



Ref: 7745

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

Aircraft Registration	ZS-CWK	Date of Accident	24 December 2003	Time of Accident	0830Z
Type of Aircraft	PIPER PA-24-250		Type of Operation	Private	
Pilot-in-command Licence Type	Private	Age	54	Licence Valid	Yes
Pilot-in-command Flying Experience	Total Flying Hours	750.0	Hours on Type	510.0	
Last point of departure	Kroonstad (FAKS)				
Next point of intended landing	Kroonstad (FAKS)				
Location of the accident site with reference to easily defined geographical points (GPS readings if possible)					
±500m from the threshold of Runway 25 - Kroonstad					
Meteorological Information	Fine: Wind - 320/25 gusting 40kts, Temperature 28°C, Visibility >10km				
Number of people on board	1 + 3	No. of people injured	1 + 2	No. of people killed	None
Synopsis	<p>The pilot was accompanied by three passengers (members of the Sandriver Commando) on an intended local flight of the area to obtain aerial photo's of a certain farm when the accident occurred. After completing his pre-flight inspection the pilot and three passengers boarded the aircraft and taxied towards the threshold of Runway 07.</p> <p>Weather conditions at the time were fine with a strong north westerly wind prevailing at approximately 25 knots gusting to 40 knots. According to a statement that was obtained by the responsible person at the fuel depot on Kroonstad aerodrome, 76 litres of fuel was uplifted on 15 December 2003. At that stage both auxiliary fuel tanks were filled to capacity with an unknown amount of fuel still left in both the main tanks.</p> <p>According to two of the passengers, the take-off was normal, however shortly after lift-off the engine made a strange "Prprpr..." noise. The passenger that was seated next to the pilot observed him making certain adjustments to the throttle and mixture levers where after the engine ran smooth for a short period and then started to run rough again.</p> <p>The pilot then made the statement "people we are experiencing trouble". From this point onwards they could not recall what happened until the aircraft came to a halt and they crawled out of the wreckage. Once all three passengers were at a safe distance from the wreckage they realised that the pilot was still trapped inside. One of them went back and found the pilot still strapped in his seat, unconscious. He managed to free him from the burning wreckage and pulled him to safety whereupon they called the emergency services and police. The owner of the farm on which they crashed then arrived on the scene and assisted them, with the emergency services arriving soon afterwards.</p>				
Probable Cause					
The following conditions were found to have contributed to the accident:					
(i) Maximum gross weight limitation exceeded prior to take-off.					
(ii) Forward CG limit exceeded.					
(iii) Take-off Runway 07, with a strong cross wind tail wind component of 320°/25 gusting 40kts.					
(iv) Evidence of a lean mixture setting during the engine teardown inspection.					
(v) A density altitude of 7 200ft.					