No: 6/88 **Ref: EW/C1054** **Category: 1c**

Aircraft Type and Registration:	Cessna 150L, G-BBUO
No & Type of Engines:	1 Rolls Royce Motors Continental O-200-A piston engine
Year of Manufacture:	1972
Date and Time (UTC):	15 January 1988 at 1300 hrs
Location:	2 nm North of Teignmouth, Devon
Type of Flight:	Private (pleasure)
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 (with Night Rating)
Commander's Age:	39 years
Commander's Total Flying Experience:	Approximately 113 hours (of which approx 100 hours were on type)
Information Source:	AAIB Field Investigation

The aircraft departed Exeter Airport at 1213 hrs for a local VFR flight planned to last for one hour. Earlier that morning, following refuelling, the aircraft had been flown for an uneventful one hour sortie by a pilot who later reported that he had been able to operate VFR at altitudes between 2000-3000 feet on the local QNH pressure setting. Weather information available prior to the accident flight indicated that Exeter Airport would have a minimum cloud base of 3000 feet and a visibility in excess of 15 km. The LAPFORM 215 (Meteorological chart for UK issued by London Airport Met Office) for the relevant period forecast weather for three separate regions. The region containing the area of the proposed flight extended from north of the Shetlands to the Brest peninsular and indicated visibilities ranging between 30 km and Hill Fog, weather ranging between Nil, Rain showers, Hail, Thunderstorms and Haze, and cloud bases from 800 to 2000 feet.

After take-off, G-BBUO headed south-west at 800 feet until 6 miles from Exeter when a climb to an altitude of 1500 feet amsl was commenced. Recordings of SSR returns received by the Burrington radar head of the London Air Traffic Control Centre (LATCC) radar indicated that the aircraft then followed a meandering track to a point west of Teignmouth where at 1227 hrs G-BBUO's transponder ceased to paint on radar. The aircraft's transponder was not equipped with a height encoding facility but studies indicated that, because of shielding by intervening high ground, the minimum altitude at which an aircraft could be seen by the Burrington radar in the vicinity of

Teignmouth would be 1300 feet amsl. At 1231 hrs the pilot reported his position as 4 nm north-west of Berry Head at an altitude of 1500 feet. At about 1230 hrs an aircraft, presumed from the witness evidence to be G-BBUO, was seen flying in an easterly direction at a normal altitude to the north of Berry Head, and at 1232 hrs, G-BBUO reappeared on radar to the south of Teignmouth flying in a northerly direction. From this position, the aircraft followed the west coast of the River Exe estuary for 9 miles before turning right onto a south-westerly heading.

At 1244 hrs G-BBUO again disappeared from radar in an area where it should have painted at an altitude of 900 feet. Shortly afterwards, an aircraft was heard flying in a southerly direction at very low level, estimated to be approximately 100 feet agl (around 700-750 feet amsl), over the Haldon Hills, just to the north of Teignmouth. The ground rises to 811 feet amsl in parts of the area. Witness evidence indicated that many of the hill tops were fog-covered. At a time estimated from ear-witness evidence as between 1235 - 1245 hrs and while heading north-west at an altitude of 670 feet amsl, the aircraft struck a stand of mature Douglas Fir trees growing near the top of a steep sided hill forming part of the Haldon Hills, and then impacted the ground. No eye-witnesses to the accident were found and the final part of the flight path could not be established. The wreckage was discovered by chance shortly after the accident by a passing motorist.

Evidence from tree, ground, and aircraft markings and characteristics indicated that the aircraft initially collided with a 90 feet high tree, 20 feet below its top, causing detachment of the left wing. The remainder of the aircraft suffered additional damage from secondary tree strikes, followed by ground impact on the left side of the cabin 82 metres from the initial impact point in an area of open ground interspersed with tree stumps. After rolling inverted and sliding sideways for 15 metres the aircraft was brought to rest as the fuselage struck a large tree stump. There was no significant ground fire. The evidence indicated that, after the aircraft had come to rest inverted, engine oil dripping from the filler point onto engine external surfaces had spontaneously ignited but that the fire had rapidly self-extinguished.

At initial impact with the trees the aircraft had an estimated airspeed of 80-120 kt, was tracking 300-310°M and was banked 20-25° right, with flaps fully retracted. Pitch attitude and vertical speed were not quantifiable but the evidence indicated that the aircraft had not deviated grossly from level flight. Little evidence of the engine power being developed at initial impact was available, but it was established that the engine was turning at moderate speed at ground impact, and the post-impact ignition of oil on engine external surfaces suggested that the engine had experienced a sustained period of relatively high power operation up to, or until very shortly before, impact.

The altimeter subscale was found correctly set to the Regional QNH setting of 1017 mb. Detailed examination of the aircraft revealed no evidence of pre-impact failure or malfunction in the structure, flying controls, powerplant or systems.

Post-mortem examination of the pilot revealed no evidence of a condition likely to have contributed to the accident.