

**No: 8/91**      **Ref: EW/C91/5/3**      **Category: 1b**

**Aircraft Type and Registration:** North American T6G Harvard, G-BHTH

**No & Type of Engines:** 1 Pratt & Whitney R1340-AN1 piston engine

**Year of Manufacture:** 1950

**Date & Time (UTC):** 19 May 1991 at 1810 hrs

**Location:** Standlake near Witney, Oxfordshire

**Type of Flight:** Private

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

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

**Nature of Damage:** Substantial to wing leading edges and propeller

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

**Commander's Age:** 40 years

**Commander's Flying Experience:** 507 hours (of which 78 were on type)

**Information Source:** AAIB Field Investigation

The aircraft had flown a total of 70 hours during the past 10 years. In August 1990 it was flown to North Weald, near Harlow, Essex for its annual Certificate of Airworthiness renewal. No significant defects were found and the aircraft completed a satisfactory air test on 13 January 1991. The aircraft next flew on 19 May 1991 when the owner collected it from North Weald with the intention of flying to Kidlington, near Oxford. All pre-flight checks were satisfactory and the aircraft took off at 1720 hrs with the pilot handling the aircraft from the front seat and a passenger occupying the rear seat. Following an uneventful transit to the Kidlington area, the pilot flew some aerobatic manoeuvres before flying in the local area. At this time the aircraft was at a height of 2000 feet and the pilot was in RTF contact with Brize Norton. When overhead Standlake, the pilot became aware of a vibration coincident with engine misfiring and the aircraft began to lose height. The pilot informed Brize Norton that he was proceeding to Kidlington but did not declare an emergency. The pilot then completed the relevant checks including changing fuel tanks which at this time contained 20 gallons in the right tank and 25 gallons in the left tank. All engine indications were normal except for the oil temperature which was slightly low. As the engine was still misfiring, the pilot decided to make a forced landing. He selected the landing gear down and then exercised the throttle. Opening the throttle increased the level of vibration and white smoke and flames were seen to emerge from the rear of the engine cowling. On closing the throttle, the vibration ceased together with the smoke and flames. The pilot continued with

the forced landing and at about 500 feet decided that it would be more prudent to land with the landing gear retracted. He therefore raised the landing gear and decided not to use any flap in order to reach his intended landing area. As smoke and flames were by now reappearing intermittently from the cowling the pilot selected the fuel cock to 'OFF'. At about 300 feet, the pilot transmitted a 'MAYDAY' call. The aircraft touched down initially in a field of standing crop some 40 metres short of a substantial hedge. After passing through the hedge the aircraft slid a further 15 metres before coming to rest upright. Both occupants were wearing full restraint harness and were able to exit the aircraft uninjured. There was no fire.

Examination of the aircraft on site revealed that it had sustained substantial damage to the wing leading edges due to its contact with the hedge and that the propeller was bent in a manner that indicated the engine was not developing power at impact. There was no fuel in the left wing tank. Subsequent examination of the aircraft by the maintenance organisation that had undertaken the C of A renewal revealed that the fuel drain cock for the left fuel tank had been broken off during the landing thus allowing all the fuel in that tank to escape. The maintenance organisation consider that the symptoms observed by the pilot were consistent with a supercharger bearing failure.