

## Fred Series 2, G-BMMF

<b>AAIB Bulletin No: 2/2004</b>	<b>Ref: EW/G2003/08/26</b>	<b>Category: 1.3</b>
<b>Aircraft Type and Registration:</b>	Fred Series 2, G-BMMF	
<b>No &amp; Type of Engines:</b>	1 Volkswagen 1834 piston engine	
<b>Year of Manufacture:</b>	1990	
<b>Date &amp; Time (UTC):</b>	14 August 2003 at 1624 hrs	
<b>Location:</b>	Near Ross-on Wye, Herefordshire	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - None
<b>Injuries:</b>	Crew - None	Passengers - N/A
<b>Nature of Damage:</b>	Minor damage to the landing gear	
<b>Commander's Licence:</b>	Private Pilot's Licence	
<b>Commander's Age:</b>	36 years	
<b>Commander's Flying Experience:</b>	201 hours (of which 10 were on type)	
	Last 90 days - 18 hours	
	Last 28 days - 8 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot plus subsequent enquiries	

### History of the flight

The FRED is an aircraft constructed from plans. The purpose of the flight was an air test in support of renewing the aircraft's Permit to Fly. It was operating from an airstrip located at the end of a valley where the weather was good with a light wind blowing down the runway.

Before taking off the pilot completed the pre-flight checks including an engine power check which did not reveal any problems. He then took off in the aircraft which was at its maximum take-off weight. On climbing through about 350 feet agl the engine started to misfire and the RPM reduced. The pilot selected the carburettor heat to HOT but this seemed to have no effect and so he prepared to make a forced landing in a small field below. Whilst he circled the field, however, the engine suddenly accelerated and full power was restored. The pilot placed the aircraft into a climb and after regaining some height he decided to return to the airstrip, which was now only about a mile away.

As the aircraft turned towards the airstrip the engine problem returned, somewhat worse than before, and the pilot believed the engine was about to stop. At this point he was about 650 feet above the bottom of the valley and due to rising ground around him, he had only a limited choice of landing areas available. As a result, he had no option but to attempt a forced landing in a field containing numerous obstacles on the ground (chiefly bales of hay), two sets of telephone wires which crossed the field and a line of trees along its approach-end boundary. Owing to the short distance available in which to land, combined with the aircraft's relatively high weight, the landing was heavy resulting in bending damage to the undercarriage. The pilot was, however, able to bring the aircraft safely to a stop without any further damage or injury to himself.

### Source of the engine malfunction

Subsequent checks to the aircraft's engine and fuel system have not revealed an identifiable cause for the rough running. Whilst carburettor icing cannot be ruled out under the prevailing conditions, the

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commander stated he did not consider this to be the cause. Further examination of the engine is planned by the owner and an addendum to this report will be made if the cause of the problem is positively identified.