

Aircraft type and registration: Piper PA28-180 G-BHHO (light single engined fixed wing aircraft)

Year of Manufacture: 1975

Date and time (GMT): 9 August 1985 at 1541 hrs

Location: 1 mile north-west of Welford, Northamptonshire

Type of flight: Private

Persons on board: Crew — 1 Passengers — None

Injuries: Crew — 1 (fatal) Passengers — None

Nature of damage: Aircraft destroyed

Commander's Licence: Private Pilot's Licence

Commander's Age: 31 years

Commander's Total Flying Experience: Approximately 130 hours (of which about 70 hours were as pilot in command)

Information Source: AIB Field Investigation.

On the afternoon of 9 August 1985 the pilot arranged the hire of the Piper Archer aircraft, G-BHHO, from a flying school based at Coventry Airport. As he had not flown for six weeks, he was asked by the Chief Flying Instructor to have a check flight before flying solo. The pilot agreed and, at 1439 hrs, the aircraft took off from Coventry with a second qualified pilot occupying the right hand seat and acting as safety pilot. Three circuits and landings were flown after which the safety pilot vacated the aircraft. He later stated that the pilot appeared to have been in good health and that his handling of the aircraft had been satisfactory.

At 1505 hrs the aircraft again took off from Coventry Airport, this time flown solo. A transcript of the recorded radio-telephony communications between the aircraft and Coventry Air Traffic Control has shown that the pilot completed two further circuits and landings and, at 1518 hrs, he requested clearance to leave the Coventry Airport local area, climb to 750 feet and head towards the south-east. This was approved. All communication between the aircraft and Air Traffic Control was normal, with standard position reports until, at 1540 hrs, the following message was recorded "Hotel Oscar, Pan Pan..... Pilot unwell..... Emergency descent.....". This was followed by an open transmission from a keyed microphone, which ceased with a short, sharp burst of noise at 1540¹/₂ hrs.

From eye-witness evidence it was established that, at about 1540 hrs, the aircraft was observed flying level in a northerly direction, at a height of approximately 2000 feet above ground level close to the village of Welford. It was then seen to enter a steep dive. The aircraft appeared to partially recover from the dive at very low level, and entered a steep left turn when the left wing-tip struck the ground. There was no fire, however the aircraft was destroyed and the pilot sustained fatal injuries.

Examination of the impact area and aircraft wreckage showed that it had first struck the ground at

a speed of approximately 130 mph, in a level pitch attitude with 90° bank, left wing low. The first contact with the ground was with the left wing-tip, and it had then pitched nose down causing the engine and front left underside fuselage to gouge a large depression in the soil. After the initial contact with the ground the aircraft had continued for a further 22 metres before coming to rest. Evidence from damage to the propeller indicated that it had struck the ground with engine power applied. The wreckage was removed from the accident site and transported to the AIB facility at Farnborough for further examination.

Detailed examination of the wreckage showed that, prior to impact, the aircraft had been structurally intact, and that all the flying control circuits had been properly connected. There was no evidence that either jamming of the controls or any restriction to movement had occurred. The instruments, radios, navigational equipment and electrical switches, with the exception of the magnetos, were found to have been in configurations or selections consistent with normal flight. The magneto switch was found in the OFF position but was free to rotate. It must be considered possible that this could have been due to impact forces or that it may have been deliberately selected to OFF by a member of the rescue services after the accident. The heat exchanger, which provided warm air from the engine into the aircraft's cabin, was examined in great detail in order to establish whether carbon monoxide could have leaked from the engine into the cabin warm air system. Although badly distorted during the impact, no leaks within the system were found that would allow noxious fumes into the cabin. The maintenance records for the aircraft showed that it had been correctly maintained in accordance with the Civil Aviation Authority's approved schedule. The Certificates of Airworthiness and Maintenance Release were both valid.

At the time of the accident the pilot held a current Class III Medical Certificate which would have expired on 23 November 1985. Prior to the accident, on 11 July 1985, he had been admitted to hospital with a heart condition and discharged from hospital on 18 July 1985. There is no evidence that he subsequently informed the appropriate Civil Aviation Authority approved medical agencies of his heart condition or of the treatment that he was receiving for it. The CAA Medical Authorities have stated that, had they been made aware of the pilot's heart condition, his medical certificate would have been withdrawn, at least on a temporary basis. Under this circumstance the pilot's flying licence would have been invalid.

Post mortem examination indicated that the cause of death was multiple injuries. The type of heart condition that the pilot was suffering from would not normally be detected at autopsy. Toxicological examination revealed a 10% carbon monoxide saturation of the blood which was consistent with heavy smoking.