

**Aviation Safety Investigation Report
199503968**

**Avtech Pty Ltd
Jabiru**

24 November 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:	199503968	Occurrence Type:	Accident
Location:	Bankstown, Aerodrome		
State:	NSW	Inv Category:	4
Date:	Friday 24 November 1995		
Time:	1321 hours	Time Zone	ESuT
Highest Injury Level:	None		

Aircraft Manufacturer:	Avtech Pty Ltd		
Aircraft Model:	JABIRU		
Aircraft Registration:	VH-MBF	Serial Number:	
Type of Operation:	Non-commercial Pleasure/Travel		
Damage to Aircraft:	Substantial		
Departure Point:	Goulburn NSW		
Departure Time:	1200 ESuT		
Destination:	Bankstown NSW		

Approved for Release: Friday, October 4, 1996

Prior to departing Bankstown the pilot detected bubbles of water in a sample of fuel that had been drained from the fuel tank sump. A further three samples were taken and, as the pilot considered these showed no signs of water he elected to commence the flight.

The pilot reported that as he reduced power during the approach to Goulburn the engine began to run roughly, prompting him to land the aircraft as soon as possible. A fuel sample taken, by the pilot, from the fuel tank sump showed evidence of further water contamination. He subsequently drained several litres from the sump and considered there was no more water present in the fuel. The aircraft was then refuelled. However, a sample of fuel from the fuel tank again indicated the presence of a small amount of water. A further six samples, as well as a sample taken direct from the fuel bowser, failed to reveal any additional evidence of water contamination. After carrying out a ground-run and flight test, the pilot considered the engine was operating satisfactorily and continued his flight to Bankstown.

Whilst on final approach to runway 29R the engine suffered a complete loss of power when the pilot reduced power below 2,000 RPM. The aircraft landed heavily, pitched forward and overturned, coming to rest 270 m before the runway threshold. The pilot was able to evacuate without injury. A subsequent inspection of the fuel system indicated there was water in the carburettor float bowl, fuel tank, and the inter-connecting lines.

The fuel tank of the Jabiru has a flat bottom with the sump located to the right and forward of centre. It is considered possible that any water in the tank may have pooled in one area away from the tank sump, particularly if the aircraft had been parked on a surface which was not level. During flight, as a result of flight attitude changes previously undetected water may have shifted within the tank and flowed into the sump and associated fuel line outlet, thence to the carburettor. The investigation was not able to determine the reason for the presence of water in the fuel system.

SAFETY ACTION

As a result of the investigation, the Bureau of Air Safety Investigation makes the following recommendation to the Civil Aviation Safety Authority:

R960063

The Bureau of Air Safety Investigation recommends that the Civil Aviation Safety Authority reviews the Jabiru fuel system design to ensure that any water contamination of the fuel can be drained from the system prior to flight.

