Aviation Safety Investigation Report 199403397

Cessna Aircraft Company 182P

15 November 1994

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Aviation Safety Investigation Report

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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: 199403397 **Occurrence Type:** Accident
Location: Taralga
State: NSW **Inv Category:** 4
Date: Tuesday 15 November 1994
Time: 1830 hours **Time Zone** ESuT
Highest Injury Level: None

Aircraft Manufacturer: Cessna Aircraft Company
Aircraft Model: 182P
Aircraft Registration: VH-BTC **Serial Number:** 18265090
Type of Operation: Charter Passenger
Damage to Aircraft: Substantial
Departure Point: Cudal NSW
Departure Time:
Destination: Mittagong NSW

Crew Details:

Role	Class of Licence	Hours on Type	Hours Total
Pilot-In-Command	Commercial	181.0	7947

Approved for Release: Tuesday, January 10, 1995

Two days prior to the accident the pilot checked the aircraft and found fuel leaking from the right wing near the drain valve. He defuelled the right tank to 30 litres to minimise fuel loss if the leak continued. Suspecting that the leak was from the drain valve, he reseated the valve and cleaned the fuel stains from the aircraft. The aircraft was checked again the next day. There was no evidence of fuel leakage so the right tank was filled to 60 litres. On the following day there was again no evidence of fuel leakage so the pilot assumed the leak had been from the drain valve.

The purpose of the flight was to transport three passengers from Mittagong to Cudal and return. The aircraft left Mittagong with 120 litres of fuel in the left tank and 60 litres in the right tank. During taxy prior to departure there was no evidence of fuel leakage and a post flight inspection after arrival at Cudal again revealed no evidence of leakage so the tanks were refilled to 90 litres per side for the return flight.

On the return flight the weather at the destination deteriorated necessitating a diversion. While planning the diversion the pilot noted that the right tank fuel quantity gauge had dropped significantly since he last checked fuel quantities a short time previously. A short time later the pilot noted a moderate smell of fuel in the cabin. He suspected a serious fuel leak and decided to make a precautionary landing

The pilot informed his passengers of the situation and his intentions. He then selected what appeared to be a suitable area and made three inspection runs over it. On short final approach, at about 20 feet off the ground, the pilot noticed that the selected area sloped sharply upwards. He flared the aircraft but could not arrest the descent. The aircraft touched down heavily and bounced. The pilot relanded and brought the aircraft safely to a stop. An inspection revealed substantial firewall damage as a result of the heavy landing.

After the aircraft had been recovered to a maintenance base an examination revealed a fuel stain down the right side of the fuselage just behind the cabin door. There was also heavy fuel staining on the root rib around the cutout for the right fuel tank aft supply line spigot. Further investigation revealed the right tank aft outlet spigot had fractured through 360 degrees about five millimetres inboard of the root rib cutout. The spigot is about 60 millimetres long and accommodates the aluminium supply line which is secured by a clamp at the inboard end of the spigot. The inboard end of the spigot complete with its supply line and clamp remained with the fuselage. The heavy fuel stain in the area was evidence that the spigot had been cracked for some time.

Significant Factors

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

1. A broken fuel tank supply line spigot permitting fuel leakage from the right fuel tank.

2. The leakage resulted in fuel vapour entering the cabin which led to the pilot making a decision to make a precautionary landing.

3. The area chosen for the precautionary landing had a significant upward slope which was not perceptible from the air. This slope was not noted by the pilot until very late on final approach. The result was that the pilot was unable to flare the aircraft sufficiently to prevent a heavy touchdown.