

**ACCIDENT**

<b>Aircraft Type and Registration:</b>	Europa, G-BWZT	
<b>No &amp; Type of Engines:</b>	1 Rotax 912-UL piston engine	
<b>Year of Manufacture:</b>	1997	
<b>Date &amp; Time (UTC):</b>	5 March 2006 at 1220 hrs	
<b>Location:</b>	Crowfield Airfield, near Ipswich	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - 1
<b>Injuries:</b>	Crew - 1 (Minor)	Passengers - 1 (Minor)
<b>Nature of Damage:</b>	Fuselage fractured ahead of fin	
<b>Commander's Licence:</b>	Private Pilot's Licence	
<b>Commander's Age:</b>	63 years	
<b>Commander's Flying Experience:</b>	285 hours (of which 12 were on type) Last 90 days - 3 hours Last 28 days - 3 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot, and a statement by the aircraft passenger	

**Synopsis**

Whilst carrying out a practise stall the engine began to misfire. Relevant cockpit actions did not cure the misfiring but the engine did start to run more normally during the recovery to Crowfield Airfield. The aircraft became high and fast on the approach and, when it was clear that a safe landing was unlikely, the pilot applied full power to go-around. As the aircraft turned downwind it was clear that the engine was not providing sufficient power to maintain height and speed so a forced landing was carried out into a field. The occupants received only minor injuries but the aircraft was extensively damaged during the landing.

**History of the flight**

The pilot, who owned the aircraft, was flying a local sortie from Crowfield Airfield. He was accompanied by a passenger who also held a PPL, but who was unfamiliar with the aircraft. The weather was fine but cold, with a surface temperature of about 0°C and the surface wind was from 320°(M) at 18 to 20 kt. The grass runway at Crowfield is orientated 31/13 and 768 m in length.

Pre-flight actions and checks were carried out, including a check of the fuel from both drain points. The fuel tanks were approximately two thirds full. With all engine indications normal, the aircraft took off and was operated between 800 ft and 1,500 ft in the local area.

After some general handling the aircraft was climbed to about 4,000 ft with the intention of conducting a stalling exercise. Whilst carrying out a stall, and with the aircraft in a high nose attitude at a low power setting, the engine began to misfire. The pilot levelled the aircraft and increased power, but the engine did not respond correctly. The rpm was seen to fluctuate between about 4,400 rpm and 4,900 rpm, with associated 'surges' of power. The pilot selected the reserve fuel tank but this made no noticeable difference. At some point the electric fuel pump was selected on, though the pilot was unable to say exactly when this happened. The pilot also cycled the propeller control and, although this made no immediate difference, the engine did then start to run more normally. A recovery to Crowfield was initiated, with the propeller pitch set to full fine. The pilot requested a priority landing because of the rough running engine but did not declare an emergency.

The aircraft arrived over Crowfield at about 3,000 ft, positioned to the north of the airfield on the 'dead side' of Runway 31. The pilot joined the left hand circuit crosswind, descending to about 2,000 ft at the start of the downwind leg. By the time the aircraft was on base leg it was at about 1,000 ft but the speed was too high to allow selection of flaps, which were eventually selected when the aircraft was on finals. The aircraft crossed the threshold at about 100 kt, and it was clear then that a safe landing on the grass runway was unlikely. The pilot selected full power and the engine appeared to respond. As the aircraft climbed, the pilot retracted the flaps and commenced a turn to the left, intending to fly a tight low-level circuit. Soon afterwards, it became clear that the engine was not producing sufficient power to maintain height and speed and that a forced landing would be necessary. A suitable field lay ahead and the aircraft was landed downwind into it, heading about

south-south-east, at an estimated 55 kt IAS. The aircraft ran on smoothly for a while but the nose wheel 'dug in' after about 50 or 60 m and the aircraft pitched forward and yawed through 180° before coming to rest.

The pilot and passenger, who were both wearing four point harnesses, received only minor bruising and were able to vacate the aircraft without difficulty. The aircraft suffered extensive damage to the aft fuselage, engine cowling and spinner, undercarriage and left wing.

### Comment

This accident highlights the dangers of relying on an engine which is of doubtful reliability. As the aircraft arrived overhead the airfield at about 3,000 ft, a full forced landing pattern was an option and, had the aircraft been established at the required gliding speed, the pilot may arguably have been better placed to assess, and allow for, the wind effects. Additionally, being overhead his home airfield, he would have been in a familiar situation which it would be expected he had practised several times before.

As the aircraft commenced its downwind leg higher than normal, and with excess speed, the pilot was in a less familiar situation, particularly since it would be difficult to dissipate this energy in the relatively strong tailwind. In this situation an assessment of the wind effect and aircraft's energy levels would have been more difficult until relatively late in the attempt to land.

The intended tight, low level, circuit with a relatively strong wind and suspect engine would have been a demanding manoeuvre and not without considerable risk. The pilot is to be commended for making the quick decision to force land ahead when the engine lost power again and not to attempt to return to the airfield.