



Australian Government

Australian Transport Safety Bureau

ATSB TRANSPORT SAFETY INVESTIGATION REPORT

Aviation Occurrence Report –200605133

Preliminary

**Loss of control
Mt Vernon Station, WA
CESSNA 172L, VH-RIL
1 September 2006**



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Released in accordance with section 25 of the *Transport Safety Investigation Act 2003*

Published by: Australian Transport Safety Bureau
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ISBN and formal report title: see 'Document retrieval information' on page iii.

DOCUMENT RETRIEVAL INFORMATION

Report No.

200605133

No. of pages

6

Publication title

Loss of Control- Mr Vernon Station, WA, CESSNA 172L, VH-RIL, 1 September 2006

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Abstract

The pilot with four passengers on board, was conducting a private flight within the station property. The aircraft was later discovered destroyed after it had impacted the ground. Two of the passengers were fatally injured.

The investigation is continuing.

THE AUSTRALIAN TRANSPORT SAFETY BUREAU

The Australian Transport Safety Bureau (ATSB) is an operationally independent multi-modal Bureau within the Australian Government Department of Transport and Regional Services. ATSB investigations are independent of regulatory, operator or other external bodies.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to fare-paying passenger operations. Accordingly, the ATSB also conducts investigations and studies of the transport system to identify underlying factors and trends that have the potential to adversely affect safety.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and, where applicable, relevant international agreements. The object of a safety investigation is to determine the circumstances in order to prevent other similar events. The results of these determinations form the basis for safety action, including recommendations where necessary. As with equivalent overseas organisations, the ATSB has no power to implement its recommendations.

It is not the object of an investigation to determine blame or liability. However, it should be recognised that an investigation report must include factual material of sufficient weight to support the analysis and findings. That material will at times contain information reflecting on the performance of individuals and organisations, and how their actions may have contributed to the outcomes of the matter under investigation. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

Central to the ATSB's investigation of transport safety matters is the early identification of safety issues in the transport environment. While the Bureau issues recommendations to regulatory authorities, industry, or other agencies in order to address safety issues, its preference is for organisations to make safety enhancements during the course of an investigation. The Bureau prefers to report positive safety action in its final reports rather than making formal recommendations. Recommendations may be issued in conjunction with ATSB reports or independently. A safety issue may lead to a number of similar recommendations, each issued to a different agency.

The ATSB does not have the resources to carry out a full cost-benefit analysis of each safety recommendation. The cost of a recommendation must be balanced against its benefits to safety, and transport safety involves the whole community. Such analysis is a matter for the body to which the recommendation is addressed (for example, the relevant regulatory authority in aviation, marine or rail in consultation with the industry).

FACTUAL INFORMATION

Sequence of events

On 1 September 2006, at approximately 1100 WST¹, the pilot of a Cessna C172L aircraft, registered VH-RIL, together with four passengers (two adults, one child and an infant) departed from 'Bronco', a cattle mustering area on Mt Vernon station, WA. The pilot was to fly to the homestead on the property, a flight of approximately 10 minutes duration.

At the same time, members of the pilot's family and station staff left Bronco in motor vehicles to drive the approximately 30 km journey back to the homestead. Upon their arrival, it was noted that the aircraft had failed to arrive at the homestead. After attempts to contact the pilot by radio failed, a search was conducted, during which the pilot and child passenger were found walking towards the homestead. The pilot, who was disorientated and injured, reported that the aircraft had crashed in bushland adjacent to the homestead airstrip. The child had minor injuries.

After obtaining general directions to the aircraft, the search party were able to locate the aircraft wreckage. On arrival, searchers found a female adult passenger semiconscious with extensive injuries. The male adult passenger and the infant had been fatally injured.

The pilot later reported that, on departing Bronco, the weather had been calm and clear, with a temperature of 35 degrees Celsius. During the flight, minor turbulence was experienced, with the pilot observing Willy Willies² approximately 3 to 5km in the distance. On commencing descent, and after selecting flaps in preparation to land, the aircraft entered severe turbulence that led to it pitching up violently. The aircraft also rocked from side to side before adopting a near-vertical nose down attitude.

The pilot recalled that, in responding to the in-flight upset, the controls felt heavy and that he needed to apply more engine power. However, he did not remember whether more power was applied or not. Soon after, the aircraft entered foliage, impacted the ground and came to rest in an almost inverted position.

The Australian Transport Safety Bureau (ATSB) examined the wreckage on-site and determined that the aircraft had entered the foliage at an approximate descent

¹ The 24-hour clock is used in this report to describe the local time of day, Western Standard Time (WST), as particular events occurred. Western Standard Time was Coordinated Universal Time (UTC) +8 hours

² Willy Willies (also known a dust devils) – A revolving mass of air resulting from local atmospheric instability, such as that caused by intense heating of the ground by the sun on a hot summer day. Examples are small whirls of dust or leaves, and the sand whirls of the desert, called dust devils [willy willies] or dust whirls.
<http://columbia.thefreedictionary.com/Willy+willies>

angle of 4 degrees, with a left wing-low attitude. The wreckage trail extended for 70 metres with evidence of the aircraft impacting a number of trees. The impacts resulted in the right main landing gear, right wing and right horizontal stabiliser being torn from the fuselage. Before coming to rest, the aircraft rolled to the right and collided with a tree, which split the fuselage at the rear of the cabin (Figure 1).

Figure 1. Right wing, horizontal stabiliser and main landing gear torn away, fuselage breached at the rear of cabin.



Examination of the aircraft did not find any system anomalies that would have prevented controlled flight of the aircraft prior to impact. The engine and propeller were removed for disassembly and further examination, during which no anomalies were found.

The investigation is continuing and will include a review of:

- weather phenomena
- operational information
- passenger restraint effectiveness.