Accident

Aircraft Type and Registration:	Piper PA-28-140, G-BAXZ
No & Type of Engines:	1 Lycoming O-320-E2A piston engine
Year of Manufacture:	1970 (Serial no: 28-26760)
Date & Time (UTC):	19 June 2024 at 1158 hrs
Location:	Skegness Airfield, Lincolnshire
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - 1
Injuries:	Crew - 1 (Serious) Passengers - 1 (Minor)
Nature of Damage:	Distorted passenger compartment, collapsed nose and right main landing gear
Commander's Licence:	Private Pilot's Licence
Commander's Age:	70 years
Commander's Flying Experience:	352 hours (of which 130 were on type) Last 90 days - 14 hours Last 28 days - 7 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and subsequent enquiries by AAIB

Synopsis

Having landed normally at Skegness Airfield, the aircraft veered off the grass runway, before entering a drainage ditch and striking its far side. The pilot was found unconscious after the accident and cannot recall anything after final approach. The passenger who was also knocked out, does not know why the aircraft departed the runway. The passenger restraints were examined and it was found that the passenger seatbelt functioned normally but required more force than normal to engage the clasp and may not have been fully done up before the accident.

History of the flight

The pilot was flying his second flight of the day, having flown from Turweston to Little Gransden during the first. The pilot was accompanied by a friend, who was also a PPL holder. The weather for the flight from Little Gransden was benign, with forecast wind from 050° at 10 kt. The flight was uneventful and, as an aircraft was landing at Skegness before G-BAXZ, the pilot was able to ascertain the runway in use and prepared for a straight in approach to Runway 03.

The aircraft touched down just before the runway intersection and after approximately 100 m it started to veer to the left. It left the mown grass runway into some long grass and continued towards a drainage ditch that ran perpendicular to the runway (Figure 1).

The aircraft entered the ditch and then struck the far side of it at approximately 45°, causing deformation of the fuselage and the right main landing gear and nose landing gear to collapse, before coming to rest next to the ditch (Figure 2).

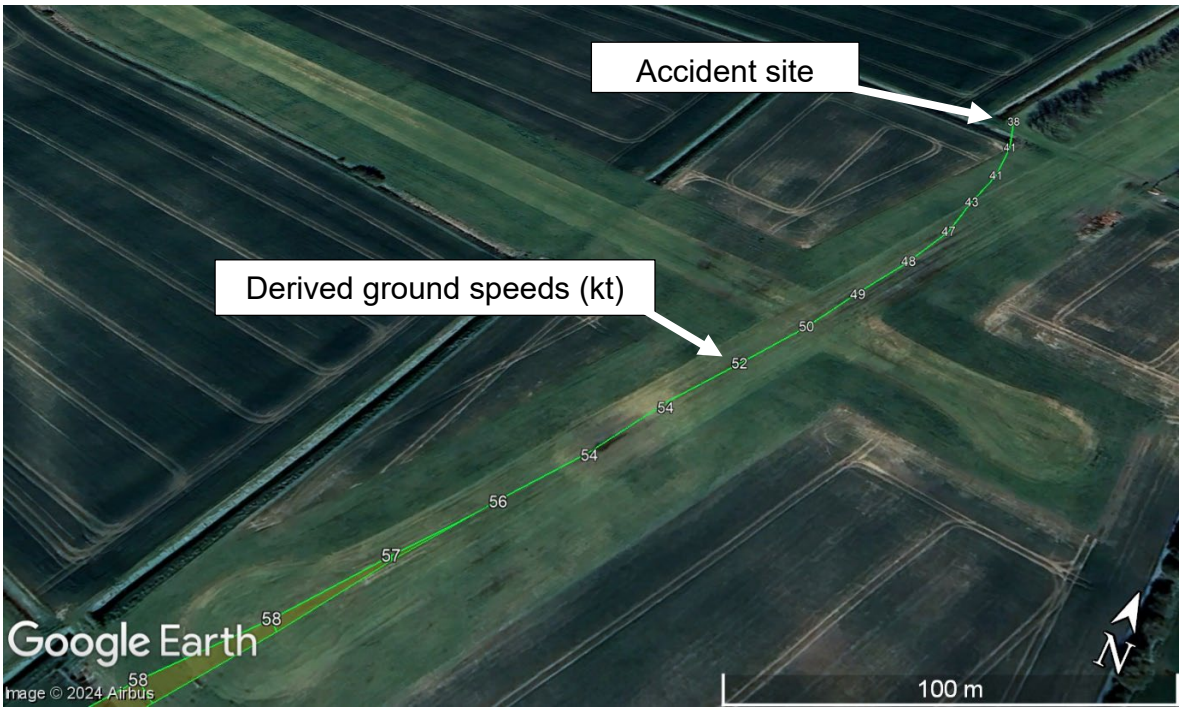

Figure 1

G-BAXZ path data extracted from an aviation app running on pilot's tablet showing landing and subsequent runway excursion

Figure 2

G-BAXZ final location (note: portable barriers erected after the accident)

Both the pilot and passenger were unconscious after the accident. The passenger came-to with his torso on the upper surface of the wing and his head on the grass with the aircraft door open. Soon after, the passenger found the pilot in his seat with his head resting on the passenger side instrument panel. The pilot was later airlifted to hospital where he was treated for head injuries, bruising and fractured vertebrae. Both occupants had been wearing three-point seatbelts during the flight. The pilot's seatbelt was still done up after the accident. The passenger does not know whether his seatbelt was done up after the accident.

The pilot was able to recall the flight up to final approach to land but does not recall the landing and subsequent runway departure. He does not know whether he lost consciousness because of the accident, or during the landing roll. There were no recording devices on the aircraft.

The passenger recollected that the landing was smooth and initially the aircraft rolled out centrally on the runway, but then noticed that it was veering to the left. He called to the pilot to make him aware of some trees that they were rapidly approaching to the left of the runway. He then remembers that the aircraft turned violently left as it entered the ditch but does not remember anything else until he came-to after the accident. He does not recall the pilot verbalising anything during the accident sequence, and did not look at the pilot during this time either.

Aircraft information

The PA-28-140 is a four-seat light aircraft with a fixed tricycle landing gear. The cabin is accessed by a single overwing door. The door is hinged at the front and secured by a sprung latch below window level and pin and hook mechanism at the top of the door.

The pilot and front passenger seats are fitted with an adjustable lap belt with a buckle located on the inboard side of the seat. Inertia real shoulder straps, which run from the fuselage walls behind the forward seats, are designed to pass over the outboard shoulder of the occupant and connect to the lap belt latch plate.

Aircraft examination

An assessment of the aircraft by the AAIB found that the aircraft fuselage had been deformed by the accident such that the door would not fit the frame. The sprung latch functioned normally, but the pin mounted in the top of the door frame onto which the hook engages had been pulled out. The door stay had also broken so that the door could open beyond its normal range.

Both the pilots and passenger seatbelt inertia reel mechanisms activated normally. The pilot and passenger seatbelt buckles also functioned normally, but it was noticed that the passenger latch plate had to be pushed slightly more forcefully into its buckle to be correctly seated.

Subsequent assessment of the aircraft by a salvage organisation did not find any obvious technical issue with the aircraft that could account for the loss of directional control.

Analysis

With the pilot not being able to recall the end of the flight, no recording devices on the aircraft able to capture what happened during the event and with no findings from the examination of the aircraft by the salvage organisation, it is not possible to determine why the aircraft veered off the runway.

Both occupants had been wearing three-point seatbelts during the flight, but the seatbelts would not have restrained them during the accident sequence when the aircraft moved laterally, initially during the left turn as it entered the ditch and then when it stopped abruptly as it struck the far side of the ditch. This explains how the pilot struck the instrument panel in front of the passenger seat with his head and the movement of the passenger forcing the door open, pulling out of the upper door locking pin and damage to the door stay.

It is not possible to determine how the passenger found himself partially outside of the aircraft. It may be that the seatbelt clasp had not been fully engaged and parted under the load during the accident sequence, or it may be that the impact dazed him such that he undid his seatbelt after the accident before passing out as he attempted to exit the aircraft.

AAIB comment

Although it is not possible to confirm whether the passenger's seatbelt was fastened correctly or not, this event acts as a reminder for pilots to ensure seatbelts are properly fastened during pre-flight and pre-landing checks, ensuring that their passengers are also correctly secured. CAA Safety Sense Leaflet SS02 – *'Care of Passengers in General Aviation Aircraft'*[1] provides guidance and advice on looking after passengers, including the requirement to provide emergency briefings which should include the operation of seatbelts.

Footnote

[1] Civil Aviation Authority Safety Sense Leaflet 02 Care of Passengers in General Aviation Aircraft https://www.caa.co.uk/media/ovwcto24/safety-sense-ss002-care-of-passengers-version-8.pdf [Accessed 10 February 2025].