Aviation Safety Investigation Report 199900112

Cessna Aircraft Company Skyhawk

10 January 1999

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Occurrence Number: 199900112 **Occurrence Type:** Accident
Location: Maroochydore/Sunshine Coast, Aerodrome
State: QLD **Inv Category:** 4
Date: Sunday 10 January 1999
Time: 0936 hours **Time Zone** EST
Highest Injury Level: Fatal
Injuries:

	Fatal	Serious	Minor	None	Total
Crew	0	1	0	0	1
Ground	0	0	0	0	0
Passenger	2	0	0	0	2
Total	**2**	**1**	**0**	**0**	**3**

Aircraft Manufacturer: Cessna Aircraft Company
Aircraft Model: 172N
Aircraft Registration: VH-PJH **Serial Number:** 17273502
Type of Operation: Non-commercial Pleasure/Travel
Damage to Aircraft: Destroyed
Departure Point: Maroochydore Qld
Departure Time: 0855 EST
Destination: Maroochydore Qld

Crew Details:

Role	Class of Licence	Hours on Type	Hours Total
Pilot-In-Command	Commercial	4.0	163

Approved for Release: Friday, August 6, 1999

FACTUAL INFORMATION

The pilot had conducted a local scenic flight in Cessna 172N, VH-PJH. Returning to Maroochydore at about 0930, he requested clearance for a touch-and-go landing on runway 18. The aerodrome controller saw the aircraft bounce slightly on landing and the pilot apparently commence a go-around from less than 100 ft above ground level. The aircraft's assumed a high nose attitude and then commenced a left turn before descending steeply into the ground approximately 100 m east of the runway. The wing flaps were in the fully extended position at impact.

The aircraft was examined and no defects were found that may have contributed to the accident. Inspection of the engine revealed that it should have been capable of normal operation at the time of the accident. The aircraft's stall warning system was capable of normal operation.

The pilot later stated that when he applied full power to go-around, he noticed that the engine RPM was only about 2,100 and that he thought the engine was suffering a power loss. His impression was that there was insufficient runway remaining to land straight ahead, so he elected to carry out a steeply banked left turn, with the intention of landing on runway 30. This runway was behind the aircraft and west of runway 18. The turning manoeuvre was attempted with full flap set. The pilot said he could not remember hearing the stall warning horn operate before impact.

The meteorological situation at the time of the accident comprised a trough of low pressure off the south Queensland coast, with a light southerly gradient over south-east Queensland coastal regions. The Maroochydore meteorological observations at 0930 showed that there was an easterly wind at 6-9 kts, the temperature was 25.4 degrees Celsius and the dew point was 21.3 degrees Celsius. Under these conditions, there was a risk of serious carburettor icing at descent power settings. The pilot had flown a long straight-in approach to the runway and stated that he had not used carburettor heat during that time. The presence of carburettor ice could have restricted airflow into the engine when full power was applied, causing the low engine RPM reported by the pilot.

The manufacturer's information manual for the aircraft stated that in a baulked landing or go-around, the flap setting should be reduced to 20 degrees immediately after full power is applied. The manual further stated that if obstacles must be cleared during the go-around climb, the flap setting should be reduced to 10 degrees, and a safe airspeed must be maintained. During the go-around in the accident sequence, the pilot had not reduced the flap setting, nor did he maintain level flight to increase aircraft speed.

Prior to the accident flight, the pilot underwent a 40-minute flight check on the aircraft with an instructor. The check included a touch-and-go landing, during which the instructor retracted the flaps. It did not include a go-around.

It is probable that the combination of full flap and high aircraft nose attitude, along with less than full engine power, resulted in the aircraft speed reducing such that the wings stalled. The height of the aircraft above ground level at which this occurred was insufficient to allow recovery to normal flight.