

ACCIDENT

Aircraft Type and Registration:	Thruster T300, G-MYAR	
No & Type of Engines:	1 Rotax 503 piston engine	
Year of Manufacture:	1992	
Date & Time (UTC):	8 July 2007 at 0930 hrs	
Location:	Horse Leys Farm, east of Loughborough, Leicestershire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - N/A
Injuries:	Crew - 1 (Minor)	Passengers - N/A
Nature of Damage:	Minor	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	Not known	
Commander's Flying Experience:	378 hours (of which 105 were on type) Last 90 days - 3 hours Last 28 days - 0 hours	
Information Source:	BMAA Accident Report Form submitted by the pilot and further enquiries by the AAIB	

Synopsis

During takeoff from a grass farm strip the aircraft suffered a loss of power. The pilot carried out a forced landing in a wheat field but the aircraft clipped a hedge and inverted. The pilot assessed the cause of the power failure to have been due to a blocked vent in the fuel tank cap.

History of the flight

The Thruster T300 is a two-seat three-axis microlight aircraft with a maximum takeoff weight of 370 kg. Its Rotax 503 piston engine is mounted on a pylon ahead of the wing. The accident flight occurred after two successful short flights while operating from a 480 metre grass farm strip. The two short flights were

conducted with the 40 litre fuel tank half-full. The pilot had experienced some over-pressurisation of the carburettors using the electric fuel pump, which was causing fuel to drip onto the windscreen, so he had switched the electric fuel pump off and was using only the mechanical pump to supply the fuel. He reported that the fuel pressure had been fine during the first two flights with the mechanical pump. For the third flight the pilot filled the tank to full and was ready to depart approximately 10 minutes after landing from the previous flight.

The takeoff proceeded normally although the aircraft lifted off later than on the previous flights, which the

pilot thought was due to the increased fuel load and some soft patches on the runway. At about 30 feet agl the pilot noticed that the engine power was starting to fade. By the time he realised what was occurring he had allowed the aircraft to drift to the left and was now over a hedge and standing mature wheat crop. He now had no power and did not have sufficient speed or height to return to the runway, so he elected to land straight ahead. The aircraft clipped a hedge and flipped inverted relatively gently, coming to rest in the wheat. At this point the pilot had not suffered any injuries but when he released his harness, he did not brace himself and fell out of his inverted seat. He was wearing a helmet but suffered a strained neck upon hitting the main fuselage tube.

Pilot's assessment of the cause

The pilot believes that the tank breather, which consists of a small hole in the top of the fuel cap, was probably blocked. This blockage would have caused a partial vacuum in the tank as the fuel level reduced, eventually reducing the fuel flow below a sufficient level to sustain the engine. The pilot was not able to confirm this theory because the vent hole, when examined, was not blocked. However, the pilot believes that when the aircraft inverted, the pressure of the 40 litres of fuel, which was now on top of the vent hole, may have cleared the blockage.

The pilot considers that a contributory cause of the accident was his allowing the aircraft to drift to the left of the runway while the power fade was distracting him.