No: 6/90 **Ref: EW/C1152** **Category: 1c**

Aircraft Type and Registration:	Sportavia-Putzer Fournier RF5, G-AYAI	
No & Type of Engines:	1 Sportavia-Limbach SL 1700-E piston engine	
Year of Manufacture:	1970	
Date and Time (UTC):	18 March 1990 at 1535 hrs	
Location:	Near Rattlesden Airfield, Suffolk	
Type of Flight:	Private (pleasure)	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - 1 (Fatal)	Passengers - 1 (Serious)
Nature of Damage:	Aircraft destroyed	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	57 years	
Commander's Total Flying Experience:	285 hours (of which 9 were on type)	
Information Source:	AAIB Field Investigation	

At about 1530 hrs the aircraft took-off, from runway 24 at Rattlesden Airfield, for a flight to Tibenham Airfield. The weather was fine and the surface wind southerly at about 12 kt. Several members of the local gliding club saw the take-off and noted that the climb attitude appeared to be steeper than normal. The passenger, who occupied the rear seat, recalled that the airspeed indicator read about 80 mph shortly after take-off and he also noticed the steep climb attitude. At about 400 feet agl, as the aircraft crossed the upwind end of the runway, it entered a left turn. Almost immediately the passenger felt a marked vibration. He noted that the airspeed had reduced to about 50 mph and the aircraft was in a high nose attitude. The pilot lowered the nose and reduced the angle of bank slightly. The vibration ceased and the speed increased to about 80 mph, accompanied by a height loss of about 200 feet. The pilot again raised the nose, the vibration started and the aircraft continued to descend in a steepening left turn until it struck the ground left wingtip first.

On-site examination indicated that the aircraft had impacted with almost 90° of left bank and in a nose down attitude of about 45°. The speed at impact was moderate and the aircraft was complete, with the undercarriage locked down, the spoilers in and the engine running. The cowl flaps were probably open.

In the subsequent detailed examination of the wreckage at AAIB Farnborough, it was established that the flying controls had all been serviceable and that the wing outer plane rigging pins has been engaged (the FR5 has folding outer wing panels). No defect which would have contributed to the accident was positively identified from the wreckage. Stall warning was provided by a vane switch, in the leading edge of the wing, which, when made, completed the circuit to a red warning light in the front cockpit. When the switch was tested it could be heard to click at about mid travel but no electrical continuity occurred until it was at the limit of its upward travel and contacting the top of the slot. The area around switch was damaged and it was not possible to determine how it would have operated prior to impact. The co-owner, who had noticed that it did not operate on the ground, believed it was fitted with some kind of interlock, however, study of the electrical circuit diagram showed this not to be the case.

The forward and rear airspeed indicators were attached to a common source to which air pressure was applied. The forward indicator registered about 15 mph higher than the rear, however, as the former had been severely disrupted by the impact it was not possible to say whether this discrepancy had existed prior to the crash.

Analysis of samples of fuel taken from the tanks and the carburettor showed contamination in both cases. The contamination of the tank fuel was believed to have occurred post accident, and that of the carburettor fuel to have been a consequence of the impact.

The post mortem examination of the pilot did not reveal any pre-existing medical condition which could have contributed to the accident.

The British Gliding Association has indentified a problem which can exist when pilots, whose experience is mainly on Group A aircraft, fly motor gliders. The latter have relatively low power and there may be a tendency to climb too steeply after take-off with a consequent loss of airspeed.