



Ref: 7629

# SOUTH AFRICAN CIVIL AVIATION AUTHORITY

## ACCIDENT REPORT – EXECUTIVE SUMMARY

<b>Aircraft Registration</b>	ZS-KCD	<b>Date of Accident</b>	20/2/2003	<b>Time of Accident</b>	1347Z
<b>Type of Aircraft</b>	BEECH BARON 58	<b>Type of Operation</b>		Commercial Domestic Charter Flight	
<b>Pilot-in-command License Type</b>	Commercial	<b>Age</b>	59	<b>License Valid</b>	Yes
<b>Pilot-in-command Flying Experience</b>	Total Flying Hours	11 187.9		Hours on Type	725.4
<b>Last point of departure</b>	Elliot Aerodrome				
<b>Next point of intended landing</b>	East London (FAEL)				
<b>Location of the accident site with reference to easily defined geographical points (GPS readings if possible)</b>					
10km South of Engcobo on the R61 road. GPS: 31° 44.023' South 027° 58.935' East, elevation ± 2 550 ft					
<b>Meteorological Information</b>	Fine: Cloud Base 300 - 500 feet AGL, Overcast, Visibility 8km below cloud.				
<b>Number of people on board</b>	1 + 2	<b>No. of people injured</b>	None	<b>No. of people killed</b>	None
<b>Synopsis</b>	<p>The pilot, accompanied by two passengers departed East London on a domestic charter flight. According to the available fuel tax invoice the aircraft was refueled to capacity two days prior to the flight with 290 liters of fuel being uplifted. After landing at Elliot they spent approximately 20 minutes on the ground, where another three passengers boarded the aircraft before they departed to an unlicensed aerodrome near Greytown known as Pannar Seeds. The aircraft was parked at the Greytown aerodrome for a period of approximately 4½ hours, while the pilot accompanied the passengers. They departed Greytown again at approximately 1140Z for Elliot. After landing at Elliot they spent approximately 20 minutes on the ground where the three passengers they had uplifted earlier disembarked and they commenced their returned flight for East London at 1332Z.</p> <p>Approximately 8 minutes after take-off the right engine failed. They then commenced a left turn aiming for an opening through the clouds. Approximately 4 minutes later the left engine also failed, with both engines in the feathered position the pilot observed a tar road. With some traffic on the road, the pilot elected to land on the road, but his landing distance was slightly altered to compensate for the traffic and with the feathered propellers the aircraft presented very little drag, although full flaps and gear down was selected. After approximately 300m of level road the road became downhill and at the bottom was a bridge with concrete railings and some thorn trees on each side of the bridge. Although it was possible to reduce the speed, both wings clipped the trees on the side causing the aircraft to swerve to the left damaging the left wing with the aircraft coming to a halt against the banister. Nobody was injured in the accident.</p>				
<b>Probable Cause</b>					
Both engines failed in-flight within 4-minutes of one another due to fuel starvation. A forced landing resulted in substantial damage to the aircraft. The investigation revealed that the flapper valve assembly installed between the aft box section fuel cell and the inboard leading edge fuel cell on the left and right wings had been incorrectly installed, thus preventing the fuel from migrating between the aft box section cell and inboard leading edge fuel cell. This resulted in the exhaustion of the useable fuel in the inboard leading edge cells that supplies the engines.					