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

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/3/2/1499						
Classification	Serious Incident	**Date**	21 August 2025		**Time**	0824Z	
Type of Operation	Training (Part 141)						
Location							
Place of Departure	Grand Central Airport (FAGC), Gauteng Province	Place of Intended Landing	Grand Central Airport (FAGC), Gauteng Province				
Place of Occurrence	Runway 17 at Grand Central Airport (FAGC)						
GPS Co-ordinates	Latitude	25° 58' 57.28" S	Longitude	028° 8' 16.86" E	Elevation	5 325 ft	
Aircraft Information							
Registration	ZS-EFI						
Make; Model; S/N	Piper Cherokee; PA28-140 (Serial Number: 28-20696)						
Damage to Aircraft	Minor	Total Aircraft Hours	5 579.5				
Pilot-in-command							
Licence Type	Student Pilot Licence (SPL)	Gender	Female	Age	25		
Licence Valid	Yes	Total Hours	76.5	Total Hours on Type	64.4		
Total Hours 30 Days	14.4	Total Flying on Type Past 90 Days	39.7				
People On-board	1 + 0	**Injuries**	0	**Fatalities**	0	**Other (on ground)**	0

What Happened

On Thursday, 21 August 2025, a student pilot (SP) on-board a Piper Cherokee PA-28-140 aircraft with registration ZS-EFI departed on a solo navigational training flight from Grand Central Airport (FAGC), Gauteng province, with the intention to land back at the same airport. The flight was conducted under visual meteorological conditions (VMC) by day and under the provisions of Part 141 of the Civil Aviation Regulations (CAR) 2011 as amended.

The SP stated that she completed the pre-flight checks with no anomalies noted; this was in preparation for her second solo navigational flight. The SP's route was from FAGC to Potchefstroom Airport (FAPS) via Grasmere (GAV) and to Rustenburg Airport (FARG) before returning to FAGC. The 3.2-hour flight was uneventful; however, the wind speed increased during approach for landing on Runway 17. The SP stated that she was not comfortable to land, which resulted in two go-arounds as the approaches were high and unstable. On the third attempt, the aircraft touched down hard and bounced; as a result, the nose wheel broke, and the propeller impacted the runway surface.

The pilot evacuated the aircraft unassisted; she was uninjured. The aircraft sustained damage to the nose wheel and the propeller blades, which were bent.

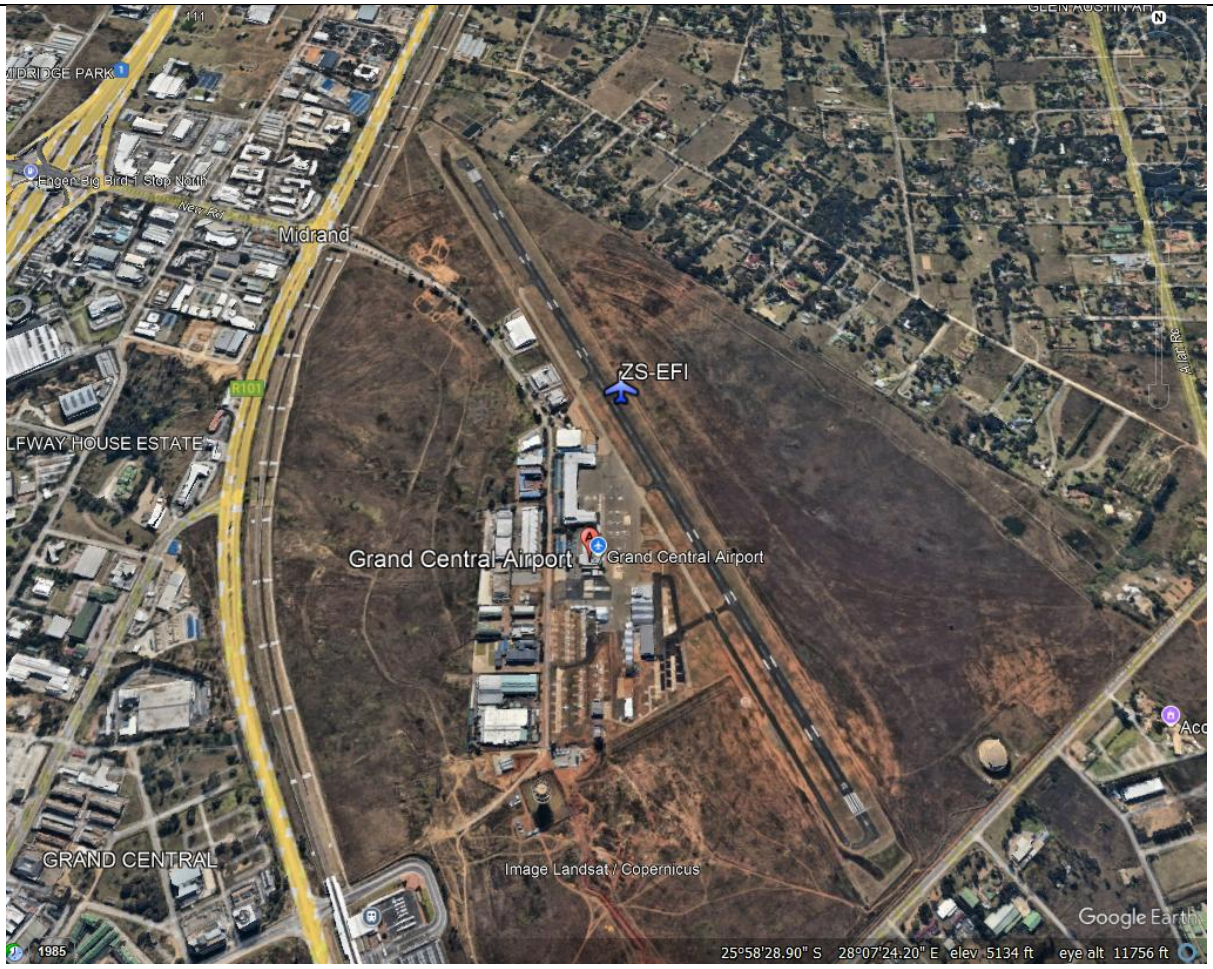

Figure 1: An overview of the serious incident site. (Source: Google Earth)

Figure 2: The aircraft near the serious incident site during recovery. (Source: Operator)

The weather information in the table below was obtained from the South African Weather Service (SAWS), prepared for FAGC on 21 August 2025 at 0800Z.

FAGC 210800Z 24005KT CAVOK 23/M23 Q1026

Wind Direction	240º	Wind Speed	5 knots	Visibility	10000 m
Temperature	23ºC	Cloud Cover	CAVOK	Cloud Base	CAVOK
Dew Point	M23ºC	QNH	1026 hPa		

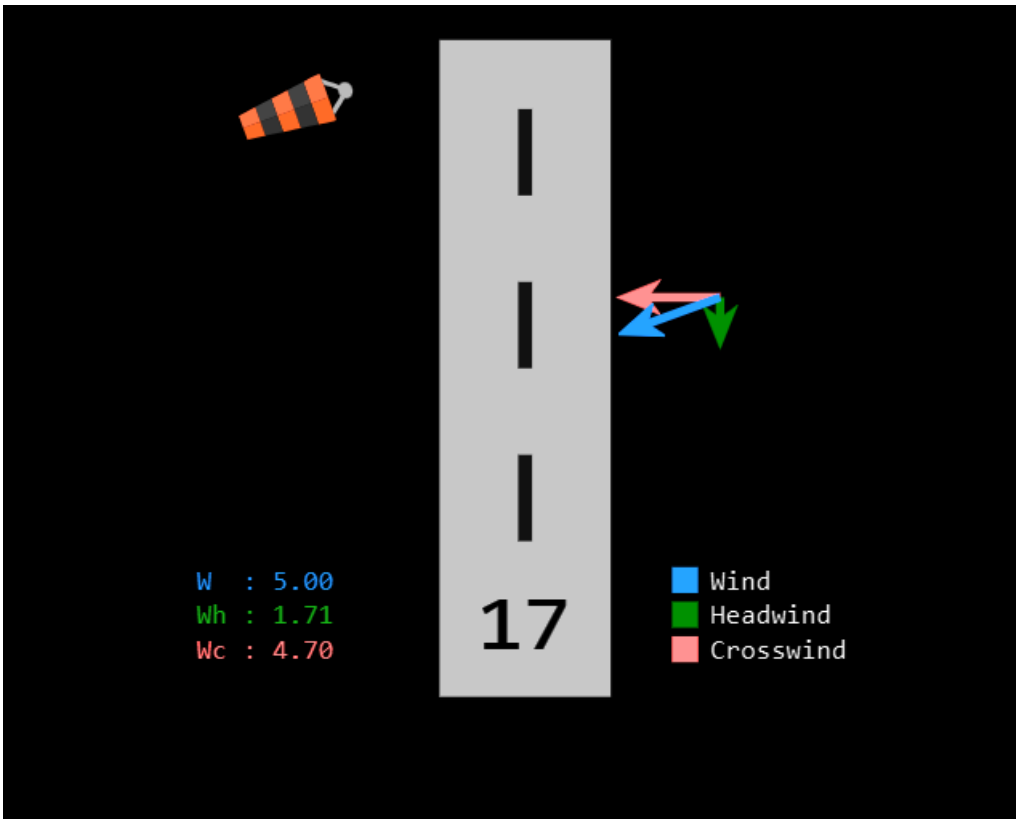

Figure 3: The wind component during landing. (Source: https://e6bx.com/wind-components/)

High Round-out (Flare) (Source: FAA-8083-3A)

Sometimes when the airplane appears to temporarily stop moving downward, the round out has been made too rapidly and the airplane is flying level, too high above the runway. Continuing the round out would further reduce the airspeed, resulting in an increase in angle-of-attack to the critical angle. This would result in the airplane stalling and dropping hard onto the runway. To prevent this, the pitch attitude should be held constant until the airplane decelerates enough to again start descending. Then the round-out can be continued to establish the proper landing attitude. This procedure should only be used when there is adequate airspeed. It may be necessary to add a slight amount of power to keep the airspeed from decreasing excessively and to avoid losing lift too rapidly. Although back-elevator pressure may be relaxed slightly, the nose should not be lowered any perceptible amount to make the airplane descend when fairly close to the runway unless some power

is added momentarily. The momentary decrease in lift that would result from lowering the nose and decreasing the angle-of-attack may be so great that the airplane might contact the ground with the nosewheel first, which could collapse. When the proper landing attitude is attained, the airplane is approaching a stall because the airspeed is decreasing and the critical angle-of-attack is being approached, even though the pitch attitude is no longer being increased.

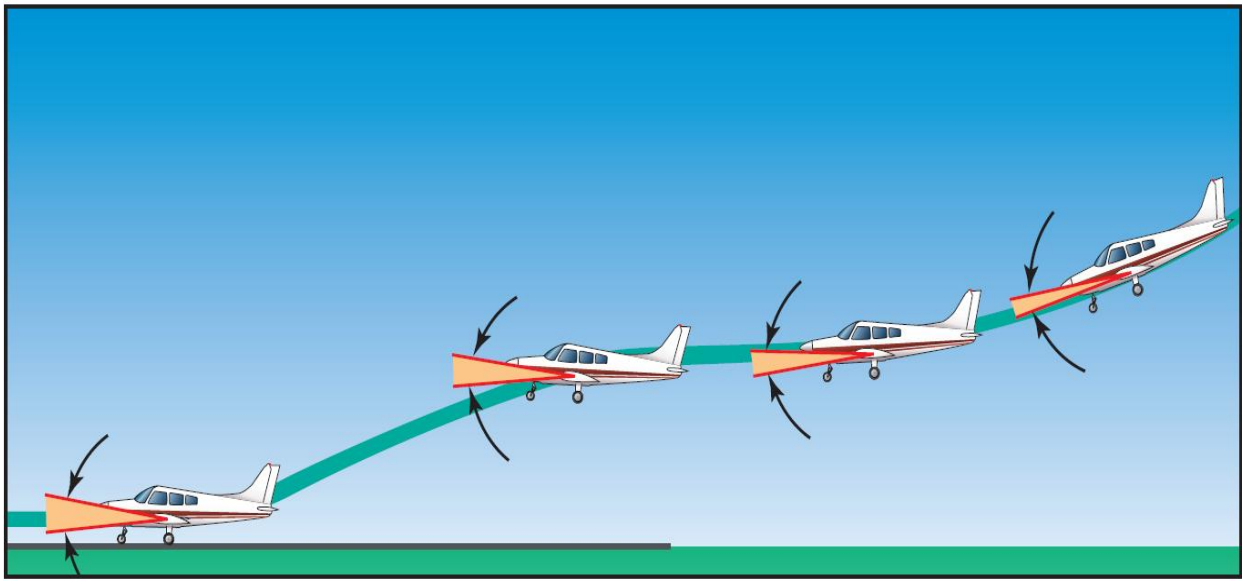

Illustration 1: Rounding out too high. (Source: FAA-8083-3A)

1 Personnel Information

1.1 The student pilot (SP) had a Student Pilot Licence (SPL) that was initially issued by the Regulator (SACAA) on 9 February 2025 with an expiry date of 8 February 2026. The pilot had flown a total of 64.4 hours on the aircraft type.

1.2 The SP was issued a Class 2 aviation medical certificate on 16 January 2025 with an expiry date of 16 January 2030.

1.3 The SP had the aircraft endorsed on her licence; she had adequate training to conduct the flight.

1.4 The approved training organisation (ATO) was issued an Approved Training Organisation Certificate by the Regulator (SACAA) on 19 March 2025 with an expiry date of 31 March 2030.

Aircraft Information

1.5 The last 100-hour mandatory periodic inspection (MPI) that was conducted on the aircraft prior to the serious incident flight was certified on 19 July 2025 at 5 488.9 total airframe hours. The aircraft had accrued 90.6 hours since the said inspection.

1.6 The aircraft was maintained by an aircraft maintenance organisation (AMO) that was issued an AMO Certificate by the Regulator on 23 July 2021 with an expiry date of 31 July 2026.

1.7 The aircraft had a valid Certificate of Airworthiness (C of A) that was initially issued on 13 November 1975. The renewed C of A was reissued on 14 November 2024 with an expiry date of 13 November 2025.

1.8 The aircraft's Certificate of Registration (C of R) was issued to the present owner on 10 June 2024.

1.9 The aircraft was issued a Certificate of Release to Service (CRS) on 19 July 2025 with an expiry date of 19 July 2026 or at 5 588.92 airframe hours, whichever occurs first.

2 Meteorological Information

2.1 The weather conditions were not a contributory factor to this serious incident.

3. Conclusion

3.1 The student pilot made two high approaches and go-arounds on Runway 17. During the third attempt, the aircraft landed hard with the nose gear first. The nose wheel broke and the propeller blades impacted the runway surface; the aircraft came to rest on Runway 17.

Probable Cause(s)
The aircraft landed hard after the student pilot flared the aircraft too high; as a result, the nose wheel broke and the propeller blades impacted the runway surface.
Contributing Factor(s)
Poor landing technique.
Safety Action(s)
None.
Safety Message and/or Safety Recommendation/s
None.

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 issued by:

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