

**Aviation Safety Investigation Report
198802338**

Cessna 210L

4 January 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: 198802338
Location: 2 km SW of Point Plomer NSW
Date: 4 January 1988
Highest Injury Level: Serious
Injuries:

Occurrence Type: Accident
Time: 1230 ESuT

	Fatal	Serious	Minor	None
Crew	0	0	0	0
Ground	0	0	0	-
Passenger	0	2	3	0
Total	0	2	4	0

Aircraft Details: Cessna 210L
Registration: VH-BBI
Serial Number: 21060471
Operation Type: Private
Damage Level: Substantial
Departure Point: Bankstown NSW
Departure Time: 1100
Destination: Maryborough QLD

Approved for Release: March 17th 1989

Circumstances:

The aircraft was cruising just inland of the beach at 1500 feet when the pilot noted smoke, accompanied by a strong burning smell entering the cabin from the lower right hand side air vent. Almost immediately the engine suffered a complete loss of power. The pilot carried out a successful wheels-up forced landing on the beach. A fire which had been burning in the nose wheelwell area had apparently been extinguished by seawater and wet sand during the landing slide. Inspection revealed that chaffing had occurred between an electric cable and hydraulic line situated in the wheelwell. Arcing from the electric cable burnt through the hydraulic line, and hydraulic oil under pressure escaped in a fine spray and was ignited by the arcing. This created a torching effect which was directed at the fuel strainer. The heat caused the fuel in the strainer to boil, developing a vapour lock and disrupting the fuel flow to the engine and causing the subsequent engine failure. The chaffing of the cable on the pipe was in such a location that it would have been difficult to see during normal periodic or pre-flight inspections.

Significant Factors:

It was considered that the following factors were relevant to the development of the accident

1. An electrical cable in the nose wheelwell chaffed on a hydraulic pipe until bare wire was exposed, and the subsequent short circuit burnt a hole in the pipe.
2. A spray of hydraulic oil from the hole was ignited by sparks from the short circuit. The heat from this was directed at the fuel strainer which caused a fuel vapour lock to occur.

Reccomendations:

It is recommended that the Civil Aviation Authority should commend the pilot for his conduct, and the manner in which he carried out the forced landing.