



Airworthiness Directive of the Netherlands

Bijzondere Luchtwaardigheids Aanwijzing - BLA

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Caution

In accordance with the Civil Air Navigation Regulations (RTL), Articles 76 and 88, the following Airworthiness Directive (BLA) is issued by the Director-General of Civil Aviation of the Netherlands (Directeur-Generaal van de Rijksluchtvaartdienst-RLD). Airworthiness Directives affect aviation safety. These are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive.

BLA nr : 1997-113/3

(A)

Date : June 18, 1999

FOKKER SERVICES B.V.
(formerly Fokker Aircraft B.V.)
Model F.27 Mk.050 series

RLD Type Certificate Nr.:

T-050-87

ICE & RAIN PROTECTION - STABILIZER DE-ICING MONITORING SYSTEM - INTRODUCTION

Description:

A number of operators of Fokker Model F.27 Mk.050 (Fokker 50) series aircraft have reportedly experienced problems with the tail de-icing system. Investigation showed that interrupted de-icing boot operation may be caused by freezing of one or more distributor valves. To counter this, Fokker developed a modification that introduces heater mufflers on the affected distributor valves. However, on early models of this type, the tail de-icing system operation is not monitored. Consequently, information on the system's operational status is unavailable to the flight crew, and any failure during flight would not be detected. Since an unsafe condition was identified, likely to exist or develop on other aircraft of the same type design, Airworthiness Directive (BLA) 1997-113 was issued to require the introduction of a system to monitor the stabilizer de-icing operational status. Some time later, RLD were notified that the affected system parts could not be produced in sufficient numbers by their suppliers within the given compliance time schedule. As a result, Fokker was unable to provide kits in time to allow operators to complete the modifications within the original compliance period. More recently, RLD were notified that operators have experienced nuisance warnings of de-icing boot low pressure, caused by failure of one or more stabilizer de-icing boots pressure switches. As a reaction to this, some operators have de-activated the stabilizer de-icing monitoring system. The exact failure mode of the pressure switches has now been determined, but modified pressure switches will not be available in sufficient quantity on short notice to meet the original compliance requirement of this directive. RLD has carefully considered all the available information and has agreed to revise the BLA once more and extend the compliance period for all affected aircraft to September 15, 1999, to accommodate those operators that have delayed the introduction of the stabilizer de-icing monitoring system (or had de-activated the system) in view of the recent problem with nuisance warnings. In addition, the relevant MMEL-item has been amended, and a provision for operation with a de-activated system is introduced, to be used in case of continued pressure switch failures. This revision otherwise retains the earlier requirements, including the temporary AFM amendment introduced to provide an equivalent level of safety until the moment of modification, which requires a check to be performed prior to each flight into known or expected icing conditions.

Applicability: **Fokker Aircraft B.V.** Model F.27 Mk.050 series aircraft, serial numbers 20103 through 20245, 20248, 20250 through 20255, 20257 through 20269, 20272 through 20275, 20278, 20280 through 20283, 20285, 20287 through 20302, 20304, 20305 and 20307 through 20311.

Effective date: July 1, 1999

Compliance: Required as indicated, unless accomplished previously.

(a) For aircraft without any tail de-icing distributor valve heating system installed, or with the tail de-icing distributor valve heating installed but with the distributor valves not cleaned in accordance with Fokker Service Bulletin (SB) F50-30-024 in the period of 5,000 flight hours prior to the effective date of this directive, before further flight after the effective date of this directive, amend the Airplane Flight Manual (AFM) in accordance with **Appendix I** of this directive. This may be accomplished by inserting a copy of this directive into the AFM.

NOTE 1 : At any time after compliance with paragraph (b)(1) of this directive, the amendment may be removed from the AFM.

BLA nr : 1997-113/3

(b) For all aircraft affected by this directive:

(1) Before September 15, 1999 install and/or activate the monitoring system in accordance with Fokker SB F50-30-025 dated October 31, 1997 or a later RLD-approved revision;

(2) Before further flight after the effective date of this directive, amend the Master Minimum Equipment List (MMEL) in accordance with **Appendix II** of this directive. This may be accomplished by inserting a copy of this directive into the MMEL;

NOTE 2 : After compliance with paragraph (b)(1) of this directive, the MMEL amendment as provided by **Appendix II** of this directive remains effective.

(c) To allow operators to utilise the MMEL exception as provided by **Appendix II** of this directive for a longer time period than stipulated therein, a further amendment of the MMEL is introduced with **Appendix III** of this directive. This amendment is to be used ONLY when present standard pressure switches continue to fail and need replacement AND replacement pressure switches, either present standard or modified, are unavailable on short notice. The MMEL may be amended by inserting a copy of this directive into the MMEL.

(d) As soon as modified pressure switches become available, within the next ten (10) calendar days thereafter, replace the affected pressure switches in accordance with available maintenance practices.

NOTE 3 : At any time upon compliance with paragraph (d) of this directive, the MMEL amendment as provided by **Appendix III** of this directive must be removed from the MMEL.

Remarks:

- Operators of the affected aircraft may obtain copies of the referenced service information upon request directly from **Fokker Services B.V., Technical Services Dept., P.O.Box 231, 2150 AE Nieuw-Vennep, The Netherlands; telephone (31) 252-627-350; facsimile (31) 252-627-211.**
- Compliance with this AD must be recorded in the proper Aircraft Log Book(s).
- This revision supersedes and cancels Airworthiness Directive (BLA) 1997-113/2 dated September 30, 1998.

Address inquiries concerning this AD to:

Bureau Coordination & Technical Information (CTI); Telephone 31-(0)23-566 3155; Facsimile 31-(0)23-566 3006; Telex 74592 rldli nl
E-mail "info.register@rld.minvenw.nl"

APPENDIX I

Insert the following in Section 5 - NORMAL PROCEDURES

AIRPLANE FLIGHT MANUAL FOKKER 50

**PRE-FLIGHT INSPECTION PROCEDURE
FOR FLIGHTS INTO KNOWN OR EXPECTED ICING CONDITIONS**

- Cycle the airframe de-icing system twice through the MANUAL 1 and 2 positions during ground operation;
- Have the tailplane leading edge de-icing boots checked visually for inflation.

APPENDIX II

Insert the following in Section 30 ICE AND RAIN PROTECTION of the
FOKKER 50 MASTER MINIMUM EQUIPMENT LIST

SYSTEM & SEQUENCE NUMBER	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH		4. REMARKS AND/OR EXCEPTION
30	<u>ICE AND RAIN PROTECTION</u>						
-13-1	"LOW PRESS" Light	C	1	0	*(O)	May be inoperative or may be continuously ON after activation of the system provided: <ul style="list-style-type: none"> - satisfactory operation of the automatic and manual de-icing mode of all wing and tail de-icing boot sections is visually verified if the flight is conducted into known or forecast icing conditions, and - procedure for landing with a failed airframe de-icing system is applied in accordance with the AFM. 	

Operational Procedure

30-13-1 Airframe de-icing system

If the "LOW PRESS" light is continuously ON after the system is activated:

- A level 2 alert will be generated each time the system is activated.
- The MCL can be depressed to cancel the CAUTION light. The "LOW PRESS" light will remain ON.
- The system should not be switched ON before take-off in order to avoid a level 2 alert and/or local caution light.

APPENDIX III

Insert the following in Section 30 ICE AND RAIN PROTECTION of the
FOKKER 50 MASTER MINIMUM EQUIPMENT LIST

NOTE: For the period that modified pressure switches have been ordered, but not yet delivered, the repair time category associated with item 30-13-1 may be changed from 'C' to 'D'. Under the same condition (no modified pressure switches having been delivered) item 30-13-1 may also be applied with intermittent inadvertent operation of the LOW PRESS light.

