

Aircraft type and registration: Hoffman Aircraft H36 Dimona Motor Glider HB 2071

No & Type of engines: 1 Limbach L2000 EBI piston engine

Year of Manufacture: 1983

Date and time (UTC): 20 July 1987 at 1345 hrs

Location: Over Norton, nr Chipping Norton, Oxon

Type of flight: Private

Persons on board: Crew — 1 Passengers — 1

Injuries: Crew — 1 (fatal) Passengers — 1 (fatal)

Nature of damage: Aircraft destroyed

Commander's Licence: Private Pilot's Licence — Swiss (Motor Gliders)

Commander's Age: 59 years

Commander's Total Flying Experience: 742 hours on gliders and motor gliders (of which 78 hours were on type)

Information Source: AIB Field Investigation

The pilot filed a Visual Flight Rules (VFR) flight plan for the intended journey from Southend, where the pilot and passenger had stayed overnight, to Cork in the Republic of Ireland. The estimated flight time was 5 hours and 30 minutes, with an endurance of 7 hours.

The aircraft's route as reported on RTF, and tracked by radar, took the flight from Southend to Barkway VHF omni directional range (VOR), to Daventry VOR, and after at least one orbit in the vicinity of an area of weather clutter observed on the Controller's radar, proceeded to track in a south westerly direction from Daventry. A number of excursions away from the aircraft's expected track were observed. After leaving Southend the pilot had contacted Stansted, Bedford and Brize Norton, and appeared to have had some difficulty in interpreting the communications. He also flew at between 1000 and 5000 feet without advising ATC of changes of height. At 1342 hrs Brize Radar requested a right turn to 300°, identified the aircraft, which had no transponder, and asked that the aircraft should remain on the same heading for traffic avoidance purposes. This request was acknowledged and in response to a further enquiry to Brize Radar the pilot reported that the aircraft was at 5300 feet, and after further prompting, that he was climbing. At 1344 hrs the radar controller queried the aircraft's southerly heading and asked for a resumption of the 300° heading. This was again acknowledged, and there was no further RTF communication with the aircraft. A recording of Heathrow's radar at the time, indicates that the aircraft turned left from its requested north westerly heading, onto a southerly heading, then the radar returns became disrupted and disappeared.

Witnesses in the area of Chipping and Over Norton heard the sound of a high revving engine followed by an explosive noise, or crack, with no further engine noise. The weather was a low

overcast with good visibility. Pieces of the aircraft and debris were seen to fall out of the bottom of the cloud and land on farmland and fields. The two occupants were ejected and killed by impact forces.

The main wreckage was located over a south westerly (downwind) trail of approximately 1 km. Lighter items such as paper drifted up to 5 km away. The wreckage was removed to Farnborough and was examined by experts in the design and manufacture of the aircraft, and in the materials that were used in its construction. The outer 8 feet section of the port wing had failed in download and the remaining portion failed in an upwards direction, disrupting the lower fuselage. The horizontal stabilizer detached with the port side moving upwards; this caused the release of the rudder. The starboard wing, complete with the rear cockpit bulkhead came away from the fuselage, separating the front cockpit and the rear fuselage. The engine and propeller detached and landed at the head of the wreckage trail. The disruption of the cockpit area caused the failure of the majority of the harness attachment points through overload, and released the occupants. It was concluded that the damage was consistent with the aircraft having suffered a gross exceedance of its VNE (never exceed airspeed), followed by an in-flight structural disintegration.

Significant weather in the area at the time was: cloud 3 to 5 oktas stratus base 1500 feet, 5 to 8 oktas stratocumulus 2000 feet to 5000 feet; visibility 4000 metres to 6 km — occasional rain.

The pilot and passenger died from multiple injuries consistent with them having left the aircraft at a height of at least 500 feet and achieving their terminal velocity. Both were in good health, and the toxicological screening was negative.