

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10223						
Classification	Accident	Date	17 September 2022		Time	0800Z	
Type of Operation	Private (Part 94)						
Location							
Place of Departure	Hoek Van Spruit Se Vloer Pan Airstrip, Northern Cape Province			Place of Intended Landing	Hoek Van Spruit Se Vloer Pan Airstrip, Northern Cape Province		
Place of Occurrence	Hoek Van Spruit Se Vloer Pan gravel airstrip, 5nm north of Verneukpan, Northern Cape Province						
GPS Co-ordinates	Latitude	29° 58' 17" S	Longitude	20° 54' 32" E	Elevation	2 897 feet	
Aircraft Information							
Registration	ZU-IIX						
Make; Model; S/N	SAFARI LSA (Serial Number: 020-02-14 SAF)						
Damage to Aircraft	Substantial			Total Aircraft Hours	625		
Pilot-in-command							
Licence Type	Private Pilot Licence (PPL) Aeroplane		Gender	Female		Age	43
Licence Valid	Yes	Total Hours	144.2		Total Hours on Type	55.5	
Total Hours 30 Days	4.3		Total Flying on Type Past 90 Days	0.5			
People On-board	1 + 0	Injuries	0	Fatalities	0	Other (on ground)	0
What Happened							
<p>On Saturday, 17 September 2022, a pilot on-board a Safari LSA aircraft with registration ZU-IIX took off on a private flight from Hoek Van Spruit Se Vloer Pan Airstrip in the Northern Cape province with the intention to return to the same airstrip. No flight plan was filed for the flight. Visual meteorological conditions (VMC) by day prevailed at the time of the flight. The flight was conducted under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The pilot stated that the take-off from the airstrip was uneventful, and the entire flight, which took approximately 30 minutes, proceeded as expected. The pilot stated that the runway used was 3000 metres (m) long. During landing with full flaps and at a speed of 55 knots (kts), the aircraft touched down hard with all three landing gears and bounced. The pilot lost directional control of the aircraft, and it ground-looped to the left-side of the gravel airstrip. She then tried to recover by pushing the control column (stick) to the right, but without success. The right-side landing gear struck the ground hard, followed by the right-wing tip. The propeller also struck the ground during the accident sequence before the aircraft came to a stop.</p> <p>The aircraft sustained substantial damage to the propeller, both main landing gears, right-wing tip, and the right-wing front spar. The pilot was not injured during the accident sequence.</p>							

According to the Pilot's Operating Handbook (POH) of the Safari LSA, the landing speed is 55kts with flaps positioned at 8 degrees or 50kts with flaps position at 12 degrees. The POH also states that the aircraft could be landed on all three wheels if a short runway is used.

The pilot stated that her last flight was on a taildragger aircraft, six (6) months prior to the accident flight. She further stated that on hindsight, it would have been better if she had flown with an instructor on the day of the accident flight.



Figure 1: Damaged landing gears and the propeller blades. (Source: Pilot)



Figure 2: Damaged right-side wingtip. (Source: Pilot)

The pilot had not flown a taildragger in six (6) months. According to the Civil Aviation Regulations Part 91.02.4 (1), the pilot was not supposed to fly without an instructor because she had not flown the aircraft in more than 90 days. The pilot contravened the provisions of the Civil Aviation Regulations 2011 Part 91.02.4 (1).

Civil Aviation Regulations 2011,

Recency

91.02.4 (1) *A pilot shall not act as PIC of an aircraft, or second-in-command (SIC) of an aircraft required to be crewed by more than one pilot, carrying passengers by day, unless such pilot has personally, within the 90 days immediately preceding the flight, carried out either by day or by night at least three take-offs and three landings in the same class or, if a type rating is required, type or variant of aeroplane, and in the case of a helicopter three circuits including three take-offs and three landings in the same type of helicopter as that in which such flight is to be undertaken. The landings required by this sub-regulation may be completed in an FSTD approved for the purpose. In the case of a tail-wheel aeroplane, each landing shall be carried out to a full-stop.*

LANDING: Source: Kitplanes Pilot's Operating Handbook - Landing Procedure

The preferred landing for short field on the Safari is a 3-point landing.

- a. *FEET OFF THE BRAKES.*
- b. *Cross the threshold at low speed with the power off to avoid floating. KEEP IT STRAIGHT with rudder, the wings need not be level if there is a cross wind.*
- c. *Round out and hold off until remaining speed washes off and aircraft touches down.*
- d. *At touchdown, HOLD BACK STICK, flaps can be reduced to increase weight on the tail slightly if not 3 points. This will arrest any tendency to bounce. The more flaps used, the more the tendency to bounce but the slower the landing speed. Reducing the flap during the flare will result in very short landings. Practice this technique first on longer runways before attempting to land on short strips.*
- e. *Continue to FLY THE TAIL if wheeler landing is used. If it is windy bring the tail down sooner and hold the stick back. If it is calm continue to fly the tail but land it before full elevator authority loss.*
- f. *Generally, do not use the brakes while the tail is flying except in emergency. When braking on the landing roll move the toes onto the brake and start with GENTLE applications as the tail comes down. Counter any forward pitching with back stick.*
- g. *Remember to keep the stick fully back when the tail is on the ground.*

Findings

1. The pilot was initially issued a Private Pilot Licence (PPL) on 30 August 2016. The pilot completed her skills test and was re-issued a PPL on 20 October 2021 with an expiry date of 31 October 2022. The taildragger Bush Baby aircraft type was endorsed on her licence. The

pilot was issued a Class 2 medical certificate on 25 May 2022 with an expiry date of 30 June 2024 with no medical restrictions.

2. The last annual inspection carried out on the aircraft prior to the accident flight was conducted on 30 August 2022 and was certified at 615.8 airframe hours. The aircraft was flown a further 9.2 hours since the last annual inspection.
3. The aircraft was issued a Certificate of Release to Service (CRS) on 30 August 2022 at 615.8 airframe hours with an expiry date of 30 August 2023 or at 715.8 airframe hours, whichever occurs first unless the aircraft is involved in an accident or becomes unserviceable.
4. The aircraft was issued an Authority to Fly (ATF) on 21 October 2019 with an expiry date of 31 October 2022.
5. The pilot had not flown an aircraft in six (6) months, but she piloted an aircraft solo, which was in contravention of the Civil Aviation Regulations 2011 Part 91.
6. The aircraft was landed on all three landing gears with full flaps and at a speed of 55 knots, which was in accordance with the POH. However, the pilot lost control of the aircraft. The POH states that, *“At touchdown, HOLD BACK STICK, flaps can be reduced to increase weight on the tail slightly if not 3 points. This will arrest any tendency to bounce. The more flaps used, the more the tendency to bounce but the slower the landing speed.”* The pilot did not reduce the flaps when landing at a high speed and that caused the aircraft to bounce.
7. The pilot was rated on the Bush Baby taildragger aircraft model since 17 October 2018.
8. According to the pilot, the wind direction was variable with light speed. The temperature was 25 degrees Celsius and there were no clouds.

Probable Cause(s)

The aircraft landed hard and ground looped after touchdown; thereafter, the pilot lost directional control of the aircraft.

Contributing Factor(s)

The pilot was not current on the aircraft type as she had not flown a taildragger in six (6) months.

Safety Action(s)

None.

Safety Message and/or Safety Recommendation/s

None.

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 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**