

**Aviation Safety Investigation Report
199000078**

Cessna 182Q

14 March 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: 199000078
Location: Nelson Springs NT
Date: 14 March 1990
Highest Injury Level: Minor
Injuries:

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

Occurrence Type: Accident
Time: 800

Aircraft Details: Cessna 182Q
Registration: VH-MLP
Serial Number: 18265463
Operation Type: Private
Damage Level: Substantial
Departure Point: Nelson Springs NT
Departure Time: N/A
Destination: Nelson Springs NT

Approved for Release: 28th June 1990

Circumstances:

The left hand fuel filler cap locking tongue had been replaced during the periodic servicing 20 hours prior to the accident. The new tongue did not have a positive feel when pushed to the closed position and the cap did not seal correctly. The pilot was aware that the bladder type fuel cells could trap water which might not be apparent during a normal fuel drain. About one week before the accident and following heavy rain, the pilot rocked the aircraft, during his fuel drain check, to remove all the trapped water. On the day of the accident the pilot refuelled the aircraft, to full tanks, from an un-opened 200 litre drum. A subsequent check of the drum disclosed some water although in insufficient quantities to enter the standpipe of the hand pump during refuelling operations. The pilot carried out a normal fuel drain check which indicated that the system was free of water. He did not rock the aircraft as there had not been any significant rainfall since his previous check. At 150 feet above ground level, shortly after take off and following flap retraction and power reduction, the engine stopped. The pilot carried out a turn through 170 degrees in an attempt to land in the only reasonable area. The nosewheel collapsed on touchdown and the aircraft overturned. An inspection of the aircraft's fuel system disclosed water contamination in the main fuel filter bowl, in the fuel lines to the carburettor and in the carburettor. No other defects found which may have been factors in the accident. It is probable that water entered the fuel tanks, via the defective fuel cap and remained trapped in the tank despite the checks carried out by the pilot. Water subsequently entered the engine fuel system during the manoeuvres following take-off.

Significant Factors:

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

1. The fuel filler cap was still unserviceable following replacement of the locking tongue.

2. Water in the fuel system that was not detected during the pre-flight inspection.
3. Engine stoppage caused by water contamination of the fuel system.
4. Unsuitable terrain for a forced landing.