

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10247						
Classification	Accident	Date	2 January 2023	Time	2030Z		
Type of Operation	Private (Part 91)						
Location							
Place of Departure	Grand Central Airport (FAGC), Gauteng Province		Place of Intended Landing	Grand Central Airport (FAGC), Gauteng Province			
Place of Occurrence	Runway 35 at Grand Central Airport (FAGC)						
GPS Co-ordinates	Latitude	25°59'28.3" S	Longitude	28°08'34.5" E	Elevation	5 325 ft	
Aircraft Information							
Registration	ZS-SMK						
Make; Model; S/N	Cessna 172M Skyhawk (Serial Number: 17263023)						
Damage to Aircraft	Substantial		Total Aircraft Hours	9 810.6			
Pilot-in-command							
Licence Type	Private Pilot Licence (PPL) Aeroplane		Gender	Male	Age	32	
Licence Valid	Yes	Total Hours	190.3	Total Hours on Type	116.2		
Total Hours 30 Days	14.2		Total Flying on Type Past 90 Days	33.9			
People On-board	1 + 1	Injuries	0	Fatalities	0	Other (on ground)	0
What Happened							
<p>On Monday, 2 January 2023, a pilot and a passenger on-board a Cessna 172M Skyhawk aircraft with registration ZS-SMK were on a private flight from Grand Central Airport (FAGC) to Wonderboom Airport (FAWB), both located in Gauteng province. The intention of the flight was to perform touch-and-go landings at FAWB before returning to FAGC. Visual meteorological conditions (VMC) by night prevailed at the time of the flight. The flight was conducted under the provisions of Part 91 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The pilot stated that he conducted a pre-flight inspection on the aircraft, and no anomalies were noted. The aircraft had 40 US gallons (151 litres) of Avgas LL100 fuel in the tanks. The aircraft took off from Runway 35 at approximately 1906Z and climbed to 7 500 feet (ft) above mean sea level (AMSL). The pilot performed four uneventful touch-and-go landings at FAWB, thereafter, routed back to FAGC at 7 000ft AMSL. Upon reaching FAGC controlled zone (CTR), he joined FAGC and performed unmanned landing procedures, followed by two touch-and-go landings on Runway 35. Whilst rolling after the second touch-and-go landing and readying to get airborne for the third circuit at approximately 65 knots, the aircraft struck a buck that was crossing the runway with the right-side main landing gear. The aircraft veered off slightly to the left but continued rolling.</p> <p>The pilot applied excessive brakes to bring the aircraft to a stop. In the process, the right landing gear strut collapsed, causing the aircraft to veer off to the right-side of the runway and onto the grass area. The right-side wing impacted a pole before the aircraft came to a stop against the airport's perimeter fence.</p>							

The pilot and the passenger were unharmed; they disembarked the aircraft unassisted. The aircraft sustained damage to the right wing, right landing gear, left and right horizontal stabilisers, spinner, propeller blades and the nose landing gear.



Figures 1 and 2: The damaged right-wing leading edge (right); and the aircraft against the perimeter fence. (Source: FAGC Fire Department)



Figure 3: The final position of the aircraft. (Source: FAGC Fire Department)



Figures 4 and 5: Damage to the left-side elevator and right-side horizontal stabiliser.
(Source: FAGC Fire Department)

Post-accident interview with the pilot revealed that the aircraft was airworthy at the time of the flight. The duration of the flight was 1.3 hours and approximately 27.6 US gallons (104.3 litres) of Avgas 100LL fuel remained in the aircraft's tanks.

FAGC management stated that there was no animal control programme in place as there was not much animal activity at the airport. The airport has a written agreement with the Society for the Prevention of Cruelty to Animals (SPCA) and snake wranglers for the removal of animals as and when they are found. According to the airport management, this was the first time a buck was found at the airport.

Findings

1. The pilot was initially issued a Private Pilot Licence (PPL) by the South African Civil Aviation Authority (SACAA) on 3 September 2012. The pilot completed his skills test and was re-issued a PPL on 16 June 2022 with an expiry date of 30 June 2024. A night rating was endorsed on his licence.
2. The pilot was issued a Class 2 medical certificate on 7 June 2022 with an expiry date of 30 June 2027 with no restrictions.
3. At the time of the accident, the pilot had flown a total of 190.3 hours, of which 33.9 hours were on the aircraft type.
4. This flight was conducted under the provisions of Part 91 of the CAR 2011 as amended.
5. The Certificate of Registration (C of R) was issued to the current owner on 9 September 2019.
6. The aircraft was issued a Certificate of Release to Service (CRS) on 6 December 2022 at 9 743.3 airframe hours with an expiry date of 5 December 2023 or at 9 843.3 airframe hours, whichever occurs first unless the aircraft is involved in an accident or becomes unserviceable, in which case the certificate is invalid for the duration of the period.
7. The last 100-hour mandatory periodic inspection (MPI) prior to the accident flight was certified on 6 December 2022 at 9 743.3 airframe hours. The aircraft had logged 9 810.6 total hours

at the time of the accident; meaning that it had been flown a further 67.3 hours since the last inspection.

8. The Certificate of Airworthiness (C of A) was initially issued on 18 October 2013. The C of A was renewed on 27 October 2022 with an expiry date of 31 October 2023.

Probable Cause(s)

The aircraft collided with a buck during the landing roll whilst preparing to rotate for a third circuit. As a result, the right-side main landing gear collapsed, and the aircraft veered off to the right-side of the runway before it came to stop against the airport's perimeter fence.

Contributing Factor(s)

Presence of wild animals on the runway.

Safety Action(s)

The fire department carries out runway inspections regularly to remove mainly dogs and snakes which are collected by the SPCA and snake wranglers.

Safety Message and/or Safety Recommendation/s

None.

About this Report

The decisions 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

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