



TASMANIAN AIRCRAFT DISASTERS. ANA DC3 VH-AET
CAMBRIDGE AIRPORT 1946

Tasmanian Aircraft Disasters. ANA DC3 VH-AET, Cambridge Airport 1946

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The Incident

On Sunday 10 March 1946, one of Australia's worst aircraft accidents occurred. An Australian National Airways (ANA) DC3, registered VH-AET and en-route to Essendon, Victoria, crashed into the waters of Frederick Henry Bay in Southern Tasmania at approximately 8:50 pm, less than two minutes after departure from Cambridge Aerodrome.¹



Early aerial of Cambridge Airport. Source: Par Avion.edu.au

Observers reported the aircraft's take-off and initial climb out appeared normal with both engines operating properly. At about 400 feet, the aircraft began a left hand turn before descending steeply, impacting the sea some 300 yards beyond the water's edge. It was estimated the aircraft had a descent rate of approximately 4000ft per minute on impact.²

The flight crew. The flight crew consisted of the captain Thomas Spence, aged 30, who had about 3,500 hours flying experience and had been a captain of Douglas DC-3 aircraft for a year, joining Australian National Airways in June 1942. The co-pilot was David Collum, aged 21. He had about 1,400 hours flying experience, mostly with Australian National Airways. The supernumerary pilot was Austin Gibson, aged 37. He had about 2,500 hours flying experience in the RAAF; half of this as a flying instructor. He had over 1,000 hours in command of twin engine aircraft but no experience on the Douglas DC-3.³



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The Inquiry

The Director General of Civil Aviation, Arthur Drakeford, ordered an investigation into the accident. He selected John Watkins (Superintendent of Air Worthiness & Aeronautical Engineering) as Chairman and on 24 April 1946, appointed Mr Justice Simpson of the Supreme Court of the Australian Capital Territory to conduct the inquiry. The inquiry's findings were released on 11 June 1946.

This era of Australian aviation, with the lack of cockpit voice recorders or black boxes, made it difficult for accident investigations to ascertain a specific cause, however, the findings did present some significant factors that influenced future Australian aviation safety. The automatic pilot's control box, which had been recovered from the aircraft's wreckage, revealed the gyroscopes control nob was still set in the caged position, with the warning flag "caged" clearly visible. The control box also had a clearly visible placard that stated the gyro "must be uncaged before take-off".

The investigation proposed that the auto pilot may have been engaged at approximately 400 feet, when one of the pilots attempted to select the fuel cross-feed to ON. The controls for the cross feed and auto pilot were basically the same height, shape and only twelve inches apart. Tests that occurred appeared to support this theory, in that when the auto pilot was engaged, the control column was snatched from the pilot's hands and recovery may take some time, with a height loss of up to 600 feet.⁴

This theory was somewhat reinforced by the fact that nobody on the ground at Cambridge could remember who was seated, prior to take-off, in the co-pilot's seat and the possibility of the inexperienced supernumerary pilot being in the seat was suggested. Should the captain have called for the cross feed to be turned ON during the initial climb out (perhaps because of a fuel pressure problem on one engine), the lack of the supernumerary pilot's familiarity with the cockpit layout may have caused him to inadvertently engage the auto pilot, instead of the cross feed. But it still does not explain why the gyroscopic control nob was still caged.⁵

The inquiry further discovered some disturbing evidence in relation to the health and medical condition of the aircraft's captain, Thomas Spence. Spence was in fact a diabetic and had been treating himself with insulin. It was further discovered that he had been discharged from the RAAF in September 1941 as medically unfit. He applied for his Commercial Pilots licence in early 1942 but failed to disclose his diabetic condition during this medical and all other medical examinations.⁶

Spence was scheduled for a medical examination on 11 March for his licence renewal and it was considered plausible that he may have taken extra insulin to prepare for this examination. An overdose of insulin can distort the senses and cause muscles to be un-coordinated.

Further evidence was given to the inquiry by Michael Sharland, honorary ornithologist to the Tasmanian Museum. He told the inquiry that he had been shown the mutilated remains of a



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dead bird, that he identified as a Gannet. He was unable to say how the bird died, although he believed its injuries were suggestive of a collision with a fast-moving body.³

Captain P T L Taylor, Flight Superintendent of Australian National Airways, tendered that he thought a bird strike on the aircraft's pitot tube could have caused the crash, although Justice Simpson rejected this theory.⁷

Of the 25 persons on board the aircraft and despite an extensive search, only 21 bodies were recovered.



Wreckage of the aircraft's rudder and elevators. Source: Tasmanian Times

The findings. During the court of inquiry, Justice Simpson became aware of four irregularities that he listed in his report:⁸

1. When Thomas Spence had applied for a commercial pilot's licence, the RAAF Director-General of Medical Services had been acting as assessor for the Department of Civil Aviation. The Director-General had neglected to check Spence's RAAF medical history.
2. A medical examiner had failed to check Spence's statement that a recent period of hospitalisation was due to influenza, when in fact he had been suffering a serious diabetic condition.
3. Although it appeared the aircraft was about 900lbs (408kg) below the maximum authorised weight for take-off, it departed with 25 persons onboard but was approved to carry only 24 persons.
4. No flare path had been lit to illuminate the runway for take-off and any unexpected return to the aerodrome for landing.



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Recommendations. As a result of the inquiry, Justice Simpson made five recommendations.⁹

1. The practice of allowing pilots under instruction to gain experience in the cockpit of aircraft carrying paying passengers should be reviewed.
2. The levers that actuate the automatic pilot and fuel cross-feed should be modified so that they have a different appearance.
3. A regulation should be made to prohibit taking off at night without a flare path or other runway lighting system and it should be compulsory for the flare path to remain lit until there is no longer a possibility that the aircraft might return to the airport for a landing.
4. Ground engineers completing daily inspections should keep copies of their inspection records.
5. Medical examinations for issue or renewal of pilot licences should be made by doctors chosen - and paid for - by the Department of Civil Aviation.



ANA DC3 Similar to the accident aircraft. Source: TAHS File photo

The Coronial Inquiry. Only 21 bodies of the 25 persons on board were found. The Tasmanian Coroner Mr Sorell, investigating the bodies, determined that the cause of their deaths were multiple fractures and injuries, but was unable to say how or in what manner they met their deaths.

Future safety. Following Justice Simpson's recommendations, three were sent to the Director General for his consideration.³

1. Operation of the auto pilot off/on control on all DC3 aircraft registered in Australia should be distinctive from operation of any other control.
2. Instructions to be issued to pilots that the gyroscopes should be uncaged prior to take-off.
3. An urgent review of pilots under instruction on aircraft with fare paying passengers on board should be undertaken.



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The author would like to acknowledge the kind permission of the Holyman family in allowing the writing of this article.

¹ Mercury Newspaper 11 March 1946

² Canberra Times 12 March 1946

³ Job, Macarthur (1992) Air crash volume2, chapter 3

⁴ Mercury Newspaper 11 March 1946

⁵ Canberra Times 12 March 1946

⁶ Canberra Times 12 March 1946

⁷ The Argus 04 May 1946

⁸ Mercury Newspaper 12 June 1946

⁹ The Argus 12 June 1946