

AAIB Bulletin No: 9/93

Ref: EW/G93/08/01

Category: 1c

Aircraft Type and Registration: Piper PA-23-250 Aztec, G-BDHL
No & Type of Engines: 2 Lycoming IO-540-C4B5 piston engines
Year of Manufacture: 1974
Date & Time (UTC): 2 August 1993 at 1150 hrs
Location: Farm field, Willington Hall, Cheshire
Type of Flight: Private
Persons on Board: Crew - 1 Passengers - 1
Injuries: Crew - None Passengers - None
Nature of Damage: Substantial to wings, fuselage and landing gear
Commander's Licence: Private Pilot's Licence with IMC and Night Ratings
Commander's Age: 44 years
Commander's Flying Experience: 1226 hours (of which 10 were on type)
Last 90 days - 81 hours
Last 28 days - 38 hours
Information Source: Aircraft Accident Report Form submitted by the pilot

It was planned to fly from Liverpool to Biggin Hill, Biggin Hill to East Midlands and East Midlands to Liverpool with a period on the ground at each intermediate stop. The pilot calculated that he would require 410 litres of fuel to complete the planned task with 40 minutes of reserves. The aircraft was refuelled with 252 litres of Avgas which was disposed so as to fill both outboard tanks and the left inboard tank to give a total of 411 litres. The pilot stated that he visually checked the contents of the right inboard tank and assessed that it contained about 70 litres of fuel. If this estimate was correct the aircraft fuel available was 481 litres.

The flight from Liverpool to Biggin Hill was uneventful with both inboard and outboard tanks being used. While on the ground, the pilot made a visual check of the actual tank contents having noted fluctuations of the indicated contents noted during flight. The flight to East Midlands, using only the outboard tanks, was again uneventful.

On departure from East Midlands, the left outboard and right inboard tanks were selected. After 15 minutes of flight, the right engine began to run roughly and the pilot selected the right outboard tank whereupon the engine again ran smoothly. After a further 10 minutes and at a height of about

1,400 feet, the right engine stopped again and its propeller was immediately feathered with a view to restarting the engine once the aircraft had been established in asymmetric flight and the cross-feed cock opened. Before this could be achieved however, the left engine stopped and, despite the selection of the electric fuel pump, inboard tank and cross-feed cock to OPEN, the engine failed to start before the pilot was committed to a forced landing. The pilot transmitted a distress call on the frequency in use and executed a forced landing in a field. Neither occupant was injured and they were able to evacuate the aircraft unaided.

Subsequent calculation of the fuel used since the aircraft left Liverpool, including due allowance for taxi, take off and climb, indicate that the right inner tank contained about 30 litres of fuel rather than the 70 litres estimated by the pilot. On start up at Liverpool, the gauge for this tank indicated that it contained between zero and 35 litres.