Australian Government

Australian Transport Safety Bureau

ATSB TRANSPORT SAFETY INVESTIGATION REPORT

Aviation Safety Occurrence Report – 200607801

Preliminary

Wirestrike

Nelson, Victoria

24 December 2006

Auster Aircraft Co. J1/A1, VH-ALO

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Google Earth satellite photograph.

Abstract

On 24 December 2006, the owner-pilot of an Auster Aircraft Company J1/A1 aircraft, registered VH-ALO, was intending to ferry the aircraft from a private airstrip at Nelson, Vic, to Akuna station S.A. The pilot was the sole occupant. At approximately 0930 Eastern Daylight-saving Time, the pilot commenced a takeoff towards the west. Three people were standing between two hangars that were to the north of the airstrip and they observed that the aircraft became airborne before it reached the taxiway leading from the hangars to the runway. When the aircraft was adjacent to the taxiway, it made a low level right turn towards the hangars.

One witness, who was an experienced pilot, reported that the aircraft climbed suddenly just prior to striking a power line that was located on the airstrip side of the hangars. The aircraft then drifted over open space between the two hangers on a northerly heading; the left wing was seen to drop and the aircraft impacted the ground almost vertically. The pilot was fatally injured.

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 24 December 2006, the owner-pilot of an Auster Aircraft Company J1/A1 aircraft, registered VH-ALO, was intending to ferry the aircraft from a private airstrip at Nelson, Vic, to Akuna station S.A. The pilot was the sole occupant.

At approximately 0930 Eastern Daylight-saving Time[1], the pilot commenced a takeoff towards the west. Three people were standing between two hangars that were to the north of the airstrip and they observed that the aircraft became airborne before it reached the taxiway leading from the hangars to the runway (figure 1). When the aircraft was adjacent to the taxiway, it made a low level right turn towards the hangars.

One witness, who was an experienced pilot, reported that the aircraft climbed suddenly just prior to striking a powerline that was located on the airstrip side of the hangars. The aircraft then drifted over open space between the two hangers on a northerly heading; the left wing was seen to drop and the aircraft impacted the ground almost vertically. The pilot was fatally injured.

The witnesses reported that the engine sounded normal and the aircraft appeared to be in controlled flight before the wire strike. The powerline consisted of two wires running parallel to each other. Only one of the wires was struck and it detached from the adjacent pole but was not cut. The other wire remained in place.

At the time of the accident, the weather was reported to be fine with a 15 kt wind from the west. The approximate flight path of the aircraft is shown in figure 1.

Figure 1: Aerial view of the aircraft flight path

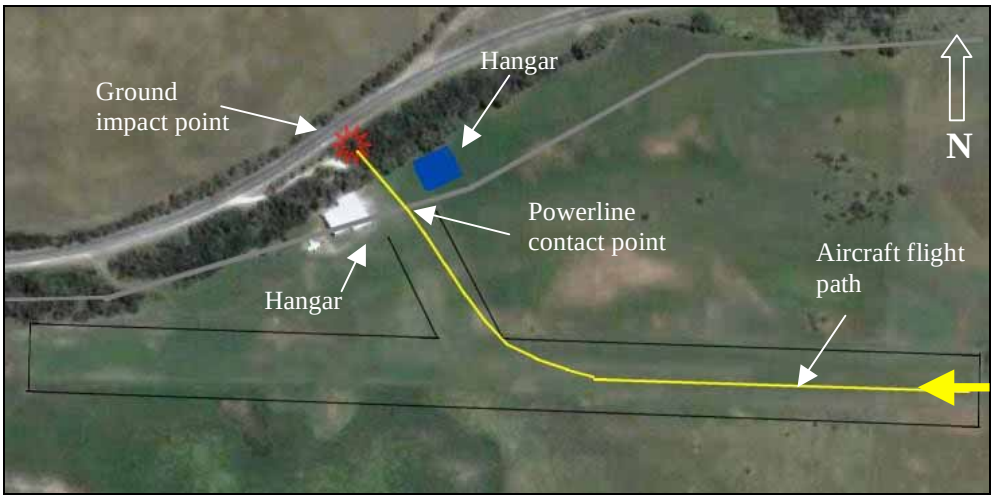
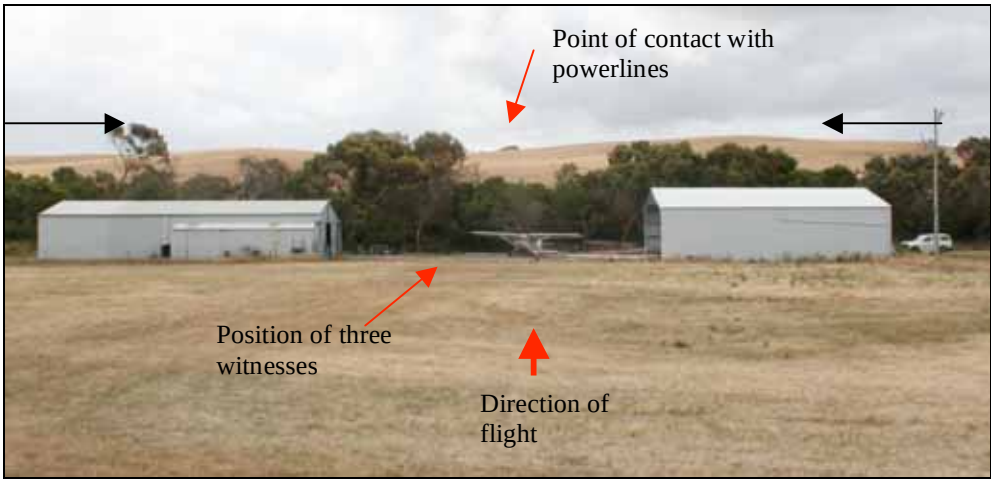


Photo courtesy of Google Earth – note the blue square denotes the location of a hangar built subsequent to this photograph.

1 The 24 hour clock is used in this report to describe the local time of day which was Eastern Daylight-saving Time (EDT). EDT is universal Time Co-ordinated + 11 hours.

The three witnesses were standing almost directly beneath the powerline contact point. The aircraft impacted the ground directly behind the trees located beyond the two hangars (figure 2).

Figure 2: View of the two hangars and power line contact point



Wreckage Examination

The aircraft impacted the ground inverted at an angle of approximately 60 degrees (figure 3). The aircraft was examined, with no pre-impact defects evident and all of the aircraft components accounted for on the accident site.

A damaged hand-held Global Positioning System (GPS) was found in the aircraft. The GPS was recovered by the Australian Transport Safety Bureau for further examination.

Figure 3: Aircraft wreckage

Fragmented sections of the wooden propeller were found in close proximity to the section of powerline that was struck. Powerline contact marks on the propeller indicated that the aircraft engine was generating significant power when the propeller blade came in contact with the powerlines.

The propeller blade pieces were reassembled at the accident site. Powerline contact marks were evident along the propeller leading edge and a section of the leading edge was bent forward, indicating the point where the powerline contact resulted in the propeller blade fracture (figure 4).

Figure 4: Fragmented propeller blade

Further investigation

The investigation is continuing and will include:

- a review of the pilot's post-mortem results
- examination of the damaged GPS unit
- a review of the aircraft maintenance records
- a review of the pilots' records.