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- safety data recording, analysis and research
- fostering safety awareness, knowledge and action.

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Publication Date: Month Year

ISBN: 978-1-74251-205-1

ATSB-Sept11/ATSB20

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

# Collision with terrain, VH-POJ

## 40 km N Horsham, Victoria

### 15 August 2011

#### Abstract

On 15 August 2011, a Piper Aircraft Inc. PA-28-180 aircraft, registered VH-POJ, was conducting a private flight between Essendon Airport, Victoria and Nhill Aerodrome, Victoria under the visual flight rules (VFR). On board were the pilot and two passengers. The purpose of the flight was to transport one of the passengers, who had been in Melbourne, Victoria for non-emergency medical reasons, back to Nhill.

VH-POJ departed Essendon at 1600 and the pilot made an unplanned landing at Bendigo, Victoria at 1649. The aircraft departed Bendigo for Nhill at 1711.

The weather in the area around the accident was reported by other pilots not to have been suitable for VFR flight in the late afternoon.

Witnesses in, and to the south west of, Warracknabeal, Victoria reported hearing and/or seeing a low-flying light aircraft from approximately 1800 onwards. At approximately 1820, a loud bang was heard.

The aircraft's emergency locator transmitter did not activate. Witnesses raised the alarm immediately, but the crash site was not found until two hours after the accident occurred; the police and emergency services arrived at the scene a further thirty minutes after that.

Although classified as a private operation, the flight had been organised as an 'Angel Flight' by the charity, Angel Flight™ Australia.

The investigation is continuing.

#### FACTUAL INFORMATION

*The information in this preliminary report is derived from initial investigation of the occurrence. Readers are cautioned that it is possible that new evidence may become available that would alter the description of circumstances discussed in this report.*

#### History of the flight

On 15 August 2011, a Piper Aircraft Inc. PA-28-180 aircraft, registered VH-POJ (POJ), was conducting a private flight between Essendon Airport, Victoria and Nhill Aerodrome, Victoria under the visual flight rules (VFR)<sup>1</sup>. On board were the pilot and two passengers.

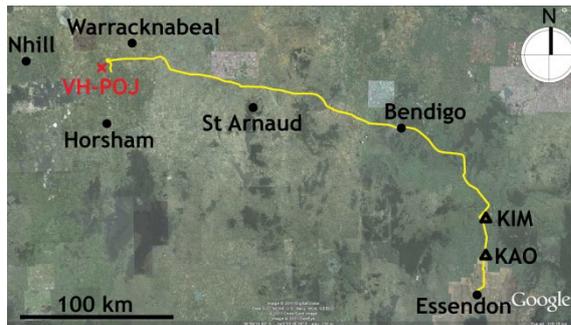
The purpose of the flight was to transport one of the passengers, who had been in Melbourne, Victoria for non-emergency medical reasons, back to Nhill. Although classified as a private operation, the flight had been organised as an 'Angel Flight' by the charity, Angel Flight™ Australia.

Earlier in the day, the pilot had departed alone from Yarrowonga, Victoria for Essendon via Albury, New South Wales, where he had refuelled the aircraft. While waiting for his passengers, he was reported to have spent the afternoon in a pilot shop in Essendon, and to have been concerned about the weather. He refuelled the aircraft again at Essendon.

1 Visual flight rules (VFR) are a set of regulations which allow a pilot to only operate an aircraft in weather conditions generally clear enough to allow the pilot to see where the aircraft is going.

The pilot had planned to fly from Essendon to the VFR waypoints Kalkallo (KAO) and Kilmore (KIM), and then direct to Nhill. He departed Essendon at 1600, however, after passing KIM he flew POJ to Bendigo Airport, landing there at approximately 1649<sup>2</sup> (Figure 1).

**Figure 1 Accident flight track**



While on the ground at Bendigo, the pilot logged on to the National Aeronautical Information Processing System (NAIPS), from which it was possible to access the most up-to-date aviation weather forecasts and reports. One of the passengers telephoned a family member at Nhill for an assessment of the weather there. On the basis of this assessment, the pilot decided to continue the flight and POJ departed Bendigo for Nhill at approximately 1711 (Figure 1).

Witnesses in, and to the south-west of, Warracknabeal, Victoria reported hearing and/or seeing a low-flying, light aircraft, at approximately 1800. At 1820, witnesses 1.8 km south of the accident site observed VH-POJ fly in an arc, initially to the west of them heading south, then to the south of them heading west, and finally disappearing from view behind trees as it flew to the north of them heading in a north westerly direction. Moments later, they heard a loud bang.

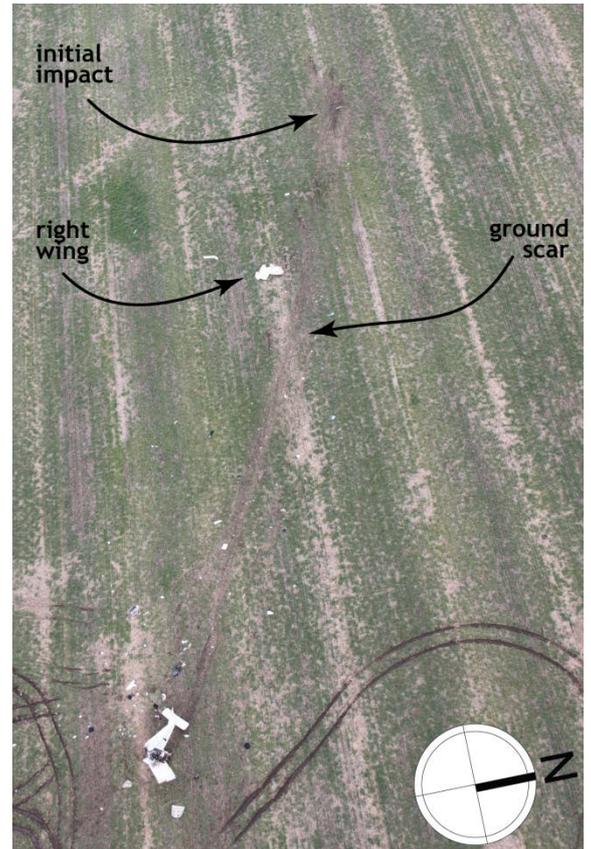
## Injuries to persons

The pilot and one of the passengers sustained fatal injuries while the other passenger died one week later from injuries sustained during the accident.

## Wreckage and impact information

Ground impact marks indicated that the aircraft impacted the ground in a right wing-low attitude. The aircraft's fuselage came to rest about 100 m from the initial ground impact (Figure 2).

**Figure 2 Aerial view of accident site**



The right wing had separated from the fuselage. The soil in the vicinity of the right wing was contaminated with fuel.

**Figure 3 Aircraft wreckage**



All of the aircraft's primary structure and flight controls were located at the accident site and there was no evidence of fire (Figure 3) or pre-

2 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.

impact failure. No anomalies of the aircraft's flight control system were identified. The engine exhibited no external signs of pre-impact damage.

## Personnel information

At the time of the accident, the pilot held a Private Pilot (Aeroplane) licence and a valid Class 2 aviation medical certificate. He was endorsed to fly single engine aeroplanes of less than 5,700 kg maximum takeoff weight, except those requiring a specific type or class endorsement, and he held a night VFR rating<sup>3</sup>. He had a total aeronautical experience of about 940 hours.

## Aircraft information

The aircraft was a Piper Aircraft Inc. PA-28-180 manufactured in the USA in 1965. It was powered by a single Lycoming O-360-A3A four-cylinder engine. The aircraft had a total time in service of approximately 8,603 hours.

## Meteorological information

A METAR<sup>4</sup> for Horsham, issued at 1800 by the Automatic Weather Station located at the aerodrome, indicated that the wind in the area at the time of the accident was from a NNE direction at 10 knots. The temperature was 11 °C and the relative humidity was 100 %. There had been no rainfall at the airport in the 10 minutes prior to 1800.

An Aerodrome Forecast (TAF)<sup>5</sup> issued for Nhill and current at the time of the accident stated that, from 1600 to 1800, the weather would change from a NNE wind of 12 knots, light rain and scattered cloud at 2,500 ft and broken cloud at 8,000 ft, to a NW wind of 10 knots, with a few clouds at 2,000 ft and scattered cloud at 3,500 ft. Visibility was forecast to be in excess of 10 km for

the period of the TAF, except for an INTER<sup>6</sup> period from 0800 to 1800, with visibility reducing to 4,000 m in rain and broken cloud at 1,000 ft. A TAF for Horsham was issued at 0438 that morning, with the same INTER period.

The weather during the late afternoon in the area around the accident location was reported by other pilots not to have been suitable for VFR flight.

## Recorded information

There was a Lowrance 2000c Global Positioning System (GPS) unit on board the aircraft. That equipment had been recording GPS information throughout the day's flying and the data was downloaded by the ATSB. The aircraft's track shown in Figure 1 is derived from that information. There was also a tablet PC on board the aircraft, two mobile phones, and a portable media player.

## Further investigation

The investigation is continuing and will include:

- examination of recorded data and position information recovered from the GPS and tablet PC
- examination of aircraft components recovered from the wreckage, including the engine, cockpit instruments, and emergency locator transmitter
- a review of the aircraft maintenance history
- a review of the pilot's training records and flying history
- examination and analysis of meteorological information
- analysis of witness information
- examining the use of private flights for the transfer of passengers for non-emergency medical reasons.

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3 The Night VFR rating allows the holder to fly an aircraft by night in Visual Meteorological Conditions (VMC). It authorises the holder to fly at night in good weather.

4 Routine aerodrome weather report issued at fixed times, hourly or half-hourly.

5 Aerodrome Forecasts are a statement of meteorological conditions expected for a specific period of time, in the airspace within a radius of 5 NM (9 km) of the aerodrome.

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6 An intermittent deterioration in the forecast weather conditions, during which significant variation in prevailing conditions are expected to last for periods of less than 30 minutes duration.