



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 : 1992-077/2 (A)

Date : January 31, 1995

FOKKER AIRCRAFT B.V.

Model F.28 series

Type Certificate Nr.:

A23F

FLIGHT CONTROLS - HORIZONTAL STABILIZER CONTROL UNIT - INSPECTION/REPLACEMENT

Description:

- During June 1992, an incident occurred with a Fokker Model F.28 Mk.1000, whereby the crew experienced a horizontal stabilizer malfunction. During cruise at 29,000 feet, the stabilizer trim slowly ran away, the autopilot disengaged and the aircraft started to pitch up and climb. Although both pilots held the control column fully forward, the aircraft continued to climb to 31,000 feet. The crew reduced engine power after which the climb stopped and the aircraft started to descend. At the same time, the centre of gravity had been moved forward by reseating the passengers. The aircraft diverted to the nearest suitable airfield and a safe emergency landing was made. Subsequent investigation revealed that the spool of the horizontal stabilizer actuator servo-valve was broken between the spherical end and the first land. The failure of the spool may have been caused by heavy operation of the servo valve sub-assembly or a failure of the servo valve sub-assembly rod-end bearing. Since an unsafe condition was identified that could exist or develop on other aircraft of the same type design, the first issue of this Airworthiness Directive (BLA) required the inspection of all Menasco Horizontal Stabilizer Actuators P/N 11100, including spare units. As servo valves are not always replaced during overhaul of the actuator, and currently installed valves may have suffered damage as a result of past "heavy operation" control forces, a possible "dormant failure" situation exists, that may lead to failure of the servo valve before the sticking mechanism has depressurized the stabilizer hydraulic control. Further tests have resulted in the development of a revised "creep-rate" adjustment for the affected servo valve. With this modification installed, should another servo valve failure (disconnect) occur, the horizontal stabilizer will move to the extreme Aircraft Nose Down (AND) position. After evaluating all available information, the RLD considers that a potentially unsafe condition may still exist or develop on aircraft of this type design. Consequently, the present Airworthiness Directive revision requires the inspection and, ultimately, replacement of the affected Horizontal Stabilizer Actuators with modified units.

- Applicability: **Fokker Aircraft B.V.** Model F.28 Mk.1000 through Mk.4000 series aircraft, all serial numbers, if equipped with **Menasco** Horizontal Stabilizer Actuators P/N 11100-(), all serial numbers;
Menasco Aerospace spare Horizontal Stabilizer Actuators P/N 11100-(), all serial numbers.

- Effective date: March 01, 1995

Compliance: Required as indicated, unless accomplished previously:

- (a) Before further flight, inspect all Menasco Horizontal Stabilizer Actuators P/N 11100-() for free movement, in accordance with Fokker Service Bulletin (SB) F.28/27-180 dated July 03, 1992 or a later RLD-approved revision; and Menasco Aerospace Ltd. SB 11100-27-104, dated July 7, 1992;
- (b) Within the next six calendar months after the effective date of this AD, inspect and test the Horizontal Stabilizer Control System in accordance with Part 1 of the Accomplishment Instructions of Fokker SB F.28/27-183 dated November 21, 1994 or a later RLD-approved revision;
- Note 1:** After the effective date of this AD, no spare Horizontal Stabilizer Control Unit P/N 11100-() may be installed as a replacement in any aircraft, unless it has been modified in accordance with Menasco Aerospace Ltd. SB 11100-27-105, dated November 20, 1994.

Address inquiries concerning this AD to:

Bureau Coordination & Technical Information (CTI); Telephone 31-(0)2503-63155; Facsimile 31-(0)2503-40741; Telex 74592 rldli nl

BLA nr : 1992-077/2 (A)

(c) When an actuator is found to be suspect or defective as a result of the inspection as required by paragraph (a) or the test as required by paragraph (b) of this directive, before further flight, replace the Horizontal Stabilizer Actuator P/N 11100-() with a modified unit in accordance with Part 2 of the Accomplishment Instructions of Fokker SB F.28/27-183 dated November 21, 1994 or a later RLD-approved revision;

Note 2: Fokker Maintenance Manual, Chapter 27-42-01, Menasco Aerospace Ltd. Overhaul Manual, Chapter 27-41-4, Temporary Revision N°3, dated 10 July 1992, and Menasco Aerospace SB 11100-27-105, dated November 20, 1994 also pertain to this subject.

(d) At the next scheduled shop visit of the Horizontal Stabilizer Actuator P/N 11100-(), or before January 01, 1998, whichever occurs first, unless already accomplished in accordance with paragraph (c) of this directive, replace the Horizontal Stabilizer Actuator P/N 11100-() with a modified unit in accordance with Part 2 of the Accomplishment Instructions of Fokker SB F.28/27-183 dated November 21, 1994 or a later RLD-approved revision;

(e) Report all findings to Fokker Aircraft.

Remarks:

- Operators of the affected aircraft may obtain copies of the referenced service information upon request directly from the manufacturer.
- Compliance with this AD must be recorded in the proper Aircraft Log Book(s).
- This revision supersedes and cancels Airworthiness Directive (BLA) 92-077 dated July 13, 1992.