

**Aviation Safety Investigation Report
199502164**

**Cessna Aircraft Company
Titan**

19 June 1995

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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.

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

Occurrence Number: 199502164 **Occurrence Type:** Incident
Location: Essendon, Aerodrome
State: VIC **Inv Category:** 4
Date: Monday 19 June 1995
Time: 2017 hours **Time Zone:** EST
Highest Injury Level: None

Aircraft Manufacturer: Cessna Aircraft Company
Aircraft Model: 404
Aircraft Registration: VH-ANP **Serial Number:** 404-0064
Type of Operation: Non-commercial Aerial Ambulance
Damage to Aircraft: Nil
Departure Point: Hamilton VIC
Departure Time:
Destination: Essendon VIC

Approved for Release: Monday, August 21, 1995

On left base for runway 26 at Essendon the right engine started to run roughly and surge and continued to do so until the aircraft landed. Towards the end of the landing roll the right engine stopped. The pilot reported that after the aircraft was parked the fuel gauges were indicating 200 lbs per side. When inspected, the right fuel tank was found to be empty. The right engine subsequently ran normally during a ground run with the left tank selected.

The aircraft was delivered to its maintenance organisation where it was determined that the indicating system for the left fuel tank was faulty. A signal condition unit was replaced and a fuel calibration carried out after which the aircraft was returned to service.

Investigation of the operational factors revealed that it is the operator's standard practice to fill the tanks to a total of 1250 lbs of fuel for a typical day's operation. It is not possible to see the fuel through the filler point when the tanks are only filled to this level. It is therefore normal practice to cross check fuel added against calculated fuel used on the previous flight and gauge indication as a check of fuel in the tanks.

On the flight that terminated in this incident, the pilot had crossfed fuel in flight from the right tank due to unbalanced gauge indications. Hence, the reason that the right tank ran dry while there was still plenty of fuel in the left tank.

Factors

The following factors were considered relevant to the development of the incident:

- . The fuel quantity gauge indication for the right tank was inaccurate due to a faulty signal condition unit.
- . The inaccurate indication for the right tank led the pilot to believe that there was an imbalance between the left and right tanks.
- . Because of this perceived imbalance he crossed from the right tank during flight until the imbalance appeared to be corrected.
- . This in turn resulted low fuel quantity in the right tank which eventually led to the right engine being starved of fuel.

