



COMMONWEALTH OF AUSTRALIA - DEPARTMENT OF TRANSPORT

Reference No.

AIRCRAFT ACCIDENT INVESTIGATION SUMMARY REPORT

SI/783/1037

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

1. LOCATION OF OCCURRENCE

Lilydale, Victoria	Height a.m.s.l. 240 feet	Date 14.8.78	Time (Local) 1515 hours	Zone EST
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2. THE AIRCRAFT

Make and Model Piper PA-28/140	Registration VH-EGC	Certificate of Airworthiness Valid from 30.6.76
Certificate of Registration issued to	Operator	Degree of damage to aircraft Substantial
		Other property damaged Fence
Defects discovered		
<ol style="list-style-type: none"> 1. Throttle butterfly dished. 2. Throttle shaft bent. 3. Inner surfaces of carburettor steel, Throttle shaft bushes extremely rough. 4. Compression buckling of throttle inner cable. 		

3. THE FLIGHT

Last or intended departure point Mangalore	Time of departure 1430 hours	Next point of intended landing Lilydale	Purpose of flight Pleasure	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	38	Private	100	163	Minor

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

Name	Status	Degree of injury	Name	Status	Degree of injury
	Passenger	Serious			

6. RELEVANT EVENTS

The purpose of the flight was for the pilot to gain some recent experience for the renewal of his private licence. While returning from a flight to Mangalore the throttle control became stiff to operate and appeared to be restricted in its movement. On arriving back at Lilydale the pilot planned for and made a steep approach to land in case the throttle control malfunctioned. On final approach, when he believed the aircraft was overshooting, he closed the throttle and selected flaps full down. Later on final approach he assessed that the aircraft was undershooting and on attempting to apply power he found that the throttle was jammed closed. He raised the flaps in an attempt to increase the gliding range but the aircraft undershot the end of the airstrip and heavily contacted the embankment of a drain just inside the airfield boundary. The landing gear collapsed and the aircraft slid some 20 metres before stopping.

The aircraft's engine and carburettor had been overhauled some 5.85 flying hours prior to the accident. At this time a new throttle butterfly valve, throttle shaft and throttle shaft bushes were installed. Post accident inspection of the carburettor indicated that the steel throttle shaft bushes had been binding on the steel throttle shaft. During the investigation samples of new butterfly valves, throttle shafts and throttle shaft bushes were obtained. All had defects approximately similar to those listed in section 2 above.

7. OPINION AS TO CAUSE

The cause of the accident was that following a misjudged landing approach the pilot was unable to apply engine power due to jamming in the throttle system. The probable cause of the throttle system jamming was seizure of the throttle shaft in the throttle shaft bushes.

Approved for
publication

Delegate of the Secretary

Date



MINUTE

11

SIGS (B)

A review of the report at folio 9 has been completed, and a draft summary report prepared as requested.

The report concerns a defective carburettor throttle shaft assembly which "seized", depriving the pilot of throttle control at a critical stage of flight. The pilot became aware of a throttle problem while airborne and planned a glide approach should the throttle jam. Due to his lack of continuity in flying practice however, he misjudged the approach. When he attempted to open the throttle to correct an undershoot, the throttle jammed.

Folio 8 shows that the airworthiness aspects are being followed up. Aside from the airworthiness aspects, there is a lesson to be learned from the accident. Pilots of single engine aircraft have a need to practice forced landings just as much as multi engine pilots must practice asymmetric aircraft handling.

Your attention is drawn to the requests contained in the covering memo.

28-2-79

A handwritten signature in cursive script, appearing to read "J. A. E. P.", with a flourish underneath.
SIG 3



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		Other property damaged Fence
Defects discovered Carburettor throttle shaft bending in throttle shaft bushes. Compression failure of throttle inner cable.		

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7. OPINION AS TO CAUSE

The cause of the accident was that, on becoming aware of a throttle control malfunction, the pilot did not use the best operating techniques to ensure a safe landing.

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publication

Delegate of the Secretary

Date