

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10241						
Classification	Accident	Date	19 December 2022		Time	1200Z	
Type of Operation	Training (Part 141)						
Location							
Place of Departure	Brakpan Aerodrome (FABB), Gauteng Province		Place of Intended Landing		Brakpan Aerodrome (FABB), Gauteng Province		
Place of Occurrence	Runway 36 at Brakpan Aerodrome						
GPS Co-ordinates	Latitude	26°14'28.60" S	Longitude	028°18'15.14" E	Elevation	5 340 ft	
Aircraft Information							
Registration	ZS-OGG						
Make; Model; S/N	Piper PA-23-250 Aztec (Serial Number: 27-4510)						
Damage to Aircraft	Substantial			Total Aircraft Hours	6259.81		
Pilot-in-command							
Licence Type	Airline Transport Pilot Licence (ATPL)		Gender	Male		Age	73
Licence Valid	Yes	Total Hours	24 700		Total Hours on Type	700	
Total Hours Past 30 Days	20		Total Flying Hours on Type Past 90 Days			20	
People On-board	2 + 0	Injuries	0	Fatalities	0	Other (on ground)	0
What Happened							
<p>On Monday, 19 December 2022, a flight instructor and a student pilot on-board a Piper PA23-250 Aztec aircraft with registration ZS-OGG took off on a circuit training flight from Brakpan Aerodrome (FABB) in Gauteng province with the intention to land back at the same aerodrome. The flight was conducted in accordance with the provisions of Part 141 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The instructor reported that prior to the flight, the student pilot conducted the pre-take-off checks, and all instrumentation were within parameters. On final approach at an airspeed of 80 miles per hour, the aircraft experienced wind shear and it sank faster than expected. The aircraft landed hard on Runway 36, and the nose landing gear collapsed. The aircraft skidded for approximately 200 metres (m) from the runway threshold before it veered off to the right-side and onto the grass area. There were no injuries reported. The aircraft sustained substantial damage to the propeller blades and the underside of the nose cone.</p> <p>The accident occurred during daylight at Global Positioning System (GPS) co-ordinates determined to be 26°14'28.60" South and 028°18'15.14" East, at an elevation of 5 340 feet (ft).</p>							

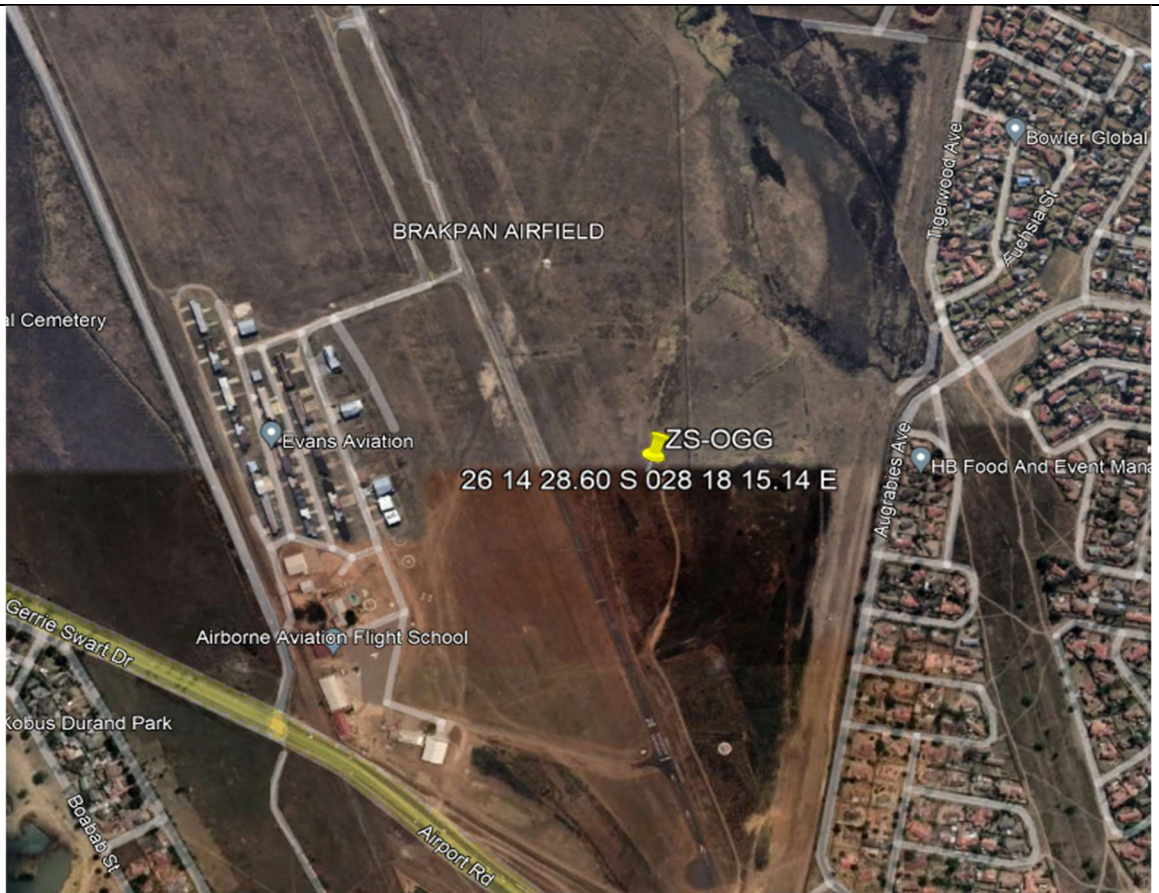


Figure 1: The approximate location of the accident after it veered off Runway 36. (Source: Google Earth)



Figure 2: The aircraft as it came to rest post-accident. (Source: Pilot)

The following information was taken from <https://www.aopa.org>

With the runway approaching, often students instinctively pull aft. At 20 to 40 feet above the runway, this can slow the airplane too much, too early and result in a hard landing, or even a stall.

The instructor

The instructor was initially issued an Airline Transport Pilot Licence (ATPL) by the South African Civil Aviation Authority (SACAA) on 23 July 1975.

The ATPL was reissued by the SACAA on 10 February 2022 with an expiry date of 28 February 2023.

The pilot had flown a total of 24 700 hours, of which 700 hours were on the aircraft type. The pilot had the aircraft type endorsed on his licence.

The pilot had a valid Class 1 aviation medical certificate, which was issued on 1 July 2022 with an expiry date of 31 January 2023.

The aircraft was issued a Certificate of Registration (C of R) on 15 July 2014.

The Certificate of Airworthiness (C of A) was issued on 30 December 2018 with an expiry date of 30 November 2023.

The last mandatory periodic inspection (MPI) was carried out on 8 December 2022 at 6251.81 hours. The aircraft was flown a further 8 hours since the last MPI.

The aircraft was issued a Certificate of Release to Service (CRS) on 8 December 2022 with an expiry date of 7 December 2023 or at 6351.81 hours, whichever occurs first. There were no defects recorded in the flight folio at the time of the accident.

The weather report as obtained from pilot's questionnaire:

Wind Direction	300°	Wind Speed	10 knots gusting 15 knots	Visibility	10km
Temperature	25°C	Cloud Cover	Broken 2000 feet	Cloud Base	2000 feet
Dew Point	15°C	QNH	N/a		

The weather report from South African Weather Services (SAWS) was as follows:

FAOR 191100Z 30009KT 9999 BKN035 24/15 Q1015 NOSIG=

FAGM 191200Z 30010KT 260V330 9999 SCT044 25/15 Q1014 NOSIG=

According to the weather table above, the headwind component was 8 knots and the crosswind component was 6 knots. The maximum crosswind component for this aircraft is 15 knots. The aircraft landed in a crosswind of 6 knots, which was within the aircraft's limitations.

Findings

- (i) The pilot was reissued the ATPL by the SACAA on 10 February 2022 with an expiry date of 28 February 2023.
- (ii) The pilot had a valid Class 2 aviation medical certificate which was issued on 1 July 2022 with an expiry date of 31 January 2023.
- (iii) This flight was conducted under the provisions of Part 141 of the CAR 2011 as amended.
- (iv) At the time of the accident flight, the pilot had flown a total of 24 700 hours, of which 700 hours were on the aircraft type.
- (v) The last 100-hour MPI prior to the accident flight was certified on 8 December 2022 at 6251.81 airframe hours. The aircraft was flown 8 hours since the last MPI.
- (vi) The AMO that performed the last inspection had a valid certificate issued by the SACAA in accordance with (IAW) Part 145 of the CAR 2011 as amended on 9 February 2022 with an expiry date of 31 January 2023.
- (vii) The Certificate of Airworthiness (C of A) was issued on 30 December 2018 with an expiry date of 30 November 2023.
- (viii) The Certificate of Registration (C of R) was issued to the current owner on 15 July 2014.
- (ix) The Certificate of Release to Service (CRS) was issued on 8 December 2022 with an expiry date of 7 December 2023 or at 6351.81 hours, whichever occurs first.

Probable Cause

It is likely that the aircraft was flared too early which resulted in the high rate of descent and a hard landing. Consequently, the nose gear collapsed, and the aircraft veered off to the right-side of the runway.

Contributing Factor

None.

Safety Action(s)

None.

Safety Message

Pilots should be more attentive during the critical phases of flight such as take-off and landings, and in particular, during training of new and inexperienced pilots.

About this Report

The decision to conduct a limited investigation is based on factors including whether the cause is known and the evidence supporting the cause is clear, the level of safety benefit likely to be obtained from an investigation

and that will determine the scope of an investigation. For this occurrence, a limited investigation has been conducted, and the Accident and Incident Investigations Division (AIID) has relied on the information submitted by the affected person/s and organisation/s to compile this limited report. The report has been compiled using information supplied in the initial notification, as well as from follow-up desk top enquiries to bring awareness of potential safety issues to the industry in respect of this occurrence, as well as possible safety action/s that the industry might want to consider in preventing a recurrence of a similar occurrence.

All times given in this report are Co-ordinated Universal Time (UTC) and will be denoted by (Z). South African Standard Time is UTC plus 2 hours.

Purpose

In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011 and ICAO Annex 13, this report was compiled in the interest of the promotion of aviation safety and the reduction of the risk of aviation accidents or incidents and not to apportion blame or liability.

Disclaimer

This report is produced without prejudice to the rights of the AIID, which are reserved.

This report is issued by:

Accident and Incident Investigations Division

South African Civil Aviation Authority

Republic of South Africa