retaining the requirements of EASA AD 2010-0217, which was superseded, to require implementation of the related CDCCL items as specified in Fokker Services SBF28-28-053 Revision 2, or SBF28-28-055, as applicable to aeroplane s/n.

More recently, Fokker Services published Revision 3 of SBF28-28-053, to eliminate the use of a heat gun in or near to the fuel tank, and prompted by a change to the definition of the related CDCCL item. Fokker Services also cancelled SBF28-28-055, due to the introduction of a revised definition of the CDCCL item that has been published in Fokker Services SBF28-28-050, Revision 2.

For the reason described above, this [EASA] AD retains the requirements related to SBF28-28-053 of EASA AD 2011-0184, which is superseded, but requires those actions to be accomplished in accordance with the instructions of Fokker Services SBF28-28-053, Revision 3 (R3).

All the actions related to SBF28-28-055, as previously required through paragraphs (5) and (6) of EASA AD 2011-0184, are now addressed by EASA AD 2014-0110 [http://ad.easa.europa.eu/ad/2014-0110_1.pdf].

* * * * *

The CDCCL requirement in AD 2011-17-10 for Model F.28 Mark 2000, 3000, and 4000 airplanes is now addressed in other related rulemaking. Therefore, this AD does not include Model F.28 Mark 2000, 3000, and 4000 airplanes in the applicability.

This AD also removes airplanes having serial numbers 11993 and 11994 from the applicability because those airplanes were scrapped and removed from the type certificate data sheet.

The unsafe condition is the potential of ignition sources inside fuel tanks. Such ignition sources, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2015-8138.

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 this AD as proposed, except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information Under 1 CFR Part 51

Fokker Services B.V. has issued Fokker Service Bulletin SBF28-28-053, Revision 3, dated January 9, 2014. The service information describes procedures for inspecting for a by-pass wire between the housing of each in-tank FQI cable plug and the cable shield, and installing a by-pass wire if necessary. The service information also describes CDCCL Item 1.7 for fuel quantity indicating system (FQIS) wiring in wing tanks. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

We estimate that this AD affects 5 airplanes of U.S. registry. This AD adds a requirement to revise the airplane maintenance or inspection program by incorporating the instructions in revised service information. The current costs associated with this AD are repeated as follows for the convenience of affected operators:

The actions required by AD 2011-17-10 will take about 6 work-hours per product, at an average labor rate of \$85 per work-hour. Required parts cost about \$0 per product. Based on these figures, the estimated cost of the actions that were required by AD 2011-17-10 is \$510 per product.

In addition, we estimate that any necessary follow-on actions required by AD 2011-17-10 take about 7 work-hours and require parts costing \$308, for a cost of \$903 per product. We have no way of determining the number of products that may need these actions.

We also estimate that it takes about 1 work-hour per product to revise the maintenance or inspection program. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$425, or \$85 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 that 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);
3. Will not affect intrastate aviation in Alaska; and
4. 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.

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 removing Airworthiness Directive (AD) 2011-17-10, Amendment 39-16774 (76 FR 50111, August 12, 2011), and adding the following new AD:



2016-12-03 Fokker Services B.V.: Amendment 39-18552. Docket No. FAA-2015-8138; Directorate Identifier 2014-NM-112-AD.

(a) Effective Date

This AD becomes effective July 15, 2016.

(b) Affected ADs

This AD replaces AD 2011-17-10, Amendment 39-16774 (76 FR 50111, August 12, 2011) ("AD 2011-17-10").

(c) Applicability

This AD applies to Fokker Services B.V. Model F.28 Mark 1000 airplanes; certificated in any category; serial numbers (S/Ns) 11003 through 11041 inclusive, and S/Ns 11991 and 11992.

(d) Subject

Air Transport Association (ATA) of America Code 28, Fuel.

(e) Reason

This AD was prompted by the issuance of revised service information to update the critical design configuration control limitations (CDCCLs) that address potential ignition sources inside fuel tanks. We are issuing this AD to prevent potential ignition sources inside the fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Retained Inspection and Installation, With Revised Service Information

This paragraph restates the requirements of paragraph (g) of AD 2011-17-10, with revised service information. At a scheduled opening of the fuel tanks, but not later than 84 months after September 16, 2011 (the effective date of AD 2011-17-10), do a general visual inspection for the presence of a by-pass wire between the housing of each in-tank fuel quantity indication (FQI) cable plug and the cable shield, in accordance with Part 1 of the Accomplishment Instructions of Fokker Service Bulletin SBF28-28-053, Revision 1, dated September 20, 2010; or Fokker Service Bulletin SBF28-28-053, Revision 3, dated January 9, 2014. As of the effective date of this AD, only Fokker Service Bulletin SBF28-28-053, Revision 3, dated January 9, 2014, may be used.

(h) Retained Corrective Actions, With Revised Service Information

This paragraph restates the requirements of paragraph (h) of AD 2011-17-10, with revised service information. If during the general visual inspection required by paragraph (g) of this AD, it is found that a by-pass wire is not installed: Before the next flight, install the by-pass wire between the housing of the in-tank FQI cable plug and the cable shield, in accordance with Part 2 of the Accomplishment Instructions of Fokker Service Bulletin SBF28-28-053, Revision 1, dated September 20, 2010; or Fokker Service Bulletin SBF28-28-053, Revision 3, dated January 9, 2014. As of the effective date of this AD, only Fokker Service Bulletin SBF28-28-053, Revision 3, dated January 9, 2014, may be used.

(i) Retained Maintenance Program Revision To Add Fuel Airworthiness Limitation, With a New Exception

This paragraph restates the requirements of paragraph (i) of AD 2011-17-10, with a new exception. Except as required by paragraph (k) of this AD, concurrently with the actions required by paragraph (g) of this AD, revise the airplane maintenance program by incorporating CDCCL-1 specified in paragraph 1.L.(1)(c) of Fokker Service Bulletin SBF28-28-053, Revision 1, dated September 20, 2010.

(j) Retained Requirement for No Alternative Actions, Intervals, and/or CDCCLs, With a New Exception

This paragraph restates the requirements of paragraph (k) of AD 2011-17-10 with a new exception. Except as required by paragraph (k) of this AD: After accomplishing the revision required by paragraph (i) of this AD, no alternative actions (e.g., inspection, interval) and/or CDCCLs may be used unless the actions, intervals, and/or CDCCLs are approved as an alternative methods of compliance (AMOC) in accordance with the procedures specified in paragraph (n)(1) of this AD.

(k) New Maintenance or Inspection Program Revision To Add Fuel Airworthiness Limitation

Within 30 days after the effective date of this AD: Revise the airplane maintenance or inspection program, as applicable, by incorporating CDCCL Item 1.7 as specified in paragraph 1.L.(1)(c) of Fokker Service Bulletin SBF28-28-053, Revision 3, dated January 9, 2014. Accomplishing the revision required by this paragraph terminates the revision required by paragraph (i) of this AD.

(l) No Alternative CDCCLs

After the maintenance or inspection program has been revised as required by paragraph (k) of this AD, no alternative CDCCLs may be used unless the CDCCLs are approved as an AMOC in accordance with the procedures specified in paragraph (n)(1) of this AD.

(m) Credit for Previous Actions

This paragraph provides credit for the applicable actions required by paragraph (k) of this AD, if those actions were performed before the effective date of this AD using Fokker Service Bulletin SBF28-28-053, Revision 2, dated June 22, 2011. This document is not incorporated by reference in this AD.

(n) Other FAA AD Provisions

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. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1137; fax 425-227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(2) Contacting the Manufacturer: As of the effective date of this AD, for any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA); or Fokker B.V. Service's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(o) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2014-0111, dated May 8, 2014, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-8138.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (p)(5) and (p)(6) of this AD.

(p) Material Incorporated by Reference

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

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(3) The following service information was approved for IBR on July 15, 2016.

(i) Fokker Service Bulletin SBF28-28-053, Revision 3, dated January 9, 2014.

(ii) Reserved.

(4) The following service information was approved for IBR on September 16, 2011 (76 FR 50111, August 12, 2011).

(i) Fokker Service Bulletin SBF28-28-053, Revision 1, dated September 20, 2010.

(ii) Reserved.

(5) For service information identified in this AD, contact Fokker Services B.V., Technical Services Dept., P.O. Box 1357, 2130 EL Hoofddorp, the Netherlands; telephone +31 (0)88-6280-350; fax +31 (0)88-6280-111; email technicalservices@fokker.com; Internet <http://www.myfokkerfleet.com>.

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

(7) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on May 31, 2016.
Michael Kaszycki,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.