

DH 82ATiger Moth, G-BXMN

AAIB Bulletin No: 2/2000 **Ref: EW/G99/05/31** **Category: 1.3**

Aircraft Type and Registration: DH 82ATiger Moth, G-BXMN

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

Year of Manufacture: 1943

Date & Time (UTC): 25 May 1999 at 1823 hrs

Location: Nr Whalley, Nr Blackburn, Lancs

Type of Flight: Private

Persons on Board: Crew - 1 - Passengers - 1

Injuries: Crew - Minor - Passengers - 1 Serious

Nature of Damage: Aircraft severely damaged

Commander's Licence: Private Pilot's Licence

Commander's Age: 47 years

Commander's Flying Experience: 1,088 hours (of which 22 were on type)
Last 90 days - 19 hours
Last 28 days - 5 hours

Information Source: Aircraft Accident Report Form submitted by the pilot

The aircraft, with pilot and passenger onboard, was undertaking a local flight from a farm strip when, at a height of 1,100 feet, the engine began to run roughly and lose power. The pilot elected to carry out a forced landing on a golf course adjacent to a wooded area but, as he positioned the aircraft for the landing the engine appeared to recover. He completed a 360° turn but the engine then again lost power, leaving the pilot with no choice but to land in the trees. During the landing, both Sutton type harnesses failed and both occupants sustained injuries. There was no fire.

The weather conditions obtained from Blackpool Airport at the time of the accident indicated a temperature of +12°C and a dew point of +6°C, conditions considered favourable for the formation of carburettor icing at cruise power. It was the opinion of the pilot and his passenger that the symptoms of the power loss were consistent with such icing having occurred.

Sutton harnesses

Over the years many Tiger Moth aircraft have been fitted with replacement harnesses made from modern synthetic materials. This is especially the case in Australia, where Sutton harnesses have been prohibited for almost 30 years on such aircraft.

As a result of a previous accident to a Tiger Moth, G-AOBJ, at Cardiff Airport on 20 August 1997 in which both occupants sustained serious injuries, the AAIB published (AAIB Bulletin 6/98) Safety Recommendation 98-40, the content of which is reproduced below:

' In order to avoid unnecessary injury to the occupants of vintage aircraft during accidents, and since most Sutton harnesses fitted to such aircraft in service are likely to be in a deteriorated condition, it is recommended that all affected aircraft, including the de Havilland Moth series, be the subject of mandatory action by the CAA to equip them with improved modern harnesses.'

The CAA responded to this recommendation in its 'Follow-up Action on Occurrence Report (FACTOR) Number F 19/98, published on 1 August 1998, as follows:

' The Authority accepts this Recommendation.

The Authority will require the aircraft Type Design Organisation to issue a Service Bulletin requiring the fitting of either life-limited Sutton harnesses or new improved modern harnesses for all affected de Havilland aircraft, and this will be made mandatory by the Authority. It is intended that this will be completed by 31 December 1998. For other affected types, for which the manufacturers may no longer exist, it is intended that these actions will be completed by 31 December 1999.