

Schempp-Hirth Discus b and Discus CS gliders - Flight Controls

16 March 2015

Issued by the Civil Aviation Authority of New Zealand in the interests of aviation safety. A Continuing Airworthiness Notice (CAN) is intended to alert, educate, and make recommendations to the aviation community. A CAN contains non-regulatory information and guidance that does not meet the criteria for an Airworthiness Directive (AD). The inspections and practices described in this CAN must still be carried out in accordance with the applicable NZCAR Parts 21, 43 and 91.

The contents of this notice are ADVISORY ONLY and are NOT MANDATORY.

CAN numbering is by ATA Chapter followed by a sequential number for the next CAN in that ATA Chapter.

Applicability:

All Schempp-Hirth Discus b and Discus CS gliders.

Purpose:

This Continuing Airworthiness Notice (CAN) is issued to advise operators and maintainers that the stowage tray must be located correctly before the wings are fitted to the aircraft so that the stowage tray is locked in position by the wing spars. Incorrect rigging can result in an undetected gap between the tray and the aft bulkhead through which stowed equipment can enter the flight control system. This CAN requires an inspection to check the stowage tray location before every aircraft rigging to ensure that the stowage tray is locked in position.

Background:

This CAN is prompted by a recent investigation of a Schempp-Hirth Discus CS glider accident which was due to a restriction in the flight controls. The restriction was caused by unsecured picketing equipment which jammed the aileron flight controls. Fortunately the pilot was able to exit the aircraft and land safely by parachute. The glider was destroyed in the resultant impact with terrain.

The following observations were made by the CAA during the onsite inspection:

- Two picketing ropes and steel pegs were found jammed in the flight control mechanism located in the centre fuselage.
- The unsecured picketing equipment had fallen through the gap between the stowage tray and the aft bulkhead.
- The picketing equipment restricted full aileron movement to starboard.
- The control system restrictions made the glider uncontrollable and the aircraft was destroyed.

For further detail refer to the enclosed photographs (Occurrence #15/541 refers).

Recommendation:

The CAA strongly recommends the following:

Before every aircraft rigging inspect the stowage tray for correct position, and after every aircraft rigging ensure that the stowage tray is located all the way to the aft bulkhead and locked by the wing spars. There should be no gap through which any stowed equipment can enter the aircraft empennage and the flight control system.

Note:

Please report any defects found with the stowage tray installation to the CAA by completing a CA005 Defect Report form. Please provide as much engineering detail as possible. The form can be obtained from http://www.caa.govt.nz/Forms/CA005D_Form.pdf and the completed form can be emailed to the CAA at CA005@caa.govt.nz

Enquiries regarding this Continuing Airworthiness Notice should be made to:

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Picketing equipment jammed in the centre fuselage flight control system.



Demonstration of the gap between the stowage tray and the aft bulkhead which is difficult to detect when looking aft.



Stowage tray bulkhead to main fuselage detail.



Demonstration of stowage tray to aft bulkhead installation due to incorrect rigging and the resultant gap which results in an undetected gap through which stowed equipment can enter the flight control system.



Demonstration of correct stowage tray to aft bulkhead installation.