

ACCIDENT

Aircraft Type and Registration:	Piper PA-28-140 Cherokee, G-ATPN	
No & Type of Engines:	1 Lycoming O-320-E2A piston engine	
Year of Manufacture:	1966 (Serial no: 28-21899)	
Date & Time (UTC):	11 February 2018 at 1143 hrs	
Location:	Southend Airport, Essex	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 2
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Extensive	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	44 years	
Commander's Flying Experience:	55 hours (of which 6 were on type) Last 90 days - 8 hours Last 28 days - 4 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and further enquiries made by the AAIB	

Synopsis

Gusty wind conditions were experienced by the pilot during his first flight with passengers, which was also his first flight since the issue of his Private Pilot's Licence (PPL). He attempted to go around from a bounced landing, but the aircraft stalled and fell to the ground; impacting on a grass area to the south of the runway.

History of the flight*Flight preparation*

This was the pilot's first flight since the issue of his PPL and since completion of Piper PA-28 familiarisation training eight days previously; as a student pilot he had mostly flown Cessna 152s. The instructor who had completed the pilot's PA-28 training helped the pilot prepare for this flight, as it was his first flight with passengers and the first time he had flown with a rear-seat occupant. The pilot calculated that the aircraft's weight would be a little less than the Maximum Take Off Weight (MTOW) and that the Centre of Gravity (CG) would be near the centre of the permitted range.

The forecast wind was from 260° at 17 kt, with gusts to 32 kt, from the same direction, expected later in the day. Given the runway orientation of 235°, the pilot and the instructor were satisfied that the aircraft's crosswind limit of 17 kt for takeoff and landing would not be exceeded during the flight, and neither would the flying club's maximum wind limit of 30 kt for PPL hire. However, because turbulent conditions were expected, the instructor

recommended that the aircraft be landed using two stages of flap rather than three so that there would be no need to retract one stage of flap in the event of a go-around. The instructor recommended that the approach speed be increased by 5 mph, to 90 mph, to provide a margin of safety if gusts were encountered.

After an uneventful flight in the local area, the pilot returned to land on Runway 23 by way of a straight-in approach from a range of 12 nm. He described the conditions as “choppy”, especially once below 1,500 ft aal, with the strong, gusty wind leading to “a long and uncomfortable approach”. He set two stages of flap, as recommended, but forgot to add a safety increment to his airspeed and consequently his target speed was 85 mph. At a range of two nautical miles he received landing clearance from Air Traffic Control (ATC) and was informed the wind was from 280° at 19 kt¹.

Nearing the runway, the pilot thought he was below the ideal approach path but he continued because he felt he could still reach the displaced landing threshold. Prior to touchdown, he sensed a sudden gust of wind blowing the aircraft to the left and immediately after this the aircraft hit the runway and bounced. He attempted to go around and, as he added power, he transmitted on the radio that he was going around. While doing this he was aware the aircraft was pitching up and, although he did not notice if the stall warning light illuminated, he realised there was a danger of the aircraft stalling. Before he was able take any corrective action, the aircraft sank quickly and struck the grass to the left of the runway, causing all three landing gear legs to break. It skidded a few feet and turned right approximately 90° before coming to a halt facing towards the runway and resting on its left wing (Figure 1). The pilot and both passengers then escaped, unassisted, through the main door. The pilot reported that he turned the fuel selector to OFF and also tried to switch off the electric master switch before he got out, although he later realised he had misidentified another system switch as the electric master.



Figure 1

G-ATPN in its resting position approximately 95 m from the centreline of Runway 23

Footnote

¹ A wind of from 280° at 19 kt on Runway 23 would have given a crosswind component of 13 kt.

Recorded information

Recordings from the airfield's CCTV system indicated that the aircraft began to flare when approximately 20 ft aal and that it rolled left, and its rate of descent increased, before it contacted the runway having regained a wings-level attitude. The aircraft immediately bounced and climbed in a 25-30° nose-up attitude until it levelled for three seconds at approximately 40 ft aal, with a reduced nose-up attitude at a groundspeed that seemed slower than it should have been. After turning left a few degrees the aircraft began to sink and, as it dropped towards the grass area south of the displaced runway threshold, its rate of descent increased and the right wing dropped. Ten seconds after the bounced touchdown it struck the ground hard, skidded forward a few feet and slewed right before coming to rest.

The occupants of the aircraft were seen to walk clear of the aircraft 35 seconds later, and one minute after that the Rescue and Fire Fighting Service reached the scene.

Aircraft operator's comments

The instructor who completed the pilot's PA-28 training reported that the four approaches and landings which the pilot performed with him were "good" and this reflected the level of landing competency recorded in the pilot's previous training notes. He had apparently landed without difficulty with a crosswind of 12 kt from the right and in gusty conditions.

The flying club which operated the aircraft noted this was the pilot's first flight with an aircraft close to the MTOW and with a rear seat passenger. He would have had to overcome a tendency for the aircraft to pitch nose-up because the CG was further aft than he had previously experienced. The flying club is considering introducing a requirement for newly qualified PPL holders to practice flying an aircraft at its MTOW with an instructor, before they fly solo with passengers.

Pilot's comments

Following the accident, the pilot thought he should have tried to gain more experience in various wind conditions before he carried passengers. He observed that because he flew a long final approach in turbulent conditions he had felt "unnerved" by the time he reached the airfield. He assessed that he should have gone around earlier, once he appreciated that he had diverged from his ideal approach path. When he did attempt to go-around he should have concentrated on flying the aircraft rather than trying to communicate with ATC.

Although he did not recall applying back pressure on the control column to pitch the nose-up excessively, he realised he should have adopted an attitude during the go-around which allowed the speed to increase, and had he done this the aircraft would not have stalled. He was also aware that he should have applied more right rudder pedal to keep the aircraft straight as he increased power. Before flying solo again he intends to practise go-arounds with an instructor and would like to do this from scenarios close to the runway.