



AIRCRAFT ACCIDENT INVESTIGATION SUMMARY REPORT

Reference No.

SI/785/1025

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

1. LOCATION OF OCCURRENCE

Newman, Western Australia

Height a.m.s.l.
1717 feetDate
21.8.78Time (Local)
0829 hoursZone
WST

2. THE AIRCRAFT

Make and Model Bellanca 8KCAB	Registration VH-ERB	Certificate of Airworthiness Valid from 23.8.74
Certificate of Registration issued to	Operator	Degree of damage to aircraft Destroyed
		Other property damaged Nil
Defects discovered Nil		

3. THE FLIGHT

Last or intended departure point Newman	Time of departure 0826 hours	Next point of intended landing Port Hedland	Purpose of flight Travel	Class of operation Private
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4. THE CREW

Name	Status	Age	Class of licence	Hours on type	Total hours	Degree of injury
	Pilot	41	Commercial	535	9256	Fatal

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

Name	Status	Degree of injury	Name	Status	Degree of injury

6. RELEVANT EVENTS

The pilot was an experienced flying instructor and aerobatic pilot and held a general authorisation to conduct aerobatic flying below 3000 feet but not below 500 feet above ground level. He was also authorised to conduct an aerobatic display at Newman down to a height of 500 feet on the day before the accident. On that day, he flew the aircraft from Port Hedland to Newman and, after completing his aerobatic display, which commenced with a spin, he commented that the spin had been made with engine power on and more height had been lost during the manoeuvre than he had intended.

On the next morning, the pilot telephoned the Port Hedland Briefing Office and submitted flight plan details for a return flight from Newman to Port Hedland. The aircraft was refuelled to capacity and the pilot carried out a pre-flight inspection. He indicated that he would do a couple of "simple manoeuvres" after take-off before setting course for Port Hedland.

The surface wind was from 080° at three knots, there was no low cloud and visibility was unrestricted. After a normal engine start and warm-up period, the aircraft took off into the north-east and climbed in a left circuit pattern until it was again heading north-easterly, parallel to and to the south-east of the runway. During this period, the pilot broadcast by radio his intention to "carry out aerial work" in the vicinity of the aerodrome for three minutes before departure. At a height variously estimated from 2000 to 4500 feet above ground level, the aircraft made a steep turn in each direction and then resumed a north-easterly heading in a nose-up attitude. Engine power was then heard to decrease and the aircraft entered a spin, probably to the left although one of several witnesses believed it was to the right. As the spin progressed, the nose attitude appeared to steepen to the near vertical. After making four complete turns, and after the fifth turn commenced, the aircraft struck the ground some 600 metres south-east of the aerodrome terminal building. There was no fire.

Detailed examination of the aircraft wreckage indicated that it had struck the ground in a nose down attitude of some 60° to 70° below the horizontal. At the time of impact, it was not rotating about the vertical axis to any degree which suggests that the pilot had initiated partially successful action to recover from the manoeuvre. There was no evidence of any defect or malfunction which might have contributed to the accident.

6. RELEVANT EVENTS (Cont'd)

It was established that it was the normal practice of the pilot, when performing aerobatics, to set the altimeter of his aircraft to indicate the height above ground level. The altimeter of VH-ERB was found to be set to indicate the altitude above mean sea level, which is the required setting for cross country flight.

7. OPINION AS TO CAUSE

The probable cause of the accident was that the pilot, for reasons which have not been established, did not take timely action to recover from an aerobatic manoeuvre at a safe height.

Approved for publication	 Delegate of the Secretary	Date 20.8.80
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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

Note. - Specifically excluded are: death from natural causes and fatal or serious injury to any person on board whether self-inflicted or inflicted by another person, or to ground support personnel before or after flight, or fatal or serious injury which is not a direct result of the operation of the aircraft, or which concerns stowaways.

- (b) the aircraft suffers substantial damage or is destroyed; or
- (c) the aircraft is missing or is completely inaccessible.

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 or its accessories, or to propeller blades; bent fairings or cowlings; small dents or puncture holes in the skin; damage to wing tips, antennas, tires, or brakes.

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