

No: 12/87

Ref: 3

Aircraft type and registration: Mainair Gemini Flash 2A (microlight aircraft) G-MTIA

No & Type of engines: 1 Rotax 503 (reciprocating engine)

Year of Manufacture: 1987

Date and time (UTC): 8 August 1987 at 1637 hrs

Location: Nr North Waltham, Hampshire

Type of flight: Private

Persons on board: Crew — 1 Passengers — None

Injuries: Crew — 1 (fatal) Passengers — N/A

Nature of damage: Aircraft destroyed

Commander's Licence: Private Pilot's Licence Group D

Commander's Age: 41 years

Commander's Total Flying Experience: 86 hours (of which 20 minutes were on type)

Information Source: AAIB Field Investigation

The pilot was the owner of a Mainair Gemini Flash 2. On the day of the accident he had been offered the opportunity to try out a development of his own machine, a Mainair Gemini Flash 2A. One significant difference between the Mark 2 and the Mark 2A was that the latter had an extended wingspan and was more responsive in roll. Some 20 minutes after take-off the aircraft was seen by one witness at a height estimated to be about 700 feet and a position thought to have been towards the end of, but wide of the downwind position for landing. This witness described the aircraft as performing a steeply banked turn through about 360° using more than 60° of bank and then banking steeply in the opposite direction. Because the aircraft was in silhouette and some distance from him, he could not be sure of the direction of the first turn. After the aircraft banked in the other direction, he saw it twitch violently and saw the outer end of the lower wing fold over. Again, because the aircraft was so far away, he was unable to say whether the wing folded up or down. The aircraft then appeared to zig-zag before stabilising in a slow downward spiral. Other witnesses saw the aircraft only as it was descending, and they described it variously as a shape that was constantly changing and as flapping in a random manner.

Examination of the accident site showed that the first part of the aircraft to reach the ground was the front lower part of the nacelle unit, which had been twisted 180° from its normal position. The aircraft had descended vertically and there was little sign of rotation at the time of impact. The leach lines showed evidence of considerable negative loading and both outer wing poles had failed symmetrically in download some 3 feet from the tips. The monopole had failed in backward bending and the nacelle was attached to the sail only by the safety cable. The front pole had been fractured and a matching fracture was found in the centre of the

horizontal part of the "A" frame, which was held together only by a spring steel reinforcing rod. There was evidence that the propeller had struck the top rear end of the keel member. During the descent several contacts had occurred between the sail unit and the nacelle preventing a reliable determination of the actual failure sequence.