



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 : 1999-128

(A)

Date : October 29, 1999

FOKKER SERVICES B.V.

(formerly Fokker Aircraft B.V.)

Model F.28 Mk.0070 and Mk.0100

RLD Type Certificate Nr.:

T-100-87

COMMUNICATIONS - STABILIZER ELECTRICAL BONDING JUMPERS - REPLACEMENT

Description:

In February 1998, during a routine scheduled flight, a Fokker 100 (F.28 Mk.0100) aircraft was struck by lightning. It was reported that a No.2 hydraulic system Low Quantity Warning occurred and shortly thereafter, a No.1 hydraulic system Low Quantity Warning. Following execution of the "Total Hydraulic Failure" procedure, which left only the hydraulic accumulator-driven systems available, the flight crew managed to land the aircraft safely. After touchdown, however, the aircraft departed the runway and the nose landing gear was sheared off. Investigation showed that the lightning current went through the vertical stabilizer and through the bonding jumper of the horizontal stabilizer. At present, only a single bonding jumper is installed between the vertical and the horizontal stabilizer on the LH side. On this particular aircraft, a bonding jumper was found melted, although it is still unclear whether this was due to the lightning strike event preceding the hydraulic systems failure, or due to an earlier event. Either way, due to this failed bonding jumper, the electrical arcing which resulted from the lightning strike caused damage to the hydraulic lines. At the same time, though unrelated to the lightning strike event, the electrical connection of the Parking Brake Shut-Off Valve (PBSOV) was found improperly attached, causing it to de-energize in the closed position. When the brakes were operated (using alternate hydraulic power) to such a level that the anti-skid function was activated, the wheels blocked because the PBSOV could not dump the brake pressure, causing the aircraft to slide off the runway. The investigation then focused on the lightning strike protective measures of the Fokker 70/100 design and found that the existing bonding jumper installation does not meet the requirements of specification MIL-B-5087B, which prescribes that each (stabilizer) hinge point must be provided with a bonding jumper. Since a potentially unsafe condition has been identified that is likely to exist or develop on other aircraft of the same type design, this Airworthiness Directive (BLA) requires the electrical bonding of the horizontal stabilizer to be improved.

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

Effective date: November 20, 1999

Compliance: Required as indicated, unless accomplished previously.

Within the next 18 calendar months after the effective date of this directive, remove the existing bonding jumper between the vertical and horizontal stabilizer and install two new bonding jumpers, Part Number FON9-1981-4CC5, in accordance with the Accomplishment Instructions of Fokker Services' SB F100-23-032 dated September 22, 1999 or a later RLD-approved revision.

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).

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"