

AIRCRAFT ACCIDENT INVESTIGATION SUMMARY REPORT

Reference No.

AS/705/1031

1. LOCATION OF OCCURRENCE

● miles east of Perth, Western Australia.	Height a.m.s.l. (ft) 5,000 feet	Date 22.7.70	Time (Local) 1718	Zone WST
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2. THE AIRCRAFT

Make and Model Cessna 402	Registration VH-DIL	Certificate of Airworthiness	Valid from 14.12.67	Valid to 13.12.76
Registered Owner Hicks Aviation Pty. Ltd., 20 Howard Street, Perth, Western Australia.	Operator Hicks Aviation Pty. Ltd., 20 Howard Street, Perth, Western Australia.	Degree of damage to aircraft Substantial		
		Other property damaged Articles of freight.		

Defects discovered

Automatic pilot pitch servo drive motor burnt out. The defect rendered the aircraft unserviceable for single pilot operations under the Instrument Flight Rules.

3. THE FLIGHT

Last or intended departure point Southern Cross	Time of departure 1600	Next point of intended landing Perth	Purpose of flight Carriage of Passengers	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
Walter Leslie ANSPACH	Pilot	32	Commercial	948	4210	Nil

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

Name	Status	Degree of injury	Name	Status	Degree of injury
K. S. JEFFS	Passenger	Nil	G. POLLOCK	Passenger	Nil
W. GORDON	Passenger	Nil	G. CRATCHLEY	Passenger	Minor
D. H. McCOLL	Passenger	Nil	D. SOKLICH	Passenger	Minor

6. CONTRAVENTIONS OF REGULATIONS AND ORDERS

Regulation or Order No.	Nature of contravention
	See Attached List

7. RELEVANT EVENTS

The aircraft was engaged on a charter flight to uplift five persons and the cabin seating was so arranged. When a sixth passenger was presented the pilot agreed to carry the extra person, seated on the floor of the aircraft and without a safety belt. A quantity of unsecured freight and baggage was also carried in the rear of the cabin. Weather information passed to the aircraft en route warned of moderate to severe turbulence and the Perth Airport weather was 7/8 of cloud with a base of 500 feet and visibility down to 2,000 yards in rain. The flight proceeded normally to a position some 24 miles east of Perth, where an area of severe turbulence was encountered. The aircraft was in cloud at an altitude of 5,000 feet and the pilot first used full power and a high nose attitude to counteract a sharp rate of descent. He then lowered the nose and reduced power to cope with a severe updraft. The effect of these manoeuvres and the resultant steep dive and recovery was that the unsecured passenger and freight forcibly contacted alternately the ceiling and the floor of the cabin slightly injuring the passenger and damaging some of the freight. This manoeuvre cycle was probably repeated before the aircraft eventually broke cloud with a ground clearance of 1,000 feet and the pilot regained control. During these manoeuvres the aircraft sustained extensive damage to the main spars and other major components. Instrument flight was then resumed and an instrument approach and a normal landing made at Perth Airport.

OPINION AS TO CAUSE

The probable cause of the accident was that the standard of instrument flying proficiency of the pilot was below the level necessary to cope with the turbulence conditions encountered.

Report approved



(D.S. GRAHAM)

Designation

Assistant Director-General
(Air Safety Investigation)

Date

16.7.71

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 cowlings, 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".

6. CONTRAVENTIONS OF REGULATIONS AND ORDERS

Regulation or Order Number	Nature of Contravention
A.N.R. 225(1)(c)	The flight was commenced when the pilot-in-command had not taken such action as was necessary to ensure that the load carried by the aircraft was so distributed and secured as to be safe for flight.
A.N.R. 225(1)(a)) A.N.O. 20.16.3) Para. 2.1)	A seat and safety harness was not provided for one of the passengers carried.
A.N.R. 312B (b)	The pilot made orally and in writing a false statement in respect of the number of passengers carried in the aircraft.
A.N.R. 312A) A.N.O. 40.1.8.2)	The pilot-in-command carried out an instrument approach procedure while holding a licence in which the instrument rating was not valid for the radio navigation aid used.
A.N.O. 20.18.5(d)	The aircraft was operated under the Instrument Flight Rules when the aircraft was not equipped with a serviceable automatic pilot providing automatic stability on the three axes when a holder of an appropriate pilot licence was not carried as a second crew member.