

**Aviation Safety Investigation Report
198900229**

Robinson R22

4 January 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: 198900229 **Occurrence Type:** Accident

Location: 100 km South of Halls Creek WA

Date: 4 January 1989

Time: 800

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

Registration: VH-HCL

Serial Number: 17

Operation Type: Aerial Work

Damage Level: Substantial

Departure Point: Lamboo Station WA

Departure Time: 0800

Destination: Lamboo Station WA

Approved for Release: 5th September 1989

Circumstances:

The aircraft had been operating for two hours without any apparent problems. Shortly after lift off, following a refuelling stop, the pilot was unable to maintain directional control and the aircraft began yawing rapidly to the right. The pilot attempted to land the aircraft in a clear area, however, one skid dug in and the aircraft rolled over. A fractured tail rotor drive shaft intermediate flexplate was the only mechanical defect found during the investigation. The specialist engineering investigation established that the flexplate failure was caused by the main rotor blades contacting an external object. The only main rotor strike evident at the accident site occurred when the aircraft rolled over following the landing. Damage to the tail rotor control rods indicated that full left peddle had been applied at the time of the flexplate failure. Aircraft weight, power requirements, wind conditions and take-off and DEPARTURE techniques were not conducive to loss of tail rotor effectiveness, however, loss of tail rotor effectiveness will cause the aircraft to yaw to the right. The reason for the initial yaw was not determined. The aircraft rolled over when the pilot was forced to make an emergency landing on unsuitable terrain whilst he was attempting to recover from a difficult control situation.

Significant Factors:

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

1. The pilot was unable to maintain directional control during the takeoff sequence.
2. The pilot was forced to carry out a landing whilst he did not have full control of the aircraft and he was unable to prevent the aircraft rolling over on touchdown.
3. The reason for the loss of control could not be determined.