American Champion (Aeronca, Bellanca) Series Aeroplanes

AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/CHA/23 Amdt 3 and issues the following AD under subregulation 39.1 (1) of CAR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

AD/CHA/23
Amdt 4
Wing Spars 10/2001

Applicability:

Group 1 aircraft: ACAC Models 7AC, 7ACA, S7AC, 7BCM (L-16A), 7CCM (L-16B), S7CCM, 7DC, S7DC, 7EC, S7EC, 7FC, 7JC, 11AC, S11AC, 11BC, S11BC, 11CC, and S11CC aircraft that have not been modified to incorporate an engine with greater than 90 horsepower.

Group 2 aircraft: ACAC Models 7ECA, 7GC, 7GCA, 7GCAA, 7GCB, 7GCBA, 7GCBC, 7HC, 7KC, 7KCAB, 8GCBC, and 8KCAB aircraft; and any of the Group 1 aircraft that have been modified to incorporate an engine with greater than 90 horsepower.

Requirement:

1. Perform a detailed visual inspection of the entire length of the front and rear wood wing spars for cracks, compression cracks, longitudinal cracks through the bolt holes or nail holes, or loose or missing rib nails. Accomplish in accordance with the instructions in ACAC Service Letter No. 406, Revision A, dated May 6, 1998. This service letter specifies, as an FAA-approved inspection option, using a high-intensity flexible light (e.g., “Bend-A-Light”). A regular flashlight must not be used for this portion of the inspection.

2. If, after 22 March 2001 any aircraft is involved in an accident/incident that involves wing damage (e.g., wing surface deformations such as abrasions, gouges, scratches, or dents, etc.), accomplish the inspection specified in Requirement 1.

3. If any damage is found during any inspection required by this Directive, repair or replace the wood spar, in accordance with Advisory Circular 43.13-1B, Acceptable Methods, Techniques, and Practices; or other data that is FAA-approved for wing spar repair or replacement.

Note: FAA AD 2000-25-02 R1 Amdt 39-12255 refers.

Compliance:

1. For Group 1 aircraft: Initially inspect at the first annual inspection that occurs 30 calendar days or more after 4 October 2001 or within the next 13 calendar months after 22 March 2001, whichever occurs first.
For Group 2 aircraft: Initially inspect at the first annual inspection that occurs 30 calendar days or more after 22 March 2001 or within the next 13 calendar months after 22 March 2001, whichever occurs later. Repetitively inspect thereafter at intervals not to exceed 500 hours time in service or 12 calendar months, whichever occurs first.

2. Before further flight after each accident/incident that involved wing damage.

3. Before further flight after the inspection where the damage is found.

The compliance times remain unchanged by this issue except for Requirement 1 compliance.

This amendment becomes effective on 4 October 2001.

Background: Accidents caused by in-flight structural failure of the wings were attributed to compression failures in the wooden wing spars. Significant compression failures have also been found in other areas not addressed by FAA AD 87-18-09.

Amendment 2 required repetitive inspections of the front and rear spars for damage, including installing any necessary inspection holes, and repairing or replacing any damaged spar. The FAA actions resulted from in-flight wing structural failure on one of the affected aircraft that was in compliance with AD 87-18-09, plus four other ACAC Model 8GCBC accidents and eleven service difficulty reports of compression cracked spars.

Amendment 3 retained the actions of FAA AD 98-05-04 for the Model 8GCBC aircraft; extended the actions to all 7,8, and 11 series aircraft, and incorporated alternative methods of accomplishing the actions. FAA AD 200-25-02 was the result of a review of the service history of the affected aircraft that incorporate wood wing spars and of damage found on the spars.

Amendment 4 is issued in response to a revision of the related FAA AD which corrects the initial compliance time statement for Group 1 aircraft to “whichever occurs first”.

Amendment 3 of this Airworthiness Directive became effective on 22 March 2001.

Amendment 2 of this Airworthiness Directive became effective on 12 August 1999.
The original issue of this Airworthiness Directive became effective on 3 December 1987.

David Alan Villiers
Delegate of the Civil Aviation Safety Authority

22 August 2001

The above AD is notified in the Commonwealth of Australia Gazette on 12 September 2001.