Aviation Safety Investigation Report 199602115

Cessna Aircraft Company U206G

06 July 1996

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Aviation Safety Investigation Report

199602115

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: 199602115 **Occurrence Type:** Accident
Location: 26km N Kununurra, Aerodrome
State: WA **Inv Category:** 4
Date: Saturday 06 July 1996
Time: 1100 hours **Time Zone** WST
Highest Injury Level: Serious
Injuries:

	Fatal	Serious	Minor	None	Total
Crew	0	1	1	0	2
Ground	0	0	0	0	0
Passenger	0	0	1	0	1
Total	**0**	**1**	**2**	**0**	**3**

Aircraft Manufacturer: Cessna Aircraft Company
Aircraft Model: U206G
Aircraft Registration: VH-BRW **Serial Number:** U20603860
Type of Operation: Non-commercial Aerial Application/Survey etc
Damage to Aircraft: Destroyed
Departure Point: Kununurra WA
Departure Time: 1000 WST
Destination: Kununurra WA

Crew Details:

Role	Class of Licence	Hours on Type	Hours Total
Pilot-In-Command	Commercial		1430

Approved for Release: Friday, May 2, 1997

FACTUAL INFORMATION

Sequence of events

The flight was to conduct photographic work around the Kununurra area. The crew consisted of the pilot in command and a second pilot in the right front seat to assist with look-out, radio communications and communicating with the photographer. The photographer operated from the rear seat without a headset.

After the crew had completed part of the task, the pilot started to climb the aircraft to a higher altitude. As the aircraft passed about 600 ft above ground level, the engine stopped suddenly without warning. The pilot transmitted a Mayday message and carried out a forced landing into 30-foot trees. During the impact, the aircraft turned over and the stitching of the harness of both pilots came undone, releasing the shoulder harnesses.

The pilot in command and the photographer suffered minor injuries. The right-seat pilot was seriously injured.

Wreckage

The aircraft came to rest inverted with the left wing torn off. The propeller blades were broken but showed no signs of rotation during impact. The Bureau was advised that, four days after the accident, an inspection of the fuel tanks indicated that the right tank was about three-quarters full, while the left tank contained only about 20 litres. Fuel was leaking from the impact-damaged left tank-to-engine feed lines. Consequently, the fuel quantity remaining in the aircraft at the time of the engine failure could not be accurately determined. Subsequent specialist inspection of the fuel-system components found that the engine-driven fuel pump outlet port was blocked by grit wrapped in fibrous material. The system filters were also contaminated.

The aircraft was normally refuelled at Kununurra, but had been refuelled from drums when operating from another strip in the area.

Aircraft maintenance

Further inspection of the engine found that the mixture control was excessively worn and that three spark plugs could be unscrewed by hand. The time at which contamination of the fuel system occurred was determined. The last periodic inspection was conducted 94 hours prior to the accident.

Emergency locator transmitter

A portable Pointer 3000 emergency locator transmitter (ELT) was carried in the baggage compartment. The ELT was turned on by the pilot after the accident and its signal was detected by the Brisbane Search and Rescue Co-ordination Centre.

ANALYSIS

The reported blockage of the engine-driven fuel pump outlet port is consistent with the circumstances of the engine failure. Contamination could have been introduced to the system if appropriate filtration was not used during refuelling from drums. Although there were indications that the aircraft maintenance was deficient, there was insufficient evidence to suggest that inadequate maintenance was implicated in the circumstances of the accident.

SIGNIFICANT FACTOR

It is likely that engine power was lost due to fuel starvation caused by system contamination.