

No: 1/84

Ref: EW/G83/10/08

**Aircraft type and registration:** Mooney M20F, G-BDVU (light single engined fixed wing aircraft)

**Year of manufacture:** 1975

**Date and time (GMT):** 30 October 1983 at 1415 hrs

**Location:** 3 nm northwest of Sywell Airfield

**Type of flight:** Private (Business)

**Persons on board:** Crew — 1                      Passengers — 2

**Injuries:** Crew — None                      Passengers — None

**Nature of damage:** Bent undercarriage door

**Commander's Licence:** Private Pilot's Licence

**Commander's Age:** 40 years

**Commander's total flying experience:** 350 hours (of which 300 were on type)

The aircraft was on a flight at 3000 feet altitude from Blackpool to Stansted, but as it was nearing Sywell, the engine lost power and the pilot was forced to land in a field. Up to that point in the flight the pilot had been flying with the left fuel tank selected, with the intention of allowing the contents of the tank to reduce to a low level by reference to the fuel gauge, before selecting the right tank. As the fuel injected engine lost power he noticed that the fuel pressure had fallen, so an immediate selection to right tank was made. The fuel pressure did not rise even though the electric boost pump was selected, and consequently the engine failed to re-start.

Subsequent examination of the aircraft revealed that a shear pin had failed in the drive to the impellor of the electric fuel pump. No other defects were discovered in the fuel system. At the time of the accident the left tank was effectively empty, the right tank contained approximately 10 gallons of fuel.

The pilot believes that air entered the fuel system as the left tank inadvertently ran too low, and that without the benefit of the electric fuel pump, the engine driven pump was not able to re-prime the system from the comparatively low fuel level in the right tank in the time available. Tests carried out after the aircraft had been repaired confirmed the serviceability of the engine drive pump and the aircraft's fuel system.