ACCIDENT

Aircraft Type and Registration:	Rans S6-ESD Coyote II, G-MYLW
No & Type of Engines:	1 Rotax 503 piston engine
Year of Manufacture:	1993
Date & Time (UTC):	26 April 2008 at 1510 hrs
Location:	Priory Farm Airfield, Norfolk
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - None
Injuries:	Crew - None Passengers - N/A
Nature of Damage:	Nose landing gear and the underside of the fuselage
Commander's Licence:	Private Pilot's Licence
Commander's Age:	57 years
Commander's Flying Experience:	239 hours (of which 15 were on type) Last 90 days - 10 hours Last 28 days - 4 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot, engine test by the UK manufacturer's agent and an aftercast from the Met Office

Synopsis

At about 100 ft on the climb-out the engine "faltered". The pilot levelled the aircraft, which was very rapidly followed by the engine stopping. Due to insufficient height, speed and time the pilot initiated the flare as the aircraft impacted the ground in a field adjoining the side of the runway. Following the accident no clear reason for the engine failure could be found.

History of the flight

The pilot/owner carried out a normal pre-flight check of the aircraft and found everything to be acceptable for flight. After starting the engine he ensured that it had reached its operating temperature, which took 8 to 9 minutes, before starting the takeoff. At about 100 ft on the climbout the engine "faltered". The pilot levelled the aircraft, which was very rapidly followed by the engine stopping. He applied nose-down pitch and steered the aircraft away from the hangars and parked aircraft that were in the overshoot area of the runway. Due to insufficient height, speed and time the pilot initiated the flare as the aircraft impacted the ground in a field adjoining the side of the runway, causing damage to the nose landing gear and the lower fuselage.

Following the accident the pilot could find no obvious reason for the engine failure. There was sufficient fuel

of the correct type, the fuel and ignition were switched ON, the fuel filter was clean and the propeller was free to rotate.

Engineering examination

The engine was taken to the manufacturer's UK agent where it was examined and test run. A limited examination of the cylinders and pistons revealed no evidence of a 'cold' seizure. The engine was placed onto a test stand and test run. It was started on the second pull of the start cord and ran satisfactorily.

Meteorological aftercast

The aftercast showed that there was a shallow area of low pressure over Liverpool at 1200 hrs which moved northeast to cover Middlesbrough by 1800 hrs. A 'split' or 'upper' cold front was observed over Norfolk and Suffolk at 1200 hrs, which moved east to the coast by 1800 hrs. A surface cold front was seen moving from the Welsh border at 1200 hrs to just to the west of the meridian at 1800 hrs. The estimated ground level wind and temperatures relevant to the accident area at 1520 hrs were 180/10; temperature 16.5 to 17.4°C; dew point 9.5 to 10.4°C and humidity 60 to 67%.

These ground level temperature and humidity figures were plotted on the carburettor icing probability chart that is shown in the CAA General Aviation Safety Sense Leaflet 3A titled '*Winter Flying*' and Leaflet 14 titled '*Piston Engine Icing*'. They indicated that there was a possibility of moderate carburettor icing at a cruise engine power setting and serious icing at a descent power setting.