

Rutan Varieze, G-SKCI

AAIB Bulletin No: 6/2002	Ref: EW/G2002/02/11	Category: 1.3
Aircraft Type and Registration:	Rutan Varieze, G-SKCI	
No & Type of Engines:	1 Lycoming 0-200 piston engine	
Year of Manufacture:	2001	
Date & Time (UTC):	16 February 2002 at 1305 hrs	
Location:	Biggin Hill Airport	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Substantial damage to nose landing gear and aircraft nose	
Commander's Licence:	Private Pilots Licence	
Commander's Age:	55 years	
Commander's Flying Experience:	1,025 hours (of which 260 were on type)	
	Last 90 days - 3 hours	
	Last 28 days - hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and AAIB enquiries	

The pilot, who was undertaking the first flight of the newly built aircraft, reported that after extensive checks he took off and levelled at 50 feet over the runway to check the control responses. Satisfied that all was well he reselected full power and continued the climb. During the initial climb the engine lost power but recovered to full power when carburettor heat was selected 'ON'. The climb was continued and at approximately 400 to 500 feet the pilot commenced a left turn in order to stay close to the airfield. During the turn the engine lost power for a second time. The pilot selected carburettor heat back to 'OFF', but the engine stopped. He made a 'Mayday' call and turned downwind towards the runway to carry out a forced landing but landed approximately 30 metres short of the threshold. The aircraft's small wheels unfortunately sank into the soft ground, the nose landing gear failed, and the nose of the aircraft suffered substantial damage. The fire services attended the scene but there was no fire and the pilot was uninjured.

Subsequent extensive examination of the aircraft did not reveal any defects except for a very small amount of debris in the engine fuel filter drain. The pilot considered, however, that there was insufficient debris to account for the power loss. He reported that the engine in the Varieze, because of its installation, is prone to carburettor icing, and in his opinion, this was more probably the cause of the power loss. Earlier in the day, the same pilot in another aircraft of the same type, experienced carburettor icing during ground running. The aircraft was using Avgas 100L at the time of the accident.

The pilot estimated the weather conditions at the time as generally good with a visibility of 10 km or more, a surface air temperature of +6°C and a surface wind of 8kt. The Meteorological Office estimated that, at the time of the accident, the temperature was +7°C with a dew point of 0°C. This equated to 61% relative humidity and placed the environmental conditions within the 'serious icing at any power' envelope as depicted on the carburettor icing chart published by the CAA in their General Aviation Safety Sense leaflet No 3B titled *'Winter Flying'*.