

**Aviation Safety Investigation Report
198500136**

Robinson R22HP

19 May 1985

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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: 198500136 **Occurrence Type:** Accident
Location: 37 km WNW of Mt House Station WA
Date: 19 May 1985 **Time:** 1000
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 R22HP
Registration: VH-ONE
Serial Number:
Operation Type: Aerial Work (Mustering)
Damage Level: Substantial
Departure Point: 33 km WNW of Mt House
Station WA
Departure Time: 1000
Destination: 33 km WNW of Mt House
Station WA

Approved for Release: 30th December, 1985

Circumstances:

After the helicopter had been transitioned to forward flight, the pilot felt a vibration through both the collective and cyclic controls. During his attempts to stop the vibration, the helicopter was allowed to descend. As he then selected a climb attitude the helicopter yawed to the right. The pilot was unable to correct the yaw and the tail struck a tree which slowed the yawing and allowed the pilot to land the helicopter. Initial inspection revealed that the intermediate flexplate in the tail rotor drive system had disintegrated. A metallurgical examination of the flexplate indicated that it probably failed due to overload. The examination also revealed that prior to the application of the overload that resulted in the ultimate failure, the flexplate had been cracked and weakened by another previous overload. The cause of the overload that resulted in the pre-existing crack could not be determined. However, examination of the tail rotor indicated that the ultimate failure most likely occurred as a result of a minor tail rotor strike whilst the helicopter was transitioning into forward flight.