

No: 11/91

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Category: 1c

Aircraft Type and Registration: Taylor Titch JT2, G-BCTR
No & Type of Engines: 1 Rolls-Royce Continental C90-8F piston engine
Year of Manufacture: 1975
Date & Time (UTC): 6 July 1991 at 0955 hrs
Location: Brickhouse Farm Aerodrome, Frampton Cotterell, Avon
Type of Flight: Private
Persons on Board: Crew - 1 Passengers - None
Injuries: Crew - Fatal Passengers - N/A
Nature of Damage: Aircraft destroyed
Commander's Licence: Private Pilot's Licence (UK) and
FAA Commercial Pilot's Licence
Commander's Age: 35 years
Commander's Flying Experience: 1,000 hours (of which 117 were on type)
Information Source: AAIB Field Investigation

On the day before the accident three pilots, together with a fourth man, flew their three aircraft, a Taylor Titch, an Acro Sport and an Enstrom helicopter, in which the fourth man travelled, from Manchester Barton to Brickhouse Farm private landing strip. They planned to stay the night and take off for Wroughton the following morning. The last of the three aircraft to arrive was the Taylor Titch which was seen by a witness to perform some aerial manoeuvres prior to landing at 2030 hrs. It was calculated that this flight gave the pilot his 1,000th flying hour.

The next day, Saturday 6th July 1991, at about 0930 hrs, the pilot of the Enstrom carried out a short flight before landing back at the strip where he got out of the helicopter leaving the engine running and the rotor stopped. He and his passenger stood outside the helicopter to watch the Taylor Titch and the Acro Sport depart.

The direction of take-off was to the east with a 10 to 15 kt wind from just west of south, although during the take-off run the effect of this wind was masked by trees to the south of the strip. The Taylor Titch took off first and was seen to climb, at about 90 mph, to a height of between 70 and 100 feet and enter a steep turn with an angle of bank estimated as at least 60°. It then began, what appeared

to be, an orbit of the Enstrom crew standing beside their helicopter, who noticed that the pilot was looking down at them. As the aircraft turned through south, in the full effect of the wind, the angle of bank continued to increase and the aircraft continued to roll, with the nose dropping, until it struck the ground in a near vertical attitude. During the entire manoeuvre those on the ground at the strip stated that the engine sounded normal and healthy until it hit the ground.

The aircraft was at its maximum authorised take-off weight due to a higher than normal basic weight for an aircraft of this type and the amount of baggage carried. The aircraft had limited stowage capacity but evidence indicates that all the baggage was contained within it, apart from a sleeping bag which appeared to have been used to supplement the seat cushion. The location of the baggage gave an aft centre of gravity, but the CG was calculated to have been within the aft limit. At the take-off weight the stall speed in unaccelerated flight was 64 mph, however, with 60° angle of bank the stall speed would have been 90 mph while 65° would result in the figure being 99 mph.

There was no post impact fire although one of the witnesses said that there had been six gallons of fuel in the tank prior to take-off. It was clear to those on the ground that despite the fact that he had been well protected, having worn a full harness and a good helmet with a double visor, the pilot had not survived the crash. Postmortem examination of the pilot did not reveal any evidence which would suggest that medical factors contributed to the accident.

Examination of the wreckage revealed that the aircraft struck the ground in a near vertical dive whilst orientated on a heading of approximately 090° magnetic. The force of the impact destroyed most of the aircraft structure leaving only the rear fuselage, tail unit and wing mainspar in largely complete states. The extent of the destruction somewhat limited the effectiveness of the examination of the wreckage. Nevertheless the examination confirmed that the aircraft was intact at the time of impact and no evidence of pre-impact failure in the flying control system was revealed.

A strip examination of the engine revealed no evidence of mechanical failure within the unit.