

		Ref: 7450			
<h2 style="text-align: center;">SOUTH AFRICAN CIVIL AVIATION AUTHORITY</h2> <h3 style="text-align: center;">REVISED ACCIDENT REPORT – EXECUTIVE SUMMARY</h3>					
Aircraft Registration	ZS-RMM	Date of Accident	12/01/2002	Time of Accident	1000Z
Type of Aircraft	ROBINSON R-44 (RAVEN)		Type of Operation	Private	
Pilot-in-command License Type	Private	Age	46	License Valid	Yes
Pilot-in-command Flying Experience	Total Flying Hours	117.3	Hours on Type	43.5	
Last point of departure	Cathedral Peak Hotel (Drakensberg Mountains)				
Next point of intended landing	Bell Park Dam – Giants Castle Area (KwaZulu-Natal)				
Location of the accident site with reference to easily defined geographical points (GPS readings if possible)					
Cathedral Peak Hotel (GPS 28°56.750' South and 029°12.169 East at an elevation of approximately 4 600ft)					
Meteorological Information	Fine: Temperature ± 39°C, Wind - SSW 2knots, Visibility - Good				
Number of people on board	1 + 3	No. of people injured	Three	No. of people killed	One
Synopsis	<p>The pilot, accompanied by two passengers, departed on Friday afternoon, January 11, 2002 from Virginia airport (FAVG - Durban) to a private landing area near Bell Park dam in the Giant's Castle Area. The duration of the flight was approximately 1 hour and 10 minutes.</p> <p>The following morning, the pilot was accompanied by three passengers and departed from the pilot's cottage at Bell Park dam to the Cathedral Peak Hotel to uplift fuel. During landing the low rotor RPM warning light illuminated momentarily, where upon the helicopter was landed. The two rear seated passengers then disembarked from the aircraft, where after it was repositioned and refuelled to capacity.</p> <p>According to the pilot, prior to his departure from the heli-pad at the Cathedral Peak Hotel, he discussed the load with the Cathedral Peak pilot. <i>(A commercial sight seeing operation was being conducted from the hotel and the helicopter used for this purpose was usually flown by a Commercial or Airline Transport Pilot).</i> "My decision was to check the power necessary to hover with the load we had. I did this twice and both times it was maintaining a hover, pulling 22 inches (Manifold Pressure – MP). Had I not achieved this I would have left 2 passengers at the pad and returned for them. Being sufficiently confident that I had enough power I committed to a take-off. As soon as we lost the ground effect the rotor RPM started to drop, the horn came on, and the machine descended to the eventual crash site".</p>				
Probable Cause					
<p>The aircraft's in ground effect (IGE) hover capabilities were exceeded by approximately 147 pounds which rendered the aircraft too heavy to conduct a safe IGE hover take-off under prevailing conditions.</p> <p>The pilot allowed the main rotor RPM to decay below the safe minimum allowable limit (warning light & audio warning sounded) while attempting a running take-off with four adult occupants onboard. He was unable to obtain sufficient flying speed from this condition and crashed 0.2nm from the point of take-off.</p>					