



LIMITED ACCIDENT INVESTIGATION REPORT
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Reference Number		CA18/2/3/10049					
Classification	Accident	Date	9 October 2021	Time	0720Z		
Type of Operation	Training Flight (Part 141)						
Location							
Place of Departure	Wonderboom Aerodrome (FAWB)		Place of Intended Landing	Wonderboom Aerodrome (FAWB)			
Place of Accident	Runway 29 at FAWB, Gauteng Province						
GPS Co-ordinates	Latitude	S25° 39'11.28"	Longitude	E028°13'28.04"	Elevation	4 071 feet	
Aircraft Information							
Registration	ZS-CBB (Serial Number 28-5694)						
Model/Make	Piper 28-180						
Damage to Aircraft	Substantial		Total Aircraft Hours	11 423.16			
Pilot-in-command							
Licence Type	Student Pilot Licence (Aeroplane)	Gender	Male		Age: 18		
Licence Valid	Yes						
Total Hours on Type	22		Total Flying Hours	23			
People On-board	1 + 0	Injuries	0	Fatalities	0	Other (on ground)	0
What Happened							
<p>On 9 October 2021 at approximately 0600Z, an instructor and a student pilot on-board a Piper 28-180 with registration ZS-CBB were engaged in circuit-and-landing exercises at Wonderboom Aerodrome (FAWB) for a solo consolidation check. This was a training flight conducted under the provisions of Part 141 of the Civil Aviation Regulations (CAR) 2011 as amended. Fine weather conditions prevailed at the time leading to the accident.</p> <p>According to the student pilot, he completed four circuit-and-landing exercises on Runway (RWY) 29 with the instructor on-board; this was without incident. The student pilot further stated that he dropped off the instructor at the flying school and then taxied to RWY 29 for his solo circuit-and-landing exercises. The student pilot conducted five circuit-and-landing exercises without incident. During the landing roll of the sixth circuit, the aircraft landed on its main wheels and when the nose wheel touched the runway, the aircraft veered off to the left (of the runway). The nose gear broke</p>							

off as the aircraft came to a stop on the grass, some distance from the edge of the runway (near the intersection of Runway 24 and 29). The aircraft sustained substantial damage; however, there were no injuries reported.



Figure 1: Final resting position of the aircraft. (Source: Chief Flight Instructor)

Post-accident inspection of the aircraft by the aircraft maintenance organisation (AMO) revealed the following damages:

- 1) Propeller was damaged.
- 2) Engine to undergo a shock load inspection.
- 3) Engine cradle was bent and had cracked.
- 4) Nose gear oleo tube had broken off from the nose gear fork and torque links were damaged.
- 5) Right-side wing ribs were found cracked.
- 6) Right-side main gear trunnion had cracked.
- 7) Both main landing gear axles had cracked.
- 8) Lower engine cowling was damaged.

The aircraft had a Certificate of Release to Service issued on 5 October 2021 with an expiry date of 5 October 2022 or at 11514.46 airframe hours, whichever occurs first. The aircraft had 11414.46 airframe hours at the time of inspection and had flown a total of 8.7 airframe hours since the last inspection. The aircraft had a valid Certificate of Airworthiness which was issued on 20 December 2011 with an expiry date of 31 December 2021.

<p>It is likely that the aircraft's approach was unstable, resulting in a hard landing and a bounce before the pilot lost control and the aircraft veered off to the left of the runway.</p>	
<p>Probable cause:</p> <p>It is likely that the aircraft landed hard, bounced and veered off the left-side of the runway, which resulted in the nose gear breaking off.</p>	
<p>Safety Action/s</p>	
<p>None.</p>	
<p>Safety Message and/or Safety Recommendation/s</p>	
<p>Safety message: Pilots should ensure that they are within the required landing limits in terms of the landing speed and height and, should they suspect that the speed and/or height is not achieved, then they should execute a go-around.</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**

