

AAIB Bulletin No: 4/93

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Category: 1c

Aircraft Type and Registration: Partenavia P68B Victor, G-LOUP

No & Type of Engines: 2 Lycoming IO-360-A1B6 piston engines

Year of Manufacture: 1979

Date & Time (UTC): 7 February 1993 at 1345 hrs

Location: Bodmin Airfield, Cornwall

Type of Flight: Private

Persons on Board: Crew - 1 Passengers - 1

Injuries: Crew - None Passengers - None

Nature of Damage: Aircraft damaged beyond economic repair

Commander's Licence: Commercial Pilot's Licence (FAA)

Commander's Age: 45 years

Commander's Flying Experience: 9,531 hours (of which 210 were on type)
Last 90 days - 34 hours
Last 28 days - Nil

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

The aircraft was attempting to take-off from the grass Runway 32 at Bodmin, for a flight to Plymouth. The commander reported that the ground was soft and wet, with the grass surface longer than normal, and that no flap was selected. The Flight Manual for the aircraft states that performance take-offs should be carried out with 15° flap selected. The aircraft failed to achieve sufficient airspeed to become airborne in the distance available, and over-ran the Runway into an area of thick gorse and moorland. There was no fire, and both occupants, who were wearing lap and diagonal shoulder harnesses, were uninjured, and vacated the aircraft by the normal means.

The commander stated that at the time of the accident, the surface wind was 340°/6 kt, with a visibility of 4-6 km in haze, and a surface temperature of +12°C. An aftercast from the Met. Office indicated that the surface wind was from 030°/4 kt, becoming 050°/10 kt at 2,000 feet. The QNH was 1035 mb.

From the Flight Manual, for the ambient conditions quoted, a take-off distance required (to 50 feet) of 1,180 feet resulted, with Flap 15° selected and the aircraft some 500 lb below maximum allowable take-off weight. However, a CAA change sheet indicates that this type of aircraft does not meet the

scheduled performance, and states that the distance calculated should be increased by a factor of 1.1, resulting in a distance of 1,298 feet on a hard level surface. Factoring this figure for wet grass (1.25 factor), and runway slope (approximately 1.2% up on Runway 32, factor 1.06), gave a take-off distance of 1,720 feet. The flight manual indicates that the ground roll is approximately 60% of this figure, resulting in 1,032 feet (315 metres). Runway 32 at Bodmin has a take-off run available of 540 metres during the winter months. The Flight Manual does not contain any performance data relating to take-offs with no flap selected.

Factors affecting take-off performance calculations are discussed in the CAA General Aviation Safety Sense leaflet, number 7A, Aeroplane Performance.