Ref: 7576

SOUTH AFRICAN CIVIL AVIATION AUTHORITY

ACCIDENT REPORT – EXECUTIVE SUMMARY

Aircraft Registration	**ZU-CTD**	**Date of Accident**	01 November 2002	**Time of Accident**	1410Z
Type of Aircraft	JABIRU J400	**Type of Operation**	Private		
Pilot-in-command Licence Type	Private	**Age**	40 Years	**Licence Valid**	Yes
Pilot-in-command Flying Experience	Total Flying Hours	70.0		Hours on Type	8.0
Last point of departure	East London Aerodrome				
Next point of intended landing	Richards Bay Aerodrome				
Location of the accident site with reference to easily defined geographical points (GPS readings if possible)					
On beach at Mtunzini 20nm south of Richards Bay					
Meteorological Information	The weather was fine and the wind 060/20-30kt				
Number of people on board	1 + 0	**No. of people injured**	Nil	**No. of people killed**	Nil

Synopsis

The pilot departed from East London Aerodrome on a flight to Richards Bay after he filled the fuel tanks to full capacity.

However, after a flight time of 4 hours and a power setting of 3100 RPM for take-off and 2900 RPM during cruise, the engine failed due to fuel exhaustion. The pilot then carried out a forced landing on the beach at Mtunzini approximately 20nm south of Richards Bay. The nose gear sank into soft sand causing the nose gear to collapse causing some damage to the engine cowling.

According to the ATC at Durban, gusty wind conditions of 060˚/30kt prevailed at the time.
The bearing from East London to Richards Bay is 066˚M which equates to head wind conditions of approximately 30kt en route to destination.

According to the pilot, the Flight Manual stipulates a total fuel capacity of 140 litres and 95 litre useable fuel in the wing tanks. He calculated that with a fuel consumption of approximately 22 litres/hour, the endurance will be sufficient for the flight. The Flight Manual was amended some time after the accident with a total fuel capacity of 135 litres and 124 litres useable fuel for both tanks.

According to the local agent for the aircraft, he advised the pilot to first land at East London and then at Margate due to the fact that the engine was still new and the fuel consumption would be higher. Normal fuel consumption is about 23litres/hour at 2600 RPM and 29 litres/hour at 2900 RPM.

The pilot stated in his questionnaire that the power setting during cruise was 2900 RPM. Thus, according to calculations, the fuel endurance with full tanks was as follows: 124 litres useable fuel ÷ 29 litres = 4.2 hours

The pilot held a valid Private Pilot's Licence and according to the pilot's logbook, was type rated on the aircraft. His medical certificate was valid from 01 May 2002 until 30 April 2003.

The Certificate of Registration for the aircraft was issued on 04 July 2002 and the Authority to Fly was issued on 11 October 2002. The aircraft had only accumulated a total of 18.3 airframe hours at the time of the accident since new.

Probable Cause

The engine failed due to fuel exhaustion.
Contributory Factor: Incorrect information in the pilot's operating handbook.