

**Aviation Safety Investigation Report
198900251**

Cessna T207-A

09 October 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: 198900251 **Occurrence Type:** Accident

Location: Tamala Station 120km N of Kalbarri WA

Date: 09 October 1989 **Time:** 1130

Highest Injury Level: Nil

Injuries:

	Fatal	Serious	Minor	None
Crew	0	0	1	1
Ground	0	0	0	-
Passenger	0	0	0	6
Total	0	0	0	7

Aircraft Details: Cessna T207-A

Registration: VH-MKY

Serial Number: 340

Operation Type: Aerial Work

Damage Level: Substantial

Departure Point: Kalbarri WA

Departure Time: N/A

Destination: Kalbarri WA

Approved for Release: 10th May 1991

Circumstances:

The aircraft was cruising at 4000 feet above mean sea level when there was a complete loss of engine power. The pilot turned the aircraft towards the Tamala Station strip and attempted to restart the engine. The restart was unsuccessful and the pilot established the aircraft on a straight in approach to the strip for an emergency landing towards the south. The approach appeared to be proceeding safely until the aircraft entered an area of mechanical turbulence and stronger headwinds. As a result the height loss was greater than anticipated and the aircraft touched down, in what appeared to be a smooth grassy area, 100 metres short of the threshold. During the landing roll the aircraft collided with hidden rocks causing the nose and right hand landing gear to collapse. The surface wind at the time of the accident, a sea breeze, was 180 degrees at 15 knots. This wind at 4000 feet was approximately 120 degrees at 15 knots and the difference was not visible to the pilot. The investigation disclosed that the engine failure occurred following a fatigue failure of the crankshaft between the No. 2 big end journal and the No. 2 main bearing. There was some evidence which indicated that the shaft failure was initiated by loose No. 2 main bearing crankcase through bolts although this evidence was not conclusive. It could not be determined when the through bolts may have been torqued incorrectly; however, it was found that the No. 4 and 6 cylinders had been replaced at an overseas locality on the 25 June 1989 during the aircraft's delivery flight to Australia.

Significant Factors:

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

1. It is possible that maintenance procedures used some time prior to the crankshaft failure were inadequate in that the crankcase through bolts were not torqued correctly.
2. Fatigue cracking caused crankshaft and engine failure.

3. The subsequent forced landing was not completely successful because (a) the pilot was not aware there would be a significant increase in the headwind component, near the ground, and as a result the aircraft undershot the intended landing area; and (b) although the undershoot area appeared to be acceptable for a landing it contained hidden obstructions which caused substantial damage to the aircraft.