



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 : 1996-140/2 (A)

Date : August 31, 1998

FOKKER SERVICES B.V.

(formerly Fokker Aircraft B.V.)

Model F.28 Mk.0070 and Mk.0100

RLD Type Certificate Nr.:

T-100-87

EXHAUST - T/R ELECTRICAL CONTROL, INDICATING & WARNING - MODIFICATION

Description:

On October 31, 1996, an accident occurred which involved a Fokker Model F.28 Mk.0100 aircraft. During take-off, the RH engine's Thrust Reverser (T/R) inadvertently deployed. To exclude the possibility of a failure remaining dormant, Fokker Services decided to recommend the implementation of a temporary operational measure, which was then made mandatory by the issuance of Airworthiness Directive (BLA) 1996-138. Next, the first step of a critical design review identified the need for further temporary measures, which were made mandatory by issuance of revised BLA 1996-138/2. Fokker Services then developed a set of modifications which deleted the need for operational procedures, restrictions and maintenance procedures as required by BLA 1996-138/2. Accordingly, RLD issued BLA 1996-140 to require the accomplishment of these modifications and associated repetitive operational and functional checks. Presently, the second step of the design review has been completed which shows that additional modifications will further protect the affected systems against inadvertent thrust reverser deployment and make the repetitive operational- and functional checks redundant. This same review also identified the need for a revised ABNORMAL "REVERSER UNLOCKED PROCEDURE" to be included into the Airplane Flight Manual (AFM). Since a potentially unsafe condition has been identified that may still exist or develop on aircraft of this type design, this revision of BLA 1996-140 initially retains the requirements imposed by the first issue of this directive, and subsequently, an amendment of the AFM and modifications of the T/R Electrical Control System and T/R Indication & Warning System.

Applicability: **Fokker Aircraft B.V.** Model F.28 Mk.0070 and Mk.0100 aircraft, all serial numbers.

Effective date: October 1, 1998

Compliance: Required as indicated, unless accomplished previously.

(a) Within the next 2 (two) calendar months after November 27, 1996 (the effective date of the original issue of this directive), modify the wiring to the Flight Warning Computer and the Thrust Reverser Stow Limit Relay wiring, in accordance with the Accomplishment Instructions of Fokker SB F100-78-012 dated November 22, 1996 or a later RLD-approved revision.

Note 1 : Before, or concurrent with, the accomplishment of the modifications as required by paragraph (a) of this directive, make wiring modifications to reduce the EMER DC BUS load in accordance with the Accomplishment Instructions of Fokker SB F100-24-034 Revision 1 dated September 12, 1996 or a later RLD-approved revision. This SB is already the subject of another directive, BLA 1995-089/4, which was made effective October 15, 1996.

Note 2 : In the event that, after modification in accordance with Fokker SB F100-78-012, an operator chooses to make the (optional) modification as provided by Fokker SB F100-78-004, additional modifications must be accomplished in accordance with steps N. and subsequent of the Accomplishment Instructions of Fokker SB F100-78-012 dated November 22, 1996 or a later RLD-approved revision. RLD has reviewed and approved Fokker SB F100-78-004 Revision 1 dated November 22, 1996 which also pertains to this subject.

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Note 3 : After accomplishment of the modifications as required by paragraph (a) of this directive, all operational procedures and restrictions which were imposed by the first issue of this directive are no longer required and may be removed from the AFM and MMEL. MMEL repair time requirements must be restored to their original status. Additionally, the daily inspections as required by the first issue of this directive may be discontinued. Paragraph (b) of this directive introduces repetitive actions to be performed after modification in accordance with SB F100-78-012.

(b) Within 500 flight cycles (FC) after the accomplishment of the modifications as required by paragraph (a) of this directive, and thereafter at intervals not to exceed 500 FC, perform operational checks of each Thrust Reverser Secondary Lock Actuator and Primary Lock Switch, and perform an operational check of the Thrust Reverser Indicating and Alerting System, including the feedback cable mechanism, in accordance with the Accomplishment Instructions of Fokker SB F100-78-013 dated November 22, 1996 or a later RLD-approved revision.

(c) For aircraft which are already in post- SB F100-78-004 -configuration on the effective date of this directive, either within 12,000 flight hours (FH) after modification in accordance with SB F100-78-004, or within the next 6,000 FH after the accomplishment of the modifications as required by paragraph (a) of this directive, whichever occurs later, and thereafter at intervals not to exceed 12,000 FH, perform a functional check for internal leakage of the Thrust Reverser Selector Valve in accordance with Maintenance Review Board (MRB) task 783200-00-02. This task already applies to aircraft in pre- SB F100-78-004 -configuration.

(d) Within the next 3 (three) calendar months after the effective date of this directive, amend Section 4 - ABNORMAL PROCEDURES, Sub-section "ENGINE" of the applicable Airplane Flight Manual (AFM) in accordance with Appendix I of this directive. This may be accomplished by inserting a copy of Appendix I of this directive into the AFM; Fokker Services' Manual Change Notification MCNO F100-015 (to be issued September 10, 1998) also pertains to this subject.

(e) Within the next 18 (eighteen) calendar months after the effective date of this directive, accomplish the following modifications concurrently :

(1) Modify the wiring of the Thrust Reverser Electrical Control System and - Indication and Warning System on board the aircraft in accordance with the Accomplishment Instructions of Fokker SB F100-78-014 dated August 15, 1998 or a later RLD-approved revision, and on the Aft Engine Cowling P/N 1159P41440, all serial numbers, including units held as spares, in accordance with the Accomplishment Instructions of Fokker Component SB P41440-78-04 dated August 15, 1998 or a later RLD-approved revision;

(2) To protect the relay contacts in the Thrust Reverser Electrical Control System, install a Voltage Spike Protection Diode over the Coil of the Thrust Reverser Secondary Lock Solenoid on the Aft Engine Cowling P/N 1159P41440, all serial numbers, including units held as spares, in accordance with Fokker Component SB P41440-78-05 dated August 15, 1998 or a later RLD-approved revision;

Note 4 : After accomplishment of the modifications as required by paragraph (e) of this directive, the repetitive inspections and leak checks as required by paragraphs (b) and (c) of this directive are no longer required. In addition, item 78-30-1 of the Fokker 70/100 MMEL has been revised to include a Maintenance Procedure for Thrust Reverser de-activation in the post-SB F100-78-014 configuration; Fokker Services' Manual Change Notification MCNO F100-014 (to be issued September 10, 1998) also pertains to this subject.

Note 5 : The maintenance requirement changes associated with the modifications as required by paragraph (e) of this directive will be incorporated in the next General Revision of the Fokker 70/100 Maintenance Review Board (MRB) document.

Note 6 : Fokker SB F100-78-004 Revision 2 and F100-78-013 Revision 1, both dated July 31, 1998 also pertain to the subject covered by this directive.

Remarks:

- Operators of the affected aircraft may obtain copies of the referenced service information upon request directly from **Fokker Services B.V., Technical Services, P.O.Box 75047, 1117 ZN Schiphol Airport, The Netherlands; telephone (31) 20-605-2136; facsimile (31) 20-605-2790.**
- Compliance with this AD must be recorded in the proper Aircraft Log Book(s).
- Where applicable, the requirements of this AD must be integrated into the aircraft's Maintenance Schedule.
- This revision supersedes and cancels Airworthiness Directive (BLA) 1996-140 dated November 25, 1996.

Address inquiries concerning this AD to:

Bureau Coordination & Technical Information (CTI); Telephone 31-(0)23-566 3155; Facsimile 31-(0)23-562 3848; Telex 74592 rldli nl

APPENDIX I

Insert the following in Section 4 - ABNORMAL PROCEDURES - Sub-section ENGINE

AIRPLANE FLIGHT MANUAL FOKKER 70 & FOKKER 100

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.	