

AAIB Bulletin No: 8/95

Ref: EW/G95/05/04

Category: 1.3

Aircraft Type and Registration: Piper PA-30 Twin Comanche, G-CALV

No & Type of Engines: 2 Lycoming IO/LIO-320-B1A piston engines

Year of Manufacture: 1969

Date & Time (UTC): 6 May 1995 at 1428 hrs

Location: White Waltham Airfield, Berkshire

Type of Flight: Private

Persons on Board: Crew - 1 Passengers - 1

Injuries: Crew - None Passengers - None

Nature of Damage: Fuselage underside crushed and scraped, propellers bent and engines shock loaded

Commander's Licence: Private Pilot's Licence with IMC and Night Ratings

Commander's Age: 34 years

Commander's Flying Experience: 253 hours (of which 23 hours were on type)
Last 90 days - 8 hours
Last 28 days - 7 hours

Information Source: Aircraft Accident Report Form submitted by the pilot and enquiries by the AAIB

The pilot lined up the aircraft for takeoff having completed his power and pre-takeoff checks. He increased RPM to 2,000, checked all the engine gauge indications and then applied full throttle. After takeoff, at a point where he no longer felt that he could land ahead in the event of power failure, the pilot selected gear up. Immediately following this the right engine began to run roughly. The pilot checked the engine gauges but could see nothing wrong. However, the right engine was evidently losing power and the aircraft began to veer to the right. Airspeed was still below the "blue line" speed (best rate of climb speed) so the pilot decided to land ahead, wheels up, and closed the throttles. The aircraft came to a halt within the confines of the grass runway and both occupants exited the aircraft normally and with no injuries.

The aircraft had completed only 2 hours 40 minutes flying since both engines had been overhauled and reinstalled. While that work, and some other airframe modifications had been carried out the aircraft had been inactive for about four months but for only about two weeks of that time had it been stored outside. The pilot reported that some fuel had been added to the main fuel tanks, with some possibly also being added to the auxiliary tanks, two days before the accident. This was before the aircraft had

been flown from the Channel Islands, where the work had been carried out, to White Waltham. The fuel quality records at the supply from which the pilot reported last refuelling showed no indications of water contamination around the date of the refuelling (G-CALV could not, in fact, be found listed in the fuel records). During the flight to White Waltham, when the pilot changed over the right engine's fuel supply from main to auxiliary the engine started to run roughly so he re-selected to main. While taxiing in after arrival he again selected the right auxiliary tank and the engine ran down. On the following day he carried out tank drain checks in which he collected the drained fluid. From the right auxiliary tank he collected about 1 gallon of water. The other tanks produced little or no indications of water. In the Flight Manual for the Twin Comanche it is recommended that the in-line fuel strainers (one for the left engine supply and one for the right) are drained with each tank selected in turn for 5s as a daily check. The strainers are drained by the operation of controls in the cockpit and so, unless a second person is available to check the discharged fluid, its quality will not be seen.

One further flight of 45 minutes was carried out before the accident flight. No water was found at the tank sump drains when they were checked after the accident but small amounts were recovered from the fuel strainers (2 to 3 cc of rusty water in the right strainer) and in a number of locations in the fuel systems of both engines. In the post-accident checks carried out by an overhaul agency no significant defect was found in either engine.