



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2015-5810; Directorate Identifier 2014-NM-116-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Fokker Services B.V. Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for certain Fokker Services B.V. Model F.28 Mark 0070 and 0100 airplanes. This proposed AD was prompted by a design review that revealed that a wiring failure, external to the center wing fuel tank, could cause a hot short circuit to a maximum level sensor wire, and result in excessive heating of the maximum level sensor element. This proposed AD would require modifying the wiring of the maximum level sensors in the center wing fuel tank, performing after-installation tests, and corrective action if necessary. This proposed AD would also require revising the airplane maintenance or inspection program to incorporate fuel airworthiness limitation items and critical design configuration control limitations. We are proposing this AD to prevent the potential of ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed 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](mailto: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.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-5810; 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 proposed 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. Comments will be available in the AD docket shortly after receipt.

**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:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2015-5810; Directorate Identifier 2014-NM-116-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

**Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive

2014-0138, dated May 30, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Fokker Services B.V. Model F.28 Mark 0070 and 0100 airplanes. The MCAI states:

\* \* \* [T]he FAA published Special Federal Aviation Regulation (SFAR) 88, and the Joint Aviation Authorities (JAA) published Interim Policy INT/POL/25/12.

The review conducted by Fokker Services on the Fokker 70/100 design, in response to these regulations, revealed that a wiring failure, external to the centre wing fuel tank, causing a hot short circuit to a maximum (max) level sensor wire may result in excessive heating of the max level sensor element.

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

EASA issued AD 2012-0240 [[http://ad.easa.europa.eu/blob/easa\\_ad\\_2012\\_0240.pdf/AD\\_2012-0240](http://ad.easa.europa.eu/blob/easa_ad_2012_0240.pdf/AD_2012-0240)], to address this unsafe condition, which required installation of three fuses in the wiring of the max level sensor(s) in the centre wing fuel tank per Fokker Services Service Bulletin (SB) SBF100-28-073. After that AD was issued, it was found that this technical solution caused fuel spills during refueling and, consequently, EASA cancelled AD 2012-0240.

More recently, Fokker Services issued SBF100-28-078, which cancelled SBF100-28-073, to correct the unsafe condition without the risk of fuel spills.

For the reasons described above, this [EASA] AD requires removal of one fuse from post-SBF100-28-073 aeroplanes, and installation of only two fuses on pre-SBF100-28-073 aeroplanes and, subsequently, the implementation of the associated Critical Design Configuration Control Limitation (CDCCL) items.

More information this subject can be found in Fokker Services All Operators Message AOF100.186#03.

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-2015-5810.

The FAA has examined the underlying safety issues involved in fuel tank explosions on several large transport airplanes, including the adequacy of existing regulations, the service history of airplanes subject to those regulations, and existing maintenance practices for fuel tank systems. As a result of those findings, we issued a regulation titled “Transport Airplane Fuel Tank System Design Review, Flammability Reduction and Maintenance and Inspection Requirements” (66 FR 23086, May 7, 2001). In addition to new airworthiness standards for transport airplanes and new maintenance requirements, this rule included Special Federal Aviation Regulation No. 88 (“SFAR 88,” Amendment 21-78, and subsequent Amendments 21-82 and 21-83).

Among other actions, SFAR 88 requires certain type design (i.e., type certificate (TC) and supplemental type certificate (STC)) holders to substantiate that their fuel tank systems can prevent ignition sources in the fuel tanks. This requirement applies to type design holders for large turbine-powered transport airplanes and for subsequent modifications to those airplanes. It requires them to perform design reviews and to develop design changes and maintenance procedures if their designs do not meet the new fuel tank safety standards. As explained in the preamble to the rule, we intended to adopt airworthiness directives to mandate any changes found necessary to address unsafe conditions identified as a result of these reviews.

In evaluating these design reviews, we have established four criteria intended to define the unsafe conditions associated with fuel tank systems that require corrective actions. The percentage of operating time during which fuel tanks are exposed to flammable conditions is one of these criteria. The other three criteria address the failure types under evaluation: single failures, combination of failures, and unacceptable (failure) experience. For all three failure criteria, the evaluations included consideration of previous actions taken that may mitigate the need for further action.

The Joint Aviation Authorities (JAA) has issued a regulation that is similar to SFAR 88. (The JAA is an associated body of the European Civil Aviation Conference (ECAC) representing the civil aviation regulatory authorities of a number of European States who have agreed to co-operate in developing and implementing common safety regulatory standards and procedures.) Under this regulation, the JAA stated that all members of the ECAC that hold type certificates for transport category airplanes are required to conduct a design review against explosion risks.

We have determined that the actions identified in this AD are necessary to reduce the potential of ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

#### **Related Service Information under CFR part 51**

Fokker has issued Service Bulletin SBF100-28-078, dated January 23, 2014. The service information describes procedures for modifying the wiring of the maximum level sensors in the center wing fuel tank, after-installation tests, and corrective action if necessary. 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 of this NPRM.

### **FAA's Determination and Requirements of this Proposed AD**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

### **Costs of Compliance**

We estimate that this proposed AD affects 15 airplanes of U.S. registry.

We also estimate that it would take up to 9 work-hours per product to modify the wiring of the maximum level sensors in the center wing fuel tank, as specified in this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$1,700 per product. Based on these figures, we estimate the cost of this proposed modification on U.S. operators to be up to \$36,975, or up to \$2,465 per product.

We also estimate that it would take about 1 work-hour per product to revise the maintenance or inspection program as specified in this proposed AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this proposed revision on U.S. operators to be \$1,275, 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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 proposed regulation:

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.

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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 airworthiness directive (AD):

**Fokker Services B.V.:** Docket No. FAA-2015-5810; Directorate Identifier 2014-NM-116-AD.

#### **(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to Fokker Services B.V. Model F.28 Mark 0070 and 0100 airplanes, certificated in any category, equipped with a center wing tank.

#### **(d) Subject**

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

**(e) Reason**

This AD was prompted by a design review which revealed that a wiring failure, external to the center wing fuel tank, could cause a hot short circuit to a maximum level sensor wire, and result in excessive heating of the maximum level sensor element. We are issuing this AD to prevent the potential of ignition sources inside 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) Wiring Modification**

Within 24 months after the effective date of this AD: Modify the wiring of the maximum level sensors of the center wing fuel tank, as specified in paragraph (g)(1) or (g)(2) of this AD, as applicable. Before further flight after accomplishing the modification, do all applicable tests and corrective actions, in accordance with Part 5 of the Accomplishment Instructions of Fokker Service Bulletin SBF100-28-078, dated January 23, 2014.

(1) For post-SBF100-28-073 configuration airplanes: Do the modification in accordance with Part 1 or Part 3, as applicable, of the Accomplishment Instructions of Fokker Service Bulletin SBF100-28-078, dated January 23, 2014.

(2) For pre-SBF100-28-073 configuration airplanes: Do the modification in accordance with Part 2 or Part 4, as applicable, of the Accomplishment Instructions of Fokker Service Bulletin SBF100-28-078, dated January 23, 2014.

**(h) Revise Maintenance or Inspection Program**

Within 30 days after installing the modification specified in paragraph (g)(1) or (g)(2) of this AD, as applicable: Revise the airplane maintenance or inspection program, as applicable, to incorporate the fuel airworthiness limitation items and critical design configuration control limitations (CDCCLs) specified in paragraph 2.L.(1)(c) of Fokker Service Bulletin SBF100-28-078, dated January 23, 2014.

**(i) No Alternative Actions, Intervals, and/or CDCCLs**

After accomplishing the revision required by paragraph (h) of this AD, no alternative actions (e.g., inspections), intervals, or CDCCLs may be used unless the actions, intervals, or CDCCLs are approved as an alternative method of compliance in accordance with the procedures specified in paragraph (j)(1) of this AD.

**(j) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, International Branch, ANM-116, 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.

**(k) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2014-0138, dated May 30, 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 it in Docket No. FAA-2015-5810.

(2) 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](mailto:technicalservices@fokker.com); Internet <http://www.myfokkerfleet.com>. 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.

Issued in Renton, Washington, on November 17, 2015.

Jeffrey E. Duven,  
Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

[FR Doc. 2015-30007 Filed: 11/25/2015 8:45 am; Publication Date: 11/27/2015]