

COMMONWEALTH OF AUSTRALIA-BUREAU OF AIR SAFETY INVESTIGATION
AIRCRAFT ACCIDENT INVESTIGATION SUMMARY REPORT

REFERENCE NO.
SI/814/1031

1. LOCATION OF OCCURRENCE

53 km east-northeast of Finke, N.T.

Elevation: 650 feet

Date: 29.8.81

Time: 2207 hours

Zone: CST

2. THE AIRCRAFT

Make and Model: Piper PA32-260

Registration: VH-PON

Certificate of Airworthiness: Issued on 6.1.75

Certificate of Registration Issued to:

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Operator:

Degree of Damage to Aircraft:
Destroyed

Other Property Damaged:
Nil

Defects discovered:
Nil

3. THE FLIGHT

Departure Point: Leigh Creek

Time of departure: 1824 hours

Destination: Alice Springs

Purpose of flight: Travel

Class of Operation: Private

4. THE CREW

Name	Status	Age	Class of Licence	Hours on Type	Total Hours	Degree of Injury
	Pilot	27	Private	42	322	Fatal

5. OTHER PERSONS (ALL PASSENGERS AND PERSONS INJURED ON GROUND)

Name	Status	Degree of Injury
	Passenger	Fatal
	Passenger	Fatal
	Passenger	Fatal

6. RELEVANT EVENTS

A private pilot had planned a fishing trip from Swan Hill, Victoria, to the Northern Territory. Three friends who were not pilots, agreed to accompany him and share the costs of the trip. It was planned to attend the Henley-on-Todd Regatta at Alice Springs on 30.8.81 during the north-bound flight. A few days before the intended departure, the pilot was required to withdraw from the trip because of other commitments. However, he was able to arrange for a commercial pilot, who worked at Tyabb, Victoria, to undertake the trip. It was also arranged that the Tyabb-based aircraft, VH-PON, would be used. The commercial pilot proposed to position at Swan Hill on 28.8.81, pick up the three passengers and proceed to Alice Springs on the next day.

Weather conditions in southern Victoria on 28.8.81 were poor. The commercial pilot flew VH-PON from Tyabb to Moorabbin Airport but was unable to proceed further in Visual Meteorological Conditions (VMC). Then, that evening, an unexpected personal matter required him to also withdraw. He contacted an acquaintance, , and asked if he would care to take over the trip. , agreed and the two pilots spent three hours together, discussing arrangements and preparing charts and preliminary flight plans for the journey. It was intended that would leave Moorabbin early on 29.8.81 and proceed that day, via Swan Hill and Leigh Creek, to Alice Springs. After the discussion, Mr Vorbach continued his preparations for some time. He was reported to have retired about 0130 hours EST but, at approximately 0300 hours, Melbourne Airport Operations Centre received a telephone call from a pilot, enquiring about the weather for a flight from Moorabbin to Swan Hill and Alice Springs. The identity of the caller was not recorded but may have been . Weather conditions were still poor and the caller was advised his prospects might be better after dawn.

The pilot arrived at a friend's house at about 0800 hours EST. He left his car in the friend's custody and was driven to Moorabbin Airport. At approximately 0830 hours, the pilot visited the Briefing Office and obtained a briefing on the weather to the north. Conditions were still unsuitable for flight in VMC. While awaiting an expected improvement, the pilot took his friend for a brief local flight in VH-PON. By about 1100 hours, the weather to the west of Moorabbin had improved and the pilot decided to depart in that direction, circumnavigating the poor conditions which still existed on the direct track to Swan Hill. He prepared and submitted a flight plan covering all stages of the journey to Alice Springs, operating under the Visual Flight Rules (VFR). Although forecasts of the wind enroute were available, the pilot chose to plan without allowance for wind.

When the flight plan was submitted, it was noted by the Briefing Officer that the estimated flight time was 9 hours 42 minutes and the journey would therefore extend beyond the end of daylight. When this was pointed out to the pilot, he indicated the final part of the journey would be completed under Night VMC procedures. The Briefing Officer reminded the pilot that he would need to check the latest weather forecasts at Leigh Creek, to ensure that indicated conditions were suitable for this type of operation.

VH-PON departed Moorabbin at 1134 hours EST and arrived at Swan Hill at 1411 hours. After refuelling and embarking the three passengers and their baggage, it departed at 1447 hours and arrived at

6. RELEVANT EVENTS (CONT)

Leigh Creek at 1819 hours (1749 hours CST). The aircraft was again refuelled and the pilot attended the Flight Service Unit, where he was given copies of the latest weather forecasts. He was then observed to make a number of calculations but he did not advise of any amendments to his original flight plan.

The forecasts provided to the pilot indicated that the wind at the planned cruising altitude of 8500 feet was from the west at 15 to 20 knots. No cloud was indicated for that part of the route south of Oodnadatta but increasing altocumulus and altostratus, base 12 000 feet, was forecast for the latter part of the journey.

VH-PON departed Leigh Creek at 1824 hours CST; at approximately the same time as the end of daylight. The planned route and estimated time intervals for the flight were : Lake Eyre North, 53 minutes; Oodnadatta, 59 minutes; Finke, 60 minutes; Alice Springs, 54 minutes. In accordance with this schedule, the pilot reported to Leigh Creek that he had reached Lake Eyre North at 1917 hours, was cruising at 8500 feet and was estimating Oodnadatta at 2016 hours. Subsequently, when in radio contact with Alice Springs, he amended his estimate for Oodnadatta to 2020 hours and then 2024 hours. At 2023 hours, the pilot reported his position as Oodnadatta at 2024 hours, cruising 8500 feet and estimating Finke at 2124 hours. At 2059 hours, he advised that he was now cruising at 7500 feet. Then, at 2124 hours, he reported he was at Finke at 2126 hours, cruising 7500 feet and estimating Alice Springs at 2220 hours.

Five minutes later, the pilot called Alice Springs and asked for radar guidance. He was then informed that Alice Springs was not equipped with radar and asked if he required navigational assistance. The pilot replied 'affirmative'. The Uncertainty Phase of Search and Rescue procedures was then implemented. As radio communications with VH-PON were intermittent, messages were relayed through other traffic and the pilot was asked if he could climb to 10 000 feet. Communications then improved and Alice Springs was able to ascertain from the pilot that his last positive visual fix had been Oodnadatta, he had maintained a heading of 335 degrees magnetic since that position and his true airspeed was 120 knots. As the aircraft was equipped with VHF omni-directional radio range (VOR) and automatic direction-finding equipment (ADF), the pilot was asked if he could receive the Alice Springs facilities. He advised that he was not receiving the VOR but that he could hear the Alice Springs automatic terminal information service (ATIS) on the ADF. At 2145 hours, the pilot advised his remaining fuel endurance was 90 minutes.

From the information provided by the pilot and the forecast winds, it was calculated that VH-PON was east of track. The pilot was therefore instructed to steer a heading of 320 degrees magnetic. At 2150 hours, he reported the ADF was indicating 030 degrees, but he could not see any lights or ground features. At 2157 hours, the pilot was instructed to steer a heading of 300 degrees magnetic, in the hope that he would come within range of the Alice Springs VOR station. Three minutes later he advised that his VOR equipment was receiving Alice Springs and he was on the 320 radial. As this indicated the aircraft was northwest of Alice Springs, the pilot was asked to confirm that his equipment indicated 320 'to' and not 320 'from' the station. No reply was received to either this or subsequent repeated calls.

6. RELEVANT EVENTS (CONT)

SAR procedures were upgraded to the Distress Phase and an extensive air and ground search ensued. VH-PON was not equipped with an emergency locator beacon and the wreckage was not located until 0755 hours on 31.8.81.

Parts of the aircraft were spread over a considerable area and a trajectory analysis of the various components indicated VH-PON had broken apart while heading 050 degrees magnetic, in a steep dive of at least 46 degrees and within an altitude range of 2750-3850 feet. Examination of the wreckage found no evidence of pre-existing defect. The left wing, both left and right stabilators and the rudder and fin had separated from the aircraft as a result of overload forces, in excess of the design strength of the aircraft. Permanent torsional deformation of both stabilators indicated the aircraft speed was in excess of 204 knots prior to break-up. There was evidence that the engine had been operating and the aircraft's electrical system had been powered at the time the fuselage struck the ground.

Although the flight was conducted at night, the pilot did not hold a night VMC or any other class of instrument rating. His log book recorded only 1½ hours night flying experience, gained in 1976 during training for his private pilot licence. However, documents recovered from the wreckage indicated that he had made travel flights at night on other occasions, as late as July 1981.

An analysis of the most probable flight path from Leigh Creek to the accident site indicated that VH-PON could not have been at Lake Eyre North, Oodnadatta and Finke at the reported times. However, the headwind which the aircraft would have experienced did not account for all of the delay apparent in reaching the location of the accident. Persons on the ground some 100 km east of Oodnadatta had sighted a light aircraft operating in their vicinity for about 15 minutes, at a time consistent with the assessed flight by VH-PON. This supported the conclusion that the pilot had been experiencing navigational difficulties and searching for an identifiable land mark for a considerable period.

Weather conditions between Oodnadatta and Alice Springs had consisted of increasing layered high cloud, with the lowest base at about 10 000 to 12 000 feet. Occasional light rain showers were present. The sky was completely overcast from about 40 km south of Finke to some 50 km south of Alice Springs. Beneath the cloud it was very dark and there was no visible horizon.

7. OPINION AS TO CAUSE

The cause of the accident was that, following a loss of control, the aircraft was subjected to aerodynamic loads in excess of its design limit. The reason for the loss of control was not determined but the pilot's lack of training and experience at maintaining control in the absence of external visual reference, fatigue and prolonged stress arising from navigational difficulties were probably contributing factors.

Approved for publication under the
provisions of Air Navigation
Regulation 283(1)


P.E. Choquenot Director

Date:

18.4.83