

Aviation Safety Investigation Report 198201382

Beech 58

27 March 1982

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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: 198201382
Location: Armidale NSW
Date: 27 March 1982
Highest Injury Level: Fatal
Injuries:

Occurrence Type: Accident

Time: N/A

	Fatal	Serious	Minor	None
Crew	0	1	0	0
Ground	0	0	0	-
Passenger	1	0	3	0
Total	1	1	3	0

Aircraft Details: Beech 58
Registration: VH-AWT
Serial Number:
Operation Type: Commercial - Carriage of Passengers
Damage Level: Destroyed
Departure Point: Armidale NSW
Departure Time: N/A
Destination: Sydney NSW

Approved for Release: 13th March, 1984

Circumstances:

The aircraft had been chartered to transport a television film crew to Sydney, departing Armidale at 2130 hours. After rising about 0800 hours the pilot had spent the day working in his garden and watching television. At about 1600 hours he went to the airport to prepare the aircraft for the flight to Sydney and to submit a flight plan. He returned home at 1745 hours for a meal and planned to proceed to the airport at 2045 hours. Shortly afterwards he received a telephone call from another client requesting a charter flight to Sydney. He agreed to carry out the additional flight and DEPARTURE was made from Armidale at 1830 hours, with the return flight arriving from Sydney at 2130 hours. After landing the pilot refuelled the aircraft and waited at the airport for the film crew, who were delayed and finally arrived at about 2310 hours. The film crew requested that an additional passenger be flown to Sydney and after calculating the weight of the baggage the pilot agreed to the carriage of that passenger. The aircraft was loaded, with the front seat beside the pilot being occupied by Mr Phillips. The other three passengers were seated in the rear passenger area, one facing aft while the other two faced forward. All passengers fastened their seat belts, although Mr Phillips used only the lap portion of the lap/sash belt which was provided for the front seat passenger. After both engines were started, the aircraft was taxiied to the threshold of runway 23 where the engine checks were completed. The take-off run was commenced and a witness reported that the aircraft became airborne after a ground roll of about 1100 metres and then commenced a shallow climb. It then disappeared from sight. It was established the aircraft entered a descent and shortly afterwards it collided with a number trees in an apple orchard before impacting the ground about 1400 metres beyond the point where it became airborne. Subsequent investigation did not find any fault with the aircraft or its systems that would have contributed to the accident. At the time of the accident the wind was calm, the night was dark with no moon light. Once the aircraft passed the end of the runway no ground lights would have been visible to the pilot. These conditions may cause a

pilot to experience sensory illusions; so he must rely solely on the flight instruments in order to establish and maintain correct aircraft attitude. Whether the pilot of VH-AWT was affected by such illusions on the particular occasion could not be positively determined. The pilot selected the initial climb attitude of the aircraft by referring to the runway lights. This technique is considered less than optimum, for the recommended technique requires reference to the flight instruments for attitude selection and maintenance. Reliance upon reference to runway lights during the initial climb may result in a lower than desired climb attitude where a runway slopes down in the direction of take-off. This condition exists on runway 23 at Armidale. ((1))

Significant Factors:

The reason(s) why the pilot failed to establish and maintain the aircraft on a safe flight path after take-off could not be positively determined. However, whilst none of the following factors alone may have caused the accident, the combination of all three may have been sufficient to result in the accident.

1. It is possible that the pilot was tired as a result of his long period of wakefulness. The effects of this may have increased the pilot's susceptibility to sensory illusions and lessened his ability to cope with their effects.
2. The take-off technique used by the pilot was considered less than optimum for night operations.
3. The down slope on runway 23 and the lack of visual cues available beyond runway 23 were conducive to the development of sensory illusions during take-off. Such illusions may cause a pilot to believe that he is climbing when he is actually descending.