

**Aviation Safety Investigation Report
198900019**

Piper PA25-235

6 November 1989

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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: 198900019 **Occurrence Type:** Accident
Location: "Nivan" (13 km north-west of Deniliquin) NSW
Date: 6 November 1989 **Time:** 600
Highest Injury Level: Nil
Injuries:

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

Aircraft Details: Piper PA25-235
Registration: VH-PXI
Serial Number: 25-4353
Operation Type: Aerial work
Damage Level: Substantial
Departure Point: "Nivan" NSW
Departure Time: N/K
Destination: "Wakool" NSW

Approved for Release: 31 January 1990

Circumstances:

The pilot intended to ferry the aircraft to another property. He reported that the engine started normally, and he immediately taxied the aircraft to the closest end of the airstrip, and commenced to take-off without having given the engine sufficient time to warm up. He later informed his employer that he had carried out all the necessary pretakeoff checks, including checking the carburettor heat operation. Shortly after becoming airborne the engine failed and the pilot was forced to land in a rough paddock. Inspection of the engine revealed that the carburettor heat scat hose, from the exhaust muff to the carburettor, was detached. No other faults were found which might have caused the engine to fail. The weather was fine and calm, the temperature five degrees Celsius, and the relative humidity approximately 70 per cent. From the Carburettor Icing - Probability Chart, as published in the Aviation Safety Digest Number 108, these conditions were conducive to serious carburettor icing under any power setting. The most probable cause of the engine failure was carburettor icing, and as the carburettor heat scat hose was adrift there was no means of providing heat to the carburettor to clear any ice accumulation. The pilot, in his haste to depart, did not check for the change in engine note and rpm which would indicate that the carburettor heat was functioning when he operated the carburettor heat control during the pretakeoff checks. This occurrence was not the subject of an on-site investigation.

Significant Factors:

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

1. The pilot did not conduct adequate checks before take-off.
2. Carburettor heat system inoperative because of disconnected hose.

3. Engine failure, probably because of carburettor icing.
4. Pilot forced to land on unsuitable terrain.