

**Aviation Safety Investigation Report
199400528**

**Cessna Aircraft Company
Stationair**

02 March 1994

Readers are advised that the Australian Transport Safety Bureau investigates for the sole purpose of enhancing transport safety. Consequently, Bureau reports are confined to matters of safety significance and may be misleading if used for any other purposes.

Investigations commenced on or before 30 June 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with Part 2A of the Air Navigation Act 1920.

Investigations commenced after 1 July 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with the Transport Safety Investigation Act 2003 (TSI Act). Reports released under the TSI Act are not admissible as evidence in any civil or criminal proceedings.

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: 199400528 **Occurrence Type:** Accident
Location: Kununurra
State: WA **Inv Category:** 4
Date: Wednesday 02 March 1994
Time: 1300 hours **Time Zone** WST
Highest Injury Level: None

Aircraft Manufacturer: Cessna Aircraft Company
Aircraft Model: U206F
Aircraft Registration: VH-PQJ **Serial Number:** U20602245
Type of Operation: Charter Passenger
Damage to Aircraft: Substantial
Departure Point: Forrest River WA
Departure Time: 1218 WST
Destination: Kununurra WA

Crew Details:

Role	Class of Licence	Hours on Type	Hours Total
Pilot-In-Command	Commercial	250.0	1215

Approved for Release: Sunday, June 19, 1994

The pilot was conducting a charter flight involving four legs. He was familiar with the routes being flown and carried fuel sufficient to complete all legs without refuelling.

It was the pilot's normal fuel management practice to fly the first leg on the left tank and change to the right tank prior to landing. He would then fly the next leg on the right tank and change to the left tank for landing. This procedure was normally used for each of the remaining legs.

During the second leg the pilot forgot to change to the left tank for landing. He did not recognise his error until taxiing for departure for the final leg to Kununurra. At that point the pilot was uncertain as to the exact contents of each tank although it was evident that the left tank contained significantly more fuel than the right. He decided to fly the final leg using the contents of the right tank with the intention of changing to the left tank for the landing. The pilot was not in the practice of changing fuel tanks during transit due to the inhospitable terrain in the Kimberley region.

The engine stopped, due to fuel starvation, as the aircraft entered the circuit for a low level approach. The pilot selected the left hand tank, which contained almost two hours of fuel, but the engine did not restart before the pilot was forced to manoeuvre for an abnormal approach and landing. The aircraft was landed across the runway and the impact was sufficiently hard to cause the mainwheel legs to splay, the nosewheel leg to collapse and the bottom of the fuselage and the propeller to contact the ground. The aircraft stopped within the runway flight strip and the occupants evacuated uninjured.

The aircraft fuel gauges were serviceable and the aircraft was fitted with a fuel calibration card.

The investigation determined that the pilot did not use a fuel logging system other than a very general mental tally of fuel used. The sequence of events indicates that the pilot failed to complete his pre-landing checks on at least two occasions as he did not change the fuel selector to the fullest tank for landing as was his normal practice. Other evidence indicated that although the fuel gauges were serviceable the pilot ignored their indications because he considered them unreliable. The company provided a fuel dip stick which the pilot did not use even when he became unsure of the actual fuel contents because he thought he had sufficient knowledge of the fuel state. Finally the pilot was not concerned that the engine might stop as a result of fuel starvation because his experience led him to believe that it would restart quickly once a tank, with fuel in it, was selected.

The pilot was very familiar with the route flown and it is probable that he had become complacent about fuel management.

The pilot had developed a habit of completing a low level circuit as he believed it assisted his control of aircraft speed. It is possible that the pilot's decision to conduct a low level circuit contributed to the accident. Had the aircraft been at normal circuit height there may have been sufficient time for the engine to respond to the alternate fuel tank selection.

The operator's check and training system did not disclose the pilots apparent complacency or unusual circuit procedures as he had performed more than adequately on check rides.
