

**Aviation Safety Investigation Report
199003119**

Hiller UH12-E

19 December 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: 199003119
Location: 10km NW Quirindi NSW
Date: 19 December 1990
Highest Injury Level: Minor
Injuries:

Occurrence Type: Accident
Time: 1100

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

Aircraft Details: Hiller UH12-E
Registration: VH-FBQ
Serial Number: 5092
Operation Type: Private
Damage Level: Substantial
Departure Point: Merriwa NSW
Departure Time: N/K
Destination: Caloundra QLD

Approved for Release: 2nd March 1992

Circumstances:

The pilot reported that the helicopter was cruising normally at 2500 feet when there was a loud noise from the engine. He entered autorotation and landed but the helicopter rolled on its side on landing. Specialist examination of the engine revealed that the number four piston connecting rod failed as a result of fatigue cracking initiated by galling between the connecting rod and the crankshaft bearing. Galling is the deposition of metal from one surface on another when the two surfaces come into forceful contact. The galling was induced by continual overspeeding of the engine. Other connecting rods from the engine also showed evidence of galling.

Significant Factors:

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

1. The engine had previously been subjected to overspeeding.
2. The connecting rod suffered a fatigue failure as a result of galling.
3. Uncontained mechanical failure of the engine.
4. The pilot was forced to land the helicopter on unsuitable terrain. This accident was not the subject of an on-scene investigation.