

PRELIMINARY ACCIDENT REPORT

Accident and Incident Investigations Division

Accident
- Preliminary Report -
AIID Ref No: CA18/2/3/10454



Figure 1: The ZU-ITL aircraft after the accident. (Source: pilot)

Description:

On Friday afternoon, 10 May 2024, a pilot on-board a Savannah aircraft with registration ZU-ITL took off on a local flight from River North Airfield in the North West province with the intention to return to the same airfield. The flight was conducted under visual meteorological conditions (VMC) and under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended.

Whilst overhead a farm, the aircraft's engine ran rough, and the pilot elected to execute a forced landing. During the landing roll, the aircraft rolled over the water drainage and impacted a silage bag. The aircraft was substantially damaged; no person was injured.

Occurrence Details

Reference Number : CA18/2/3/10454
Occurrence Category : Category 2
Type of Operation : Private (Part 94)
Name of Operator : P L de Bruyn
Aircraft Registration : ZU-ITL
Aircraft Make and Model : Savannah S
Nationality : South African
Registration Marks : ZU-ITL
Place : River North Airfield
Date and Time : 10 May 2024 at 1200 Z
Injuries : None
Damage : Substantial

Purpose of the Investigation

In terms of Regulation 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.

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.

Investigation Process

The Accident and Incident Investigations Division (AIID) of the South African Civil Aviation Authority (SACAA) was notified of the occurrence involving a Savannah S which occurred in River North Airfield in the North West province on 10 May 2024 at 1200Z. The occurrence was classified as an accident according to the CAR 2011 Part 12 and the International Civil Aviation Organisation (ICAO) STD Annex 13 definitions.

The AIID has appointed an investigator-in-charge to commence with the full investigation. The IIC did not dispatch to the accident site. Notifications were sent to the State of Registry and Operator in accordance with the CAR 2011 Part 12 and the ICAO Annex 13 Chapter 4. The States did not appoint an accredited representative and/or advisor. The AIID will lead the investigation and issue the final report of this accident in accordance with the CAR 2011 Part 12 and the ICAO Annex 13.

The information contained in this preliminary report is derived from the information gathered during the on-going investigation into the occurrence. Later, an interim or final report may contain altered information in case new evidence is found during the on-going investigation that requires changes to the information depicted in this report.

The AIID reports are made available to the public at:

[Accidents and Incidents – SACAA](#)

Notes:

1. *Whenever the following words are mentioned in this report, they shall mean the following:*
Accident — this investigated accident
Aircraft — the Savannah S involved in this accident
Investigation — the investigation into the circumstances of this accident
Pilot — the pilot involved in this accident
Report — this accident report

- 2. Photos and figures used in this report were taken from various sources and may have been adjusted from the original for the sole purpose of improving clarity of the report. Modifications to images used in this report were limited to cropping, magnification, file compression; or enhancement of colour, brightness, contrast; or addition of text boxes, arrows, or lines.*

Disclaimer

This report is produced without prejudice to the rights of the SACAA, which are reserved.

Table of Contents

Occurrence Details	2
Investigation Process.....	2
Disclaimer	3
Table of Contents	4
Abbreviations	5
1. FACTUAL INFORMATION	6
1.1. History of Flight.....	6
1.2. Injuries to Persons	7
1.3. Damage to Aircraft.....	7
1.4. Other Damage	7
1.5. Personnel Information.....	8
1.6. Aircraft Information	8
1.7. Meteorological Information	10
1.8. Aids to Navigation	10
1.9. Communication.....	10
1.10. Aerodrome Information	10
1.11. Flight Recorders	10
1.12. Wreckage and Impact Information.....	10
1.13. Medical and Pathological Information.....	10
1.14. Fire.....	10
1.15. Survival Aspects	11
1.16. Tests and Research.....	11
1.17. Organisational and Management Information	11
1.18. Additional Information	11
1.19. Useful or Effective Investigation Techniques	11
2. FINDINGS	11
3. ON-GOING INVESTIGATION.....	12

Abbreviation	Description
°	Degrees
°C	Degrees Celsius
ACCID	Accident
AIID	Accident and Incident Investigations Division
AP	Approved Person
ATF	Authority to Fly
C of R	Certificate of Registration
CAR	Civil Aviation Regulations
CAVOK	Cloud and Visibility OK
CRS	Certificate of Release to Service
CVR	Cockpit Voice Recorder
FDR	Flight Data Recorder
ft	Feet
GPS	Global Positioning System
hPa	Hectopascal
kt	Knots
m	Metres
MHz	Megahertz
nm	Nautical Miles
PPL	Private Pilot Licence
QNH	Altitude Above Mean Sea Level
RWY	Runway
SACAA	South African Civil Aviation Authority
SAWS	South African Weather Service
VMC	Visual Meteorological Conditions
Z	Zulu (Term for Universal Co-ordinated Time - Zero Hours Greenwich)

1. FACTUAL INFORMATION

1.1. History of Flight

- 1.1.1. On Friday afternoon, 10 May 2024, a pilot on-board a Savannah S aircraft registered ZU-ITL took off from River North Airfield in the North West province with the intention to land back at the same airfield. Clear weather conditions prevailed at the time of the flight which was conducted under visual meteorological conditions (VMC) and under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended.
- 1.1.2. The pilot took off to a farm located 20 nautical miles (nm) north-west of Hartbeesfontein at 1130Z. Whilst overhead the farm, the aircraft's engine ran rough, and he elected to execute a forced landing on the farm. During the landing roll, the aircraft rolled over the water drainage line and impacted a silage bag (used to convert hay or corn into feed for livestock through fermentation); it came to a stop thereafter. (*Figure 3 shows the height of the silage bag compared to the height of the aircraft*). The aircraft sustained substantial damage to the propeller blades and the nose section. The pilot was not injured.
- 1.1.3. The accident occurred at Global Positioning System (GPS) co-ordinates determined to be 26°29'00" South 026°37' 00.22" East, at an elevation of 4 513 feet (ft).

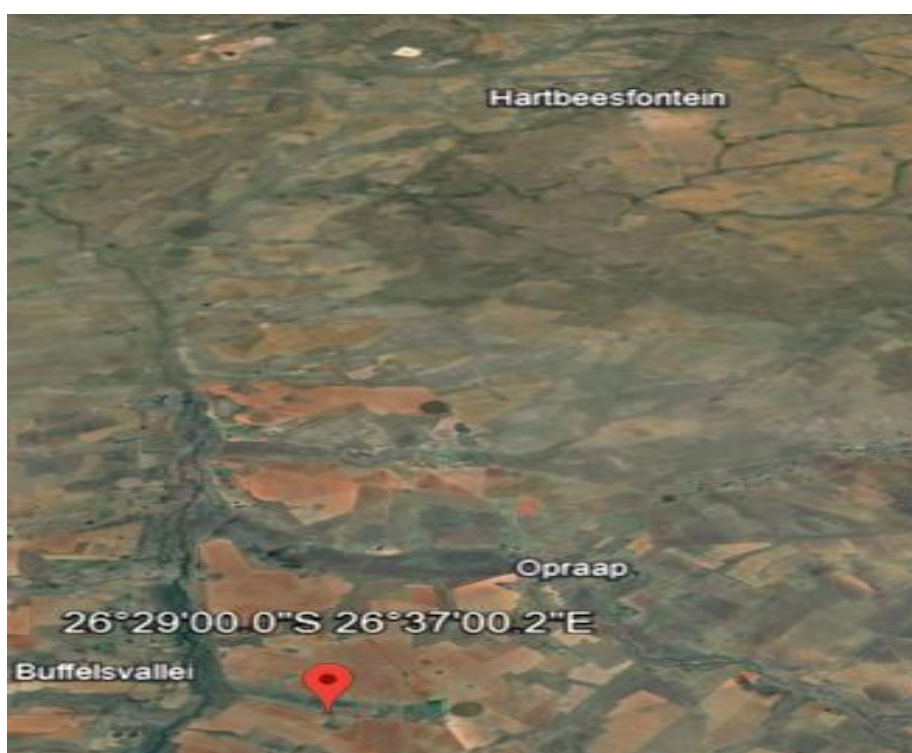


Figure 2: The red mark indicates the accident site. (Google Earth)

1.2. Injuries to Persons

Injuries	Pilot	Crew	Pass.	Total On-board	Other
Fatal	-	-	-	-	-
Serious	-	-	-	-	-
Minor	-	-	-	-	-
None	1	-	-	-	-
Total	1	-	-	-	-

Note: Other means people on the ground.

1.3. Damage to Aircraft

1.3.1. The propeller blades and the nose section were substantially damaged.



Figure 3: The aircraft post-accident with the damaged propeller blades and nose section. The silage bag is in the background.

1.4. Other Damage

1.4.1. None.

1.5. Personnel Information

Nationality	South African	Gender	Male	Age	46
Licence Type	Private Pilot Licence (PPL)				
Licence Valid	Yes	Type Endorsed	Yes		
Ratings	None				
Medical Expiry Date	31 March 2026				
Restrictions	None				
Previous Accidents	None				

Note: Previous accidents refer to past accidents the pilot was involved in, when relevant to this accident.

Flying Experience:

Total Hours	767.9
Total Past 24 Hours	0
Total Past 7 Days	0
Total Past 90 Days	11.7
Total on Type Past 90 Days	11.7
Total on Type	767.9

- 1.5.1. The pilot was initially issued a Private Pilot Licence (PPL) on 17 December 2013. The licence was renewed on 30 September 2023 with an expiry date of 30 September 2025.
- 1.5.2. The pilot was issued a Class 2 aviation medical certificate on 4 March 2024 with an expiry date of 31 March 2026 with no medical restrictions.

1.6. Aircraft Information

- 1.6.1. (Source: <https://www.manualslib.com/manual/3047585/lcp-Savannah-S.html>)

The aircraft is a monoplane type with two side-by-side seats, fitted with a high wing supported by struts. The wing presents a "high lift" NACA 650-18 modified airfoil with fixed slats along the full wingspan and Junkers type flaperon (aileron + flap). The airframe structure is a full-metal with load-resisting panels. The horizontal tailplane features a symmetric bi-convex airfoil. The rudder is attached to the fixed vertical fin. The dorsal fin is fitted to improve the directional stability.

The engine installed onboard the aircraft is the ROTAX 912 ULS or ROTAX 912 UL. WARNING: the installed engine, by its design is subject to sudden stoppage. Engine stoppage can result in crash landings, forced landings or no power landings. Such crash landings can lead to serious bodily injury or death. Never fly the aircraft equipped with the engine at locations, airspeeds, altitudes, or other circumstances from which a successful no power landing cannot be made, after sudden engine stoppage. Aircraft

equipped with this engine must only fly in DAYLIGHT VFR conditions. The installed engine is not a certificated aircraft engine. It has not received any safety or durability testing and conforms to no aircraft standards. This is for use in experimental, uncertificated aircraft and vehicles only in which an engine failure will not compromise safety. User assumes all risk of use and acknowledges by his use that he knows this engine is subject to sudden stoppage.

Airframe:

Manufacturer/Model	Savannah Aircraft Africa	
Serial Number	19-10-54-0698	
Year of Manufacturer	2020	
Total Airframe Hours (At Time of Accident)	95.8	
Last Inspection (Date & Hours)	28 March 2024	95.4
Hours Since Last Inspection	0.4	
CRS Issue Date	28 March 2024	
Authority to Fly (Issue Date & Expiry Date)	22 April 2024	6 April 2025
C of R (Issue Date) (Present Owner)	28 March 2024	
Type of Fuel Used	Avgas 100LL	
Operating Category	Private Part 94	
Previous Accidents	None	

Note: Previous accidents refer to past accidents the aircraft was involved in, when relevant to this accident.

Engine:

Manufacturer/Model	Rotax 912ULS
Serial Number	9574244
Part Number	N/A
Hours Since New	95.4
Hours Since Overhaul	TBO not yet reached

Propeller:

Manufacturer/Model	E-Prop Durandal V-20
Serial Number	90375
Part Number	N/A
Hours Since New	95.4
Hours Since Overhaul	TBO not yet reached

1.6.2. The aircraft's Certificate of Release to Service (CRS) was issued on 28 March 2024 at 95.4 hours with an expiry date of 31 March 2025 or at 192.4 hours, whichever comes first.

1.7. **Meteorological Information**

1.7.1. To be included in the final report.

1.8. **Aids to Navigation**

1.8.1. The aircraft was equipped with standard navigational equipment as approved by the Regulator (SACAA). There were no records indicating that the navigational equipment was unserviceable prior to the flight.

1.9. **Communication**

1.9.1. The aircraft was equipped with a standard communication system as approved by the Regulator. There were no recorded defects with the communication system prior to the flight.

1.10. **Aerodrome Information**

1.10.1. The accident occurred at a private farm.

1.11. **Flight Recorders**

1.11.1. The aircraft was neither equipped with a flight data recorder (FDR) or a cockpit voice recorder (CVR), nor was it required by regulation to be fitted to the aircraft type.

1.12. **Wreckage and Impact Information**

1.12.1. The aircraft's engine ran rough, and the pilot elected to execute a precautionary landing. During the landing roll, the aircraft rolled over a water drainage and impacted a silage bag before it stopped. The propeller blades broke off and the nose section was damaged. The middle part of the nose section was also deformed.

1.13. **Medical and Pathological Information**

1.13.1. None.

1.14. **Fire**

1.14.1. There was no pre- or post-impact fire.

1.15. **Survival Aspects**

1.15.1. The accident was survivable as the cabin structure was not damaged.

1.16. **Tests and Research**

1.16.1. To be discussed in the final report.

1.17. **Organisational and Management Information**

1.17.1. This was a private flight conducted under the provisions of Part 94 of the CAR 2011 as amended.

1.17.2. The aircraft was registered to the present owner on 5 February 2021.

1.17.3. The aircraft had a valid Authority to Fly (ATF) which was initially issued on 7 April 2021. The ATF was renewed on 22 April 2024 with an expiry date of 6 April 2025.

1.18. **Additional Information**

1.18.1. To be discussed in the final report.

1.19. **Useful or Effective Investigation Techniques**

1.19.1. None.

2. **FINDINGS**

2.1. **General**

From the available evidence, the following preliminary findings were made with respect to this accident. These shall not be read as apportioning blame or liability to any organisation or individual.

To serve the objective of this investigation, the following sections are included in the conclusions heading:

- **Findings** — are statements of all significant conditions, events, or circumstances in this accident. The findings are significant steps in this accident sequence, but they are not always causal or indicate deficiencies.

2.2. Findings

- 2.2.1. The pilot was initially issued a Private Pilot Licence (PPL) on 17 December 2013. The licence was reissued on 30 September 2023 with an expiry date of 30 September 2025. The aircraft type was endorsed on his licence and logbook.
- 2.2.2. The pilot was issued a Class 2 aviation medical certificate on 4 March 2024 with an expiry date of 31 March 2026 with no medical restrictions.
- 2.2.3. The aircraft had a valid Authority to Fly (ATF) which was initially issued on 7 April 2021. The ATF was renewed on 22 April 2024 with an expiry date of 6 April 2025.
- 2.2.4. The aircraft was issued a Certificate of Release to Service on 28 March 2024 at 95.4 hours with an expiry date of 31 March 2025 or at 192.4 hours, whichever comes first.
- 2.2.5. The engine was recovered to the approved person (AP) for further analysis after the accident.

3. ON-GOING INVESTIGATION

- 3.1. The AIID investigation is on-going, and the investigator will investigate other aspects of this occurrence which may or may not have safety implications.

4. SAFETY RECOMMENDATIONS

4.1. General

The safety recommendations listed in this report are proposed according to paragraph 6.8 of Annex 13 to the Convention on International Civil Aviation and are based on the conclusions listed in heading 3 of this report. The AIID expects that all safety issues identified by the investigation are addressed by the receiving States and organisations.

4.2. Safety Recommendation/s

- 4.2.1. None.

5. APPENDICES

- 5.1. None

This report is issued by:

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