

**ACCIDENT**

<b>Aircraft Type and Registration:</b>	Rotorsport UK Calidus, G-CPTR	
<b>No &amp; Type of Engines:</b>	1 Rotax 912 ULS piston engine	
<b>Year of Manufacture:</b>	2010 (Serial no: RSUK/CALS/014)	
<b>Date &amp; Time (UTC):</b>	10 August 2017 at 1505 hrs	
<b>Location:</b>	Popham Airfield, Hampshire	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - None
<b>Injuries:</b>	Crew - 1 (Minor)	Passengers - N/A
<b>Nature of Damage:</b>	Extensive	
<b>Commander's Licence:</b>	Other	
<b>Commander's Age:</b>	51 years	
<b>Commander's Flying Experience:</b>	72 hours (of which 10 were on type) Last 90 days - 18 hours Last 28 days - 5 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

**Synopsis**

The control stick was moved to the aft position during the takeoff run, the rotors struck the ground and the gyroplane rolled onto its side.

**History of the flight**

The pilot lined up his gyroplane and pre-rotated the rotor to 200 rpm, prior to an into-wind takeoff from a wet, grass runway which sloped down. He applied maximum wheel braking but, after he disengaged the pre-rotator and before he moved the control stick aft for takeoff, the gyroplane's wheels started to slide. Although the grass was very wet, the wheel brakes had held during an earlier engine check.

The pilot was distracted by the apparent brake failure and when he realised he could not prevent the gyroplane sliding forwards he elected to take off. Thinking that he had already moved the control stick aft, he released the brake and let the gyroplane accelerate.

After travelling approximately 70 m, the pilot pulled the control stick back and the gyroplane rolled quickly left, the rotors struck the ground, followed by the propeller; causing the engine to stop. The gyroplane came to a halt on its left side and, with some difficulty, the pilot managed to force open the canopy and climb out.

Afterwards the pilot realised he should have abandoned the takeoff when the wheels began to slide. His distraction with the braking issue caused him to overlook the important

step of moving the control stick aft before releasing the brake. By moving the control stick aft once the gyroplane gained speed, rather than when it was stationary, he had induced a rapid roll to the left<sup>1</sup> which he could not correct.

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**Footnote**

- <sup>1</sup> The rotor blades would have stalled when moving rearwards (retreating) on the left side of the gyroplane, due to a high angle of attack and low rotor speed. The ensuing 'retreating blade stall' would have led to reduced lift on the left side of the rotor disc compared to the right side; the advancing blades on the right benefitting from a greater relative airflow due to the wind velocity and the gyroplane's groundspeed.
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