

Piper PA-28-161, G-BJBY

AAIB Bulletin No: 2/98 Ref: EW/G97/11/07 Category: 1.3

Aircraft Type and Registration:	Piper PA-28-161, G-BJBY
No & Type of Engines:	1 Lycoming O-320-D3G piston engine
Year of Manufacture:	1981
Date & Time (UTC):	23 November 1997 at 1145 hrs
Location:	Old Sarum Airfield, Wiltshire
Type of Flight:	Private
Persons on Board:	Crew - 1 - Passengers - 2
Injuries:	Crew - Minor - Passengers - Minor
Nature of Damage:	Crushing to engine bay, landing gear destroyed, damage to both wings and tail area
Commander's Licence:	Private Pilot's Licence
Commander's Age:	54 years
Commander's Flying Experience:	1,126 hours (of which one was on type) Last 90 days - 6 hours Last 28 days - 1 hour
Information Source:	Aircraft Accident Report Form submitted by the pilot

A short flight lasting about one hour in the local area was planned. Performance calculations made by the pilot were based on using 25° of flap for take off from the soft grass runway. The calculations showed that, with appropriate factors for the wet grass conditions having been applied, sufficient take-off distance was available. The aircraft was refuelled to 20 US gallons and two passengers were boarded. After completing the power checks, which were satisfactory, the pilot lined up on Runway 06 and selected 25° of flap. He noted a similar type of aircraft, carrying four people, make a successful take off from the same runway ahead of him. During the take-off run the pilot considered the acceleration to be slow, but this was anticipated given the ground conditions. However, acceleration through 50 kt was 'sluggish' and the pilot rotated the aircraft at 52 kt expecting to clear the fence and mound at the end of the runway. The aircraft took a long time to 'unstuck' and then the rate of climb appeared to be minimal. The pilot considered that there was insufficient distance in which to stop safely and so he continued the takeoff in the hope of clearing

the obstacles. However, the aircraft clipped the fence and the top of the mound before coming to rest abruptly at the far side on some waste ground. The pilot switched off the electrics and fuel and checked the condition of his passengers. Helpers were quickly on scene to assist with the evacuation of the aircraft.

Subsequent examination of the aircraft showed the flaps to have been set to 40°; this was evidence by distortion of the detent in the quadrant at the 40° setting. Such a flap setting would have accounted for the aircraft's poor acceleration .