

Aircraft type and registration: Piper PA 32-300 Cherokee-Six 00-PIF (light single engined fixed wing aircraft)

Year of Manufacture: 1974

Date and time (GMT): 23 February 1985 at 1352 hrs

Location: Shoreham Airport

Type of flight:

Persons on board: Crew — 1 Passengers — 6

Injuries: Crew — None Passengers — None

Nature of damage: Bending failures of both wings, burst starboard tyre and minor fuselage distortion.

Commander's Licence: Private Pilot's Licence.

Commander's Age: 34 years

Commander's total flying experience: 1850 hrs (of which 138 were on type)

Information Source: Aircraft Accident Report Form submitted by the pilot and AIB examination of the aircraft.

The aircraft, which had taken off from Liege in Belgium with seven persons on board for a direct flight, joined as No 3 in the circuit at Shoreham. The pilot, who was unfamiliar with the airfield, executed a higher and wider circuit than was his usual practice due to the presence of high ground to the North, and commenced an approach to runway 21. The reported weather conditions at the time were given as wind 230/10 kt, temperature +8°C, visibility 3000M and 6 oktas of altocumulus at 10,000 feet. The aircraft landed heavily, approximately one quarter of the distance along the runway, and in doing so burst the right main undercarriage tyre and damaged both wings. After the aircraft had travelled to approximately the runway mid-position the pilot steered off to the right onto the grass, as he was concerned about the possibility of leaking fuel and friction sparks starting a fire.

As the aircraft came to rest a few yards from the runway, the engine was shut down, the master switch turned off and the occupants made their exit. No injuries were sustained and there was no fire.

Subsequent examination of the aircraft revealed both wings to have suffered downward bending failures about their mid-span positions, just outboard of a main spar joint, with distortion occurring of the lower inner wing skins, upper outboard wing skins and one fuselage frame. It was established that both wing tip tanks were full (17 US gallons each), with each inboard tank containing approximately 4 to 5 gallons (25 US gallons each max).

The aircraft's weight at the time of the accident was quoted by the pilot as 3200 lbs (1454 kg), 200 lb below its maximum gross weight of 3400 lbs.

Two factors were considered, by the pilot, to have contributed to his failure to round out before striking the runway.

Firstly, his view was directly into sun and this, combined with the long narrow appearance of Runway 21/03, led him to misjudge height above the runway.

Secondly, having flown a higher circuit than usual, the final approach was flown at an unaccustomed steeper angle, with a resultant higher rate of descent.

The paved runway at Shoreham is 824M long and 18M wide.