

No: 4/90

Ref: C1147/01

Category: 1c

Aircraft Type and Registration:	Beelee Aviation Christen Eagle II G-ZAPP	
No & Type of Engines:	One Lycoming AEIO-360-A1D piston engine	
Year of Manufacture:	1985	
Date and Time (UTC):	9 February 1990 at 1436 hrs	
Location:	Pleshey, near Chelmsford, Essex	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - nil
Injuries:	Crew - 1 (fatal)	Passengers - N/A
Nature of Damage:	Aircraft destroyed	
Commander's Licence:	Private Pilot's Licence with night rating and instrument rating	
Commander's Age:	41 years	
Commander's Total Flying Experience:	586 (of which 13 were on type)	
Information Source:	AAIB Field Investigation	

Before flying from London/Stansted to Southend the aircraft was refuelled to full tanks. After 1 hour 8 minutes on the ground at Southend it took off at 1427 hrs to return on a VFR flight to Stansted. There was no significant cloud, visibility was good, and the wind at 2,000 feet was 250°/25 kt.

Two minutes after take-off the pilot reported that he was leaving the Southend Special Rules Zone to the north-west flying at 1,000 feet. At 1434 hrs he called Stansted to report that he was inbound from Southend and that his position was over Chelmsford at 1,500 feet. Stansted radar responded by instructing him to position the aircraft on a left hand base leg for runway 23. The pilot acknowledged this call at 1434:30 hrs, at which time the radar returns from the aircraft showed it to be 4 nm from the point where it later crashed. Two minutes later a witness whose attention was attracted to the aircraft by its engine noise saw it hit the ground in a steep dive. He saw the aircraft only during the last 20 to 30 feet of its descent and described its attitude as about 45 degrees nose

down and banked to the right. He described the sound of the engine as a full-throated, healthy roar throughout.

A witness who saw the aircraft when it was still two miles from the point where it crashed described it as flying straight and level at about 1,000 feet and then pulling up to complete a loop before continuing in straight and level flight at its original height. Another witness, half a mile from the site of the accident, saw the aircraft pass just to the north of him on track for Stansted at a height he estimated to be between 500 and 700 feet. He had turned his back on the aircraft for about 6 seconds when his attention was again drawn to it by a change in its engine note, which he described as rising in a crescendo until it seemed to be screaming. He turned round again just in time to hear the aircraft hit the ground and to see smoke rise from it. Another witness who was about half a mile to the south-west of the aircraft's track described the aircraft as flying an aerobatic manoeuvre before diving to the ground. He could not describe the manoeuvre precisely but thought it might have been either a loop or a barrel roll, during which the aircraft seemed to be fully under the control of the pilot.

Analysis of radar information showed that the aircraft followed a straight track between Southend and Stansted. Its mean groundspeed was approximately 128 kt until about 30 seconds before the accident, when it appeared to reduce to about 112 kt.

The aircraft had struck the ground at moderately high speed, in a steeply banked attitude with the nose pitched over 30 degrees below the horizontal. The airframe was completely broken up in the impact, and the subsequent ground fire had destroyed much of the wood and aluminium airframe. At impact the engine had been developing considerable power and the aircraft had been complete, with all control surfaces attached and properly connected to the control column. The flying control surface attachments were examined and no evidence was found of any looseness or other defect. Because of the fire damage, the possibility of a control jam could not be excluded, but no evidence of any such defect, or any other unserviceability prior to the impact, was found. The propeller was found to have been at the fine pitch end of its operating range at impact but no damage to indicate engine overspeeding was found.

There was no evidence that the pilot suffered from any medical condition that could have contributed to the accident.