

**No:** 1/89

**Ref:** EW/C1086

**Category:** 1c

**Aircraft Type**

**and Registration:** Societe Wassmer Aviation Jodel D120A, G-BKDY

**No & Type of Engines:** 1 Rolls Royce Continental O-200A piston engine

**Year of Manufacture:** 1964

**Date and Time (UTC):** 18 September 1988 at 1126 hrs

**Location:** South of Wellcross Grange Strip near Slinfold, 3 miles south-east of Horsham, West Sussex

**Type of Flight:** Private (pleasure)

**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

**Commander's Age:** 47 years

**Commander's Total**

**Flying Experience:** 490 hours (of which 290 were on similar types)

**Information Source:** AAIB Field Investigation

The pilot had flown the aircraft on 9 occasions during the previous weekend, 10th and 11th September. The aircraft landed from its last flight at Shoreham at 1805 hrs on the 11th September and was refuelled with 45 litres of Avgas before the duty crew went off duty at 1830 hrs. There is no record of the aircraft having been flown again until Sunday 18th September when, at approximately 1055 hrs, the pilot taxied G-BKDY (DY) to the fuel pumps but refused the offer of fuel saying that the aircraft was full. He then purchased 2 pints of oil and was seen to pour them into the engine before he re-occupied the left hand seat, with a passenger in the right seat. The pilot was known for his attention to detail and careful operation of the aircraft, and insisted on the use of Avgas instead of the permitted Mogas.

The Wellcross Grange Strip is known to the light aviation fraternity and ATC as Slinfold. Five aircraft from Shoreham took off for Slinfold for a Popular Flying Association fly-in between 1059 hrs and 1116 hrs. The only aircraft relevant to the accident were a Currie Wot homebuilt G-CWOT (OT) that took off at 1110 hrs, a Piper Cub G-OCUB (UB) that departed at 1111 hrs, and DY that took off at

1112 hrs. UB then DY successively overtook OT en route to Slinfold, and the pilot of OT states that he followed DY overhead the active grass runway 03 at approximately 900 feet agl and into the right hand circuit pattern. On the downwind leg OT had descended to approximately 700 feet agl and was flying at 60 kt. The pilot of OT was of the impression that DY had slowed up from its earlier cruising speed as OT was maintaining the same distance separation behind DY which had also descended to an estimated 150 feet below OT's height. At this time UB had already landed and was not a hazard. Witnesses saw DY commence a turn to the right from the downwind leg, the roll to the right continued, the nose dropped and the aircraft rotated through 1½-2 revolutions to the right before crashing into a narrow copse of trees.

The site of the crash was some 370 metres east of the runway 03 centreline and 390 metres downwind of the runway threshold. A number of witnesses stated that the aircraft appeared to start its turn closer to the runway, and was lower at this point than preceding flights that morning. Witnesses close to the site cannot recall any significant or remarkable engine noise during the accident sequence.

Aerial photographs taken immediately after the accident show the runway as a bright green strip surrounded by brown fields. There is no evidence of the pilot having visited Slinfold before but the weather was fine with a light northerly wind and visibility in excess of 9 km. The temperatures and dewpoints measured at Shoreham at 1050 hrs were temperature +16°C dewpoint + 11°C, and at 1150 hrs, temperature + 17°C and dewpoint + 11°C. The standard carburettor icing probability chart indicates the possibility of moderate icing at cruise power and severe icing at descent power. (Pink AIC 1/1985 and pink corrigenda 10/1985 refer).

Both occupants were killed in the impact and there was no evidence of any medical or toxicological factor that might have contributed to the accident.

#### Examination of the Wreckage

Examination of the wreckage on-site showed that the aircraft impacted one of several oak trees and during its descent to the ground dislodged some previously broken boughs bringing them down onto the fuselage. Because the arrangement of the broken boughs prior to the accident was not known it was not possible to positively establish the attitude of the aircraft when it initially contacted the tree. From the general damage to the aircraft structure it would appear that it impacted the tree in a nose down attitude and travelling at a relatively slow forward speed. The damage to the wooden propeller indicated that it was rotating at impact but not under full power. The engine controls and instruments indicated that a mid-range power setting was selected and that the engine was running. The carburettor hot air selector was selected to cold air. All the flying control surfaces were attached and the flying control cables were serviceable and unrestricted at impact. There was no evidence of a structural failure or part of the aircraft becoming detached prior to the impact. Detailed examination of the aircraft structure, engine and all the associated systems did not reveal any engineering factor that could have contributed to the accident.

Aboard the aircraft had been carried a camera bag and various items of photographic equipment which included a medium sized single lens reflex camera and telephoto lens. The camera, with lens attached was found in the cockpit area of the wreckage separate from the camera bag which would indicate that the camera was in the cockpit at the time of the accident. The film in the camera was processed and included an aerial photograph of the latter part of the flight.

Examination of the aircraft's documentation showed that it had been correctly maintained in accordance with the regulations and the wreckage indicated that the aircraft had been kept in a very good condition. The Permit to Fly was issued in July 1988 and was valid for one year.