

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number		CA18/2/3/10465					
Classification	Accident	Date	18 June 2024			Time	1545Z
Type of Operation	Private 94						
Location							
Place of Departure	New Tempe Aerodrome (FATP) Free State Province		Place of Intended Landing	New Tempe Aerodrome (FATP) Free State Province			
Place of Occurrence	On Runway 01 during landing at New Tempe Aerodrome (FATP)						
GPS Co-ordinates	Latitude	29° 2' 22.15" S	Longitude	026° 9' 33.01" E	Elevation	4 526ft	
Aircraft Information							
Registration	ZU-CUD						
Make; Model; S/N	Urban Air S.R.O; Samba UFM-10 (Serial Number: 29/10/2002)						
Damage to Aircraft	Substantial			Total Aircraft Hours	865.3		
Pilot-in-command							
Licence Type	National Pilot Licence (NPL)		Gender	Male		Age	82
Licence Valid	Yes	Total Hours	604.5		Total Hours on Type	62.5	
Total Hours 30 Days	2.6		Total Flying on Type Past 90 Days			2.6	
People On-board	1+0	Injuries	0	Fatalities	0	Other (on ground)	0
What Happened							
<p>On Tuesday afternoon, 18 June 2024, a pilot on-board a Samba UFM-10 aircraft with registration ZU-CUD was on a private flight from New Tempe (FATP) Aerodrome, Free State province, with the intention to land back at the same aerodrome. Visual meteorological conditions (VMC) by day prevailed at the time of the flight which was conducted under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The pilot took off to the general flying area (GFA) from Runway (RWY) 01 at approximately 1500Z with no notable events. Later, he flew back to FATP for a full-stop landing. On final approach, the aircraft's speed was approximately 65 knots. During the flare, the aircraft ballooned and the pilot missed the intended touchdown spot. The aircraft landed deep and hard with the nose gear first. This resulted in the collapse of the nose gear strut which subsequently broke off. During the accident sequence, the propeller impacted the runway and sustained damage; one of the three blades broke off and the remaining two blades' tips sustained damage. The nose section dropped during the accident and the nose strut scrapped the runway surface before the aircraft stopped on the runway a few metres from the point at which the wooden propeller blades impacted the runway. The pilot disembarked from the aircraft unassisted and with no injuries. The aircraft's nose landing gear, propeller and the engine cowling were damaged during the accident sequence.</p> <ul style="list-style-type: none"> • There was sufficient fuel on-board the aircraft • Good weather prevailed at the time of the flight. 							

The accident occurred during daylight after landing on RWY 01 at Global Positioning System (GPS) coordinates determined to be S 29 2 22.15 E 026 9 33.01, at a field elevation of 4526 feet.



Figure 1: A view of the accident site. (Source: Google Earth Maps)



Figure 2: The damaged propeller after recovery. (Source: Pilot)

The Aircraft Type and Performance

The information below is an extract from the Lambada Flight Manual

A SAMBA UFM-10 originated from the Czech Republic and was developed as a low-wing and fitted with a fixed tricycle landing gear type. The aircraft has a single Jabiru 2200 four-cylinder horizontally opposed and air-cooled engine type equipped with a three-bladed propeller.

Landing

According to the pilot's statement, the approach speed was approximately 65kt (120km/h) with the aircraft configured for landing.

According to the aircraft operating handbook, the approach speed required for the on-final is 110km/h (59kt). The airspeed during the final is slowly reduced so that the touchdown speed is about 70km/h (37kt). Gradually pull the stick after touchdown. The landing run can be shortened by braking.

Caution: *When the airplane rebounds, hold the control stick fully pulled.*

Findings

1. The pilot had a National Pilot Licence (NPL) that was initially issued by the Regulator (SACAA) on 31 August 2020. The licence was renewed on 30 June 2023 with an expiry date of 25 June 2025. The pilot's Class 4 aviation medical certificate was issued on 7 October 2021 with an expiry date of 31 October 2024.
2. The pilot was qualified to operate the flight with a total of 604.5 flying hours on fixed-wing aircraft. The aircraft type was endorsed on his licence; he had accumulated a total of 62.5 flying hours at the time of the flight.
3. The aircraft had an Authority to Fly (ATF) that was issued by the Regulator on 10 July 2023 with an expiry date of 30 September 2024.
4. The aircraft's maintenance was conducted and certified by the Approved Person (AP), after which a Certificate of Release to Service (CRS) was issued on 26 June 2023 at 862.5 airframe hours with an expiry date of 25 June 2024 or at 962.5 airframe hours, whichever comes first.
5. The AP had an AP Certificate with the aircraft type endorsed on it; the certificate was issued by the Regulator on 10 January 2022 with an expiry date of 9 January 2024.
6. The aircraft's approach and flaring speeds were at 65 knots which was above the manufacturer's recommended speed of 59 knots for approach and 37 knots for landing, respectively.
7. Good weather conditions prevailed at the time of the flight; the weather was not a contributing factor to this accident.

8. There was sufficient fuel on-board the aircraft during the flight.
9. The aircraft was too fast during landing which led to the aircraft ballooning, followed by a bounce that caused the nose gear to impact the runway hard and, thus, broke off.

Probable Cause(s)

The aircraft's airspeed was too high on approach which resulted in the aircraft ballooning and landing deep and hard on the runway with the nose landing gear first, which broke off.

Contributing Factor(s)

None.

Safety Action(s)

None.

Safety Message and/ or Safety Recommendation/s

Safety message: In the interest of safety, pilots are advised to be vigilant during the critical phases of flight such as landing and take-offs.

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 desktop inquiries 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**