

Aircraft type and registration: Westland Bell 47G-3B-1, G-BFEJ (light single engined helicopter)

Year of Manufacture: 1964

Date and time (GMT): 18 April 1984 — time not determined

Location: High Eldwick, Bingley, West Yorkshire

Type of flight: Private (pleasure)

Persons on board: Crew — 1 Passengers — 1

Injuries: Crew — Nil Passengers — Nil

Nature of damage: Substantial — to tail rotor assembly and skids

Commander's Licence: FAA Commercial Pilot Rating

Commander's Age: 26 years

Commander's total flying experience: 1490 hours (of which 1,215 hours were on rotary wing aircraft including 195 hours on type)

Information Source: Aircraft Accident Report completed by the pilot, and from ATC and the West Yorkshire police.

On the day of the accident, the aircraft was acquired by a new owner who was not a pilot, and had only limited knowledge of aircraft operations. He flew as passenger on the flights preceding the accident. The aircraft was refuelled to a reported full tanks at Luton, uplifting 210 litres (46.2 imp/gall) of Avgas. It has not been established how much ground running the engine had undergone prior to each flight.

The aircraft took off from Luton at 1424 hrs Z with the intended destination being Elstree. However, the aircraft landed at Hatfield, and after a conversation between the occupants of the helicopter and a British Aerospace ground services employee logged at 1438 hrs Z, departed again for Elstree where it arrived at 1500 hrs Z.

At 1600 hrs Z the aircraft took off for Leeds/Bradford airport on a low level VFR flight. It was not refuelled at Elstree. At 1910 hrs Z Leeds ATC recorded that G-BFEJ had requested navigational assistance and the pilot recalls being given a QDM (course to steer) of 100°M. At 1913 hrs Z Leeds ATC lost RTF contact with the aircraft, and some minutes later received a telephone call from the pilot to the effect that he had been obliged to carry out a precautionary landing.

The pilot states that he checked the fuel contents during the approach to Leeds airport and 8—11 gallons above the red sector on the gauge were indicated. The passenger drew his attention to a fluctuating fuel pressure gauge, and shortly afterwards the engine stopped. The aircraft had been climbing, and was put into autorotation and turned into a south westerly wind. Rotor rpm decayed and the pilot suspected a defective free wheeling unit, but a post accident examination revealed no significant damage. The aircraft landed in a sloping field tail rotor first, swung through 180° and came to rest with no injuries to the occupants, no fire, but substantial damage to tail rotor and skids. The pilot also reports that after landing, the indicated fuel contents read 9 gallons, whereas ½ gallon of fuel was recovered from the tanks.

It has not been possible to establish the engine running or airborne times with any certainty. The occupants of the aircraft assert that the accident occurred at approximately 1910 hrs BST (1810 hrs Z). However, the police attended the scene shortly after the aircraft's landing and initial notification of the accident was passed to them at approximately 2025 BST (1925Z).

AIB Bulletin 9/84 ref EW/C877/01 contains details of an accident to a similar type of helicopter, where due to inaccurate fuel gauges, the aircraft was allowed to run out of fuel. This Bulletin also points out that during the two years prior to this present accident, there have been 8 reported occurrences in the UK where a light helicopter has run out of fuel in the air.