

## ACCIDENT

<b>Aircraft Type and Registration:</b>	Rotorsport UK MT-03, G-RSMT	
<b>No &amp; Type of Engines:</b>	1 Rotax 912 ULS piston engine	
<b>Year of Manufacture:</b>	2007	
<b>Date &amp; Time (UTC):</b>	3 July 2011 at 1450 hrs	
<b>Location:</b>	Fine Lane, Fradley, near Lichfield, Staffordshire	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - 1
<b>Injuries:</b>	Crew - None	Passengers - 1 (Minor)
<b>Nature of Damage:</b>	Nosewheel, fuselage, airframe, mast, rotor, propeller, rudder and fuel tanks	
<b>Commander's Licence:</b>	Private Pilot's Licence	
<b>Commander's Age:</b>	58 years	
<b>Commander's Flying Experience:</b>	132 hours (of which 132 were on type) Last 90 days - 5 hours Last 28 days - 1 hour	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

## Synopsis

The pilot reported that shortly after takeoff the aircraft did not climb as expected and, with the aircraft in level flight and throttle fully open, the aircraft did not accelerate as expected. The pilot subsequently made a forced landing onto a road and the rotor impacted the ground.

## History of the flight

On the afternoon of the accident, the pilot and a passenger had flown approximately 15 nm from Stoke Golding Airfield to Roddige Airfield. After about an hour on the ground the pilot and his passenger prepared for a flight to Otherton Airfield. No additional fuel or baggage was uploaded and having completed his

pre-flight checks, he taxied the aircraft to the holding point for grass Runway 27. After waiting for two aircraft to land, he positioned the aircraft on the threshold and lined up for takeoff. The reported wind was from 270° at 2 kt. The pilot pre-rotated the rotor to 240 rpm and smoothly applied full throttle whilst checking the engine indications, which appeared normal. After about 200 m, the aircraft became airborne and, as it reached the end of the runway having travelled about 430 m, its airspeed was about 60 mph (the best climb speed  $V_{climb}$  is 60-65 mph). Pulling back on the control stick to climb, the pilot reported that the climb rate was very low and so lowered the nose slightly to gain airspeed. However, having levelled at approximately 15 ft above

a standing crop of rapeseed in an adjacent field with the throttle lever in the fully open position, the aircraft did not accelerate as expected and airspeed remained at about 65 mph.

Approaching a line of trees and suspended electrical cables ahead, the pilot pulled back on the stick and the aircraft climbed to about 40 ft, at which point the passenger advised the pilot to “watch your speed” as the airspeed had reduced to about 30 mph (minimum speed  $V_{min}$  is 25 mph at maximum takeoff weight (MTOW)). With the obstacles still ahead, the pilot positioned the aircraft for a forced landing on an adjacent road. The aircraft touched down heavily, tail first, before the rotor impacted the ground at the side of the road. The aircraft then came to a stop resting against some trees. Having switched off the ignition, the pilot and passenger vacated the aircraft unaided and moved a safe distance away as a fuel leak had developed. The pilot was uninjured, but the passenger sustained minor injuries. The nosewheel, fuselage, mast, rotor, propeller, rudder and fuel tanks were damaged.

The reported takeoff weight of the aircraft was 434 kg, which was 16 kg below the MTOW of 450 kg. The Pilot’s Handbook states that at MTOW at sea level, with standard atmospheric conditions, the nominal climb rate is 600 ft/min for this aircraft and engine combination. At 1320 hrs, which coincided with the takeoff time, the METAR for Birmingham Airport, which is approximately 16 nm from Roddige Airfield, advised that the temperature was 22°C, the dew point was 08°C, QNH was 1017 mb and CAVOK. Roddige Airfield elevation is approximately 180 ft, with a calculated density altitude of about 800 ft at the time. Stoke Golding Airfield elevation is about 280 ft.

The pilot stated that the preceding flight from Stoke Golding Airfield had been uneventful, with the takeoff and climb performance appearing normal considering the atmospheric conditions and the aircraft being near to its MTOW. The pilot considered that shortly after takeoff from Roddige Airfield, the engine had suffered an unexplained partial loss of power.