



Collision with terrain

VH-CZX Liberty Aerospace XL2

Luddenham, NSW

24 September 2008

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Abstract

On 24 September 2008, at about 1605 Eastern Standard Time, a Liberty Aerospace XL2 aircraft, registered VH-CZX, with one occupant, collided with terrain 2 km south of Luddenham, NSW. The aircraft descended through trees and impacted the ground, fatally injuring the student pilot. The aircraft sustained serious damage.

The investigation is continuing.

FACTUAL INFORMATION

The information contained in this preliminary report is derived from initial investigation of the occurrence. Readers are cautioned that there is the possibility that new evidence may become available that alters the circumstances as depicted in this report.

Sequence of events

On 24 September 2008, at about 1605 Eastern Standard Time¹, a Liberty Aerospace XL2 aircraft, (Liberty), registered VH-CZX, with one occupant, collided with terrain 2 km south of Luddenham, NSW. The aircraft descended through trees and impacted the ground, fatally injuring the student pilot. The aircraft sustained serious damage.

The pilot had been tasked to fly a solo navigational exercise from Bankstown, NSW to Cessnock, and to return to Bankstown via a flying training area (Figure 1). The student was to conduct practice forced landings and precautionary search and landing exercises while in the training area. Those exercises had been included as preparation for a flight test for a Private Pilot (Aeroplane) Licence.

Figure 1: Accident site location (red shaded area indicates training area)



The pilot departed Bankstown at about 1406. Radio broadcasts recorded at Cessnock indicated that the pilot departed Cessnock at 1513 to fly to the flying training area before returning to Bankstown.

A witness on the ground near the accident site saw the aircraft fly slowly at low level in a right turn, and then descend rapidly into trees. Another

1 The 24-hour clock is used in this report to describe the local time of day, Eastern Standard Time (EST), as particular events occurred. Eastern Standard Time was Coordinated Universal Time (UTC) + 10 hours.

witness saw the aircraft descend steeply toward the trees with the wings rocking as it descended.

The aircraft descended through a stand of trees before impacting the ground.

Wreckage and accident site information

The aircraft descended at about 40 degrees from the horizontal, in a direction of about 190 degrees (magnetic). It struck four small trees, travelled for about 18 metres and struck a larger tree, before impacting the ground about 5 metres from the base of that tree.

The empennage and wings separated from the fuselage and the aircraft came to rest next to a small dam, 52 metres from the first tree strike (Figure 2). The outer section of the right wing separated from the aircraft at an early stage in the impact sequence and was found 17 metres away from the fuselage. The left wing and inner section of the right wing came to rest about 7 metres from the fuselage. The inner section of the right wing sustained significant leading edge crush damage. The left wing sustained crush damage to the outer section consistent with tree impact. The nose section and cockpit were substantially damaged and the engine had partially separated from the fuselage.

Evidence of propeller strikes was found on fallen tree branches, and a large section of one propeller blade was found in a tree 40 metres to the right of the direction of aircraft travel, abeam the location of the ground impact.

The aircraft's fuel tank was ruptured during the impact sequence. Emergency services personnel reported that fuel had leaked from the tank for several minutes after their arrival at the site.

All major parts of the aircraft were accounted for at the accident site and continuity for all of the flight controls was established.

Figure 2: Accident site



Pilot information

In March 2008, the pilot had been issued with a Student Pilot Licence. The pilot's Class 2 medical certificate was valid until 9 April 2011 and he had accumulated approximately 74 hours aeronautical experience. The pilot was enrolled in a Commercial Pilot (Aeroplane) Licence course at a Bankstown flying school.

Aircraft information

The Liberty was a single-engine low-wing composite-fuselage aircraft certified in the normal category. It was manufactured in the United States in 2008, and was first registered in Australia on 3 June 2008. The aircraft had an estimated 160 hours flight time at the time of the accident.

It was powered by a Teledyne Continental IOF-240-B5B engine, driving a two-bladed, fixed-pitch wooden composite propeller.

Further investigation

The investigation is continuing and will include further examination and analysis of:

- the accident and impact sequence
- pilot training records
- the flight school's pilot training system
- the aircraft's engine and instruments.