

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10542						
Classification	Accident		Date	24 March 2025		Time	1100Z
Type of Operation	Private (Part 94)						
Location							
Place of Departure	Morningstar Airfield, Western Cape Province		Place of Intended Landing	Morningstar Airfield, Western Cape Province			
Place of Occurrence	Morningstar Airfield in Western Cape Province						
GPS Co-ordinates	Latitude	33° 45' 44.36" S	Longitude	18°32' 54.69" E	Elevation	200 ft	
Aircraft Information							
Registration	ZU-IJS						
Make; Model; S/N	Sling 4 (Serial Number:094)						
Damage to Aircraft	Substantial			Total Aircraft Hours	346.8		
Pilot-in-command							
Licence Type	Private Pilot Licence (PPL)		Gender	Male		Age	42
Licence Valid	Yes	Total Hours	67.8	Total Hours on Type	1		
Total Hours 30 Days	7.2		Total Flying on Type Past 90 Days			1	
People On-board	1+0	Injuries	0	Fatalities	0	Other (on ground)	0
What Happened							
On Monday, 24 March 2025, a pilot on-board a Sling 4 aircraft with registration ZU-IJS was conducting a private flight from Morningstar Airfield in Western Cape province with the intention to land at the same airfield when the accident occurred. The flight was conducted under visual metrological conditions (VMC) by day and under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended. The pilot had recently purchased the aircraft from the previous owner. On 24 March 2025, he had planned to perform a short aircraft acceptance flight and to familiarise himself with the electronic flight instrument system (EFIS) of the aircraft. The pilot conducted a pre-flight inspection of the aircraft and found no anomalies. The aircraft was refuelled with 185 litres of Motor Gasoline (Mogas). The aircraft took off from Runway 02 (RWY02) at approximately 1040Z and climbed to 1800 feet (ft) above ground level (AGL) in a westerly direction towards Bloubergstrand. After 20 minutes of an uneventful flight, the pilot returned to Morningstar Airfield and completed the unmanned joining procedure before joining the active circuit on the right downwind leg for a full-stop landing on RWY02. The pilot selected full flaps and turned right to position for final approach. The							

aircraft's approach speed was 75 knots (kts) indicated air speed (KIAS); as the aircraft crossed the runway threshold, the pilot flared the aircraft for landing. During the landing flare, it ballooned which resulted in a rapid increase in altitude. In an attempt to correct the situation, the pilot pushed forward the control column to lower the nose and the aircraft impacted the ground hard with the nose landing gear first, which broke and, thus, the propeller struck the ground. The aircraft skidded on its engine cowl on the runway and veered off towards the right. It exited the runway and came to rest on a dry grassy terrain on the right-side shoulder of RWY02.

The pilot was not injured during the accident sequence. The aircraft sustained substantial damage to the nose landing gear, engine nose cowl and propeller.



Figure 1: RWY02 with ground scars and a fully extended windsock in view. (Source: Pilot)



Figure 2: The aircraft on the right-side shoulder of Runway 02 with a damaged nose landing gear and propeller. (Source: Pilot)

The weather information below was obtained from the pilot questionnaire.

Wind Direction	300°	Wind Speed	15 kts	Visibility	10km
Temperature	24°C	Cloud Cover	FEW	Cloud Base	2000 ft
Dew Point	13°C				

The calculated crosswind that was blowing from left to right across RWY02 was 14kts. The maximum demonstrated crosswind component for the aircraft is 15kts.

Ballooning During Round-out/Flare (Source: Federal Aviation Administration (FAA) *Airplane Flying Handbook* chapter 8)

When ballooning is excessive, it is best to execute a go-around immediately; do not attempt to salvage the landing. Power must be applied before the airplane enters a stalled condition. The pilot must be extremely cautious of ballooning when there is a crosswind present because the crosswind correction may be inadvertently released, or it may become inadequate. Because of the lower airspeed after ballooning, the crosswind affects the airplane more. Consequently, the wing will have to be lowered even further to compensate for the increased drift. It is imperative that the pilot makes certain that the appropriate wing is down, and that directional control is maintained with opposite rudder. If there is any doubt, or the airplane starts to drift, execute a go-around.

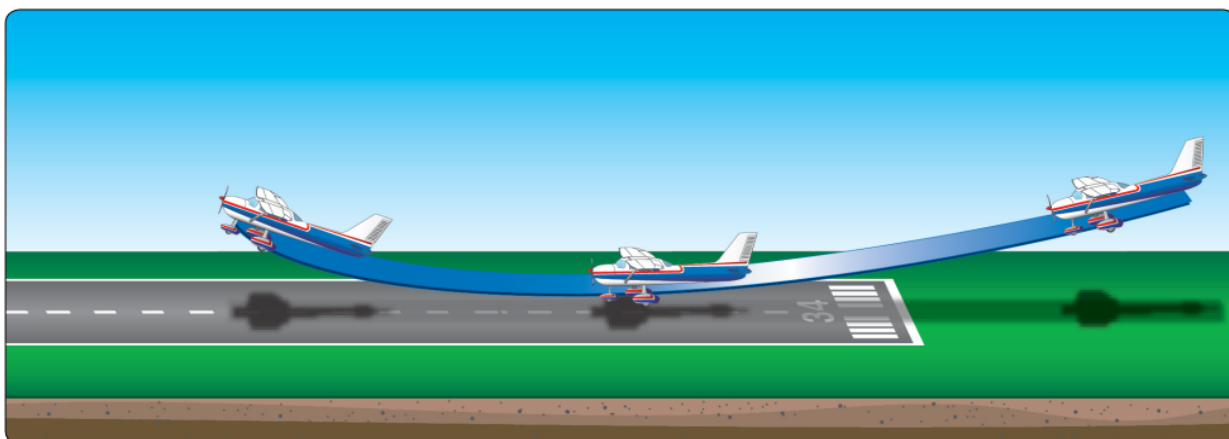


Figure 3: Ballooning during round out/flare.

Normal Landing (Source: Sling 4 TSi Pilot's Operating Handbook)

1. Airspeed @50 ft 70 KIAS
2. Power..... IDLE IN GROUND EFFECT
3. Flare TO MINIMUM FLIGHT SPEED
4. Touchdown MAINS FIRST
5. Brakes..... APPLY AS NEEDED

The pilot stated that on final approach for landing, the aircraft's configuration was full flaps at 75kts, which is 5kts more than the recommended 70kts as prescribed in the POH.

Findings

1. Personnel information

- 1.1. The pilot had a Private Pilot Licence (PPL) that was initially issued on 13 March 2025 with an expiry date of 31 March 2026. The pilot was appropriately rated for the flight, and the aircraft type was endorsed on his licence. The pilot had 67.8 hours total flying experience with 1 hour on the aircraft type. The pilot had last flown the aircraft type on 24 March 2025.
- 1.2. The pilot had a Class 2 aviation medical certificate that was issued on 3 August 2023 with an expiry date of 31 August 2025 and with no restrictions.
- 1.3. The pilot had 1 hour of flight time on the aircraft type. This limited experience on the aircraft type may have contributed to the incorrect landing technique being applied.

2. <u>Aircraft</u> 2.1 The aircraft was initially issued an Authority-to-fly (ATF) Certificate on 21 November 2019. The latest ATF was issued on 11 September 2024 with an expiry date of 30 November 2025. 2.2 The Certificate of Registration (C of R) was issued to the present owner on 20 September 2016. 2.3 The last annual inspection of the aircraft was conducted and certified on 31 July 2024 at 337.1 airframe hours after which a Certificate of Release to Service (CRS) was issued with an expiry date of 31 July 2025 or at 437.1 airframe hours, whichever comes first. 2.4 The aircraft had a total of 346.8 airframe hours at the time of the accident. 3. <u>Environment</u> 3.1 The aircraft's maximum demonstrated crosswind limitation is 15kts. The crosswind component at the time of the accident was 14kts. 3.2 The aircraft ballooned during the landing flare due to the excessive landing speed of 75kts. 3.3 The excessive speed led to the aircraft ballooning, and the pilot's inputs resulted in the nose landing gear impacting the runway hard and, thus, breaking off. Subsequently, the pilot lost directional control.
Probable Cause(s) The aircraft ballooned during the landing phase and the nose gear impacted the runway surface; the pilot subsequently lost directional control of the aircraft.
Contributing Factor(s) The pilot's limited experience on the aircraft type and the associated weather conditions may have resulted in the pilot using incorrect landing technique.
Safety Action(s) None.
Safety Message Pilots operating aircraft are urged to conduct a go-around and not commit to landing the aircraft when the approach profile is not suitable. This is to prevent damage to the aircraft and injury to self and/or occupants that could be caused by a hard or uncontrolled landing.
About this Report <i>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</i>

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 <i>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.</i>
Disclaimer <i>This report is produced without prejudice to the rights of the AIID, which are reserved.</i>

This report is issued by:

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