

**PRELIMINARY ACCIDENT REPORT**

**Accident and Incident Investigations Division**

Accident  
- Preliminary Report -  
AIID Ref No: CA18/2/3/10381



**Figure 1:** File picture of the ZU-MWG. (Source: Family)

**Description:**

On Thursday, 26 October 2023, a SC01 B-160 aircraft with registration ZU-MWG was involved in an accident at Zandspruit Aero Estate private airstrip in Hoedspruit, Limpopo province. Visual meteorological conditions (VMC) by day prevailed at the time of the flight.

The aircraft took off from Rand Airport (FAGM) in Gauteng province with the intention to land at Zandspruit Aero Estate private airstrip. It was reported that the pilot approached the private airstrip and conducted a low fly-by to inspect the runway and, thereafter, orientated the aircraft to land on Runway 35. The aircraft seemed to have landed deep, and the pilot did not slow down the aircraft. The aircraft floated and drifted towards the left as it approached the end of the runway. Moments later, it impacted a tree and burst into flames.

The pilot was fatally injured. The aircraft was destroyed by impact forces and the post-impact fire.

## Occurrence Details

**Reference Number** :CA18/2/3/10381  
**Name of Owner** : Gideon Johannes van der Ploeg  
**Name of Operator** : Marcel Theodor Anthonius Johannes Nijdam  
**Type of Operation** : Private (Part 94)  
**Manufacturer** : Flugplatz (Gyroflug MBH)  
**Model** : SC01 B-160 (Veteran)  
**Nationality** : Dutch  
**Registration Marking** : ZU-MWG  
**Place** : Zandspruit Aero Estate, Limpopo Province  
**Date** : 26 October 2023  
**Time** : 1517Z  
**Injuries** : One fatal  
**Damage** : Destroyed

### Purpose of the Investigation:

*In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011, 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) was notified of the occurrence involving a Flugplatz (Gyroflug MBH) SC01 B-160 (Veteran) aircraft which occurred at Zandspruit Aero Estate in Limpopo province on 26 October 2023 at 1517Z. The occurrence was classified as an accident according to the CAR 2011 Part 12 and the International Civil Aviation Organisation (ICAO) Standards (STD) Annex 13 definitions.

The AIID has appointed an investigator-in-charge and a second in-charge investigator who dispatched to the accident site to conduct the full investigation. Notifications were sent to the State of Registry, Operator, Design and Manufacturer in accordance with the CAR 2011 Part 12 and ICAO Annex 13 Chapter 4. The states did not appoint an accredited representative and advisor. The AIID will lead the investigation and issue the final report of this accident in accordance with the CAR 2011 Part 12 and ICAO Annex 13.

The information contained in this preliminary report is derived from the information gathered during the on-going investigation into the occurrence.

*The AIID reports are made available to the public at:*

<http://www.caa.co.za/Pages/Accidents%20and%20Incidents/Aircraft-accident-reports.aspx>

*Notes:*

*1. Whenever the following words are mentioned in this report, they shall mean the following:*

*Accident — this investigated accident*

*Aircraft — the SC01 B-160 (Veteran) involved in this accident*

*Investigation — the investigation into the circumstances of this accident*

*Pilots — the pilots involved in this accident*

*Report — this accident report*

2. Photos and figures used in this report were taken from different 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.*

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<b>Abbreviation</b>	<b>Description</b>
AIID	Accident and Incident Investigations Division
AMO	Aircraft Maintenance Organisation
AP	Approved Person
ATF	Authority to Fly
C of R	Certificate of Registration
CAR	Civil Aviation Regulations
CRS	Certificate of Release to Service
CVR	Cockpit Voice Recorder
FAGM	Rand Airport
FDR	Flight Data Recorder
ft	feet
GPS	Global Positioning System
Kt	Knots
M	metres
METAR	Meteorological Aerodrome Report
MHz	Megahertz
PIC	Pilot-in-command
QNH	Barometric pressure adjusted to sea level
SACAR	South African Civil Aviation Regulation
SAWS	South African Weather Service
UTC	Co-ordinated Universal Time
VMC	Visual Meteorological Conditions
Z	Zulu (Term for Universal Coordinated Time – Zero Hours Greenwich)

## 1. FACTUAL INFORMATION

### 1.1. History of Flight

1.1.1 On Thursday, 26 October 2023, a SC01 B-160 aircraft with registration ZU-MWG took off from Rand Airport (FAGM) in Gauteng province with the intention to land at Zandspruit Aero Estate private airstrip in Hoedspruit, Limpopo province, where it was involved in an accident after landing. 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.

1.1.2 On the day of the accident, the aircraft was at an aircraft maintenance organisation (AMO) facility in Rand Airport for repairs as grease was leaking on the propeller for some time. After the maintenance of the propeller, the ground run was conducted and the propeller was balanced and found to be serviceable. The pilot then took off on the aircraft and routed to Zandspruit private airstrip. Upon arrival at Zandspruit private airstrip, the pilot was observed conducting a low-level inspection overhead the runway which was orientated 17/35. The aircraft was then observed making a turn to commence with the landing phase on Runway 35 (RWY 35). One of the eyewitnesses stated that the aircraft landed 250 metres (m) from the threshold of RWY 35, but it did not slow down. The aircraft got airborne again and floated just above the runway whilst maintaining centreline, after which it started drifting to the left of the runway; it touched down again on the grass alongside the runway, about 5.8m from the threshold. The aircraft then impacted a tree and the post-impact fire ensued which consumed the aircraft. The pilot was fatally injured.

1.1.3 Another eyewitness stated that when she heard the aircraft fly past, she hurried outside to look as she would usually do. She stated that she observed the pilot approach and land, and as the aircraft flew beyond her line of sight, she noticed that the pilot's posture was hunched (his shoulders rounded); he was not sitting upright as expected during this phase of the flight. Moreover, she noticed that the pilot did not acknowledge her by means of a hand gesture (with his left hand); the pilot seemed to be fixated on a point ahead of him. She then observed the aircraft getting airborne, it then floated over the runway whilst maintaining centreline before it drifted to the left without seeing any control surfaces move as it disappeared from her line of vision. After the aircraft burst into flames, the eyewitness and the pilot's spouse made their way to the burning aircraft.

1.1.4 The accident occurred during daylight on Zandspruit Estate private airstrip in Hoedspruit at Global Positioning System (GPS) co-ordinates determined to be 24°22'22.2" South 030°55'55.5" East, at an elevation of 1700ft.



Figure 2: Aerial view of the runway and elevation profile.

## 1.2. Injuries to Persons

Injuries	Pilot	Crew	Pass.	Total On-board	Other
Fatal	1	-	-	1	-
Serious	-	-	-	-	-
Minor	-	-	-	-	-
None	-	-	-	-	-
<b>Total</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>

## 1.3. Damage to Aircraft

1.3.1 The aircraft was destroyed by impact forces and post-impact fire.





**Figure 3:** The wreckage post-accident.

#### 1.4. Other Damage

1.4.1 None.

#### 1.5. Personnel Information:

Pilot-in-command (PIC)

Nationality	Dutch (NL)	Gender	Male	Age	76
Licence Type	Private Pilot Licence (PPL)				
Licence Valid	Yes	Type Endorsed	Yes		
Ratings	None				
Medical Expiry Date	TBA				
Restrictions	Corrective Lense				
Previous Accidents	None				

#### Flying Experience:

Total Hours	TBA
Total Past 24 Hours	TBA
Total Past 7 Days	TBA
Total Past 90 Days	TBA
Total on Type Past 90 Days	TBA
Total on Type	TBA

1.5.1 The pilot was initially issued a Private Pilot Licence (PPL) on 14 January 2013 under Part 61 of the South African Civil Aviation Regulations (CAR). The latest licence renewal had an expiry date of 28 April 2026.



- 1.5.2 The pilot was issued a Class 2 medical certificate on 18 July 2023. The expiry date could not be determined because there are no copies available for verification.

Approved Person (AP)

Nationality	South African	Gender	Male	Age	36
Licence Type	Approved Person (AP)				
Licence Valid	Yes	Type Endorsed	Yes		
Ratings	Airplanes of Composite Construction and all metal MTOW<5700kg				
Restrictions	None				
Previous Accidents	None				

- 1.5.3 The approved person (AP) who conducted the last annual inspection on the aircraft prior to the accident flight had an Approved Person certificate. The AP was issued the AP certificate on 28 September 2022 with an expiry date of 27 September 2024. According to the reviewed records, the aircraft type was endorsed on his certificate, and he was rated on the accident aircraft type.

**1.6. Aircraft Information**

- 1.6.1 Flugplatz (Gyroflug MBH) SC01 B-160 (Veteran)

(Source: [https://en.wikipedia.org/wiki/Gyroflug\\_Speed\\_Canard](https://en.wikipedia.org/wiki/Gyroflug_Speed_Canard) )

*The Gyroflug SC 01 Speed Canard is an unconventional sports plane produced in Germany in the 1980s and 1990s. Inspired by the Rutan VariEze, the Speed Canard is an all-new design created without input from Rutan. Like the VariEze, the Speed Canard is a canard-configured mid-wing monoplane with wing tip fins that incorporate rudders.*

*The two-seat tandem cockpit and canopy design were derived from the Grob Twin Astir sailplane, and the nosewheel of the tricycle undercarriage is retractable. Construction throughout is of composite materials, and when the design attained German certification in 1983, it became the first composite canard design to achieve certification anywhere in the world. An interesting feature of the control system is that the twin rudders operate independently, allowing both rudders to be deflected outwards simultaneously, cancelling each other's yaw, but acting as airbrakes.*

**Airframe:**

Manufacturer/Model	Flugplatz (Gyroflug MBH) SC01 B-160 (Veteran)	
Serial Number	S40	
Year of Manufacturer	1990	
Total Airframe Hours (At Time of Accident)	TBA	
Last maintenance carried out (Hours & Date)	1764.34	12 October 2023

Hours Since Last inspection	TBA
Authority to fly (Issue Date)	3 August 2022
Authority to fly (Expiry Date)	31 October 2023
C of R (Issue Date) (Present Owner)	21 July 2021
Type of Fuel Used in the Aircraft	Avgas LL100
Operating Categories	Private (Part 94)
Previous Accidents	None

1.6.2 According to available information, the aircraft was first registered to the present owner on 21 July 2021.

1.6.3 The annual inspection was conducted on 12 October 2023 at 1764.34 airframe hours. The aircraft was issued a Certificate of Release to Service (CRS) on 12 October 2023 with an expiry date of 12 October 2024 or at 1864.34 hours, whichever occurs first.

1.6.4 On 19 October 2023, the AMO started maintenance repair of the propeller in which a seal change was required. Visual inspections were conducted; also, the ball bearings, separators, hub inserts and the seals were changed during the repair of the propeller. The propeller was statically balanced on 24 October 2023, and dynamically balanced on 26 October 2023. The propeller was found serviceable for the flight.

#### Engine:

Manufacturer/Model	Lycoming 0-320-D1A
Serial Number	L-14362-39A
Hours Since New	1764.34 at inspection
Hours Since Overhaul	TBO not reached

#### Propeller:

Manufacturer/Model	MTV-6-C
Serial Number	080807
Hours Since New	1764.34 at inspection
Hours Since Overhaul	TBO not reached

### 1.7. Meteorological Information

1.7.1 The weather information entered in the table below was obtained from the South African Weather Service (SAWS) report that was issued for Airforce Base Hoedspruit (FAHS) in Limpopo province on 26 October 2023 at 1517Z. FAHS is located 13.47km east of the accident site.

Wind Direction	070°	Wind Speed	5 knots	Visibility	9999
Temperature	30°C	Cloud Cover	CAVOK	Cloud Base	CAVOK
Dew Point	16°C	QNH	1016 hPa		

## 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 recorded defects with the navigational equipment prior to the flight.

## 1.9. Communication

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

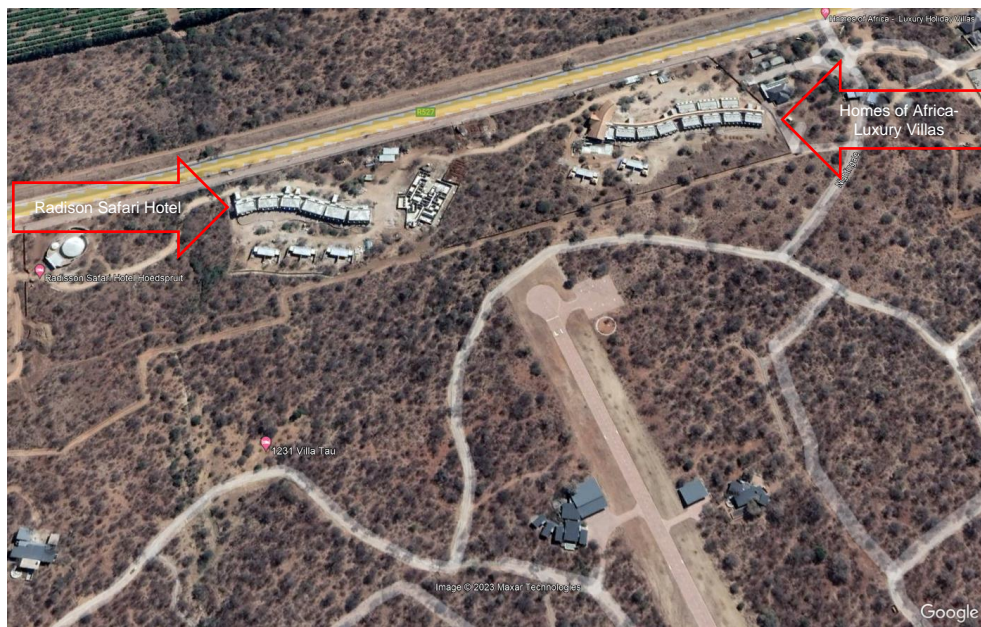
## 1.10. Aerodrome Information

1.10.1 Zandspruit Aero Estate private airstrip is an unmanned, unlicensed airstrip with a single runway oriented 17/35.

Aerodrome Location	Hoedspruit, Limpopo Province
Aerodrome Status	Unlicensed
Aerodrome Co-ordinates	24°22'22.2" S 030°55'55.5" E
Aerodrome Altitude	1700ft
Runway Headings	17/35
Runway Dimensions	1 000m X 10 m
Runway Used	N/A
Runway Surface	Paved
Approach Facilities	None
Radio Frequency	125.2 MHz



**Figure 4:** Zandspruit Aero Estate private airstrip.



**Figure 5:** Threshold of Runway 17 and the nearby hotel and luxury villas.

### **1.11. Flight Recorders**

1.11.1 The aircraft was neither fitted with a flight data recorder (FDR) and cockpit voice recorder (CVR), nor was it required by regulation.

### **1.12. Wreckage and Impact Information**

1.12.1 The aircraft touched down approximately 250m from the threshold of RWY 35 before it got airborne more than halfway through the runway and floated just above the runway whilst maintaining centreline, after which it started drifting to the left of the



runway. It touched down again on the grass alongside the runaway about 5.8m from the threshold of RWY 17 and impacted small trees which were ranging in height between 1m and 1.77m with its left wing. The aircraft continued on this path and eventually impacted larger trees with its right wing as well as ruptured its right fuel tank; the fuel started the fire which consumed the aircraft. The flight folio and other aircraft documents that are kept in the aircraft were destroyed in the fire.

1.12.2 The nose wheel was found extended and did not collapse, the nose gear mechanism was intact, with only damage caused by the fire. The control surface cables were intact and only snapped due to intense heat. The right wing burnt only at the root; the tips did not burn. The engine and the three propeller blades were burnt (the propellers were found in the position they were in when the engine stopped). The cockpit area was also burnt.



**Figure 6.** The small trees that the aircraft impacted with its left wing.



**Figure 7:** The burnt aircraft.

### **1.13 Medical and Pathological Information**

1.13.1 To be discussed in the final report.

### **1.14 Fire**

1.14.1 The aircraft was consumed by post-impact fire.

### **1.15 Survival Aspects**

1.15.1 The accident was not survivable because the aircraft careered through the trees with the fuel tank that ruptured in the accident sequence, and thus, the fuel started the fire.



**Figure 8:** The wreckage after the accident.

## **1.16 Tests and Research**

1.16.1 To be discussed in the final report.

## **1.17 Organisational and Management Information**

1.17.1 The flight was conducted in accordance with the provisions of Part 94 (General Aviation) of the CAR 2011 as amended.

1.17.2 The AP who conducted the last annual inspection on the aircraft prior to the accident flight had an AP certificate. The AP was issued the AP Certificate on 28 September 2022 with an expiry date of 27 September 2024. According to the reviewed records, the aircraft type was endorsed on his certificate, and he was rated on the aircraft type.

## **1.18 Additional Information**

1.18.1 To be discussed in the final report.

## **1.19 Useful or Effective Investigation Techniques**

1.19.1 To be discussed in the final report.

## **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 particular 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 14 January 2013 under Part 61 of the South African Civil Aviation Regulations (CAR). The latest renewed licence had an expiry date of 28 April 2026.



- 2.2.2 The pilot was issued a Class 2 medical certificate on 18 July 2023; the expiry date could not be determined because copies were not available for verification.
- 2.2.3 The flight folio was destroyed in the post-impact fire.
- 2.2.4 The AP who carried out the last annual inspection on the aircraft prior to the accident flight had an AP Certificate. The AP was issued the AP Certificate on 28 September 2022 with an expiry date of 27 September 2024. According to the reviewed records, the aircraft type was endorsed on his certificate, and he was rated on the aircraft type.
- 2.2.5 The annual inspection was conducted on 12 October 2023 at 1764.34 airframe hours. The aircraft was issued a Certificate of Release to Service (CRS) on 12 October 2023 with an expiry date of 12 October 2024 or at 1864.34 hours, whichever occurs first.
- 2.2.6 On 19 October 2023, the AMO was repairing the propeller which required a seal change. Visual inspections were carried out, and the ball bearings, separators, hub inserts and the seals were changed during the propeller repair process. The propeller was statically balanced on 24 October 2023, and dynamically balanced on 26 October 2023. The propeller was found serviceable.
- 2.2.7 The aircraft's total hours could not be determined because the flight folio was consumed by the fire.

### **3. On-going Investigation**

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

### **4. APPENDICES**

- 4.1 None.

**This report is issued by:  
Accident and Incident Investigations Division  
South African Civil Aviation Authority  
Republic of South Africa**