

Cessna T337D, G-BEDL

AAIB Bulletin No: 2/99 Ref: EW/G98/10/03 Category: 1.3

Aircraft Type and Registration: Cessna T337D, G-BEDL

No & Type of Engines: 2 Continental TSIO-360-A piston engines

Year of Manufacture: 1969

Date & Time (UTC): 3 October 1998 at 1143 hrs

Location: Leatherhead Common, near A425/M25

Type of Flight: Private

Persons on Board: Crew - 2 - Passengers - 2

Injuries: Crew - 1 Major - Crew - 1 Minor
Passengers - Minor

Nature of Damage: Substantial to left wing, landing gear and fuselage

Commander's Licence: Commander of the aircraft could not be determined

Commander's Age: N/K

Commander's Flying Experience: N/K

Information Source: AAIB Field Investigation

Background

Work had been completed on the aircraft for the renewal of its Certificate of Airworthiness at Bournemouth International Airport on 7 August 1998. The aircraft was then refuelled to full tanks and completed three air tests and several ground runs. On completion of the tests, the auxiliary tanks were full and there was sufficient fuel in the main tanks for approximately 30 minutes of flight. There was no record of the aircraft having been refuelled subsequent to these tests. Shortly after the completion of the air tests, the aircraft was involved in a ground collision and was not available for flight until the beginning of October 1998.

When the aircraft had been repaired, there was a requirement to ferry it to Biggin Hill for storage. As the paperwork for the issue of a Certificate of Airworthiness had not been completed, the maintenance organisation raised an 'A Conditions' certificate in accordance with the Air Navigation Order, Article 8(1) Schedule 2. This certificate authorised the ferry flight to Biggin Hill but prohibited the carriage of passengers on the flight.

Following discussion with the maintenance organisation, two pilots agreed to undertake the flight to Biggin Hill. The first, 'Pilot A', had a current FAA Air Transport Pilot's Licence but his UK licence had lapsed. He had flown the Cessna 337 previously but was not current on type. The second pilot, 'Pilot B' held a current Private Pilot's Licence valid for twin engine aircraft but had no experience of the 337. Neither pilot considered that he was the commander of the aircraft and both stated that the other was the commander. Both pilots stated that they were unaware that the aircraft was being operated under 'A Conditions'. Despite the restriction implicit in flight under 'A Conditions', two passengers were on board the flight to Biggin Hill.

History of the flight

The fuel state of the aircraft was discussed before departure and both pilots agreed that the fuel gauges were reading 'FULL'. The aircraft had four fuel tanks, one main and one auxiliary in each wing. The fuel gauges indicated the contents of whichever tank was selected on the fuel selector valve. The aircraft departed Bournemouth at 1113 hrs with Pilot A in the left-hand seat as the handling pilot and Pilot B, who was not an instructor, in the right-hand seat. The weather was fine and the flight progressed without incident until the aircraft was overhead Farnham, some 35 miles from Biggin Hill, when the front engine began to run roughly and then stopped. Attempts to restart the engine were unsuccessful and the decision was taken to continue to Biggin Hill despite availability of Farnborough airfield close by. At this stage both fuel gauges were reading full. Some five minutes later and thirty minutes after departure from Bournemouth, the rear engine failed and could not be restarted. The handling pilot lowered the landing gear and flaps and positioned the aircraft for a forced landing in a field adjacent to the M25 motor way. During the latter stages of the approach, after the non-handling pilot had transmitted a MAYDAY call, the aircraft struck a tree causing the separation of a large section of the left wing. On impact, both pilots suffered significant injuries but the passengers in the rear of the aircraft escaped without serious injury. There was no post impact fire and the emergency services attended the scene promptly.

Post accident investigation

Examination of the aircraft at the crash site by the maintenance organisation revealed that there was no usable fuel in the main tank of the, undamaged, right wing but that the auxiliary tank in that wing was full. The fuel selector valves were found to be in the OFF position. On examination, the fuel feed line to the rear engine was found to be dry. On selecting the auxiliary fuel tank, fuel

flowed freely. Fuel was transferred to the main tank and on selection, fuel again flowed freely. It was not possible to carry out any tests of the left-hand fuel system because of the damage sustained during impact. However, it was noted that the left auxiliary tank was half full despite having leaked due to impact damage. It was not possible to carry out any checks on the front engine due to impact damage, but the fuel and ignition systems on the rear engine were checked and found to be serviceable.