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## No. CF-80-20R1

### 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-80-20R1 DE HAVILLAND

Applies to Boeing Canada, de Havilland Division Model DHC-7 aircraft, Series 1, 100, 101, 102 and 103, serial numbers 1 to 14 inclusive, and 17.

Compliance is required as indicated, unless already accomplished.

Cracks have been found on the fatigue test airframe, in the fuselage upper longeron (at the rear spar frame), and in the wing-to-outboard nacelle joints.

To detect these cracks in in-service aircraft, accomplish the following:

1. Inspect the fuselage upper longeron near the rear spar frame by personnel certified to Level II (aircraft structure) of CGSB Standard 48-GP-4M using X-ray method in accordance with de Havilland Service Bulletin No. 7-53-9, dated 23 May 1980 or later revisions approved by the Director, Airworthiness Branch, Transport Canada, Ottawa. The X-ray inspection is to be accomplished at intervals not exceeding 1000 flight hours after the initial inspection which is to be determined as follows:

(a) For Series 101 and 103 aircraft:

(i) with 2900 flight hours or less, the initial inspection is to be performed before 3000 flight hours.

(ii) with more than 2900 flight hours, the initial inspection is to be performed within 100 flight hours from 22 August 1980.

(b) For Series 1, 100 and 102 aircraft:

(i) with 3900 flight hours or less, the initial inspection is to be performed before 4000 flight hours.

(ii) with more than 3900 flight hours, the initial inspection is to be performed within 100 flight hours from 22 August 1980.

2. For all Series 1, 100, 101, 102 and 103 aircraft, inspect the wing to outboard nacelle joints by personnel certified to Level II of CGSB Standard 48-GP-4M using X-ray method in accordance with de Havilland Service Bulletin No. 7-57-4, dated 23 May 1980 or later revisions approved by the Director, Airworthiness Branch, Transport Canada, Ottawa. The X-ray inspection is to be repeated at intervals not exceeding 1000 flight hours after the initial inspection which is to be determined as follows:

(a) For aircraft with 4900 flight hours or less, the initial inspection is to be performed before 5000 flight hours.

(b) For aircraft with more than 4900 flight hours, the initial inspection is to be performed within 100 flight hours from 22 August 1980.

3. Before 1 December 1991, incorporate de Havilland Modifications 7/1622 (reinforcement of support structure at the fuselage rear spar frame) and 7/1645 (reinforcement of wing lower structure and outboard nacelle) in accordance with the service bulletins mentioned in paragraphs 1 and 2 of this directive, respectively.

Incorporation of de Havilland Modification 7/1622 and 7/1645 provides terminating action for the inspection requirements of paragraphs 1 and 2 of this directive.

Alternate 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 the original issue of Airworthiness Directive CF-80-20 which was issued on 30 July 1980.

This directive becomes effective 1 March 1991.

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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