

**Aircraft type and registration:** Rollason Druine D62C Condor G-AVVN

**No & Type of engines:** 1 Rolls Royce Continental 0-240-A piston engine

**Year of Manufacture:** 1967

**Date and time (UTC):** 31 July 1987 at 1145 hrs

**Location:** Brome, Suffolk

**Type of flight:** Private (glider towing)

**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

**Commander's Age:** 26 years

**Commander's Total Flying Experience:** 113 hours (of which 40 were on type)

**Information Source:** AAIB Field Investigation

On Tuesday 28 July the pilot did six glider tows, five under the supervision of an experienced tug pilot, and one solo. This was the first time that she had towed gliders, and the first time she had operated out of Tibenham Airfield. A further eleven tows were done on Thursday 30 July.

It was normal practice to refuel the tug aircraft after the last flight of the day. However, on Thursday G-AVVN, which was being flown by another pilot, did three tows after its final refuelling at about 1845 hrs.

On Friday 31 July, the pilot took off at 0955 hrs, in G-AVVN, did five tows and landed at 1117 hrs. It was reported that the pilot stopped the engine and expressed some concern about the amount of fuel remaining, the fuel-quantity indicator being near to the bottom of its travel. This was checked by a more experienced club pilot, who assured her that there was sufficient for a further tow.

At 1121 hrs the aircraft took off, on the westerly runway, towing a K13 glider with two persons on board. Following a left turn, climbing to 2000 feet, the glider released on an easterly heading about 2.5 nm to the south of the airfield. It was reported that, on all previous tows, the pilot had taken the gliders to the north, recovering to the airfield on a southerly heading. After release, the aircraft broke right but instead of turning north, it continued south-easterly and was seen orbiting in the vicinity of Thorpe Abbots Airfield, which is about 5 nm to the south-south-east of Tibenham. It left the area in a westerly direction and was next seen orbiting Eye Airfield, which is about 7.5 nm south of Tibenham. The aircraft was seen flying down the south-westerly runway at such a height that the tow-rope touched the ground. It then turned left and climbed out to the north.

Shortly before 1145 hrs, the aircraft was seen heading south, and descending. At a height of about 50 feet agl, the nose was seen to rise sharply and the aircraft was reported to have "turned over on itself" striking the ground seconds later about 25 yards from the main building of an hotel.

Examination of the wreckage indicated that the aircraft had struck the ground at an angle of about 70° nose-down, with the wings almost level and at an airspeed of 80 kt. The heading at impact and the position of the tow-rope indicated that the aircraft had rotated about 250° to the right during its final descent. This was consistent with a spin entry to the right at low altitude.

There was no evidence of a failure of the flight-control system before impact. It was noted, however, that considerable left aileron was being applied at impact.

The fuel tank was ruptured, but there was evidence of some fuel present at impact. The only fuel found in the remainder of the system was a small amount in the carburettor bowl. The electric fuel pump was found ON, but the fuel cock was in the OFF position.

Measurement of the fuel tank and fuel-quantity indicator on a similar aircraft, in the three point attitude, showed that there would be about 3 imp/gall in the tank when the indicator had reached the bottom of its travel. From this observation, it was estimated that there was between 3.5 and 4 imp/gall in the tank prior to the final take-off. Based on the normal consumption of the aircraft, there should have been at least 1 imp/gall remaining at the time of the accident. In this aircraft the fuel is drawn from the front of the tank and calculation shows that a pitch attitude of about 12° in the climb would have been sufficient to expose the fuel outlet, leading to starvation of the engine.

The fuel cock in the accident aircraft was found to be difficult to move and so a test was carried out using the gliding club's other Condor aircraft. A female pilot, of similar build to the deceased pilot, was asked to operate the fuel cock while strapped in. Although she could, with some difficulty, reach it, she could not move it.

There was evidence of several factors which could have affected the pilot's ability to operate efficiently. During the evening of the day prior to the accident, the pilot had mentioned that she had started her period and was in some pain. She also mentioned the difficulty she experienced, in the air, orientating herself in the local area. She was aware of criticism, by her more experienced colleagues, of her ability as a tug pilot, in particular of her cautiousness and the time she took over each tow. When, prior to the accident flight, she had expressed concern about the fuel remaining, it was reported that she had been treated in an unsympathetic manner, and was admonished for wasting time.