

**Aviation Safety Investigation Report
198800138**

Cessna 210 L

14 October 1988

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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: 198800138 **Occurrence Type:** Accident
Location: White Lake (35km NE of Kalgoorlie) WA
Date: 14 October 1988 **Time:** 1534
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: Cessna 210 L
Registration: VH-TDV
Serial Number: 21061553
Operation Type: Charter
Damage Level: Substantial
Departure Point: Kalgoorlie WA
Departure Time: 1520
Destination: Porphry WA

Approved for Release: 29th August 1989

Circumstances:

The pilot was tasked to take a passenger to Porphry and bring further passengers back to Kalgoorlie. The flight proceeded normally until shortly after cruise power was selected when the engine began to surge. Attempts by the pilot to rectify the surge were unsuccessful. He turned the aircraft towards Kalgoorlie and, when the oil pressure dropped to zero, the cockpit filled with smoke and the windscreen was smeared with oil, he elected to land on the salt lake almost directly below the aircraft. The landing was uneventful until the nosewheel broke through the lake's crust and the aircraft nosed over and stopped inverted. The loss of oil pressure, the smoke in the cockpit and the oil smear on the windscreen were a result of a hole punctured through the engine crankcase at the base of number 4 cylinder. The conrod of the number 4 piston had suffered a fatigue failure due to a metal embrittlement, brought about by molten material from the number 4 big end bearing coming in contact with the conrod. It is probable that the big end bearing had overheated due to a lack of lubrication, although no evidence was found of a restriction in the oil supply lines. The metallurgical examination concluded that the fatigue failure had developed over a short time and that there was evidence that the number 3 big end bearing had also been overheated due to a lack of lubrication. The pilot chose the site for the forced landing knowing that there was a chance that the surface would be soft. His choice was made after considering that the alternative landing sites were less suitable for a variety of reasons.

Significant Factors:

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

1. Fatigue failure of the number 4 cylinder connecting rod following the liquid embrittlement of the number big end bearings. a. It is probable that the overheating which caused the embrittlement was caused by a lack of lubrication to the bearing.
2. The dry lake surface was unsuitable as a landing site.