

Airworthiness Directive

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [64 FR 51205 No. 183 09/22/99]

Docket No. 98-NM-329-AD; Amendment 39-11330; AD **99-20-02**

RIN 2120-AA64

Airworthiness Directives; Fokker Model F.28 Mark 0070 and 0100 Series Airplanes

PDF Copy (If Available):

▼ Preamble Information

AGENCY: Federal Aviation Administration, DOT

ACTION: Final rule

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to all Fokker Model F.28 Mark 0070 and 0100 series airplanes, that currently requires Airplane Flight Manual (AFM) and maintenance program revisions, modifications, and repetitive checks associated with ensuring the integrity of the thrust reverser system. This amendment continues to require the modifications and repetitive checks, and adds an AFM revision, repetitive operational tests, and other modifications related to the thrust reverser system. The new modifications terminate the repetitive operational checks and tests. This amendment is prompted by results of a review, which indicated that a potential latent failure of the secondary lock actuator switch 1 of the thrust reverser system in the open position may occur, in addition to the potential failure of the secondary lock relay 1 in the energized position. The actions specified by this AD are intended to ensure protection against inadvertent deployment of the thrust reversers during flight, which could result in reduced controllability of the airplane.

DATES: Effective October 27, 1999.

The incorporation by reference of Fokker Service Bulletin SBF100-78-014, Revision 2, dated 5/1/99, including Attachment 1 (undated); Fokker Component Service Bulletin P41440-78-04, dated 8/15/98; and Fokker Component Service Bulletin P41440-78-05, dated 8/15/98; as listed in the regulations; is approved by the Director of the Federal Register as of 10/27/99.

The incorporation by reference of Fokker Service Bulletin SBF100-78-012, dated 11/22/96; Fokker Service Bulletin SBF100-24-034, Revision 1, dated 9/12/96; and Fokker Service Bulletin SBF100-78-013, dated 11/22/96; was approved previously by the Director of the Federal Register as of 1/21/97 (62 FR 604, 1/6/97).

ADDRESSES: The service information referenced in this AD may be obtained from Fokker Services B.V., P.O. Box 231, 2150 AE Nieuw-Vennep, The Netherlands. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Norman B. Martenson, Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2110; fax (425) 227-1149.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 96-26-03, amendment 39-9866 (62 FR 604, January 6, 1997), which is applicable to all Fokker Model F.28 Mark 0070 and 0100 series airplanes, was published in the Federal Register on May 20, 1999 (64 FR 27480). The action proposed to continue to require Airplane Flight Manual (AFM) and maintenance program revisions, modifications, and repetitive checks associated with ensuring the integrity of the thrust reverser system, and to add an AFM revision, repetitive operational tests, and other modifications related to the thrust reverser system. The new modifications would terminate the repetitive operational checks and tests.

Comments Received

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Request to Withdraw Proposed AD

One commenter requests that this proposed AD and another related proposed AD (reference Rules Docket No. 98-NM-328-AD) be withdrawn, reviewed, coordinated, and reissued as a single proposal, to allow each of the requirements to be clearly stated and coordinated. The commenter states that this proposed AD adds a new repair requirement and also duplicates changes indirectly mandated by the previously issued and still active notice of proposed rulemaking (NPRM). The wiring modification described in Fokker Service Bulletin SBF100-78-014, as required by paragraph (f)(1) of this proposed AD, is necessary prior to or concurrent with accomplishment of SBF100-31-051, which is required by the other proposed AD. Additionally, paragraph (f)(2) of this proposed AD requires accomplishment of Fokker Component Service Bulletins (CSB) P41440-78-04 and CSB P41440-78-05, and SBF100-78-014 specifies that such accomplishment is also necessary. The commenter states that the other NPRM (by requiring accomplishment of SBF100-31-051) therefore includes, by a roundabout means, everything contained in this proposed AD.

The FAA does not concur with the request to withdraw the proposed AD. The FAA does not consider that withdrawing both proposals and combining the requirement into a single rulemaking action is necessary in order to provide a clear statement of these requirements. Additionally, the FAA does not consider it appropriate to delay issuance of this final rule by such action, which would necessitate (under the provisions of the Administrative Procedure Act) reissuing the notice, reopening the period for public comment, considering additional comments

received, and eventually issuing a final rule.

The FAA also notes that this AD requires various corrective actions intended to ensure protection against inadvertent deployment of the thrust reversers in flight. However, the requirements of the other proposed AD were separately issued to allow specific information to be provided regarding the unsafe condition of certain alerts generated by the flight warning computer (FWC), and the required modifications of the FWC intended to prevent that unsafe condition.

While the FAA acknowledges the relationship between the requirements of the AD's, the FAA does not consider that accomplishment of the requirements of these AD's will pose any difficulty for operators provided the AD's are issued simultaneously, since the compliance times of 18 months would be identical. The FAA will ensure that these AD's are issued simultaneously. The FAA has also added a NOTE 2 to the final rule to provide additional information regarding the related FAA rulemaking action specified in Rules Docket No. 98-NM-328-AD.

Request for Extension of Compliance Time

Two commenters request that additional time be provided for accomplishment of the requirements of paragraph (f) of the proposed AD, which specifies a compliance time of "18 months after the effective date of this AD". One commenter requests a minimum of 30 months, and states that, due to the work scope of all related modifications (discussed previously), the work must be accomplished during heavy "C-check" and modification line visits, which are 10-day visits. Another commenter requests a minimum of 24 months, and states that the hours required to accomplish the actions are too large to be completed in an overnight or drop-in maintenance period, and the out-of-service time will be even greater due to the close correlation with related modifications required by the other proposed AD.

The FAA does not concur. After further discussions with the Rijksluchtvaartdienst (RLD), which is the airworthiness authority for the Netherlands, and the manufacturer, the FAA has determined that such extension of the compliance time would not provide an acceptable level of safety necessary to address the identified unsafe condition. Accomplishment of the modifications specified in the proposed AD, as well as the necessary prior modifications to support the final modification, was found to be necessary in the wake of thrust reverser problems related to a 1996 accident in Brazil.

In developing the proposed compliance time of 18 months, the FAA considered the safety implications, the RLD's and the manufacturer's recommendations, and the availability of required parts. The FAA also considered the fact that Fokker Service Bulletin SBF100-78-014 was originally issued in August 1998. Therefore, U.S. operators have had time since then to consider initiating those actions, which this AD ultimately mandates. Under the provisions of paragraph (g)(1) of the final rule, however, the FAA may consider requests for adjustments to the compliance time if data are submitted to substantiate that such an adjustment would provide an acceptable level of safety.

Modification of Spare Parts

Two commenters request that the proposed AD be revised to accommodate concurrent

installation of aft engine cowlings modified in accordance with Fokker Component Service Bulletin P41440-78-04 on airplanes modified in accordance with Fokker Service Bulletin SBF100-78-014. Paragraph (g) of the proposed AD states that "as of the effective date of this AD, no person shall install on any airplane an aft engine cowling having part number 1159P41440, unless it has been modified in accordance with paragraph (f)(2) of this AD". One commenter notes that, due to there being no interchangeability between these modification standards, the compliance time for paragraph (g) must coincide with the compliance time for paragraph (f) of the AD.

The FAA partially concurs. The FAA concurs that aft engine cowlings modified in accordance with P41440-78-04 cannot be installed on an airplane not modified in accordance with SBF100-78-014. However, instead of revising the compliance time for paragraph (g) of the AD, the FAA has deleted the requirement regarding installation of an unmodified aft engine cowling by removing paragraph (g) from the final rule.

Request to Cite Later Revision of Service Bulletin

Two commenters request that the proposed AD be revised to reference Revision 2 of Fokker Service Bulletin SBF100-78-014, dated May 1, 1999, including Attachment 1 (undated). [Revision 1 of the service bulletin, dated December 15, 1998; as revised by Change Notice 1, dated December 18, 1998, and Change Notices 2 and 3, both dated January 29, 1999; is referenced in the proposed AD as the appropriate source of service information for accomplishment of the requirements of paragraph (f)(1) of the proposed AD]. One commenter requests compliance in accordance with the latest revision released. Another commenter, the manufacturer, states that Revision 2 of the service bulletin incorporates all prior change notices, corrects typing errors, and revises certain cost information and drawings, but does not change the technical content.

The FAA concurs with these requests. The FAA has determined that Revision 2 of the service bulletin is substantially equivalent to Revision 1 as revised by the change notices cited previously. Therefore, the FAA has revised paragraph (f)(1) of the final rule to require its accomplishment in accordance with Revision 2, dated May 1, 1999. A NOTE 3 also has been added to the final rule to provide credit for operators who may have accomplished required actions in accordance with the previously cited service bulletin revision and change notices prior to the effective date of this AD. Additionally, since Revision 2 of the service bulletin provided an increased estimate of labor costs for its accomplishment, the cost impact information, below, has been revised to include these additional work hours. The FAA also has revised its estimate of the number of affected airplanes from 131 in the proposed AD to 126, and the cost impact information has been revised accordingly.

Correction of Manufacturer's Address

One commenter, the manufacturer, informs the FAA that its address has changed and requests that the proposed AD be revised to provide the correct address for obtaining service information. The FAA has made this change in the final rule.

Conclusion

After careful review of the available data, including the comments noted above, the FAA has

determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 126 airplanes of U.S. registry that will be affected by this AD.

The actions that are currently required by AD 96-26-03 take approximately 20 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Required parts cost approximately \$1,200 per airplane. Based on these figures, the cost impact of the previously required actions on U.S. operators is estimated to be \$302,400, or \$2,400 per airplane.

The new AFM revision that is required in this AD action will take approximately 1 work hour per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the AFM revision required by this AD on U.S. operators is estimated to be \$7,560, or \$60 per airplane.

The new operational tests that are required in this AD action will take approximately 1 work hour per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the operational tests required by this AD on U.S. operators is estimated to be \$7,560, or \$60 per airplane, per test cycle.

The new modifications that are required in this AD action will take approximately 57 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Required parts will cost approximately \$7,737 per airplane. Based on these figures, the cost impact of the modifications required by this AD on U.S. operators is estimated to be \$1,405,782, or \$11,157 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted.

Regulatory Impact

The regulations adopted herein will not have substantial direct effects 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. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (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. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

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

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. Section 39.13 is amended by removing amendment 39-9866 (62 FR 604, January 6, 1997), and by adding a new airworthiness directive (AD), amendment 39-11330, to read as follows:

▼ Regulatory Information

99-20-02 FOKKER SERVICES B.V.: Amendment 39-11330. Docket 98-NM-329-AD. Supersedes AD 96-26-03, Amendment 39-9866 which superseded AD 96-24-10, Amendment 39-9850, which superseded AD 96-23-16, Amendment 39-9825.

Applicability: All Model F.28 Mark 0070 and 0100 series airplanes, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (g)(1) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To ensure protection against inadvertent deployment of the thrust reversers during flight, which could result in reduced controllability of the airplane, accomplish the following:

RESTATEMENT OF CERTAIN REQUIREMENTS OF AD 96-26-03, AMENDMENT 39-9866

(a) Within 60 days after January 21, 1997 (the effective date of AD 96-26-03, amendment 39-9866), modify the wiring of the electrical control, and indication and warning systems of the thrust reversers, in accordance with Fokker Service Bulletin SBF100-78-012, dated November 22, 1996.

(b) For Model F.28 Mark 0070 series airplanes: Prior to or in conjunction with the accomplishment of paragraph (a) of this AD, modify the wiring of the priority switching of the emergency inverter power supply in accordance with Fokker Service Bulletin SBF100-24-034, Revision 1, dated September 12, 1996.

(c) Within 500 flight cycles following accomplishment of paragraph (a) of this AD, perform operational checks to detect failures of the secondary lock actuator, primary lock switch, indication and warning system, and feedback cable mechanism of the thrust reversers in accordance with Fokker Service Bulletin SBF100-78-013, dated November 22, 1996. If any failure is detected, prior to further flight, repair the thrust reverser system in accordance with Chapter 78-30-00 of the Fokker Airplane Maintenance Manual. Repeat the operational checks thereafter at intervals not to exceed 500 flight cycles.

NEW REQUIREMENTS OF THIS AD Airplane Flight Manual (AFM) Revision

(d) Within 3 months after the effective date of this AD, revise the Abnormal Procedures Section, Sub-section Engine, of the FAA-approved AFM to include the following information. This may be accomplished by inserting a copy of this AD in the AFM.

"REVERSER UNLOCKED PROCEDURE

ON GROUND (except during engine start)

REVERSER SYSTEM.....

MAINTENANCE ACTION REQUIRED

NOTE: If alert occurs during engine start, recycle affected reverser after engine start.

IN FLIGHT

NOTE: If thrust lever is not blocked at idle and no pronounced buffet is present, normal operation of the aircraft may be continued, although alert may persist. After landing, maintenance action is required.

ATS.....

..... (Check) DISCONNECT

AFFECTED THRUST

LEVER..... (Check)

IDLE

SPEED.....

..... MAX 200 kts

AFFECTED FUEL

LEVER.....

SHUT

SINGLE ENGINE

PROCEDURE.....

APPLY

NOTE: Descent below 1,000 feet AGL requires that the landing be completed."

Repetitive Tests

(e) Perform an operational test of the pilot valve and piston seal for leakage of the selector valve

of the thrust reversers, in accordance with Fokker 70/100 Airplane Maintenance Manual 78-32-01, dated June 1, 1998, at the latest of the times specified in paragraphs (e)(1), (e)(2), and (e)(3) of this AD. If any discrepancy is detected, prior to further flight, repair in accordance with a method approved by either the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate; or the RLD (or its delegated agent). Repeat the operational test thereafter at intervals not to exceed 12,000 flight hours.

(1) For airplanes on which Fokker Service Bulletin SBF100-78-004, Revision 1, dated November 22, 1996, has been accomplished prior to the effective date of this AD: Within 12,000 flight hours after accomplishment of Fokker Service Bulletin SBF100-78-004, Revision 1, dated November 22, 1996.

(2) Within 6,000 flight hours after accomplishment of Fokker Service Bulletin SBF100-78-012, dated November 22, 1996.

(3) Within 500 flight hours after the effective date of this AD.

Terminating Modifications

(f) Within 18 months after the effective date of this AD, concurrently accomplish the requirements of paragraphs (f)(1) and (f)(2) of this AD. Accomplishment of these modifications constitutes terminating action for the repetitive operational checks and operational tests required by paragraphs (c) and (e) of this AD.

(1) Modify the thrust reverser electrical control system and thrust reverser indication and warning system, in accordance with Fokker Service Bulletin SBF100-78-014, Revision 2, dated May 1, 1999, including Attachment 1 (undated).

(2) Modify the aft engine cowlings in accordance with Fokker Component Service Bulletins P41440-78-04 and P41440-78-05, both dated August 15, 1998.

NOTE 2: Operators should note that related FAA Rules Docket No. 98-NM-328-AD requires accomplishment of Fokker Service Bulletin SBF100-31-051. That service bulletin specifies prior or concurrent accomplishment of SBF100-78-014 [which specifies concurrent accomplishment of Fokker Component Service Bulletin (CSB) P41440-78-04, and prior or concurrent accomplishment of Fokker Service Bulletin SBF-100-78-012 and Fokker CSB P41440-78-05].

NOTE 3: Accomplishment of the actions required by paragraph (f)(1) of this AD prior to the effective date of this AD in accordance with Fokker Service Bulletin SBF100-78-014, Revision 1, dated December 15, 1998; as revised by Change Notice 1, dated December 18, 1998, and Change Notices 2 and 3, both dated January 29, 1999; is acceptable for compliance with the actions required by that paragraph.

Alternative Methods of Compliance

(g) (1) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate. Operators shall submit their requests through

an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, International Branch, ANM-116.

(2) Alternative methods of compliance, approved previously in accordance with AD 96-26-03, amendment 39-9866 for accomplishment of paragraph (c) of that AD, are approved as alternative methods of compliance with paragraph (a) of this AD.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM-116.

Special Flight Permits

(h) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(i) Except as provided by paragraphs (c), (d), and (e), the actions shall be done in accordance with Fokker Service Bulletin SBF100-78-012, dated November 22, 1996; Fokker Service Bulletin SBF100-24-034, Revision 1, dated September 12, 1996; Fokker Service Bulletin SBF100-78-013, dated November 22, 1996; Fokker Service Bulletin SBF100-78-014, Revision 2, dated May 1, 1999, including Attachment 1 (undated); Fokker Component Service Bulletin P41440-78-04, dated August 15, 1998; and Fokker Component Service Bulletin P41440-78-05, dated August 15, 1998; as applicable.

(1) The incorporation by reference of Fokker Service Bulletin SBF100-78-014, Revision 2, dated May 1, 1999, including Attachment 1 (undated); Fokker Component Service Bulletin P41440-78-04, dated August 15, 1998; and Fokker Component Service Bulletin P41440-78-05, dated August 15, 1998; is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Fokker Service Bulletin SBF100-78-014, Revision 2, dated May 1, 1999, including Attachment 1 (undated), contains the following list of effective pages:

Page Number	Revision Level Shown on Page	Date Shown on Page
1-62	2	May 1, 1999
	ATTACHMENT 1	
1-53		Not Dated

(2) The incorporation by reference of Fokker Service Bulletin SBF100-78-012, dated November 22, 1996; Fokker Service Bulletin SBF100-24-034, Revision 1, dated September 12, 1996; and Fokker Service Bulletin SBF100-78-013, dated November 22, 1996; was approved previously by the Director of the Federal Register as of January 21, 1997 (62 FR 604, January 6, 1997).

(3) Copies may be obtained from Fokker Services B.V., P.O. Box 231, 2150 AE Nieuw-Vennep,

The Netherlands. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

NOTE 5: The subject of this AD is addressed in Dutch airworthiness directive BLA 1996-140/2, dated August 31, 1998.

(j) This amendment becomes effective on October 27, 1999.

▼ **Footer Information**

Issued on September 13, 1999.

▼ **Comments**