

LOCATION OF OCCURRENCE

Pennant Hills Golf Course, Sydney, New South Wales	Height a.m.s.l. (ft) 500 feet	Date 25.6.72	Time (Local) 1007	Zone EST
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2. THE AIRCRAFT

Type and Model Piper PA24/260 "Comanche"	Registration VH-TMB	Certificate of Airworthiness	Valid from 7.10.71	Valid to 6.10.80
Registered Owner J.N. Brown, P.O. Box 176, Caringbah, New South Wales.	Operator Chieftain Aviation Pty. Ltd., Hangar 276, Bankstown Airport, New South Wales	Degree of damage to aircraft Substantial		
		Other property damaged 2 fences broken		

Defects discovered In this type of aircraft the fuel contents gauge is coupled to the tank selector and indicates the quantity in the tank selected. An over-ride system permits the quantity in the other tanks to be checked without changing the tank selection. Defects found in the fuel contents indication system were: (a) an open electrical circuit resulted in a gauge indication of "Full" in any selected tank irrespective of actual quantity; (b) a loose connection caused the gauge to be unreliable in respect of the right auxilliary tank when the over-ride system was used.

3. THE FLIGHT

Last or intended departure point Bankstown	Time of departure 0933	Next point of intended landing Point of Departure	Purpose of flight Sight-seeing	Class of operation Charter
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4. THE CREW

Name	Status	Age	Class of licence	Hours on type	Total hours	Degree of injury
Patrick James HARRINGTON	Pilot	35	Commercial	34	5534	Serious

5. OTHER PERSONS (All passengers and persons injured on ground)

Name	Status	Degree of injury	Name	Status	Degree of injury
Mr James CHRISTIAN	Passenger	Serious	Nellie JOHNSON	Passenger	Serious
Norman THOMPSON	Passenger	Minor	Alice SANDLAND	Passenger	Fatal
Cecilia THOMPSON	Passenger	Serious			

6. RELEVANT EVENTS

On the day prior to the accident the aircraft was flown for approximately $3\frac{1}{2}$ hours and, although the pilot on that occasion noted the defect which gave a continuous "Full" indication in respect of the selected fuel tank, the defect was not recorded on the aircraft documents. The aircraft was not refuelled after the flight and it is probable that approximately 30 gallons of fuel, sufficient for $2\frac{1}{2}$ hours flying at normal consumption rate, remained including 7 gallons in the left main tank and 14 gallons in the right main tank. On the following morning Mr. P.J. Harrington prepared a flight plan on the assumption that all fuel tanks were full. He did not check the contents visually but accepted the visual observation by one of his passengers, a restricted private pilot licence holder, unfamiliar with this type of aircraft, that each tank was $\frac{3}{4}$ full. On entering the aircraft he checked the fuel contents by selecting each tank in turn and, noting that the gauge indicated each tank to be full, he attributed this to a gauge error. After taking off, the aircraft was flown to the north until it was over Gosford at which point the pilot turned back towards Bankstown. Shortly after passing Hornsby at an altitude of 2000 feet and some 30 minutes after departure the engine surged and ran roughly and this was followed by total loss of power. The pilot has stated that he conducted a cockpit check procedure for an engine failure and changed the fuel tank selection from left main, on which he had been operating, to right main. Attempts to restore power were unsuccessful. He then prepared to make a forced landing on a nearby golf course fairway, the most suitable area for the purpose within gliding distance. The first touchdown was not made until nearly 1300 feet from the approach boundary fence. After bouncing three times on the uneven surface of the remaining 264 feet of fairway the starboard wing struck a tree and the aircraft passed through a fence, crossed a road and then struck a low rock-faced earth bank. Examination and testing of the engine revealed no defects which would account for engine failure. The left main tank was found to be virtually empty and the left auxilliary tank contained 7 gallons. The right wing was severely damaged at impact, the torn cell of the right main tank contained approximately one quart of fuel and two gallons of the contents of the auxilliary tank was recovered. The soil beneath the wing contained traces of fuel to a depth of several inches.

7. OPINION AS TO CAUSE

The probable cause of the accident was that the pilot did not take adequate steps to determine the fuel quantity disposition prior to departure. A contributory factor was that the fuel quantity indication system was defective.

Report released <i>D.S. Graham</i> (D.S. GRAHAM)	Designation Assistant Director-General (Air Safety Investigation)	Date 20.3.1973
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