No: 2/86 **MICROLIGHT** **Ref: EW/G85/05/19**

Aircraft type and registration:	Hornet Invader/Striker G-MJVJ (single engined microlight)	
Year of Manufacture:	1982	
Date and time (GMT):	17 May 1985	
Location:	Oaker Bank Field, Killinghall, Nr Harrogate, Yorks	
Type of flight:	Pleasure	
Persons on board:	Crew — 1	Passengers — 1
Injuries:	Crew — 1 serious	Passengers — None
Nature of damage:	Extensive	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	37 years	
Commander's Total Flying Experience:	150 hours	
Information Source:	British Microlight Aircraft Association Report.	

After take-off, the aircraft was in a normal climbing turn to the left at approximately 100 feet agl when the engine suddenly emitted a loud "screeching" sound and stopped. The pilot selected an adjacent field for an emergency landing, but in trying to extend the glide to reach the field, the aircraft stalled and struck the ground some 10 metres short, before continuing through a boundary hedge into the field. The aircraft was extensively damaged and the pilot suffered a dislocated shoulder and facial injuries.

Inspection of the engine, a Fuji Robin 440 (lightweight), showed that the crankshaft had suffered a fatigue failure within the extended length which drives the magneto. The fatigue fracture originated at the end of the keyway, which locates the magneto wheel, and propagated to full failure at a point just outboard of the adjacent main bearing. Discolouration evident on the fatigue fracture was indicative of the crack having been existent for some time before the final failure.

It was reported that several previous cases of this type of failure had occurred. As a result of this accident, the B.M.A.A. issued a written request to its members to inspect this type of engine for cracks in the region of the keyway. In addition, it is reported that the engine manufacturer is now offering crankshafts for this type of engine with the original increased shaft diameter at the magneto-drive extension, which preceded the modified type for this 'lightweight' engine derivative.