Aviation Safety Investigation Report 198801406

De Havilland DH-82A

20 November 1988

Readers are advised that the Australian Transport Safety Bureau investigates for the sole purpose of enhancing transport safety. Consequently, Bureau reports are confined to matters of safety significance and may be misleading if used for any other purposes.

Investigations commenced on or before 30 June 2003, including the publication of reports as a result of those investigations, are authorised by the CEO of the Bureau in accordance with Part 2A of the Air Navigation Act 1920.

Investigations commenced after 1 July 2003, including the publication of reports as a result of those investigations, are authorised by the CEO of the Bureau in accordance with the Transport Safety Investigation Act 2003 (TSI Act). Reports released under the TSI Act are not admissible as evidence in any civil or criminal proceedings.

NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

Occurrence Number: 198801406 **Occurrence Type:** Accident
Location: 2km SE of Coldstream Airfield VIC
Date: 20 November 1988 **Time:** 1510
Highest Injury Level: Fatal
Injuries:

	Fatal	Serious	Minor	None
Crew	0	1	0	0
Ground	0	0	0	-
Passenger	1	0	0	0
Total	**1**	**1**	**0**	**0**

Aircraft Details: De Havilland DH-82A
Registration: VH-LJM
Serial Number: 996
Operation Type: Private
Damage Level: Substantial
Departure Point: Coldstream VIC
Departure Time: 1430
Destination: Coldstream VIC

Approved for Release: 12th June 1990

Circumstances:

The pilot was flying a right hand circuit for Runway 35 at a height of about 500 feet above ground level. The aircraft was observed at a base turn position to suddenly bank about 30 degrees to the right, and then to adopt a nose low attitude and begin rotating to the right. This rotation continued until the aircraft struck the ground. No fault was subsequently found with the aircraft which might have contributed to the accident. The pilot reported that he had reduced engine power on the downwind leg because the aircraft speed was too high. He recalled that after the aircraft began rotating he had pulled the control column backwards, in an attempt to raise the nose of the aircraft and recover to normal flight, but this had no effect. The behaviour of the aircraft immediately prior to impact was consistent with with its speed decreasing to the point where the wing(s) stalled and the aircraft entered a spin to the right. The pilot had completed an aerobatic endorsement (including spin entry and recovery) on the aircraft type some five months before the accident. However, he reportedly had only four opportunities to practice spin recovery since then. The attempt by the pilot to recover from the spin by moving the control stick backwards was incorrect and was probably a spontaneous action on his part triggered by the sudden onset of the spin and the low height above ground level at which it occurred.

Significant Factors:

The following factors were considered relevant to the development of the accident

1. The pilot did not maintain sufficient airspeed for the conditions involved.

2. The aircraft stalled and entered a spin to the right.

3. In what was probably a spontaneous action on his part, the pilot applied an incorrect technique in attempting to recover from the spin.

Reccomendations:

Examination of the cockpit areas of the aircraft showed that the left hand shoulder harness attachment point for the front seat safety harness had failed, possibly contributing to the injuries received by the passenger. The shoulder harness arrangement is that the shoulder straps are attached to a common end fitting which is equipped with a pulley. The pulley is free to move laterally on a traverse cable which is attached via lugs bolted to the left and right upper fuselage longerons. In this case, the lug on the left side had separated from its longeron when the rear of the two attaching bolts failed. The failed bolt was not recovered but probably failed due to a combination of tension, bending and shear loads. The recommendation is made that the Civil Aviation Authority consider requiring either modification of the lug to prevent deformation of its rear end, or replacement of the rear bolt with a larger diameter bolt to prevent local bending of the bolt.