



Ref: 7896

SOUTH AFRICAN CIVIL AVIATION AUTHORITY

ACCIDENT REPORT – EXECUTIVE SUMMARY

Aircraft Registration	ZU-DNH	Date of Accident	20 December 2004		Time of Accident	1300Z
Type of Aircraft	MAGNI M16		Type of Operation		Private	
Pilot-in-command License Type	Gyroplane	Age	38	License Valid	Yes	
Pilot-in-command Flying Experience	Total Flying Hrs	54.0		Hours on Type	54.0	
Last point of departure	Farm Spioenkop in the Wolmaransstad district					
Next point of intended landing	Farm Brakvlei in the Wolmaransstad district					
Location of the accident site with reference to easily defined geographical points (GPS readings if possible)						
Farm Spioenkop in the Wolmaransstad district						
Meteorological Information	Fine: Wind – 270/5kts, Temperature 28°C, CAVOK					
Number of people on board	1 + 0	No. of people injured	0	No. of people killed	0	
Synopsis						
<p>The pilot, the sole occupant of the aircraft took off from a friend's farm. On the right-hand side of the runway (open piece of farm land) was an avenue of trees and approximately 600m ahead a set of Eskom power lines and trees. Shortly after becoming airborne at a height slightly above the tree line the pilot experienced an unfamiliar sound emitted by the propeller. At this stage the aircraft was in a substantial nose-up attitude as well at a relatively slow airspeed. He experienced a feeling associated with a reduction in power, as if the aircraft failed to climb. Concerned that he would collide with the power lines and trees straight ahead he opted to execute a forced landing in a ploughed maize field on his left-hand side. On touch down the nose wheel dug into the soft soil and broke off, resulting in the aircraft rolling over to the right and the main rotor blades striking the ground. The pilot was not injured during the accident.</p> <p>On 22 December 2004, the aircraft was delivered to the Magni agents in South Africa where they assessed the damage, which was limited to the dynamic components and main rotor blades. The engine did not sustain any damage in the event and it was decided to perform a run-out on the crankshaft, which was well within the 0.05-inch limitation at 0.02 inches.</p> <p>The aircraft was purchased by the pilot/owner during September 2004 as new. The total airframe and engine hours at the time of the event was recorded at 63.8 hours. The CAA issued an Authority to Fly on 22 October 2004, which was valid until 21 October 2005.</p>						
Probable Cause						
<p>It would appear that the pilot failed to assess the wind properly prior to take-off, and once above the tree line he experienced a tail wind condition, with the aircraft in a high nose up attitude, which caused the propeller to “cavitate” (make an unfamiliar sound) as the pilot referred to in his statement, which scared him. Due to the pilot's limited experience he failed to assess the condition he experienced (similar to a stall in aircraft, behind the power curve) and instead of pushing the control stick forward and gain some airspeed and fly out, he allowed the aircraft to descend (sink) followed by the forced landing, resulting in a rollover.</p>						