SOUTH AFRICAN CIVIL AVIATION AUTHORITY

Section/division **Accident and Incident Investigations Division** Form Number: CA 12-57

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/3/2/1465								
Classification	Serious Incident		**Date**	4 January 2025		**Time**	1010Z		
Type of Operation	Training Part 141								
Location									
Place of Departure	Swellendam Airfield (FASX), Western Cape Province		Place of Intended Landing		Winelands Airfield (FAWN), Western Cape Province				
Place of Occurrence	Runway 05 at Winelands Airfield (FAWN)								
GPS Co-ordinates	Latitude	33° 46' 00.10" S	Longitude	018° 44' 00.00" E		Elevation	400 ft		
Aircraft Information									
Registration	ZS-JLO								
Make; Model; S/N	Piper PA-28-151; Cherokee Warrior (SN:28-7515179)								
Damage to Aircraft	Minor		Total Aircraft Hours	8007.3					
Pilot-in-command									
Licence Type	Private Pilot Licence		Gender	Male		Age	39		
Licence Valid	Yes	Total Hours	150	Total Hours on Type	9.6				
Total Hours 30 Days	3.1		Total Flying on Type Past 90 Days	9.6					
People On-board	1+0	**Injuries**	0	**Fatalities**	0	**Other (on ground)**	0		

What Happened

On Saturday, 4 January 2025, a pilot on-board a Piper PA-28-151 aircraft with registration ZS-JLO took off on a solo navigational flight from Winelands Airfield (FAWN) to Swellendam Airfield (FAWX) with the intention to return to FAWN. Both airfields are in the Western Cape province. Visual meteorological conditions prevailed at the time of the flight which was conducted under the provisions of Part 141 of the Civil Aviation Regulations (CAR) 2011 as amended.

The pilot reported that he conducted a thorough pre-flight inspection of the aircraft, and no abnormalities were detected. The take-off and the flight to FASX were both uneventful. Upon his return to FAWN, the aircraft joined the traffic pattern for Runway (RWY) 05, following other aircraft that were already established in the circuit. During approach, the pilot noted a light crosswind from the left, indicated by the windsock. The pilot then executed two approaches which resulted in go-arounds due to the aircraft being slightly high on both final approaches. During the third attempt, the aircraft approached at 65 knots (kts) with the flaps set at 40 degrees. The pilot reduced power which caused the aircraft to rapidly sink, and the aircraft touched down hard on the threshold (short of the designation runway number on the centreline) and bounced. Thereafter, the aircraft veered off to the left of the runway, prompting the pilot to initiate corrective action to return to the centreline. During this process, the aircraft rolled to the right and the right-wing tip fairing scraped along the runway surface. The pilot successfully regained control and brought the aircraft to a complete stop on the runway. The pilot was not injured during the incident sequence; he disembarked from the aircraft unassisted.

Figure 1: The aircraft after the incident. (Source: Operator)

Figure 2: Damage on the right-wing tip fairing. (Source: Operator)

The meteorological report was obtained from Cape Town International Airport (FACT), situated approximately 13 nautical miles (nm) south of FAWN. There is no weather station in the vicinity of FAWN.

Wind Direction	310	Wind Speed	12kt	Visibility	9999
Temperature	24	Cloud Cover	CAVOK	Cloud Base	CAVOK
Dew Point	15	QNH	1013		

The calculated crosswind component was 11 kts (see Figure 3).

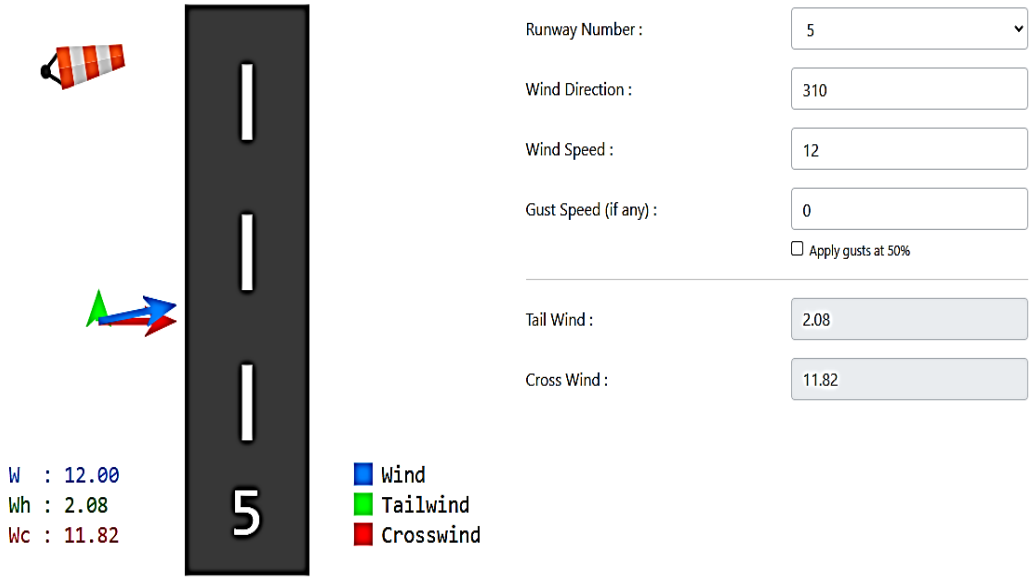

Figure 3: Crosswind component calculation. (Source: https://e6bx.com/wind-components/)

The aircraft has a maximum crosswind component of 17 kts, according to the aircraft Pilot's Operating Handbook (POH).

Pilot Conversion Training

The pilot completed the conversion to the Piper aircraft between 3 October 2024 and 3 November 2024, accumulating 6.5 hours of flight experience which was endorsed on his logbook. Thereafter, the pilot submitted an application to the Regulator for the aircraft type to be endorsed on his licence. The application was approved on 18 November 2024, and the endorsement was officially added to his licence. The pilot did not fly the aircraft type for two months until the accident flight.

CAR 2011

Recency

91.02.4 *(1) A pilot shall not act as PIC of an aircraft, or second-in-command (SIC) of an aircraft required to be crewed by more than one pilot, carrying passengers by day, unless such pilot has personally, within the 90 days immediately preceding the flight, carried out either by day or by night at least three take-offs and three landings in the same class or, if a type rating is required, type or variant of aeroplane.*

The pilot's overall experience and his recency on the aircraft were minimal.

Aircraft Performance (Source: Pilot's Operating Handbook)

Normal Procedures: Approach and Landing

APPROACH AND LANDING

Fuel selector . . . . . .proper tank
Seat backs . . . . . .erect
Belts/harness . . . . . fasten
Electric fuel pump . . . . . .ON
Mixture . . . . . .set
Flaps . . . . . set - 103 KIAS max
Trim to 70 KIAS
Final approach speed (flaps 40°) . . . . . 63 KIAS

On the third final approach, the aircraft's speed was 65 kts at 40° flap setting. The speed was 2 kts above the manufacturer's recommended speed. It is likely that the pilot reduced the aircraft's speed to below the manufacturer's required speed of 63 kts with the flap set at 40°; this resulted in the aircraft losing lift and height and it touched down hard on the runway and bounced. The pilot lost directional control, and the aircraft veered off to the left of the runway. To recover, the aircraft rolled to the right and the right-wing tip scraped the runway surface.

Findings

Man

1. The pilot, a Dutch national, had a Private Pilot Licence (PPL) that was initially issued by the Regulator on 8 June 2021. The PPL renewal was issued on 13 May 2024 with an expiry date of 31 July 2025. His Class 2 aviation medical certificate was issued on 4 February 2024 with an expiry date of 4 February 2026.

2. The pilot had 150 hours of flight time, of which 9.6 hours were accumulated on the aircraft type and endorsed on his licence. The pilot was licensed and qualified to conduct the flight.

3. The pilot's limited experience on the aircraft type and the two-month gap since the last flight before the accident likely contributed to the difficulties he encountered during the landing sequence. The lack of familiarity with the aircraft may have impacted his ability to react effectively.

Machine

4. The aircraft had a Certificate of Airworthiness (C of A) that was issued by the Regulator on 5 September 2024 with an expiry date of 31 October 2025. The Certificate of Registration (C of R) was issued to the current owner on 23 September 2021.

5. The latest mandatory periodic inspection (MPI) of the aircraft was conducted and certified after which a Certificate of Release to Service (CRS) was issued on 13 December 2024 at 7994.5 hours with an expiry date of 12 December 2025 or at 8094.5 hours, whichever comes first. The aircraft had a total of 8007.3 hours at the time of the accident. It had accumulated a total of 12.8 hours since the last MPI.

6. The aircraft was maintained by the aircraft maintenance organisation (AMO) with an approved AMO Certificate that was issued on 2 March 2024 with an expiry date of 28 February 2025. The aircraft type was endorsed on the AMO's operational specifications.

7. During the third landing, the aircraft touched down hard and bounced due to loss of lift as a result of low speed on final approach. The pilot lost directional control, and the aircraft veered off to the left of the runway. Subsequently, the right-wing tip scraped the runway.

Environment

8. The crosswind conditions were within the aircraft's maximum limit of 17 kts; the weather was not a contributing factor in this accident.

Probable Cause(s)

The aircraft's speed was slow at 40° flap settings on final approach which resulted in loss of lift and a hard landing, followed by a bounce and loss of directional control.

Contributing Factor(s)

1. Limited recent flight experience following a two-month break after conversion.
2. Lack of experience in handling crosswind conditions.

Safety Action(s)

None.

Safety Message and/or Safety Recommendation/s

The pilot is encouraged to undergo additional training, particularly in crosswind landings and recovery after bounced landings to improve control in such situations.

Given the two-month break in flying, recurrent training should be emphasised to maintain proficiency in the new aircraft type. The pilot should consider additional practise in various wind conditions, including crosswinds, before undertaking complex landings.

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 desktop 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 issued by:

Accident and Incident Investigations Division
South African Civil Aviation Authority
Republic of South Africa