



Ref: 7551

**SOUTH AFRICAN CIVIL AVIATION AUTHORITY****ACCIDENT REPORT – EXECUTIVE SUMMARY**

<b>Aircraft Registration</b>	<b>ZS-KHG</b>	<b>Date of Accident</b>	12 September 2002	<b>Time of Accident</b>	1043Z
<b>Type of Aircraft</b>	BEECH 76		<b>Type of Operation</b>	Twin Conversion Training	
<b>Pilot-in-command Licence Type</b>	Commercial	<b>Age</b>	40	<b>Licence Valid</b>	Yes
<b>Pilot-in-command Flying Experience</b>	<b>Total Flying Hours</b>	1043.3	<b>Hours on Type</b>	4.9	
<b>Last point of departure</b>	FAWB				
<b>Next point of intended landing</b>	FAWB				
<b>Location of the accident site with reference to easily defined geographical points (GPS readings if possible)</b>					
Approximately 7 nm NE of Wonderboom					
<b>Meteorological Information</b>	CAVOK. Wind: North Easterly at 8 Knots				
<b>Number of people on board</b>	2 + 0	<b>No. of people injured</b>	Nil	<b>No. of people killed</b>	Nil
<b>Synopsis</b>	<p>The student pilot was accompanied by an instructor to the Pretoria General Flying Training Area No. 2 for the completion of an initial twin conversion. Prior to the flight, the student was unable to start the Left-hand engine and had to obtain assistance from the nearby AMO. The dual magneto of the said engine was removed and bench tested and found to operate normally. After re-installation of the magneto, the engine was successfully started. The aircraft was taxied to the fuel-bay where it was refuelled to capacity with 252 litres of Avgas 100LL fuel. The instructor and student boarded the aircraft and no further starting problems were encountered.</p> <p>At 1013Z, the aircraft took off from Runway 11 and headed for the Pretoria General Flying Training Area No.2. The aircraft reported at the Northern CTR boundary at 1023Z and was climbed to 8000 ft before the instructor commenced with single engine performance demonstrations. He pulled the mixture lever of the left-hand engine to the idle/cut-off position and the student commenced to secure the engine. According to the instructor, the student's engine securing procedures were satisfactory and after completion, the engine re-start procedure was initiated approximately 2 min after it had been shut down.</p> <p>After a number of unsuccessful attempts by the student to start the engine, the instructor attempted to start the engine but it was to no avail. The aircraft continued descending with the right-hand engine producing power and both the student and instructor were unable to re-start the left-hand engine. At that stage the instructor had already turned back towards Wonderboom aerodrome and was positioned at the northern boundary of the Roodeplaats dam. Due to the fact that the aircraft was not maintaining height, the instructor declared an emergency and decided to carry out a forced landing on a dirt road, approximately 7nm North East of Wonderboom in the Kameeldrift area. Approximately 80 m after touch down the aircraft collided with a fence and small bushes and veered off to the right. The aircraft continued veering off the road and collided with a sand embankment. The nose gear separated from the aircraft, which subsequently overturned and came to rest inverted. Although the aircraft was extensively damaged, both occupants vacated the aircraft with no injuries.</p>				
<b>Probable Cause</b>					
During a simulated engine failure in order to demonstrate asymmetric flight and $V_{MCA}$ , the left-hand engine was shut down and failed to restart. The aircraft could not maintain altitude on the right-hand engine alone resulting in a forced landing on a dirt road. During the landing the aircraft collided with a fence and small bushes to the right of the road which caused it to veer off the right side of the road and overturn.					