

No: 10/90 **Ref:** EW/G90/08/05 **Category:** 1c

Aircraft Type and Registration: Piper PA-32RT-300, G-BYBB

No & Type of Engines: 1 Lycoming IO-540-K1G5D piston engine

Year of Manufacture: 1978

Date and Time (UTC): 5 August at 1220 hrs

Location: Stapleford Tawney Airfield, Essex

Type of flight: Private

Persons on Board: Crew - 1 Passengers - 2

Injuries: Crew - None Passengers - None

Nature of Damage: Extensive (aircraft assessed as beyond repair)

Commander's Licence: Private Pilot's Licence

Commander's Age: 28 years

Commander's Total: 65 hours (of which 12 were on type)

Information Source: Aircraft Accident Report Form submitted by the pilot and enquiries with numerous aviation organisations

During the morning on the day of the accident the pilot carried out some circuit flying with a check pilot. The aircraft performed satisfactorily. After a break away from the airfield, during which time the aircraft was not flown, the pilot returned with two adult passengers and prepared for a local pleasure flight. He refuelled the aircraft to full tanks which involved an uplift of 264 litres. The "pre-flight" and "after start" checks were carried out satisfactorily. The pilot then obtained permission to taxi to runway 28, which was a grass runway with an available take-off run of 715 metres. The wind was 300°/15 kts and air temperature +22.7°C. After taxiing to the hold for runway 28, the power and pre take-off checks, which included the selection of 10° flap, were carried out and everything appeared normal. Having obtained permission to take-off, the pilot lined up the aircraft on the runway, applied full power and commenced the take-off roll. The aircraft's speed built up normally and the engine temperatures and pressures were observed to be within the green indicated arc on the gauges. At approximately 65 to 70 kts, the pilot initiated rotation but the nose of the aircraft failed to rise. He then pulled the control wheel further back but the nose still failed to lift. Feeling that something was wrong the pilot shut the engine down and applied maximum braking. The aircraft failed to stop within the remaining runway available and continued into an adjacent field, causing detachment of the main landing gear.

The calculated take-off distances for this particular aircraft at its approximate weight under the prevailing conditions were:

Take-off Distance (TOD) (50 ft)	0° Flap	543 m (1,782 ft)
Ground Roll	0° Flap	392 m (1,287 ft)
TOD (50 ft)	25° Flap	520 m (1,705 ft)
Ground Roll	25° Flap	382 m (1,254 ft)

No engineering examination of the aircraft was reported to have been carried out.

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