



GOVERNMENT OF AUSTRALIA

DEPARTMENT OF TRANSPORT

## AIRCRAFT ACCIDENT INVESTIGATION SUMMARY REPORT

Reference No.

SI/763/1005

Publication of this report is authorised by the Secretary under the provisions of Air Navigation Regulations 283 (1)

## 1. LOCATION OF OCCURRENCE

|                               |                             |                 |                            |              |
|-------------------------------|-----------------------------|-----------------|----------------------------|--------------|
| Swan Hill Aerodrome, Victoria | Height a.m.s.l.<br>229 feet | Date<br>23.1.76 | Time (Local)<br>1915 hours | Zone<br>ESuT |
|-------------------------------|-----------------------------|-----------------|----------------------------|--------------|

## 2. THE AIRCRAFT

|  |  |  |
|--|--|--|
| Make and Model<br>De Havilland DH82A 'Tiger Moth'  | Registration<br>VH-BJD   | Certificate of Airworthiness<br>Valid from 7.10.74 |
| Certificate of Registration issued to<br>V. R. McFadyen,<br>P. O. Box 525,<br>Swan Hill, Victoria. | Operator<br>E. A. Borrman,<br>'Chillichil',<br>Oxley, New South Wales. | Degree of damage to aircraft<br>Substantial        |
|  |  | Other property damaged<br>Nil                      |
| Defects discovered<br><br>Nil  |  |  |

## 3. THE FLIGHT

|   |                                 |   |   |                               |
|---|---------------------------------|---|---|-------------------------------|
| Last or intended departure point<br>Swan Hill | Time of departure<br>1915 hours | Next point of intended landing<br>Swan Hill | Purpose of flight<br>Conversion<br>Training | Class of operation<br>Private |
|---|---------------------------------|---|---|-------------------------------|

## 4. THE CREW

| Name                 | Status              | Age | Class of licence | Hours on type | Total hours | Degree of injury |
|----------------------|---------------------|-----|------------------|---------------|-------------|------------------|
| Edwin Alfred BORRMAN | Pilot-in<br>Command | 50  | Private          | 556           | 3076        | Fatal            |
| Paul Charles ACFIELD | Pilot               | 25  | Commercial       | 3             | 2062        | Minor            |

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

| Name | Status | Degree of injury | Name | Status | Degree of injury |
|------|--------|------------------|------|--------|------------------|
|      |        |                  |      |        |                  |

## 6. RELEVANT EVENTS

Mr. Borrman held Departmental approval to conduct conversion training and testing of private and higher category pilots for DH82 and Cessna type aircraft. Mr. Acfield arranged to undergo DH82 conversion training with Mr. Borrman and the first period of this training was a flight of about one hour in VH-BJD at Swan Hill on 8 January, 1976. The next period was from about 1720 hours to 1850 hours on the day of the accident and it included acrobatics, steep turns, take-offs, circuits and three point touch and go landings. The wind was light and variable and the take-offs and landings were made alternately on the grassed strips bearing 040° and 146° respectively. Some of the circuits were of a non-standard pattern with a circuit height of only about 500 feet. At the conclusion of this period, the two pilots discussed three point and 'wheeler' type landings which were intended to be practised during the next period. Mr. Acfield was briefed to take-off initially from the strip bearing 220° and to then make a dumb-bell type turn to position the aircraft on approach for the 040° strip. Mr. Borrman would then demonstrate the first 'wheeler' approach and landing.

With Mr. Borrman in the front cockpit and Mr. Acfield in the rear cockpit controlling the aircraft, take-off was made from the 220° strip and, at a height of about 300 feet, a turn to the right was commenced. During the turn Mr. Acfield asked Mr. Borrman to confirm that he intended to demonstrate the first landing and, when he received an affirmative reply, he gained the impression that control of the aircraft had been taken over by Mr. Borrman and he released the controls. Shortly afterwards the angle of bank increased and Mr. Acfield initially believed that the rate of turn was being increased by Mr. Borrman. However, the nose of the aircraft dropped and it spiralled towards the ground. Despite apparent attempts by each pilot to regain control, the aircraft struck the ground in a steep nose down attitude. It was subsequently established that a formal handing over/taking over routine had not often been used during the two previous periods of conversion training.

## OPINION AS TO CAUSE

The cause of the accident was that the pilot in command did not ensure that a positive system of transfer of control of the aircraft was employed.

Approved for  
publication
  
(I. M. Leslie)  
Delegate of the Secretary

Date

27.1.1977

## DEFINITIONS

**ACCIDENT** - An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all those persons have disembarked and in which

- (a) any person suffers death or serious injury as a result of being in or upon the aircraft or by direct contact with the aircraft or anything attached to the aircraft; or
- (b) the aircraft suffers substantial damage.

**FATAL INJURY** - Any injury which results in death within 30 days.

**SERIOUS INJURY** - Any injury other than a fatal injury which

- (a) requires hospitalisation for more than 48 hours, commencing within seven days from the date the injury was received; or
- (b) results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
- (c) involves lacerations which cause severe haemorrhages, nerve, muscle or tendon damage; or
- (d) involves injury to any internal organ; or
- (e) involves second or third degree burns, or any burns affecting more than five percent of the body surface.

**MINOR INJURY** - Any injury other than as defined under "Fatal Injury" or "Serious Injury".

**DESTROYED** - Consumed by fire, demolished or damaged beyond repair.

**SUBSTANTIAL DAMAGE** - Damage or structural failure which adversely affects the structural strength, performance or flight characteristics of the aircraft and which would normally require major repair or replacement of the affected component. The following types of damage are specifically excluded: engine failure, damage limited to an engine, bent fairings or cowling, dented skin, small punctured holes in the skin or fabric, taxi-ing damage to propeller blades, damage to tyres, engine accessories, brakes, or wingtips.

**MINOR DAMAGE** - Damage other than as defined under "Destroyed" or "Substantial Damage".