

**Aviation Safety Investigation Report
199003080**

Cessna 172RG

24 June 1990

Readers are advised that the Australian Transport Safety Bureau investigates for the sole purpose of enhancing transport safety. Consequently, Bureau reports are confined to matters of safety significance and may be misleading if used for any other purposes.

Investigations commenced on or before 30 June 2003, including the publication of reports as a result of those investigations, are authorised by the CEO of the Bureau in accordance with Part 2A of the Air Navigation Act 1920.

Investigations commenced after 1 July 2003, including the publication of reports as a result of those investigations, are authorised by the CEO of the Bureau in accordance with the Transport Safety Investigation Act 2003 (TSI Act). Reports released under the TSI Act are not admissible as evidence in any civil or criminal proceedings.

NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

Occurrence Number: 199003080
Location: Cooyar QLD
Date: 24 June 1990
Highest Injury Level: Fatal
Injuries:

Occurrence Type: Accident
Time: 1200

	Fatal	Serious	Minor	None
Crew	1	1	0	0
Ground	0	0	0	-
Passenger	0	0	0	0
Total	1	1	0	0

Aircraft Details: Cessna 172RG
Registration: VH-JFK
Serial Number: 172RG0026
Operation Type: Aerial Work
Damage Level: Destroyed
Departure Point: Maroochydore QLD
Departure Time: 1115
Destination: Maroochydore QLD

Approved for Release: 27th February 1991

Circumstances:

The aircraft was observed to land about half way along a 490 metre long north-south grass strip. It became airborne again and appeared to climb slowly before veering left and disappearing from view behind trees. The aircraft failed to reappear and was located a short time later having crashed inverted adjacent to a road. The investigation revealed that, after liftoff from the strip, the aircraft had struck and severed power lines 82 metres beyond the end of the strip and eight metres above ground level. It continued to fly for a further 450-500 metres before striking the upper branches of 17 metre high trees in a nose down attitude at a bank angle of approximately 90 degrees. Ground impact was 24 metres beyond the trees. The purpose of the flight was practice for a forthcoming commercial pilot's licence flight test for the pilot-under-instruction. His task was to locate and then conduct an airborne inspection of the strip and decide whether or not it was suitable for landing. The strip was regularly used for this purpose by the training organisation. It was assessed as a difficult strip because of its approaches and comparative short length. Pilots under training were, therefore, expected to decide against landing. A decision to attempt a landing would be countered by the instructor. The instructor (pilot-in-command) was familiar with the strip and was aware of the training organisation's policy that students were not to attempt to land on the strip. No fault was found with the aircraft, including the engine and flight controls, which might have contributed to the accident. The aircraft configuration at impact was landing gear up and flaps set at 20 degrees. (This is the flap setting listed in the Pilot's Operating Handbook for a balked landing.) The carburettor heat control was in the off position. Information from the Bureau of Meteorology indicated that the local wet and dry bulb temperatures at the time of the accident were 15 and 19 degrees Celsius respectively. These figures indicate the probability of carburettor icing was moderate at cruise power and high at descent power. If icing was present, and the intention was to fly an approach to the strip and then conduct an overshoot, the performance of the engine could have been affected to the extent that a landing was unavoidable. Carburettor icing could also have affected the aircraft's climb performance after becoming airborne.

again from the strip. The evidence indicates that the wires had been cleanly severed by the propeller and had not contacted any other part of the aircraft. The effect of the collision with the wires on the aircraft's performance is difficult to quantify, but it is noteworthy that the aircraft flew for a further 450-500 metres after hitting the wires. It was not determined how far from the end of the strip the aircraft became airborne again. The angle from ground level at the end of the strip to the power line was 5 degrees. The Pilot's Operating Handbook indicates that in a maximum rate of climb configuration (full power, flaps up), the aircraft's climb angle is about 5 degrees. If the aircraft became airborne near the end of the strip, it might not have had the capability to climb above the level of the wires, particularly if the flap setting at this time was 20 degrees. Two kilometres beyond the end of the strip is a ridge line which rises 200 metres above the elevation of the strip. The accident site was in a valley which ran to the east of this ridge line, the position of the wreckage being some 200 metres left of the strip centreline but at substantially the same elevation as the strip. It is possible that the aircraft was deliberately flown along the valley to avoid the high ground and in an attempt to increase performance. The attitude of the aircraft when it struck the trees was indicative of the pilot having lost control.

FACTORS The following factors were considered relevant to the development of the accident

1. Atmospheric conditions were conducive to the formation of carburettor ice.
2. For reasons which could not be established, the aircraft struck and severed power lines.
3. The pilot lost control of the aircraft.