



LIMITED ACCIDENT INVESTIGATION REPORT
--

Reference Number		CA18/2/3/10026					
Classification	Accident	Date	29 July 2021	Time	0842Z		
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 Accident		Runway 17 at Grand Central Airport (FAGC), Gauteng Province					
GPS Co-ordinates	Latitude	S 25° 59' 13.20"	Longitude	E 028° 08' 5.80"	Elevation	5280ft	
Aircraft Information							
Registration		ZS-EWX					
Model/Make		Cessna C172I					
Damage to Aircraft		Substantial		Total Aircraft Hours		14 986.3	
Pilot-in-command							
Licence Valid		Yes		Gender		Male	
Licence Type		Student Pilot Licence					
Total Hours on Type		47.8		Total Flying Hours		47.8	
People On-board		1+0		Injuries		0	
				Fatalities		0	
				Other (on ground)		0	
What Happened							
<p>On 29 July 2021 at approximately 0842Z, a Cessna C172I aircraft with registration ZS-EWX was engaged in a training flight at Grand Central Airport (FAGC), Gauteng Province. On-board the aircraft was a student pilot conducting a solo circuit training on Runway 17. The flight was conducted during daylight with good weather conditions prevailing and under the provisions of Part 141 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>According to the student pilot, he received clearance for a long approach for FAGC Runway 17 while he was three miles inbound from the north. Air traffic control (ATC) readout weather conditions at the time were as follows, wind: 250° at 10 knots (kts) gusting 17kts. The aircraft was configured to counteract the crosswind; however, it was pushed off the centreline, but the student pilot managed to correct its direction. The student pilot noted that the aircraft's approach was at a high speed. After the aircraft bounced during touch down, he opted to carry out a go-around. Communication was conducted with ATC and permission was granted for a go-around. The student pilot then came in for another approach and he experienced a similar wind condition. This time, there was a slight change to the wind direction with ATC's readout as follows; wind: 230° at 10kts, gusting 17kts. However, the pilot opted to land the aircraft.</p> <p>During final approach for touchdown, the aircraft was still at a high speed, but he opted to continue with landing. The left-side main landing gear touched down on the edge of the runway on the left-</p>							

side. The aircraft touched down hard, resulting in a bounce. The pilot then attempted to give power to do another go-around; however, the aircraft's right wing lifted, causing the aircraft to veer off to the left-side of the runway. This was followed by the collapse of the nose landing gear, which resulted in the propeller striking the ground. The aircraft continued to skid further to the left of the runway with the nose section in contact with the ground until it came to a stop in a nose-down left-wing high attitude. After coming to a stop, the student pilot immediately shut down the engine and disembarked the aircraft unassisted. The airport fire and emergency team dispatched to the accident scene for further assistance.



Figure 1: The accident aircraft with damages sustained during the accident sequence.

The student pilot did not sustain any injuries during the accident sequence. The aircraft sustained damage to the nose landing gear (which broke off), the propeller, the fuselage (multiple structural fractures), both wings, both main landing gears, and the horizontal stabiliser.

The ZS-EWX aircraft took off at approximately 0755Z and the last weather conditions which were attained by FAGC tower at 0700Z were as follows: METAR FAGC 290700Z CAVOK 13/M02 Q1030. According to the Aircraft Training Organisation (ATO), the weather briefing communicated by ATC was attained from the South African Weather Service (SAWS) and other accredited weather service information websites. *Once the daily weather briefing is attained, the ATO schedules training according to favourable weather conditions on the day.* On the day of the accident, the weather conditions at the time of take-off were favourable with precipitation expected later, which was outside the training timeframe for the accident flight; however, at the time of the accident, change of weather conditions caught the student pilot by surprise as the weather changed earlier than expected. According to the aircraft Pilot's Operating Handbook (POH), the maximum allowable crosswind component is 15kts.

The student pilot had a Student Pilot Licence (SPL) issued by the Regulator (SACAA) on 5 May

<p>2021 with an expiry date of 4 April 2022. The student pilot had a Class 2 medical certificate issued by the Regulator on 18 February 2020 with an expiry date of 28 February 2025. According to the student pilot's training records (logbook and flight folio), the student pilot initially began his training on 18 February 2020 prior to Covid-19 lockdown and accumulated 4.8 hours. Training was resumed on 13 September 2020 following Level 3 revised lockdown regulations. The student pilot then progressed with training until he began conducting solo flights between dual flight exercises. According to the organisation (ATO), the intent of the exercises is to accumulate 5 hours of solo flight before conducting a solo consolidation flight. The student pilot had accumulated 5.1 hours solo flights after a total of 37 hours of dual instructions. The 5 hours comprised base circuits and airport general flying area excursion. On 28 July 2021, the student pilot and an instructor took off to the general flying area for practise exercises. Later, the instructor disembarked the aircraft. Thereafter, the student pilot took off on a solo flight as per verbal debrief with the instructor and returned as instructed. He was signed off on the day. On 29 July 2021, after a debrief by the instructor, the pilot took off on a solo consolidation flight, which was the day of the accident. According to the pilot's records, all pre- and post-flight debriefs were carried out with records showing that the pilot was progressing effectively and satisfactorily.</p>	
<p>Probable Cause:</p> <p>The aircraft approached at high speed, resulting in a hard landing on the left edge of the runway and the aircraft bounced before the pilot lost directional control of the aircraft as the crosswind lifted the right wing, causing it to veer off to the left of the runway.</p>	
<p>Safety Action/s</p> <p>None.</p>	
<p>Safety Message and/or Safety Recommendation/s</p> <p>None.</p>	
<p>Purpose of the Investigation</p> <p><i>In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011, 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.</i></p>	
<p>About this Report</p> <p><i>Decisions regarding whether to investigate, and the scope of an investigation are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, no 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 brief report. The report has been compiled using information supplied in the initial notification, as well as follow-up information 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 accident.</i></p> <p><i>This report provides an opportunity to share safety message/s in the absence of an investigation.</i></p> <p><i>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.</i></p>	
<p>Disclaimer</p> <p><i>This report is produced without prejudice to the rights of the AIID, which are reserved.</i></p>	

This report is issued by:

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