

LIMITED ACCIDENT INVESTIGATION REPORT

Reference Number	CA18/2/3/10076						
Classification	Accident	Date	16 November 2021	Time	0750Z		
Type of Operation	Training (Part 141)						
Location							
Place of Departure	Wonderboom Aerodrome (FAWB)		Place of Intended Landing		Wonderboom Aerodrome (FAWB)		
Place of Accident	Runway 29, FAWB						
GPS Co-ordinates	Latitude	25°39'19.11" S	Longitude	028°13'16.81" E	Elevation	4 095 ft	
Aircraft Information							
Registration	ZS-PMK						
Make / Model	Cessna 172M						
Damage to Aircraft	Substantial		Total Aircraft Hours		17 352.1		
Pilot-in-command							
Licence Valid	Yes		Gender	Male		Age: 22	
Licence Type	Private Pilot Licence (PPL)						
Total Hours on Type	10.7		Total Flying Hours		93.2		
People On-board	1 + 0	Injuries	0	Fatalities	0	Other (On Ground)	0
What Happened							
<p>On Tuesday 16 November 2021, a pilot being the sole occupant on-board a Cessna 172M with registration ZS-PMK took off from Wonderboom Aerodrome (FAWB) on a training flight under the provisions of Part 141 of the Civil Aviation Regulations, 2011.</p> <p>Upon his return flight to FAWB, he was cleared for landing Runway 29 by air traffic control (ATC). The aircraft touched down just after the threshold with the main wheels first in a high nose-up attitude. As the pilot lowered the nose gear, the aircraft touched down hard on the runway surface, resulting in damage to the nose gear oleo and forward firewall. The pilot was not injured during the accident and was able to vacate the runway unassisted. The meteorological routine aerodrome report (METAR) was as follows: FAWB 160800Z 33007KT CAVOK 29/16 Q1017=. Surface wind: 330°/7kt, temperature: 29°C, dew point: 16°C and the barometric pressure at sea level was 1017 hectopascal (hPa).</p>							

The prevailing wind conditions at the time of the accident. (Source: <https://e6bx.com>)

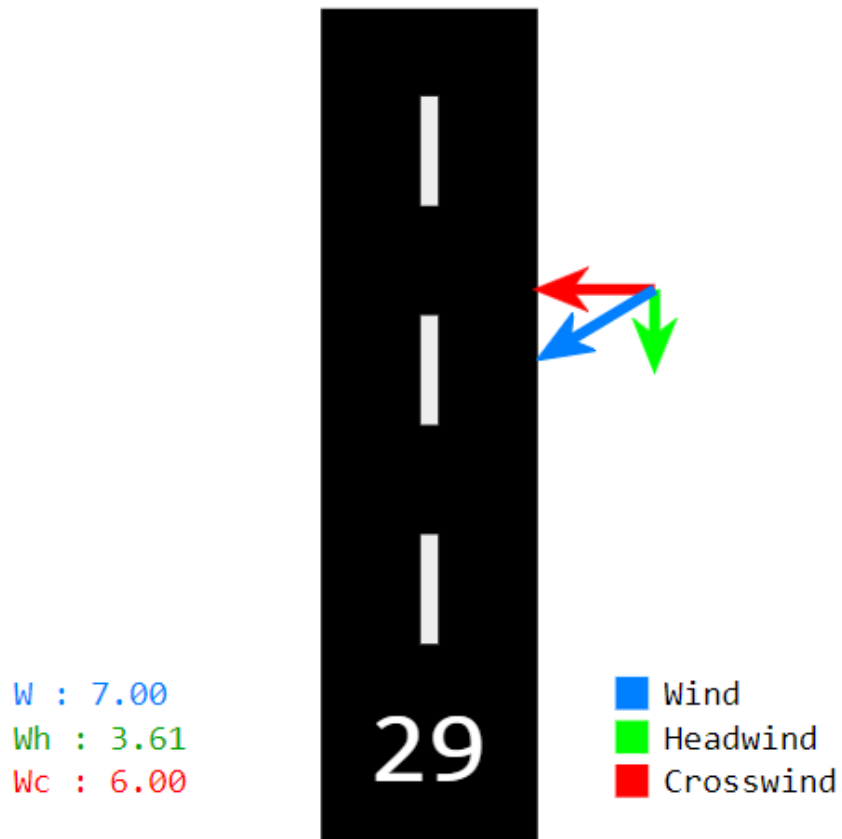




Figure 1: The nose gear fork displays slight bending deformation and damage at the axle.



Figure 2: Deformation on the firewall.

What was found:

- (i) No mechanical malfunction with the aircraft or its engine was noted that could have contributed or have caused the accident.
- (ii) The pilot had limited flying experience on the aircraft type (10.7 hours), as well as limited flying exposure during the 90 days preceding the flight as he had only flown 6.4 hours during that period.
- (iii) According to available information, there was a 6-knot crosswind from the right at the time.
- (vi) The pilot was the sole occupant; thus, the weight and balance was not compromised.
- (v) This was a training flight conducted under the provisions of Part 141 of the Civil Aviation Regulations (CAR) 2011, which was accordingly authorised by the aviation training organisation (ATO).
- (vi) The ATO was in possession of a valid ATO certificate that was issued by the South African Civil Aviation Authority (SACAA) on 22 January 2021 with an expiry date of 31 January 2026.

Probable cause

The pilot used incorrect landing technique, which resulted in a hard landing.

Contributory factors

1. The prevailing 6-knot crosswind from the right at the time might have contributed to the hard landing.

Safety Action

Following two hard landing accidents on the same day from the same ATO, the institution issued a safety notice on 16 November 2021 which calls for all student pilots, pilots under training as well as all pilots who want to hire and fly an aircraft (from the ATO) to be subjected to a dual check (of at least three circuits) by a flight instructor before their next flight.

Safety Message and/or Safety Recommendations

None.

Purpose of the Investigation

*In terms of Part 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.***

About this Report

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.

This report provides an opportunity to share safety message/s in the absence of an investigation.

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.

Disclaimer

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This report is issued by:
Accident and Incident Investigations Division
South African Civil Aviation Authority
Republic of South Africa