LUFTFARTSVERKET
Luftfartsinspektionen

LUFTVÄRDIGHETSDIREKTIV (LVD)

Flygplan
de Havilland
LVD Nr 2316B
Upphäver LVD 2316A

Sektion 2. Utlandstillverkad flygmateriel

R2

TITEL: **Inspektion av struktur och styrsystem**

GÄLLER: DHC-6 Twin Otter alla S/N

ÅTGÄRD: För att upptäcka eventuella skador utför åtgärder enligt bifogad kopia av AD CF-72-06R3.

TID FÖR ÅTGÄRD: I enlighet med AD CF-72-06R3.

UNDERLAG: AD CF-72-06R3
de Havilland Service Bulletin A6/180 och 6/180
de Havilland Service Bulletin A6/181 och 6/181

REFERENS: AD CF-72-06R3

UTGIVNINGS-DATUM: 1992-06-25

LFS: 1992:17

Åtgärd enligt LVD utgör nödvändig förutsättning för ifrågavarende flygmateriels luftvärdighet. Referens BCL M 1.11. Anteckning om åtgärd, som vidtagits i enlighet med LVD, skall införas i teknisk journal för berörd flygmateriel med hänvisning till ifrågavarande LVD-nummer. Angivet underlag refererar till senaste gällande revision/utgåva. LVD utges i luftfartsverkets författningssamlingar LFS.

L 1563:1

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Aviation Regulation / Réglementation Aérienne

No. CF-72-06R3	1/3
Date 7 May 1992	

AIRWORTHINESS DIRECTIVE

THE FOLLOWING CANADIAN AIRWORTHINESS DIRECTIVE IS ISSUED PURSUANT TO SECTION 211 OF THE AIR REGULATIONS AND CHAPTER 593 OF THE AIRWORTHINESS MANUAL.

CF-72-06R3 DE HAVILLAND

Applies to all de Havilland Inc. DHC-6 Twin Otter aircraft.

Compliance is required as indicated.

The following damage detected on the flight control system has been attributed to ground gusts:

- In the forward fuselage: cracks in the base of the lower control column, and cracks and buckles in the elevator/rudder pulley bracket;
- In the rear fuselage: distortion of the elevator quadrant, which may result in creating abnormal loads on the quadrant support bracket and subsequently in damaging the bracket.

To detect damage in these areas and maintain airworthiness, accomplish the following:

I. Control Column

A. Before further flight, unless already accomplished within the last 100 flight hours, and subsequently at intervals not exceeding 100 flight hours, and before further flight if the aircraft has been left standing in winds with mean velocity estimated at 56 km/h (35 mph) or greater, inspect the control column, sub-assembly P/N C3CF39-17, for cracks or other damage. Using a mirror and strong light, visually inspect the lower horizontal torque tube forming the base of the control column, paying particular attention to the welds and the region adjacent to the aileron chain exit holes. If cracks are discovered, the control column assembly must be either replaced by a serviceable unit or repaired within the time limits specified in paragraphs (1), (2) or (3) below, whichever is applicable according to the length of crack found:

(1) If the crack length is less than 1 inch, 150 hours of further flight is permissible before replacement or repair, provided that subsequent inspections are conducted at intervals not to exceed 25 flight hours and such inspections indicate that the crack length has not exceeded 1 inch;

(2) For cracks greater that 1 inch but less than 2 inches in length, only a single flight to repair base is permissible before replacement or repair;

(3) For cracks greater than 2 inches in length, replace or repair prior to further flight.

A serviceable unit may be one of the following:

(a) a complete new control column (P/N C6CF1225-51);

(b) the existing column with a new lower welded assembly (P/N C3CF39-17) installed;

(c) the existing cracked component repaired by an acceptable procedure.

An acceptable repair procedure is specified in de Havilland Service Bulletin No. 6/180, Revision B, dated 17 August 1972.

B. Prior to 1 June 1993, replace the lower sub-assembly with P/N C3CF39-19 in accordance with de Havilland Modification No. 6/1433.

C. The inspection required by paragraph I.A may be discontinued after the modification of paragraph I.B has been incorporated.

II. Elevator/Rudder Pulley Brackets

A. Before further flight and daily thereafter, and before further flight if the aircraft has been left standing in winds with a mean velocity estimated at 56 km/h (35 mph) or greater, accomplish the inspection and corrective action specified in de Havilland Service Bulletin No. A6/181 on pulley brackets, P/N C6FS1263-27 and P/N C6FS1263-29.

B. Prior to 1 June 1992, incorporate de Havilland Modification No. 6/1262 as detailed in de Havilland Service Bulletin No. 6/181, or a modification approved for this purpose by the Director, Airworthiness Branch, Transport Canada, Ottawa.

C. The inspection required by paragraph II.A may be discontinued after the modification of paragraph II.B has been incorporated.

III. Elevator Quadrant and Support Bracket

A. Before further flight unless already accomplished within the preceding 400 flight hours, and subsequently at intervals not exceeding 400 flight hours, visually inspect the elevator quadrant for indications of distortion. The elevator quadrant on individual aircraft may be identified as P/N C6CFM1138-27, C6CFM1450-27 or C6CFM1450-29 and is referred to as assembly P/N C6CF1137-1, -3, -5 or -7 in de Havilland Illustrated Parts Catalog 27-30-00 figure 1, page 0, dated 13 June 1981.

Distortion of the elevator quadrant can be detected visually by viewing the quadrant from the forward or aft direction to observe any warping or buckling, and/or by looking for the existence of score marks on the quadrant topside face due to its constant rubbing against the side of the cable guard.

B. Within 400 flight hours or four calendar months, whichever occurs first after the effective date of this directive, unless already accomplished within the preceding 12 calendar months, remove the quadrant support bracket P/N C6CFM1142-1 from the aircraft and perform a one-time dye penetrant inspection of the bracket for cracks. Critical areas are the outer and inner surfaces of the two lugs of the bracket.

C. If the quadrant is found distorted, replace it before further flight with a serviceable part and perform a one-time dye penetrant inspection of the quadrant support bracket as per paragraph III.B above.

D. If the quadrant support bracket is found cracked, replace it with a serviceable part before further flight.

IV. Report any damage found during the above inspections and provide details of the circumstances to your regional airworthiness office.

De Havilland Service Bulletin Nos. A6/180 and 6/180 refer to the control column cracking problem. De Havilland Service Bulletin Nos. A6/181 and 6/181 refer to the elevator/rudder pulley bracket problem.

Alternative means of compliance with the requirements of this directive may be used only if approved by the Director, Airworthiness Branch, Transport Canada, Ottawa. Any application should be made to the appropriate regional office.

This revision supersedes Airworthiness Directive CF-72-06R2 dated 12 June 1990.

This directive becomes effective 18 May 1992.

For Minister of Transport

for S.R. Didrikson
Chief, Continuing Airworthiness

The purpose of revision 2 was to mandate the incorporation of de Havilland modifications as a terminating action to the inspections required by sections I and II of this directive. In addition, this revision provides a relaxation to the special ground gust inspection of the elevator quadrant but requires an additional one-time inspection of its support bracket as described in section III. Some paragraphs remaining from the original directive and its first revision have been renumbered for clarity.

The purpose revision 3 is to allow additional time for incorporation of Modification No. 6/1433 due to unavailability of parts from de Havilland. Inspections required by paragraph I.A. are required until Modification No. 6/1433 is incorporated.

For further information regarding the contents or interpretation of this directive please contact your regional airworthiness office, or call directly Mr. Dung Duc Tran, Transport Canada, Airworthiness Branch, Ottawa, telephone (613) 952-4379.