

Aviation Safety Investigation Report 199001986

Mooney M20-C

6 May 1990

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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: 199001986
Location: Mittagong NSW
Date: 6 May 1990
Highest Injury Level: Serious
Injuries:

Occurrence Type: Accident

Time: 1140

	Fatal	Serious	Minor	None
Crew	0	1	0	0
Ground	0	0	0	-
Passenger	0	3	0	0
Total	0	4	0	0

Aircraft Details: Mooney M20-C
Registration: VH-WCT
Serial Number: 3074
Operation Type: Private
Damage Level: Destroyed
Departure Point: Mittagong NSW
Departure Time: N/A
Destination: Mittagong NSW

Approved for Release: 16th September 1991

Circumstances:

The aircraft had taken off on runway 24 towards a range of hills. Wind at the time was reported as a steady 20 knots from the south-west, straight down the runway. After take-off, the pilot retracted the landing gear and reduced power for climb. He reported that soon after, the aircraft encountered a windshear, lost airspeed and failed to climb. He did not reapply full power. There were no clear areas ahead so he commenced a left turn; however, the airspeed decayed further and the left wing dropped. The aircraft struck the top branches of a 15 m pine tree, rolling inverted before coming to rest approximately 15 m from a house. The occupants were trapped in the wreckage until emergency services arrived. The accident site was approximately 1 250 m south-west of the end of the runway. The terrain is below a five percent gradient, but beyond this area it rises quite steeply to a ridge line approximately 5 km from the runway. No fault was found with the aircraft. There was evidence from propeller strike marks on severed branches that the engine had been delivering substantial power at the time of impact. The area is well known for local wind effects due to the terrain. The prevailing wind direction would have been conducive to wind shear in the lee of the ridge where the accident occurred. This is the second of three similar accidents which have occurred within an area of 1.5 km during the last few years. In each case the aircraft failed to outclimb the terrain after taking off from runway 24.

Significant Factors:

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

1. The aircraft may have encountered windshear soon after lift-off.
2. The pilot did not operate the aircraft for maximum performance.

3. The pilot was not able to maintain speed.

Reccomendations:

Over the past ten years BASI records indicate at least 16 take-off accidents to fixed wing aircraft attributed in part or totally to the effects of wind over the local terrain and to high density altitude. The following recommendations are made

1. The CAA consider preparing an educational article to be widely distributed detailing considerations for GA type aircraft operations in areas where flight may be affected by terrain, wind and density altitude.
2. The CAA bring to the attention of training schools the need to accent these issues in both theoretical and practical training.