



REPUBLIC OF NAMIBIA

MINISTRY OF WORKS AND TRANSPORT

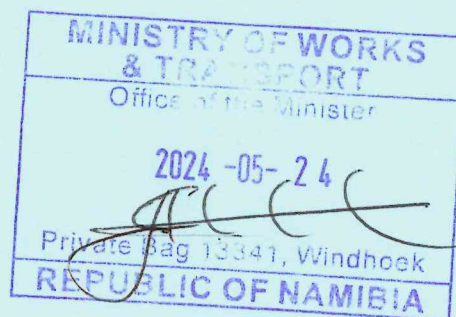
## Directorate of Aircraft Accident and Incident Investigations

Accident Reference: ACCID/06292023/01-05/

### Aircraft Accident Investigation Final Report

SAVANNAH MXP-70 V5-UZA

RELEASE DATE: 24/5/2024



# Aircraft Accident Report

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**DESCRIPTION OF OCCURRENCE:** (LOC-G) Loss of control on ground.

**TYPE OF OPERATION:** Private.

**AIRCRAFT TYPE:** Savannah MXP-740 (V5-UZA)

**LOCATION:** GPS: Farm Blumfelde. Aminuis Namibia

**DATE AND TIME:** 29<sup>th</sup> June, 2023 (11:50 UTC).

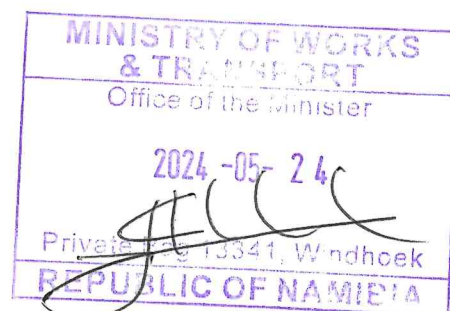


## Foreword

This report presents the information, data analysis, conclusions, and safety recommendations reached during the investigation. The purpose of the investigation was to establish the circumstances surrounding this occurrence.

In accordance with the provisions of Annex 13 to the Convention on International Civil Aviation Organization, the accident's analysis, conclusions, and safety recommendations contained therein are intended neither to apportion blame nor to single out any individual or group of individuals. The main objective was to identify the systematic deficiencies and draw lessons, from the occurrence, which might help to prevent accidents and incidents in the future. To this end, many a time, the reader may be interested in whether or not an issue was a direct cause of the accident (that has already taken place), whereas the investigator is mainly concerned with the prevention of future accidents/incidents.

As a result, the usage of this report for any purpose other than (the letter and spirit of Annex 13 and other relevant statutes) prevention of similar occurrences in the future might lead to erroneous interpretations and applications.



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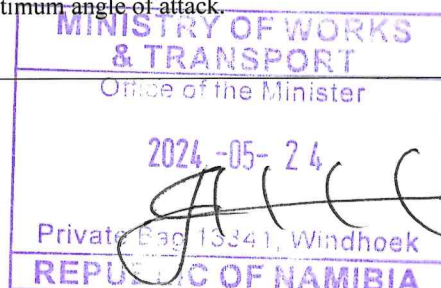
## ABBREVIATION

AD	-	Airworthiness Directives
AMO	-	Aircraft Maintenance Organization
AME	-	Aircraft Maintenance Engineer
DAAII	-	Directorate of Aircraft Accident and Incident Investigation
ELT	-	Emergency Locator Transmitter
ICAO	-	International Civil Aviation Organization
LOC-G	-	Loss of Control on Ground
NCAA	-	Namibia Civil Aviation Authority
NAMCARs	-	Namibian Civil Aviation Regulations
PPL	-	Private Pilot License
MPI	-	Mandatory Periodic Inspection
SB	-	Service Bulletins
UTC	-	Universal Time Co-ordinated





	Ministry of Works and Transport		ACCID/062923/01-05		
	<b>DIRECTORATE OF AIRCRAFT ACCIDENT INVESTIGATION</b> <b>ACCIDENT REPORT – EXECUTIVE SUMMARY</b>				
<b>Aircraft Registration</b>	V5-UZA	<b>Date of Accident</b>	29 <sup>th</sup> June , 2023	<b>Time of Accident</b>	11:50UTC
<b>Type of Aircraft</b>	SAVANNA MPX-740		<b>Type of Operation</b>	Private	
<b>Pilot- In - command License Type</b>	PA 73473	<b>Age</b>	32	<b>License Valid</b>	VALID
<b>Pilot-In-command Flying Experience</b>	Total Flying Hours	144	<b>Hours on Type</b>	101	
<b>Last point of departure</b>	Farm Blumfelde				
<b>Next point of intended landing</b>	Farm Progress				
<b>Location of the accident site with reference to easily defined geographical points (GPS readings if possible)</b>					
GPS: Farm Blumfelde (Aminuis)					
<b>Meteorological Information</b>	Wind speed: <4knt, Temperature: 20 ° C Visibility: clear,				
<b>Number of people on board</b>	1	<b>No. of people injured</b>	0	<b>No. of people killed</b>	0
<b>Synopsis</b>					
<p>On the 29<sup>th</sup> June 2023, a privately owned, Namibian registered experimental aircraft got airborne at Farm Blumfelde (Aminuis) for to Farm Progress. On Board were the pilot.</p> <p>The pilot, flying solo in the aircraft, reported that during take-off at full throttle, he initiated an early rotation at 30 mph, experiencing a lack of lift with the nose wheel still in contact with the ground. The pilot maintained back pressure for an extended duration, intending to sustain pressure on the yoke due to the rough runway conditions.</p> <p>As a result, the left wing dipped, leading to the aircraft veering off to the left of the runway. Subsequently, the wingtip collided with bushes, resulting in the aircraft catapulting and flipping over.</p> <p>The pilot was not injured however; the aircraft was declared a write-off.</p> <p>The Directorate of Aircraft Accident and Incident Investigation (DAAII) was informed telephonically by the owner. The Minister of Works and Transport Ministry was responsible for the release of the official final accident report.</p> <p>The weather was fine with good visibility.</p> <p>The pilot was a 32-year-old Namibian citizen who was a holder of a valid Private Pilot License. He had 104 hours on type and had flown 5 hours on the last 90 days.</p> <p>The last mandatory Annual Inspection was carried out on the 08 March 2023, certified on 08 March 2023 by a local microlight organization No. AI04 at 953.34 hours and had 29<sup>th</sup> may 2024.</p>					
<b>Cause:</b> Aerodynamic stall					
<b>Contributing factor (s):</b>					
Ineffective management of back pressure on the yoke to ensure optimum angle of attack.					





## AIRCRAFT ACCIDENT REPORT

Name of Owner/Operator : Laubscher Theuns  
Manufacture : Savannah  
Model : MXP-740  
Nationality : Namibian  
Registration : V5 - UZA  
Location : Farm Blumfelde GPS: 22°38'26.8"S 14°40'06.8"E  
Date : 29th June, 2023 Time: 11:50 UTC

*All times given in this report are in Co-ordinated Universal Time (UTC).*

### Disclaimer:

The report is given without prejudice to the rights of the Directorate of Aircraft Accident and Incidents Investigations, which are reserved.

### Purpose of the Investigations:

In terms of the Namibia Civil Aviation Act (Act No. 6 of 2016) and ICAO Annex 13, this report was compiled in the interest of the promotion of aviation safety and the reduction of risk of aviation accidents or incidents and **not to establish blame or legal liability.**

This report contains facts relating to aircraft accidents or incidents that have been determined at the time of issue. The report may therefore be revised should new and substantive facts are made available to the investigator (s).

### 1. FACTUAL INFORMATION

#### 1.1 History of Flight

- 1.1.1 On the 29<sup>th</sup> of June 2023 a Namibian registered Savannah MPX-740 aircraft was preparing for take-off at farm Blumfelde in the Aminuis area, at around 11:50 UTC on a private flight to farm Progress. On board was the pilot as the sole occupant.
- 1.1.2 The pilot reported that during take-off at full throttle, he initiated an early rotation at 30 mph, to lift the nose wheel from the ground due to the rough surface. The pilot maintained back pressure on the yoke for an extended duration, however he didn't release the back pressure in time
- 1.1.3 The pilot explained that, due to the rough conditions on the runway, he opted to initiate the rotation early, a practice he had employed on multiple previous occasions.
- 1.1.4 Consequently, the left wing stalled causing it to dip causing the aircraft to veer off to the left of the runway, the wingtip then hit the bushes causing the aircraft to catapult and flip over.
- 1.1.5 The pilot was not injured however; the aircraft was declared a write-off.

#### 1.2 Injuries to Persons

Injuries	Pilot	Crew	Pass.	Other
Fatal	-	-	-	-
Serious	-	-	-	-





Minor	-	-	-	-

### 1.3 Damage to Aircraft

1.3.1 The aircraft was destroyed.



Figure 1: Aircraft at the accident site.



Figure 2: Photo depicting the aircraft's nose wheel strut collapsed...





Figure 3: Photo depicting structural damage

#### 1.4 Other Damage

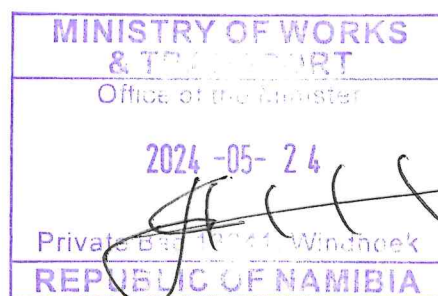
1.4.1 There was no other damage

#### 1.5 Personnel Information

1.5.1 Pilot-in- command

Nationality		Namibian			
Licence No	PA73473	Gender	Male	Age	32
Licence valid		Valid	Type Endorsed	n/a	
Type Ratings		None			
Medical Expiry Date		31/01/2028			
Restrictions		None			
Previous Accidents		unknown			

Total Hours	144
Total Past 90 Days	5
Total on Type Past 90 Days	5
Total on Type (PIC)	101



## 1.6 Aircraft Information



**Figure 3:** Savannah MXP-740 V5-UZA (file photo -www.avcom.co.za)

The Savannah MXP-740, is a high wing, single engine, ultralight with side-by-side seating for two produced in Italy. The Savannah is in production sold in both kit and ready to fly form. Structurally, the Savannah is a metal semi-monocoque with a constant chord wing, the flaps and ailerons are combined into junkers-style flaperons.

### Airframe:

Type	Savannah MXP-740	
Serial No.	01-12-51-123	
Manufacture	Savannah	
Total Airframe Hours (At time of Accident)	960	
Last MPI (Date & Hours)	08/03/2023 at 953.34 airframe hours	
Hours since Last MPI	6.66 hours	
C of safety for flight	30/05/2023 valid till 29/05/2024	
Operating Categories	Standard	

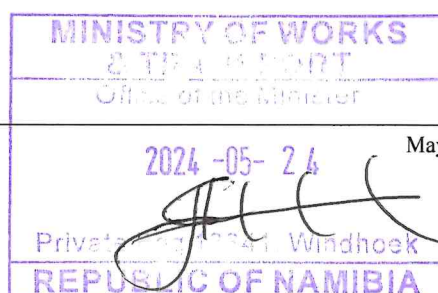
### Engine:

Type	Rotax 914	
Serial No.	S/N 4427877	
Hours since New	960	

## 1.7 Meteorological Information

Wind direction	variable °	Wind speed	<4 kts	Visibility	Cavok
Temperature	20° C	Cloud cover	clear	Cloud base	Cavok
QNH	-				

## 1.8 Aids to Navigation





- 1.8.1 The aircraft was equipped with standard navigation equipment as approved by the Regulator.  
There was no ground based navigation and landing aids available,

## 1.9 Communications.

- 1.9.1 The aircraft was equipped with standard communication equipment as approved by the Regulator for the type.  
There were no reported communication difficulties.

## 1.10 Aerodrome Information

- 1.11 The accident occurred during daylight at Farm Blumfelde which is situated in the Aminuis area.

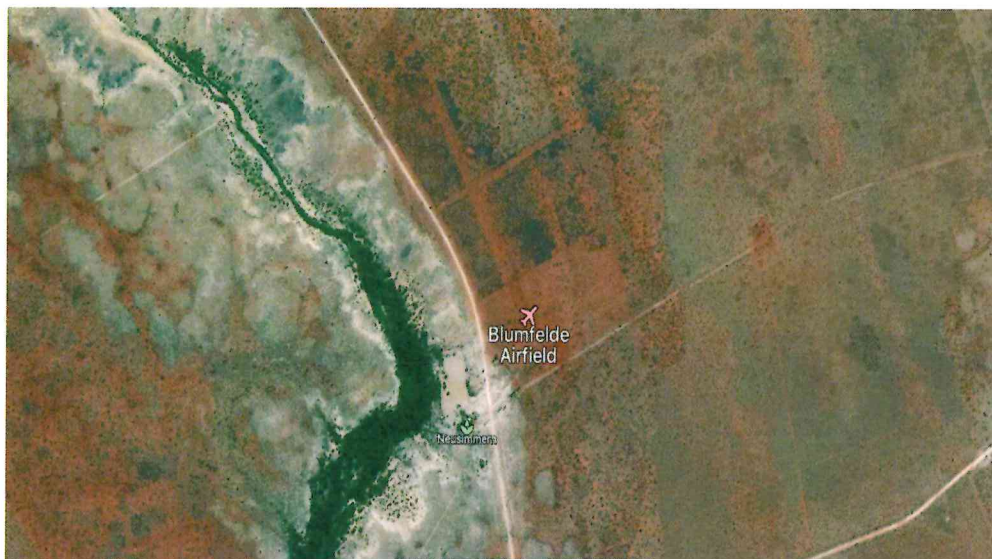


Figure 4: Farm Blumfelde (google earth)

## 1.11 Flight Recorders

- 1.11.1 The Aircraft was not equipped with a flight data recorder (FDR) or a cockpit voice recorder (CVR) nor was it required by the relevant aviation regulations.

## 1.12 Wreckage distribution and Impact Information

- 1.12. The aircraft was still intact after the accident at Farm Blumfelde GPS: 22°38'26.8"S 14°40'06.8"E

## 1.13 Medical and Pathological Information

- 1.13.1. The pilot medical certificate was valid.

## 1.14 Fire

- 1.14.1. There was no evidence of fire inflight or after the impact.

## 1.15 Survival Aspects.

- 1.15.1 This was a survivable accident as the impact forces were minimal.

## 1.16 Tests and Research.

- 1.16.1. In normal flight operations, including takeoff, pilots often need to manage the pressure on the yoke or control column to achieve and control the desired amount of lift. During takeoff, for example, as the aircraft accelerates down the runway, the pilot gradually applies back pressure on the yoke to rotate the nose upward and initiate the climb.



However, maintaining constant or excessive back pressure without adjusting it as the aircraft gains altitude can lead to various issues. If a pilot doesn't ease the back pressure appropriately, it may result in the following scenarios:

1. **Aerodynamic Stall:** Excessive back pressure can lead to a high angle of attack, potentially causing the aircraft to stall. A stall occurs when the angle of attack becomes too high, and the airflow over the wings separates, leading to a loss of lift.
2. **Difficulty Climbing:** Holding too much back pressure may impede the aircraft's ability to climb efficiently. Adjustments to the control inputs are necessary to allow the aircraft to smoothly transition from takeoff to climb.
3. **Controlled Flight into Terrain (CFIT):** In some cases, failure to ease back pressure could contribute to a CFIT accident, where the aircraft unintentionally descends into terrain due to insufficient climb performance.

Therefore, it is crucial for pilots to be aware of the aircraft's attitude, airspeed, and climb performance during takeoff. They should modulate the back pressure on the yoke to achieve a proper climb attitude without compromising safety.

#### 1.17 Organizational and Management Information.

1.17.1. The aircraft was flown for private use.

#### 1.18 Additional Information

1.18.1 None

#### 1.19 Useful or Effective Investigation Techniques.

1.19.1 Not applicable.

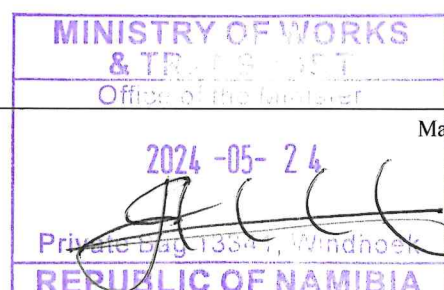
## 2. ANALYSIS

- 2.1. The maintenance records indicated that the aircraft was certified, equipped and maintained in accordance with existing regulations and approved procedures.
- 2.2 The aircraft's experimental certificate was valid at the time of accident. It was issued on the 30th May 2023 and valid till 29th May 2024.
- 2.3 The pilot's private pilot license, medical certificate and radiotelephony license were valid at the time of the accident.
- 2.4 The weather was fine and did not contribute to this accident.
- 2.5 There was no evidence of any defect or malfunction in the aircraft that could have contributed to the accident.

#### Operations

- 2.6 The pilot applied back pressure on the yoke, intending to raise the elevator control surface and, consequently, pitch the aircraft up. This was done to keep the aircraft's nose up due to the challenging and rough runway conditions. However, the prolonged application of back pressure resulted in an **aerodynamic stall**.<sup>1</sup>

<sup>1</sup> An **aerodynamic stall** refers to a condition in which an aircraft's wing or wings temporarily lose their lift-producing capability due to an excessive angle of attack. The angle of attack is the angle between the chord line (an imaginary line between the leading and trailing edges of the wing) and the oncoming air. When the angle of attack becomes too steep, the smooth airflow over the wing is disrupted, leading to a stall.





2.7 The aerodynamic stall was a contributing factor to the left wing of the aircraft dipping, resulting in the aircraft veering off to the left of the runway. This initiated a catapulting motion, ultimately leading to the aircraft flipping.

### 3. CONCLUSION

#### 3.1 Findings

- 3.1.1 The aircraft was certified, equipped and maintained in accordance with existing regulations and approved procedures.
- 3.1.2 The aircraft's experimental certificate was valid at the time of accident.
- 3.1.3 The pilot's private pilot license, medical certificate and radiotelephony license were valid.

#### 3.2. Cause/s

- 3.2.1. Aerodynamic stall

#### 3.3 Contributing factor

- 3.3.1 Ineffective management of back pressure on the yoke to ensure optimum angle of attack.

### 4.0 Safety Recommendations

#### 4.1 None

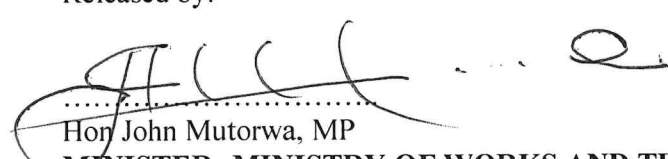
Compiled by

  
Hafeni Mweshixwa

**Investigator-in-Charge**

Date: 23/5/2024

Released by:

  
Hon John Mutorwa, MP

**MINISTER: MINISTRY OF WORKS AND TRANSPORT**

Date: 24/5/2024

