

**Aviation Safety Investigation Report
198903816**

Robinson R22 Beta

18 October 1989

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: 198903816 **Occurrence Type:** Accident
Location: Homevale Station, 40km NW of Nebo QLD
Date: 18 October 1989 **Time:** 1100
Highest Injury Level: Nil
Injuries:

	Fatal	Serious	Minor	None
Crew	0	0	1	1
Ground	0	0	0	-
Passenger	0	0	0	1
Total	0	0	0	2

Aircraft Details: Robinson R22 Beta
Registration: VH-HRY
Serial Number: 868
Operation Type: Private
Damage Level: Substantial
Departure Point: Hay Point QLD
Departure Time: N/K
Destination: Homevale Station QLD

Approved for Release: 3rd November 1989

Circumstances:

The pilot hovered the helicopter at about 20 feet above ground, in front of cattle, in an attempt to head them off. He became aware that an uncommanded descent had commenced and almost immediately the Low Rotor RPM Warning Horn sounded. He lowered the collective control in an attempt to regain control of the rotor rpm, however, the main rotor blades hit several small trees. A heavy landing resulted during which the tail boom was cut off by the main rotor and the skids were spread. The helicopter remained upright. At the time, the temperature was about 32 degrees Celcius the helicopter was hovering into a 15 knot wind. With the helicopter some 50 kilograms below maximum gross weight and a density altitude of 3000 - 3500 feet, an out of ground effect hover was within the machine's capability. However, the pilot said that he required maximum power to hover the helicopter. It is possible that the wind conditions changed momentarily, unnoticed by the pilot, or that during manoeuvring the power requirement exceeded the maximum available. The machine was flying at too low an altitude to allow a controlled recovery from an over-pitch situation. This accident was not the subject of a formal on scene investigation.

Significant Factors:

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

1. The pilot probably over-pitched the main rotor blades during flight near the edge of the flight envelope.
2. In-flight conditions possibly changed sufficiently to effect the helicopter.
3. The helicopter was being operated at too low an altitude to allow a controlled recovery before tree and ground impact (an operational hazard during mustering operations).