Zenair CH 601UL, G-ZODI

AAIB Bulletin No: 8/2004	Ref: EW/G2004/05/18	Category: 1.3
Aircraft Type and Registration:	Zenair CH 601UL, G-ZODI	
No & Type of Engines:	1 Rotax 912-UL piston engine	
Year of Manufacture:	2000	
Date & Time (UTC):	25 May 2004 at 1340 hrs	
Location:	Popham Airfield, Hampshire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - 1 (Serious)	Passengers - N/A
Nature of Damage:	Substantial damage to forward fuselage, engine and right wing	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	63 years	
Commander's Flying Experience:	154 hours (of which 18 were on type)	
	Last 90 days - 24 hours	
	Last 28 days - 7 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

The aircraft had been checked before flight, with the pilot's intention being to carry out circuit practice at Popham Airfield, commencing with a maximum climb angle takeoff at 60 knots. The weather was good, with a light north-easterly wind. After start-up, the pilot waited for the oil temperature to rise to 40°C before taxiing to the holding point of Runway 03. As he waited for a microlight aircraft to fly clear of the runway on the crosswind leg, the oil temperature rose to 60°C; he then tested the magnetos for RPM drop, and found both to be within limits. The full power check was delayed until during the take-off roll (as is normal practice for this aircraft) because the wheel brakes are not strong enough to hold the aircraft stationary at the maximum power setting.

The takeoff was uneventful and 60 knots was maintained at full throttle during the climb-out. The engine gauges were normal. As the pilot commenced a gentle turn on to the crosswind leg, the engine misfired four times and then stopped. The aircraft then entered a spiral turn to the left, and impacted the ground in an adjacent field just beyond the end of the runway, causing substantial damage to the front fuselage and canopy, displacement of the engine, and severance of the right wing. The pilot, who was wearing a four-point harness, exited the aircraft via the canopy with the assistance of some airfield staff, having sustained lacerations to both ankles, minor fractures, a cracked sternum and general bruising.

In a candid report, the pilot considered that the cause of the accident could have been due to an electrical fault or fuel pump failure, coupled with his slow reaction to control the dive following the engine failure. He also observed that the four-point harness, and the energy absorption of the metal structure surrounding him, probably saved him from more severe injury.