Aviation Safety Investigation Report 199802836

Cessna Aircraft Company Centurion

26 July 1998

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Occurrence Number: 199802836 **Occurrence Type:** Accident
Location: Virginia
State: SA **Inv Category:** 4
Date: Sunday 26 July 1998
Time: 0915 hours **Time Zone** CST
Highest Injury Level: None

Aircraft Manufacturer: Cessna Aircraft Company
Aircraft Model: 210N
Aircraft Registration: VH-BFN **Serial Number:** 21063587
Type of Operation: Non-commercial Pleasure/Travel
Damage to Aircraft: Substantial
Departure Point: Parafield SA
Departure Time: 0740 CST
Destination: Renmark SA

Crew Details:

Role	Class of Licence	Hours on Type	Hours Total
Pilot-In-Command	Private	131.0	450

Approved for Release: Wednesday, August 26, 1998

The aircraft departed Parafield for Renmark on a private flight. He could not land at Renmark when he arrived due to low stratus cloud. He then elected to return to Parafield. En route he flew above cloud to remain in VMC. North east of Parafield, while still on top of cloud at 3,000 ft, the pilot contacted Adelaide approach and requested navigational assistance. The controller vectored the aircraft to the vicinity of Edinburgh where the pilot was able to resume his own navigation and commenced a descent to 1,500 ft. Shortly thereafter, the pilot called 'Mayday' because the engine had failed. During the forced landing the aircraft landed heavily and crashed through a fence.

The pilot subsequently reported that before leaving Parafield, both fuel tanks had been filled to the tab. He flew with the right tank selected all the time from Parafield until the engine lost power. At no stage had he leaned the fuel mixture. Sometime during the descent from 3,000 ft the right fuel tank ran dry and the engine starved of fuel. The pilot did not realise that the engine had lost power until he tried to increase power at about 1,100 ft. He then changed the fuel selector to the left tank. He also switched on the electric fuel boost pump but the engine still did not regain power except for one quick burst while the boost pump was selected to high. At about 200 ft AGL, he reselected the right fuel tank but the engine never regained power.

After the accident engineers inspected the aircraft and reported that both the right wing tank and the right reservoir tank were empty and had not leaked fuel as a result of the accident. The left wing tank contained about 135 litres, after fuel had spilled from it due to the accident. A subsequent engine run proved that there was no fault with the engine; nor was fault found with the airframe fuel system. No evidence was found that the engine had flooded; the exhaust showed no signs of soot.

It is probable that the pilot inadvertently ran the right tank dry while under stress of flying in marginal weather. When he changed to the left tank, he probably did not persist long enough with the electric boost pump selected on for the air to be purged from the fuel lines to the engine. When the pilot reselected the right tank there was no chance that the engine could regain power.

SAFETY ACTION

After the accident, a flying operations inspector retested the pilot's knowledge of flight planning, fuel management and the Cessna 210N fuel system.