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No. CF-85-15

AIRWORTHINESS DIRECTIVE

The following airworthiness directive (AD) may be applicable to an aircraft which our records indicate is registered in your name. ADs are issued pursuant to Canadian Aviation Regulation (CAR) 593. Pursuant to CAR 605.84 and the further details of CAR Standard 625, Appendix H, the continuing airworthiness of a Canadian registered aircraft is contingent upon compliance with all applicable ADs. Failure to comply with the requirements of an AD may invalidate the flight authorization of the aircraft. Alternative means of compliance shall be applied for in accordance with CAR 605.84 and the above-referenced Standard.

This AD has been issued by the Continuing Airworthiness Division (AARDG), Aircraft Certification Branch, Transport Canada, Ottawa, telephone (613) 952-4357.

CF-85-15 DE HAVILLAND

Applies to all de Havilland Aircraft of Canada Limited Model DHC-7 aircraft.

Compliance is required as indicated:

Several aircraft have experienced heat damage to the wing upper surface structure behind the engines. The damaging heat is attributed to wet starts of the engine resulting in external combustion of fuel.

To preclude an unsafe condition developing due to engine 'wet starts' accomplish the following:

- 1) Following every aborted start, observe starting attempts for external flames from the exhaust stacks.
 - A. If no external flame or external flame lasting for less than approximately 5 seconds is observed the aircraft may be dispatched.
 - B. If external flame lasting approximately 5 seconds or more is observed, a visual inspection of the affected wing area, as detailed in the Accomplishment Instructions, paragraph 1, of de Havilland Service Bulletin No. 7-57-25, Revision A, dated September 27, 1985, must be performed before further flight. Refer to paragraph 5) below, to determine procedure for visible damage discovered. If no visible damage (ie. no blistering or charring of paint or buckling of the wing skin) is apparent an external conductivity survey, as detailed in Accomplishment Instructions, paragraph 2 of Service Bulletin No. 7-57-25 Revision A, dated September 27, 1985, must be conducted within the next 100 flight hours.
- 2) Within 50 flight hours from the effective date of this Directive, visually inspect the upper wing skin behind each engine nacelle in accordance with the Accomplishment Instructions paragraph 1, of de Havilland Service Bulletin No. 7-57-25, Revision A, dated September 27, 1985. Refer to paragraph 5) below, to determine the procedure for visible damage discovered.
- 3) Within 6 months of the effective date of this Directive,
 - A. Perform a conductivity survey of the upper wing skin behind each engine nacelle. The external conductivity survey is to be performed as detailed in the Accomplishment Instructions, paragraph 2, of de Havilland Service Bulletin No. 7-57-25, Revision A, dated September 27, 1985. Refer to paragraph 5) below to determine the procedure for an unacceptable survey.
 - B. For aircraft that have had the mid fuel tank access cover aft of an outboard nacelle replaced an internal conductivity survey is to be performed as detailed in the Accomplishment Instructions, paragraph 3, of de Havilland Service Bulletin No. 7-57-25, Revision A, dated September 27, 1985. Following an internal conductivity survey the removed fuel tank access covers must be inspected before replacement to ensure serviceability. Refer to paragraph 5) below to determine the procedure for an unacceptable survey.
- 4) Within 1 year of the effective date of this Directive incorporate De Havilland Modification No. 7/2414 - "Wing-Upper Skin Structure - Special Inspection and Installation of Heat Shields". The inspection detailed in paragraph 3) above must be accomplished immediately prior to installation of Modification 7/2414.

For aircraft serial no. 1-27 Modification Nos. 7/2377 and 7/2378 - "Fuel Tank Access Panel Replacement" - must be incorporated prior to the incorporation of Mod. No. 7/2414.



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5) If distortion or buckling of the skin is evident during the visual inspection repairs must be effected before further flight.

Blistering or charring of the paint due to engine exhaust heat requires an external conductivity survey of the affected area as detailed in the Accomplishment Instructions, paragraph 2, of de Havilland Service Bulletin No. 7-57-25, Revision A, dated September 27, 1985, before further flight. An unacceptable external conductivity survey will require an internal conductivity survey before further flight. An unacceptable internal conductivity survey will require the installation of an approved repair scheme before further flight.

Details of any damage discovered and results and data obtained from conductivity surveys must be transmitted to de Havilland Aircraft Limited immediately for processing.

Incorporation of de Havilland Modification No 7/2414 discontinues the requirement for the inspections of paragraphs 1), 2), and 3) above.

Alternative means of compliance with this Directive must be approved by the Director, Airworthiness.

This Directive becomes effective December 31, 1985.

Pursuant to CAR 202.51 the registered owner of a Canadian aircraft shall, within seven days, notify the Minister in writing of any change of his or her name or address. To request a change of address, contact the Civil Aviation Communications Centre (AARC) at Place de Ville, Ottawa, Ontario K1A 0N8, or 1-800-305-2059, or <http://www.tc.gc.ca/civilaviation/communications/centre/address.asp>.

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