PRELIMINARY ACCIDENT REPORT

Accident and Incident Investigations Division

Accident
- Preliminary Report -
AIID Ref No: CA18/2/3/10164

Figure 1: The file picture of ZU-JNP aircraft. (Source: Avcom.co.za)

Description:

On 25 May 2022, a pilot flying solo on-board a Ravin 500 aircraft with registration ZU-JNP took off from Runway 06 at Parys Airfield (FAPY) for a circuit and landing flight. The flight was conducted under visual meteorological conditions (VMC) by day and under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended. No flight plan was filed for this flight.
The first eyewitness reported that the aircraft was flying at a height of approximately 500 feet (ft) above ground level (AGL) when it spun to the right-side of the runway and disappeared from his view behind the trees. The second eyewitness stated that he saw the aircraft with its right-side wing low and losing height, before it finally impacted the ground. The pilot was fatally injured during the accident sequence and the aircraft was destroyed.

Occurrence Details

Reference Number	**:** CA18/2/3/10164
Occurrence Category	**:** Category 2
Type of Operation	**:** Private (Part 94)
Name of Operator/Owner	**:** Big Red Investments (PTY) LTD
Aircraft Registration	**:** ZU-JNP
Aircraft Make and Model	**:** Ravin 500
Nationality	**:** South African
Place	**:** 1 664 metres north of Runway 06
Date and Time	**:** 25 May 2022 at 0658Z
Injuries	**:** Fatal
Damage	**:** Destroyed

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 Ravin 500, which occurred 1 664 metres north of Runway 06 at Parys Airfield, Free State Province, on 25 May 2022 at 0658Z. The occurrence was classified as an accident according to the CAR 2011 Part 12 and ICAO STD Annex 13 definitions.

The AIID has appointed an investigator-in-charge who dispatched to the site to commence with the full investigation of the accident. Notifications were sent to the State of Registry/Operator/Design/Manufacture in accordance with the CAR 2011 Part 12 and ICAO Annex 13 Chapter 4. The State of Registry has appointed an advisor. The AIID will lead the investigation and issue the final report of this accident in accordance with 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. 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:
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 Ravin 500 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 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 AIID, which are reserved.

Table of Contents

Description Page 1
Occurrence Details 2
Disclaimer 3
Contents Page 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 7
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 11
1.12. Wreckage and Impact Information 11
1.13. Medical and Pathological Information 15
1.14. Fire 15
1.15. Survival Aspects 15
1.16. Tests and Research 15
1.17. Organisational and Management Information 15
1.18. Additional Information 16
1.19. Useful or Effective Investigation Techniques 16
2. FINDINGS 16
3. ON-GOING INVESTIGATION 17

Abbreviation	Description
°	Degrees
°C	Degrees Celsius
AFM	Approved Flight Manual
AGL	Above Ground Level
AIID	Accident and Incident Investigations Division
AP	Approved Person
CAR	Civil Aviation Regulations
CAVOK	Ceiling And Visibility OK
C of R	Certificate of Registration
CRS	Certificate of Release to Service
CVR	Cockpit Voice Recorder
FDR	Flight Data Recorder
FAPY	Parys Airfield
FAMO	Mossel Bay Airfield
FAVV	Vereeniging Airport
ft	Feet
GPS	Global Positioning System
hPa	Hectopascal
ICAO	International Civil Aviation Organisation
kts	Knots
m	Metres
METAR	Meteorological Routine Aerodrome Report
N/A	Not applicable
PPL	Private Pilot Licence
QNH	Altitude Above Mean Sea Level
rpm	Revolutions per minute
SACAA	South African Civil Aviation Authority
SAWS	South African Weather Service
STD	Standards
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 Wednesday morning, 25 May 2022 at about 0652Z, a pilot flying solo on-board a Ravin 500 aircraft with registration ZU-JNP took off from Runway 06 at Parys Airfield (FAPY) for a circuit and landing flight. The flight was conducted under visual meteorological conditions (VMC) by day and under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended. No flight plan was filed for this flight.

1.1.2 According to an eyewitness who was stationed outside the hangar and to the right of Runway 06, he witnessed the aircraft's take-off phase and, when it was at a height of approximately 500 feet (ft) above ground level (AGL), it spun to the right-side of the runway and disappeared from his view behind the trees. The second eyewitness was working on a nearby farm when he saw the aircraft with its right-side wing low and losing height, before it finally crashed on the ground.

1.1.3 The aircraft impacted the ground with its right-side wing first and spun clockwise; this was followed by the nose hitting the ground and, subsequently, the aircraft came to rest facing south. The pilot was fatally injured during the accident sequence and the aircraft was destroyed.

1.1.4 The accident occurred at Global Positioning System (GPS) co-ordinates determined to be 26°52'14.2" South 027°30'30" East, at an elevation of 4 658ft.

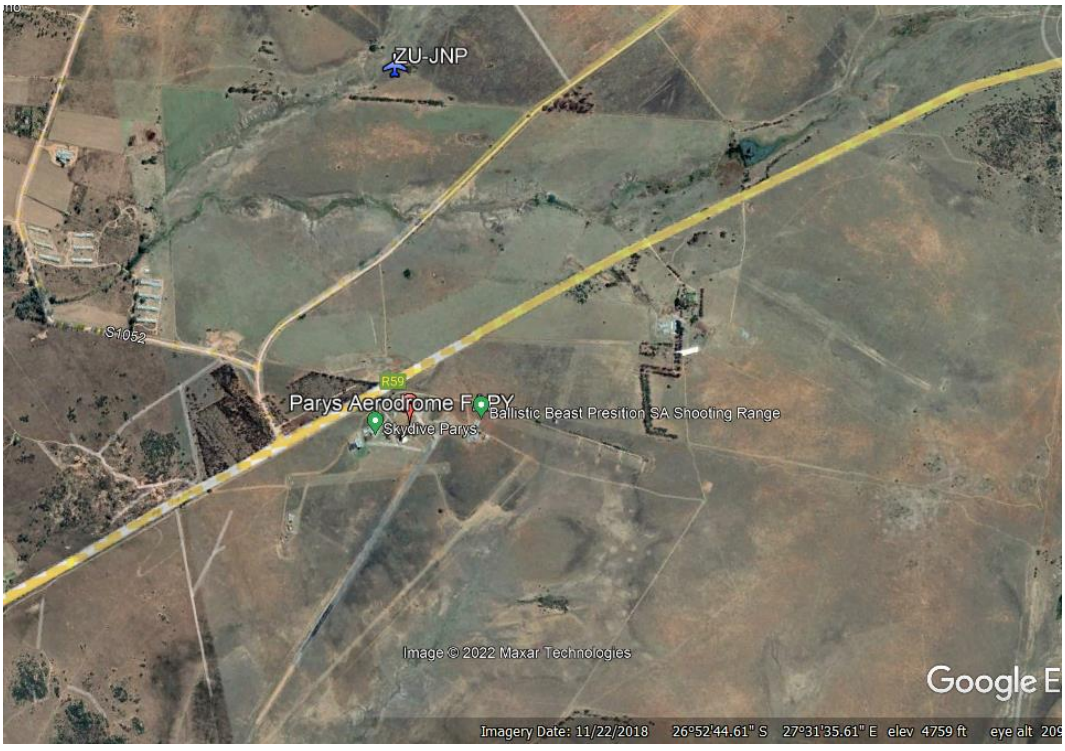


Figure 2: Aerial view of the accident site. (Google Earth)

1.2. Injuries to Persons

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

Note: Other means people on ground.

1.3. Damage to Aircraft

1.3.1. The aircraft was destroyed during the accident sequence.

Figure 3: The aircraft in its resting position post-accident. (Source: Operator)

1.4. Other Damage

1.4.1. None.

1.5. Personnel Information

Nationality	South African	Gender	Male	Age	45
Licence Type	Private Pilot Licence (PPL) Aeroplane				
Licence Valid	Yes	Type Endorsed	Yes		
Ratings	RAV5				
Medical Expiry Date	31 August 2022				
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	334.3
Total Past 24 Hours	0
Total Past 7 Days	0
Total Past 90 Days	1.9
Total on Type Past 90 Days	1.9
Total on Type	329.0

1.5.1. The pilot was initially issued a Private Pilot Licence (PPL) on 11 April 2012. The pilot's last revalidation check was conducted on 25 August 2021, and he was re-issued his licence on 8 September 2021 with an expiry date of 31 August 2022. According to the pilot's logbook, he had flown a total of 334.3 hours, of which 329.0 hours were on the accident aircraft type. The pilot was issued a valid Class 2 aviation medical certificate on 3 August 2020 with an expiry date of 31 August 2022 with no restrictions.

1.5.2. According to available information, the pilot's logbook was last updated on 7 May 2022, which is 18 days before the accident flight. The accident flight lasted approximately one minute, and this was not added to his total flying hours.

1.6. Aircraft Information

1.6.1 Produced by Ravin Aircraft, Pretoria, the Ravin 500 is an amateur-built aircraft. Buyers may choose to purchase it as a kit and assemble it themselves, or as a ready-to-fly aircraft. Its features include a cantilever low-wing, a four-seat enclosed cabin, retractable tricycle landing gear and a single engine in-tractor configuration. It also features a 114-centimetre wide cabin area. The Lycoming IO-540 four-stroke powerplant with 260 to 300 horsepower (hp) is the recommended engine for this aircraft.

Airframe:

Manufacturer/Model	SA Ravin Aircraft CC/ Ravin 500	
Serial Number	0705012	
Year of Manufacture	2014	
Total Airframe Hours (At Time of Accident)	328.6	
Last Inspection (Date & Hours)	27 July 2021	314.7
Hours Since Last Inspection	13.9	
CRS Issue Date	28 July 2021	
ATF (Issue Date & Expiry Date)	29 July 2019	30 September 2022
C of R (Issue Date) (Present Owner)	10 September 2014	
Type of Fuel Used	Avgas LL100	
Operating Category	Production Built	
Previous Accidents	None	

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

Engine:

Manufacturer/Model	Lycoming/ YIO-540-C4B5
Serial Number	L-32797-48E
Part Number	YIO-540-C4B5
Hours Since New	328.6
Hours Since Overhaul	Not yet reached

Propeller:

Manufacturer/Model	Hartzell/HC-C3YR1RFF7590
Serial Number	DY-7250B
Part Number	HC-C3YR1RFF7590
Hours Since New	328.6
Hours Since Overhaul	Not yet reached

1.6.2 Fuel

1.6.2.1 According to the aircraft's flight folio, the last fuel uplift was on 5 January 2022 in which the aircraft was refuelled with 166 litres of Avgas LL100, bringing the total fuel in the tanks to 400 litres (filled to capacity).

1.6.2.2 The aircraft was flown for approximately 6.5 hours since the last fuel uplift. According to the Approved Flight Manual (AFM), fuel consumption is 14.1 gallons per hour (53.4 litres per hour) whilst cruising at 2400 revolutions per minute (rpm). The record in the flight folio shows that on 5 January 2022, the aircraft was flown from Mossel Bay Airfield (FAMO) to FAPY for approximately 3.7 hours. The pilot who was flying the aircraft at that time stated that he was cruising at 2500rpm.

1.6.2.3 Flights and fuel uplifts for ZU-JNP

Date	From	To	Flight duration as per Hobbs hours	Fuel uplifts in litres (L)	Fuel status	Place of fuel uplift	Fuel consumption Litres / hr in accordance with aircraft flight manual
21/12/2021	FAPY	FAMO	4.1	180L	Full(400L)	FAPY	53.4
05/01/2022	FAMO	FAPY	3.7	166L	Full(400L)	FAMO	
20/01/2022	FAPY	FAPY	0.9	-------		N/A	
07/03/2022	FAPY	FAPY	0.8	-------		N/A	
07/05/2022	FAPY	FAPY	1.1	-------		N/A	
25/05/2022	FAPY	FAPY	0.1	-------		Accident	

- The flights on 21 December 2021 and 5 January 2022 were flown by a different pilot who was also the last pilot to re-fuel the aircraft. He flew a total of 3.7 hours following the last documented fuel uplift. The aircraft had 400 litres of Avgas on the main tanks, of which 30 litres was unusable.

- From 20 January 2022 to the day of the accident, the aircraft was flown for a total of 2.8 hours, which consisted of four engine starts. There was no evidence of fuel uplift prior to and post those flights.

- Therefore, approximately 347.1 litres of fuel had been used, and the aircraft had approximately 22.9 litres of fuel remaining prior to the accident flight.

1.7. Meteorological Information

1.7.1 The weather information below was obtained from the Meteorological Routine Aerodrome Report (METAR) that was issued on 25 May 2022 at 0700Z by the South African Weather Service (SAWS) recorded at Vereeniging Airport (FAVV), located 19 nautical miles (nm) north-east of the accident site.

FAVV 250700Z AUTO 04001KT //// // ////// 15/09 Q1030=

Wind Direction	040°	Wind Speed	01kt	Visibility	9999m
Temperature	15°C	Cloud Cover	CAVOK	Cloud Base	CAVOK
Dew Point	09°C	QNH	1030hPa		

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 navigation system was unserviceable prior to the accident.

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 accident.

1.10. Aerodrome Information

1.10.1 The accident occurred at approximately 1 664 metres north of Parys Airfield.

Aerodrome Location	Parys, Free State Province
Aerodrome Status	Licensed
Aerodrome GPS coordinates	26°53'13,95" South, 027°30'19,11" East.
Aerodrome Elevation	4 740 Feet
Runway Headings	06/24
Dimensions of Runway Used	1343 m x 20 m
Heading of Runway Used	Runway 06
Surface of Runway Used	Asphalt
Approach Facilities	None.
Radio Frequency	123.5 MHz

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 regulation to be fitted to the aircraft type.

1.11.2 The aircraft was fitted with a Garmin 265 GPS and the data was retrieved from the device (see Annexure A).

1.12. Wreckage and Impact Information

1.12.1 The aircraft took off in a northerly direction. According to the first eyewitness, a few seconds after take-off the aircraft was seen losing height before it disappeared behind the trees and from the eyewitness' view. The aircraft crashed approximately 1 664m from FAPY.

Figure 4: Aircraft's final position. (Source: Operator)

1.12.2 The aircraft impacted the ground with its right-side wing first and spun clockwise; this was followed by the nose hitting the ground and, subsequently, the aircraft came to rest facing south.

Figure 5: The first point of impact and the aircraft's resting position.

1.12.3 The right-side wing tip was damaged on impact, and it partly detached from the root.

Figure 6: Damage on the right-wing tip.

Figure 7: The separated wing from the root.

1.12.4 The nose section of the aircraft impacted the ground and the aircraft skidded on one of the propeller blades. The aircraft sustained damage to the spinner and one of the three propeller blades, an indication that the engine was not turning when the aircraft impacted the ground. The vertical stabiliser split in half due to impact force.

Figure 8: The damaged spinner and the propeller blade.

Figure 9: The split vertical stabiliser.

1.12.5 The instrument panel was destroyed during the accident sequence.

Figure 10: The destroyed instrument panel and the nose gear in the cockpit.

1.12.6 The ignition key was found broken and in “off” position. The fuel pump was found in “on” position.

Figure 11 and 12: Position of the switches after the accident (left); and the position of switches in a stationary aircraft that is similar to the accident aircraft (right).

1.13. Medical and Pathological Information

1.13.1 To be discussed in the final report.

1.14. Fire

1.14.1 There was no evidence of a pre- or post-impact fire damage to the aircraft.

1.15 Survival Aspects

1.15.1 The accident was not survivable as the cabin was destroyed by impact forces.

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 aircraft was privately owned and operated by the (accident) pilot.

1.17.2 The last maintenance inspection that was carried out on the aircraft prior to the accident flight was certified on 28 July 2021 at 314.7 airframe hours and was signed out by an approved person (AP).

1.17.3 The AP who maintained the aircraft had a valid approved maintenance certificate that was issued on 31 March 2021 with an expiry date of 31 March 2023.

1.18. Additional Information

Source:
(https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/07_phak_ch5.pdf)

Stalls

An aircraft stall results from a rapid decrease in lift caused by the separation of airflow from the wing's surface brought on by exceeding the critical angle of attack (AOA). A stall can occur at any pitch attitude or airspeed. Stalls are one of the most misunderstood areas of aerodynamics because pilots often believe an airfoil stops producing lift when it stalls. In a stall, the wing does not totally stop producing lift. Rather, it cannot generate adequate lift to sustain level flight.

Since the lift coefficient (CL) increases with an increase in AOA, at some point the CL peaks and then begins to drop off. This peak is called the CL-MAX. The amount of lift the wing produces drops dramatically after exceeding the CL-MAX or critical AOA, but as stated above, it does not completely stop producing lift.

In most straight-wing aircraft, the wing is designed to stall the wing root first. The wing root reaches its critical AOA first making the stall progress outward toward the wingtip. By having the wing root stall first, aileron effectiveness is maintained at the wingtips, maintaining controllability of the aircraft. Various design methods are used to achieve the stalling of the wing root first. In one design, the wing is "twisted" to a higher AOA at the wing root. Installing stall strips on the first 20–25 percent of the wing's leading edge is another method to introduce a stall prematurely.

The wing never completely stops producing lift in a stalled condition. If it did, the aircraft would fall to the Earth. Most training aircraft are designed for the nose of the aircraft to drop during a stall, reducing the AOA and "unstalling" the wing. The nose-down tendency is due to the CL being aft of the centre of gravity (CG). The CG range is very important when it comes to stall recovery characteristics. If an aircraft is allowed to be operated outside of the CG range, the pilot may have difficulty recovering from a stall. The most critical CG violation would occur when operating with a CG that exceeds the rear limit. In this situation, a pilot may not be able to generate sufficient force with the elevator to counteract the excess weight aft of the CG. Without the ability to decrease the AOA, the aircraft continues in a stalled condition until it contacts the ground.

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 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 11 June 2012. According to his logbook, he had flown a total of 334.3 hours, of which 329 hours were on the aircraft type.

2.2.2 The pilot was issued a valid Class 2 aviation medical certificate on 3 August 2020 with an expiry date of 31 August 2022 with no restrictions.

2.2.3 The aircraft was issued a Certificate of Registration (C of R) on 10 September 2014 under the current owner.

2.2.4 The aircraft was issued a Certificate of Release to Service (CRS) on 28 July 2021 with an expiry date of 27 July 2022 or at 414.7 airframe hours, whichever comes first, unless the aircraft is involved in an accident or becomes unserviceable, in which case the certificate is invalid for the duration of the period remaining.

2.2.5 The aircraft was issued an Authority to Fly (ATF) on 29 July 2019 with an expiry date of 30 September 2022.

2.2.6 On 5 January 2022, the aircraft was refuelled with 166 litres of Avgas, bringing the total fuel in the tanks to 400 litres.

2.2.7 The aircraft was flown for a total of 6.5 hours since the last fuel uplift. The aircraft fuel consumption is 53.4 litres per hour. On-site investigation revealed no evidence of fuel.

2.2.8 The condition of the propeller blades indicated that the engine had stopped prior to impact with the ground.

2.2.9 The first eyewitness who was stationed outside the hangar and to the right of Runway 06 reported that he witnessed the aircraft's take-off and, when it was at a height of approximately 500 feet (ft) above ground level (AGL), it spun to the right and disappeared from his view behind the trees. The second eyewitness who was working on a nearby farm stated that he saw the aircraft with its right-side wing low and losing height, before it impacted the ground.

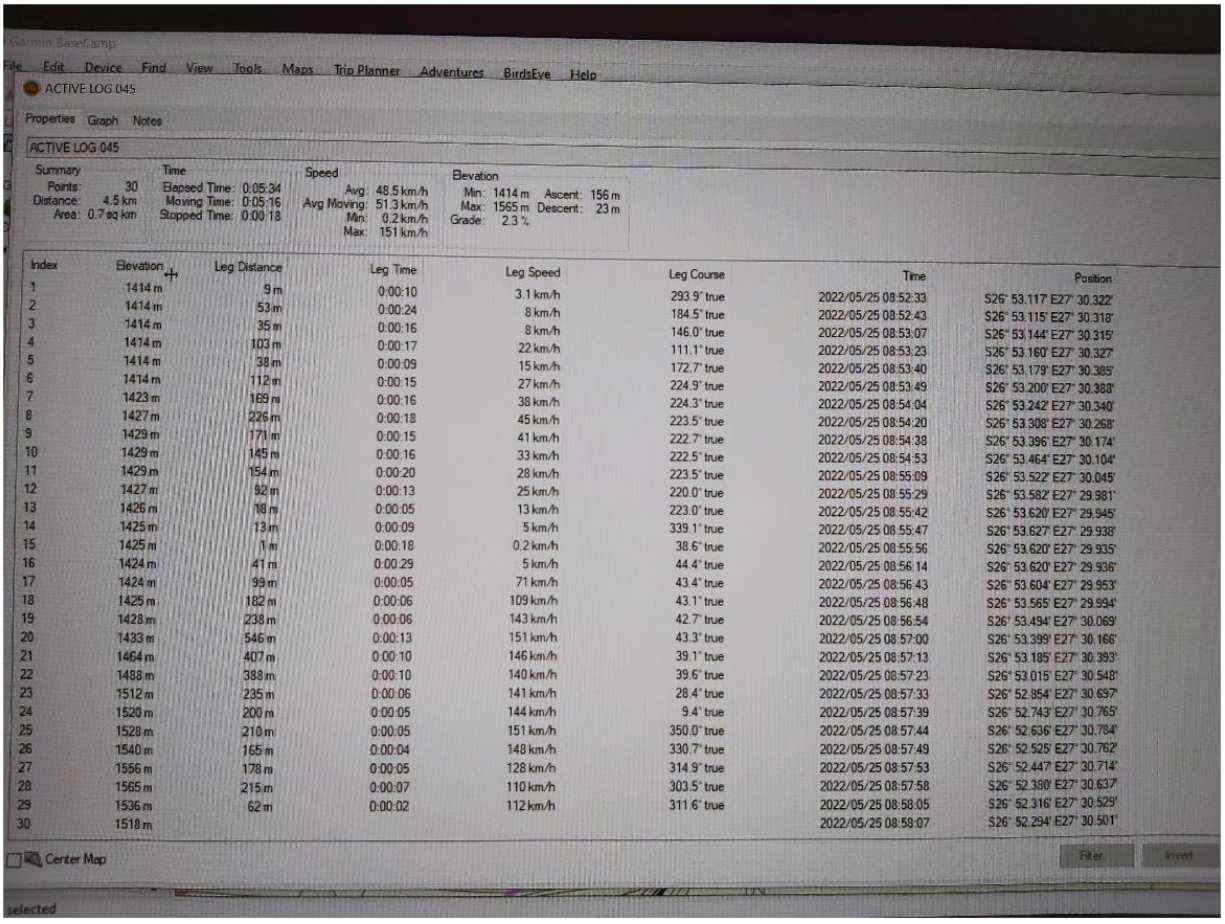
3. ON-GOING INVESTIGATION

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

This report is issued by:

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

Garmin 265 GPS Data: **Annexure A**



Garmin BaseCamp

File Edit Device Find View Tools Maps Trip Planner Adventures BirdsEye Help

ACTIVE LOG 045

Properties Graph Notes

ACTIVE LOG 045

Summary		Time		Speed		Elevation			
Points:	30	Elapsed Time:	0:05:34	Avg:	48.5 km/h	Min:	1414 m	Ascent:	156 m
Distance:	4.5 km	Moving Time:	0:05:16	Avg Moving:	51.3 km/h	Max:	1565 m	Descent:	23 m
Area:	0.7 sq km	Stopped Time:	0:00:18	Min:	0.2 km/h	Grade:	2.3 %		
				Max:	151 km/h				

Index	Elevation	Leg Distance	Leg Time	Leg Speed	Leg Course	Time	Position
1	1414 m	9 m	0:00:10	3.1 km/h	293.9° true	2022/05/25 08:52:33	S26° 53.117' E27° 30.322'
2	1414 m	53 m	0:00:24	8 km/h	184.5° true	2022/05/25 08:52:43	S26° 53.115' E27° 30.318'
3	1414 m	35 m	0:00:16	8 km/h	146.0° true	2022/05/25 08:53:07	S26° 53.144' E27° 30.315'
4	1414 m	103 m	0:00:17	22 km/h	111.1° true	2022/05/25 08:53:23	S26° 53.160' E27° 30.327'
5	1414 m	38 m	0:00:09	15 km/h	172.7° true	2022/05/25 08:53:40	S26° 53.179' E27° 30.385'
6	1414 m	112 m	0:00:15	27 km/h	224.9° true	2022/05/25 08:53:49	S26° 53.200' E27° 30.388'
7	1423 m	169 m	0:00:16	38 km/h	224.3° true	2022/05/25 08:54:04	S26° 53.242' E27° 30.340'
8	1427 m	226 m	0:00:18	45 km/h	223.5° true	2022/05/25 08:54:20	S26° 53.308' E27° 30.268'
9	1429 m	171 m	0:00:15	41 km/h	222.7° true	2022/05/25 08:54:38	S26° 53.396' E27° 30.174'
10	1429 m	145 m	0:00:16	33 km/h	222.5° true	2022/05/25 08:54:53	S26° 53.464' E27° 30.104'
11	1429 m	154 m	0:00:20	28 km/h	223.5° true	2022/05/25 08:55:09	S26° 53.522' E27° 30.045'
12	1427 m	92 m	0:00:13	25 km/h	220.0° true	2022/05/25 08:55:29	S26° 53.582' E27° 29.981'
13	1426 m	18 m	0:00:05	13 km/h	223.0° true	2022/05/25 08:55:42	S26° 53.620' E27° 29.945'
14	1425 m	13 m	0:00:09	5 km/h	339.1° true	2022/05/25 08:55:47	S26° 53.627' E27° 29.938'
15	1425 m	1 m	0:00:18	0.2 km/h	38.6° true	2022/05/25 08:55:56	S26° 53.620' E27° 29.935'
16	1424 m	41 m	0:00:29	5 km/h	44.4° true	2022/05/25 08:56:14	S26° 53.620' E27° 29.936'
17	1424 m	99 m	0:00:05	71 km/h	43.4° true	2022/05/25 08:56:43	S26° 53.604' E27° 29.953'
18	1425 m	182 m	0:00:06	109 km/h	43.1° true	2022/05/25 08:56:48	S26° 53.565' E27° 29.994'
19	1428 m	238 m	0:00:06	143 km/h	42.7° true	2022/05/25 08:56:54	S26° 53.494' E27° 30.069'
20	1433 m	546 m	0:00:13	151 km/h	43.3° true	2022/05/25 08:57:00	S26° 53.399' E27° 30.166'
21	1464 m	407 m	0:00:10	146 km/h	39.1° true	2022/05/25 08:57:13	S26° 53.185' E27° 30.393'
22	1488 m	388 m	0:00:10	140 km/h	39.6° true	2022/05/25 08:57:23	S26° 53.015' E27° 30.548'
23	1512 m	235 m	0:00:06	141 km/h	28.4° true	2022/05/25 08:57:33	S26° 52.854' E27° 30.697'
24	1520 m	200 m	0:00:05	144 km/h	9.4° true	2022/05/25 08:57:39	S26° 52.743' E27° 30.765'
25	1528 m	210 m	0:00:05	151 km/h	350.0° true	2022/05/25 08:57:44	S26° 52.636' E27° 30.784'
26	1540 m	165 m	0:00:04	148 km/h	330.7° true	2022/05/25 08:57:49	S26° 52.525' E27° 30.762'
27	1556 m	178 m	0:00:05	128 km/h	314.9° true	2022/05/25 08:57:53	S26° 52.447' E27° 30.714'
28	1565 m	215 m	0:00:07	110 km/h	303.5° true	2022/05/25 08:57:58	S26° 52.380' E27° 30.637'
29	1536 m	62 m	0:00:02	112 km/h	311.6° true	2022/05/25 08:58:05	S26° 52.316' E27° 30.529'
30	1518 m					2022/05/25 08:58:07	S26° 52.294' E27° 30.501'

Center Map

Filter Invert

selected