

ACCIDENT

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| Aircraft Type and Registration: | Rans S6-ESD XL (Modified) Coyote II, G-MZNV | |
| No & Type of Engines: | 1 Rotax 503-2V piston engine | |
| Year of Manufacture: | 1998 | |
| Date & Time (UTC): | 23 November 2007 at 1515 hrs | |
| Location: | A field 3 miles east of Popham | |
| Type of Flight: | Private | |
| Persons on Board: | Crew - 1 | Passengers - 1 |
| Injuries: | Crew - None | Passengers - None |
| Nature of Damage: | Damage to propeller, nose wheel, cowlings and tail cone | |
| Commander's Licence: | Private Pilot's Licence | |
| Commander's Age: | 56 years | |
| Commander's Flying Experience: | 487 hours (of which 423 were on type) Last 90 days - 18 hours Last 28 days - 2 hours | |
| Information Source: | Aircraft Accident Report Form submitted by the pilot | |

Synopsis

The engine of G-MZNV failed during cruise flight. During the subsequent forced landing, the nose gear collapsed and the aircraft overturned.

History of the flight

While in the cruise at 1,200 ft amsl returning to Brimpton, Berkshire from a 'land away' at Sandown, Isle of Wight, the engine stopped. The failure was preceded by a smooth though rapid rundown from cruise power. The pilot successfully restarted the engine four times but each time it ran only briefly before cutting out. The fuel pressure (measured just before the carburettor) remained normal throughout the incident and the aircraft had sufficient fuel for the flight. While attempting to restart the engine the pilot was able to turn into wind and

successfully touch down approximately half way into a large open field of short crop. After a ground run of 25 m, the nose gear collapsed causing the nose leg to dig into the soft soil. As a result, the aircraft overturned and came to rest inverted. The pilot and passenger, who were wearing three point seatbelts, were uninjured and able to vacate the aircraft using the normal exit door. There was a slow fuel leak from the tank breather but this was in an area with no ignition source and no fire resulted.

Engineering investigation

The air-cooled Rotax 503 engine fitted to G-MZNV was not equipped with carburettor heating and the possibility of engine failure due to carburettor icing was considered. The METAR for RAF Odiham,

(approximately 12 miles north east of the accident site) at 1450 hrs gave a temperature of +5°C and a dew point of +0°C. Applying these figures to the chart in the CAA Safety Sense leaflet 14 '*Piston Engine Icing*' suggests a risk of moderate to serious icing at cruise power. According to the Rotax UK distributor, the 503 draws its induction air past the cylinder head and in a cowled configuration (such as the S6) is thought unlikely to

require carburettor heating. The 503 is widely used in uncowled configurations on other aircraft and an electric heater kit which heats the body of the carburettor was available from the UK distributor. They report that they sold this kit in large numbers for 20 years before discontinuing it and received no reports of carburettor icing from aircraft using this system.