

**AAIB Bulletin No: 3/93**      **Ref: EW/G92/11/17**      **Category: 1c**

**Aircraft Type and Registration:** DH82A Tiger Moth, G-AJTW

**No & Type of Engines:** 1 De Havilland Gipsy Major Series 1 piston engine

**Year of Manufacture:** 1939

**Date & Time (UTC):** 21 November 1992 at 1326 hrs

**Location:** Tibenham, Norfolk

**Type of Flight:** Private

**Persons on Board:** Crew - 1                      Passengers - 1

**Injuries:** Crew - None                      Passengers - None

**Nature of Damage:** Damage to propeller, left main landing gear leg oleo, engine cowlings and rudder

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

**Commander's Age:** 45 years

**Commander's Flying Experience:** 454 hours (of which 373 were on type)  
Last 90 days - 19 hours  
Last 28 days - 7 hours

**Information Source:** Aircraft Accident Report Form submitted by the pilot

The aircraft was on a base leg for landing at Tibenham airfield when the engine stopped, picked up for a moment, then stopped finally. The failure was sudden and unexpected at 300 feet, and the propeller had stopped rotating before touchdown. The pilot continued the forced landing approach straight ahead, and as no usable area of asphalt surface was reachable the forced landing took place on farmland. After touchdown the aircraft rolled for about 20 metres and then nosed over due to the waterlogged nature of the field, and came to rest inverted. The pilot released himself and then assisted his passenger to unstrap and leave the aircraft.

An engine strip revealed that both spiral gears in the magneto drive had worn to the extent that the drive had failed, see photo 1. Oil is fed to the driving spiral gear by jet, and then drops onto the driven spiral gear where it collects in a hollow so that the gear runs in an oil bath. The oil pipe supplying the jet contains a filter screen inside the banjo union on the pressure filter, see photo 2: the filter screen was found to be blocked preventing the supply of oil to the magneto spiral gears. The gauze filter screen is not called up for any scheduled inspection.

Other instances of failure of the oil supply to the magneto gears have been noted due to the blockage of the jet.

### Safety Recommendation

**93-10** It is recommended that the CAA introduce an inspection of the magneto gear oil supply filter screen and oil jet at the next appropriate inspection and subsequently at intervals to be determined by experience. (Issued 22 February 1993)

Photo 1



MAGNETO DRIVING SPIRAL GEAR



MAGNETO DRIVEN SPIRAL GEAR

Photo 2

Banjo Union holding  
filter screen

Pressure  
Filter

