

No: 6/92

Ref: EW/G92/04/12

Category: 1c

Aircraft Type and Registration: Piper PA-28-160 Cherokee, G-LIZI

No & Type of Engines: 1 Lycoming O-320-B2B piston engine

Year of Manufacture: 1961

Date & Time (UTC): 19 April 1992 at 1345 hrs

Location: Fen Farm, near Lincoln

Type of Flight: Private

Persons on Board: Crew - 1 Passengers - None

Injuries: Crew - None Passengers - N/A

Nature of Damage: Damage to left wing, aileron and flap, left stabilator, left main gear torn off, right main gear pushed through top of wing

Commander's Licence: Private Pilot's Licence

Commander's Age: 30 years

Commander's Flying Experience: 72 hours (of which 6 were on type)
Last 90 days - 6 hours
Last 28 days - 6 hours

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

The aircraft was attempting to take-off towards the south from the grass runway at the Fen Farm strip. The surface wind was from approximately 240° at 3 to 5 knots. The pilot stated that he was using the short field take-off technique, using 10° Flap, and that all pre-take-off power checks were normal. During the take-off roll the indicated airspeed was checked and found to be satisfactory, at a point approximately one third of the way along the 560 metre length available. The pilot reported that at about three quarters of the way down the runway, the aircraft was still on the ground with the airspeed reducing slightly. The aircraft failed to achieve sufficient flying speed, crossed a track at the end of the runway, became airborne briefly to cross a ditch, and touched down again in a ploughed field in the over-run area. The left main wheel became detached and the left wing touched the ground as the speed reduced, causing the aircraft to swing to the left. The pilot completed the shut down checks and rapidly vacated the aircraft by the normal means. There was no fire.

The runway surface consisted of short grass, but an area of longer grass and farm crop was situated to the east side of the strip. Degradation of take-off performance would be expected on a surface consisting of longer grass. The manufacturers Owner's Handbook for this type of aircraft indicates that the correct short field take-off technique is to use 25° Flap and, under the conditions prevailing at the time of the accident, the take-off roll required is 232 metres, and the take-off distance to 50 feet is 518 metres. Factoring these figures in accordance with the CAA General Aviation Safety Sense leaflet 7A, Aeroplane Performance, gives a take-off roll of 279 metres, and a take-off distance to 50 feet of 622 metres, for a dry short grass surface, before application of the recommended 1.33 safety factor.