

**Aviation Safety Investigation Report
198700729**

Piper PA28-180

26 April 1987

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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: 198700729**Occurrence Type:** Accident**Location:** 1km SW Mataranka Homestead NT**Date:** 26 April 1987**Time:** 1805**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: Piper PA28-180**Registration:** VH-DMB**Serial Number:** 18-7405012**Operation Type:** Private (Pleasure)**Damage Level:** Substantial**Departure Point:** Mataranka Town NT**Departure Time:** 1800**Destination:** Mataranka Homestead NT**Approved for Release:** July 31st 1987**Circumstances:**

Just after the aircraft reached the top of climb, at 1000 feet above the ground, the engine failed. The pilot was unable to rectify the problem and decided to land the aircraft on a road. During the landing roll the left wing struck a roadsign and the aircraft ran off the road, then travelled a further 100 metres before colliding with a tree.

Engineering investigation revealed that the stepped dowel used to align the crankshaft timing gear had failed. This resulted in the crankshaft and camshaft timing being 30 degrees out of alignment, hence the inability of the engine to deliver any power. The stepped dowel failed due to the crankshaft timing gear retaining bolt being incorrectly torqued which allowed the gear to move on the crankshaft and eventually shear the dowel. The engine had been overhauled prior to the occurrence and it is likely that the bolt was incorrectly torqued due to oil or dirt being located between the gear and the crankshaft during engine reassembly.