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No. CF-93-14

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-93-14 AERO COMMANDER

Applies to the following Canadian registered Twin Commander Aircraft Corporation aircraft (all serial numbers):

Aero Commander Models

500, 500A, 500B, 500S, 500U, 520, 560, 560A, 560E, 560F, 680, 680E, 680F, 680F(P), 680FL, 680FL(P), 680T, 680V, 680W, 681 and 720.

Compliance is required as indicated.

Cracks have been found in the front spar lower cap forward flange at Wing Station (WS) 24.00.

To prevent structural failure of the wing in this area, accomplish the following:

A. Inspection

For the purpose of complying with this directive calculate the effective time in service according to the following formula:

Effective time in service = $N + 2.5S + 5T$

where N = hours in normal operations

S = hours in survey operations

T = hours in low altitude usage (below 1000 feet AGL)

Initially within 50 hours effective time in service after the effective date of this directive, unless already accomplished within the last 450 hours effective time in service, and thereafter at intervals not to exceed 500 hours effective time in service:

1. Perform a visual and fluorescent penetrant inspection of the left and right wing front spar lower cap in the area between wing rib, WS 24.00 and the adjacent fuselage frame, in accordance with the applicable Part I, II or III of the accomplishment instructions of the Twin Commander Aircraft Corporation (TCAC) Service Bulletin (SB) No. 90C, Revision No. 1 dated 5 June 1992.

Note: The fluorescent penetrant inspection must be performed by personnel certified to Level II or III of CGSB Standard 48-GP-9M or MIL-STD-410 or equivalent. Fluorescent penetrant Type I, Method A, Sensitivity Level II or higher, approved to military standard MIL-I-25135, must be used.

2. (a) If no cracks are found, visually inspect and, if this inspection reveals any deviation as outlined in the above service bulletin, rework the front spar lower cap radius in accordance with the applicable instructions of the bulletin.

- (b) If cracks are found in the front spar lower cap, proceed as follows:

- (i) Replace the cracked spar cap before further flight; and



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- (ii) Perform a metallurgical examination of the fracture surface.

Contact the Twin Commander Aircraft Corporation for further information on the required examination.

Within 10 days after receipt of the results of the metallurgical examination, report the results in writing to:

Transport Canada Aviation

Director, Airworthiness Branch

Attn: Mr. Peter von Moos - AARDG

200 Kent Street

Ottawa, Ontario K1A 0N8

Facsimile: (613) 996-9178

B. Modification

At the time of the initial inspection per section A.1 of this directive, to facilitate later inspections modify all aircraft listed under the effectivity Part II and III of TCAC SB No. 90C, dated 30 March 1992, in accordance with the accomplishment instructions of the above service bulletin, unless already accomplished.

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 directive supersedes Federal Aviation Administration Airworthiness Directive 65-06-01.

This directive becomes effective 20 August 1993.

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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