

Transport  
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## No. CF-81-12

### 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-81-12 BEECH

Applies to all Beech 18 series aeroplanes including all military counterparts thereof and those Beech Model 18 aeroplanes modified in accordance with Supplemental Type Approvals or Supplemental Type Certificates.

Compliance is required as indicated.

There have been fatigue failures of the wing spar lower cap causing inflight failures of the wing.

To preclude inflight failures of the wing due to fatigue of the lower spar accomplish the following:

(a) For aeroplanes with 1500 or more total hours time in service or on aeroplanes that subsequently accumulate 1500 total hours time in service, unless already accomplished:

Incorporate one of the approved spar-strap modifications listed below:

(i) Aerocon STA SA73-1 (STC SA962EA),

(ii) Dee Howard STC SA832SW together with SA895SW,

(iii) Hamilton STC SA2000WE,

(iv) Other modifications approved by the Chief, Airworthiness, Department of Transport, Ottawa.

(b) At intervals no greater than 1500 hours time in service after incorporation of any of the above modifications:

(i) Remove and inspect spar-cap modification and inspect wing spar in accordance with Beech Maintenance Instructions and the inspections required by the designate 5000 hour inspection in the Department of Transport Approved Supplemental Instructions provided by the manufacturer of the modification kit installed.

(ii) Inspect wing stations 60, 62 and 90 U on all aircraft in accordance with United States FAA AD 75-27-09 R2 Beech (Amendment 39.3878) paragraph C) 3.

(iii) Inspect wing stations 102 and 111 on aircraft incorporating Aerocon or Dee Howard wing spar modifications in accordance with United States FAA AD 75-27-09 R2 Beech (Amendment 39.3878) paragraph C) 3.

(c) Within 75 hours time in service unless already accomplished within the last 400 hours time in service accomplish the following:

(i) Where Dee Howard modification is installed inspect in accordance with paragraph A) 1 of United States FAA AD 75-27-09 R2 Beech (Amendment 39.3878).

(ii) Inspect for cracks at wing stations 60 and 62 for all spar-strap modifications in accordance with paragraph A) 2 of United States FAA AD 75-27-09 R2 Beech (Amendment 39.3878).



- (d) At the next inspection of the wing structure required by this Directive unless already accomplished, incorporate inspection access provisions in accordance with paragraph B) 2 of United States FAA AD 75-27-09 R2 (Amendment 39.3878).
- (e) All radiographic inspections must be performed by a Canadian Senior Industrial Radiographer qualified in the Aircraft Structure category (Reference N-AME-AO 14/69).
- (f) If cracks are found as a result of any inspection, replace affected parts with a new part of the same part number, or repair according to a Department of Transport approved procedure before further flight. Beech Kits 18-4024-1, 18-4024-2, 598, 791, 792-1 and 792-5 are acceptable repairs for spar cracks, but do not alleviate the requirements of paragraph (a) of this Directive.
- (g) Report any cracks or other discrepancies affecting the installation observed during the inspection to the Chief, Airworthiness Division, Department of Transport, Ottawa.

Where an aircraft is prohibited from further flight as a result of the applicability of this Directive, one ferry flight, subject to such conditions as are deemed necessary may be permitted, upon application to the appropriate Department of Transport Regional Office.

Further compliance with F.A.A. Airworthiness Directive 75-27-09 R2 ADMT 39-3878 Beech, is not required, although it may be used for guidance in inspection procedures.

This Directive supersedes Airworthiness Directive CF-76-13.

This Directive becomes effective June 1, 1981.

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>.

24-0022 (01-2001)