



Ref: 7444

SOUTH AFRICAN CIVIL AVIATION AUTHORITY

ACCIDENT REPORT – EXECUTIVE SUMMARY

Aircraft Registration	ZS-JZR	Date of Accident	3 January 2002	Time of Accident	1702Z
Type of Aircraft	PIPER PA34-200T		Type of Operation	Private	
Pilot-in-command Licence Type	Commercial	Age	27	Licence Valid	Yes
Pilot-in-command Flying Experience	Total Flying Hours	773.08	Hours on Type	265.48	
Last point of departure	A farm aerodrome close to Standerton				
Next point of intended landing	Pietermaritzburg Aerodrome				
Location of the accident site with reference to easily defined geographical points (GPS readings if possible)					
On school grounds approximately 1 nm North of Pietermaritzburg Aerodrome at S29°38.404' E030°23.532'					
Meteorological Information	Instrument Meteorological Conditions				
Number of people on board	1 + 3	No. of people injured	0 + 1	No. of people killed	0

Synopsis

The aircraft was on a private flight from a farm aerodrome to Pietermaritzburg Aerodrome. The weather conditions were Instrument Meteorological Conditions and the pilot filed an Instrument Flight Rules flight plan. Approximately 17 minutes before their estimated time for the ORI-beacon at Pietermaritzburg, the fuel flow for the left-hand engine reduced from approximately 12.6 gall/hour to 8 gall/hour. The pilot selected the auxiliary electric fuel pump to the "high" setting and managed to keep the engine operational. During the final approach phase of the flight the left-hand engine failed and the pilot was forced to land the aircraft on school grounds in close proximity to the threshold of the runway. The aircraft was substantially damaged and one of the passengers was injured.

The aircraft suffered several fuel flow defects with the left-hand engine prior to the accident flight, but attempts from two aircraft maintenance engineers to rectify the defect were not successful. They did not identify the loose tube nut in the fuel system of the left-hand engine. Besides this defect the aircraft was maintained according to the approved maintenance schedule of the aircraft. It had accumulated 4288.73 airframe hours at the time of the accident. The last Mandatory Periodic Inspection was certified on 31 May 2001 at 4201.4 hours and the aircraft operated 87.33 hours since the MPI.

Probable Cause

The tube nut that was not properly tightened caused air to enter the left-hand engine's fuel system, which adversely affected the performance of the engine. The left-hand engine failed during the final approach phase of the flight due to an over-rich mixture condition with the auxiliary fuel pump operating on the "HIGH" setting. The aircraft was unable to maintain altitude in the landing configuration and the pilot crash-landed it on school grounds close to the threshold of the runway.