

**Aviation Safety Investigation Report
198502583**

Skycraft Scout Mk 3

06 October 1985

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.

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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.

This accident was not subject to an on scene investigation.

Occurrence Number: 198502583 Location: Henty NSW Date: 06 October 1985 Highest Injury Level: Serious Injuries:	Occurrence Type: Accident Time: N/A
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	Fatal	Serious	Minor	None
Crew	0	1	0	0
Ground	0	0	0	-
Passenger	0	0	0	0
Total	0	1	0	0

Aircraft Details: Skycraft Scout Mk 3
Registration: Not Registered
Serial Number:
Operation Type: Miscellaneous (Sport Aviation)
Damage Level: Substantial
Departure Point: Henty NSW
Departure Time: N/A
Destination: Henty NSW

Approved for Release: June 26th 1986

Circumstances:

The original propeller fitted to the aircraft had been damaged in a landing mishap, and the owner/pilot ordered a replacement from the aircraft manufacturer. The new propeller was of different dimensions and weight to the original, and the owner sought and obtained the manufacturer's assurance that it was suitable for the aircraft type. A number of static and taxi trials were completed without problem. However, on the first take-off, the aircraft had reached a height of about 50 feet when the propeller failed. The aircraft pitched down and struck the ground. A subsequent examination of the propeller revealed that it had failed as a result of the applied centrifugal forces. It had been constructed in four laminations, using two types of wood. One lamination contained a large knot in the hub area, and it was probable that another lamination was affected by brittleheart. This weakness is characterised by minute compression failures in the walls of the fibres, induced by growth stresses in the particular tree. When the propeller failed the aircraft was at a critical stage of flight, and stalled. There was insufficient height available for the pilot to regain control before impact with the ground.