



AIRCRAFT ACCIDENT REPORT AND EXECUTIVE SUMMARY

				Reference:	CA18/2/3/8506	
Aircraft Registration	ZU-AFP	Date of Accident	01 June 2008		Time of Accident	0924Z
Type of Aircraft	RV-6 (Low wing fixed wing aircraft)		Type of Operation	Private		
Pilot-in-command Licence Type		Private	Age	68	Licence Valid	Yes
Pilot-in-command Flying Experience		Total Flying Hours	885		Hours on Type	473
Last point of departure		Pietermaritzburg Aerodrome				
Next point of intended landing		Alverstone Farm private airstrip in KwaZulu-Natal Province				
Location of the accident site with reference to easily defined geographical points (GPS readings if possible)						
Threshold of Runway 29 at Alverstone farm (S29°46,521" E030°43',096" Elevation 2730 feet mean sea level)						
Meteorological Information		Surface wind: 230°/10 knots; visibility good. Temperature: 23°C				
Number of people on board	1 + 0	No. of people injured	1	No. of people killed	0	
Synopsis						
<p>On 01 June 2008 at 0900Z, the pilot took off from Pietermaritzburg Aerodrome on a private visual flight rules flight to Alverstone private airstrip. The weather conditions were reported to be fine for the flight, which was estimated to take 10 minutes from departure from the aerodrome to the intended aerodrome. During approach for a landing, the aircraft collided with the power lines, then Telkom lines which were spanned across the threshold of Runway 29. The aircraft impacted with the ground, with the left-hand leading edge first before skidding for approximately three metres from the first impact mark. The aircraft flipped over on its back facing in the direction of 160° and was destroyed by post-impact forces.</p>						
Probable Cause						
<p>The aircraft collided with the power lines and Telkom lines and crashed due to too low flying and too shallow approach by the pilot. Contributing factor:</p> <p>The pilot failed to see the power lines.</p>						
IARC Date				Release Date		



AIRCRAFT ACCIDENT REPORT

Name of Owner/Operator : Drew N E
Manufacturer : Van Grunsven Aircraft INC.
Model : RV-6
Nationality : South African
Registration Marks : ZU-APF
Place : Alverstone farm (S29°46', 521" E030°43', 096"
 Elevation 2730 feet mean sea level)
Date : 01 June 2008
Time : 0924Z

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 of the Investigation:

*In terms of Regulation 12.03.1 of the Civil Aviation Regulations (1997) 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 establish legal liability.***

Disclaimer:

This report is given without prejudice to the rights of the CAA, which are reserved.

1. FACTUAL INFORMATION

1.1 History of Flight

- 1.1.1 The pilot took off from Pietermaritzburg at 0900Z, on 1 June 2008 for a 10 minute-flight to the private strip at Alverstone where the aircraft is hangered. According to the pilot, the strip is well known to him and he has landed and taken off there on several occasions.
- 1.1.2 On approach for Alverstone; the pilot made contact with ZU-SON on frequency 124.80 which was ahead of the accident aircraft and also preparing for a landing on Runway 29.
- 1.1.3 The accident aircraft was prepared for a landing behind ZU-SON.
- 1.1.4 The visibility was reported to be excellent, with a breeze from the south-west that put it more or less at cross-wind to the runway. The wind speed was not initially a concern from the landing point of view, but as the threshold neared, an input of the rudder was necessary to hold the approach straight.
- 1.1.5 On final approach the pilot reported that he could see the trees and Telkom lines, but could not see the power lines, although he knew about them.

- 1.1.6 The pilot reported that at no time could he see the power lines that he hit although he saw the Telkom phone lines at the other side of the road during approach. According to the pilot his last recollection before the crash was that he was sinking and there was a down-draft towards the trees, then he was clearing the trees and then he must have collided the power lines and could remember no more.
- 1.1.7 The topography of the airstrip is that of trees which run parallel to the runway. One side of the approach is a valley and the other side is a residential area, trees, power lines and Telkom lines. The accident happened in daylight conditions.

1.2 Injuries to Persons

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

1.3 Damage to Aircraft:

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



Picture above shows damage to the aircraft.

1.4 Other Damage:

1.4.1 Eskom power lines and Telkom lines which run perpendicular to the runway.

1.5 Personnel Information:

Nationality	South African	Gender	Male	Age	68
Licence Number	*****	Licence Type	Private		
Licence valid	Yes	Type Endorsed	Yes		
Ratings	Night rating				
Medical Expiry Date	31 May 2009				
Restrictions	No				
Previous Accidents	No				

Flying Experience:

Total Hours	885
Total Past 90 Days	5
Total on Type Past 90 Days	5
Total on Type	473

1.6 Aircraft Information

Airframe:

Type	RAV-6	
Serial Number	21412	
Manufacturer	Van Grunsven Aircraft INC.	
Date of Manufacture	1994	
Total Airframe Hours (At time of Accident)	655	
Last MPI (Date & Hours)	13 June 2007	630
Hours since Last MPI	25	
C of A (Issue Date)	03 May 1999	
Authority to Fly	Issued on 21 June 2007 Expires on 13 June 2008	
C of R (Issue Date) (Present owner)	19 June 2007	
Operating Categories	Special experimental	

Engine:

Type	Lycoming 0320-D2A
Serial Number	L8969-39A
Hours since New	655
Hours since Overhaul	1472

Propeller:

Type	Sensenich 70CM7816-0-79
Serial Number	29193K
Hours since New	655
Hours since Overhaul	1472

1.6 Meteorological Information:

1.6.1 The following information was provided by the pilot:

Wind direction	230°	Wind speed	10 Knots	Visibility	Good
Temperature	23°C	Cloud cover	Cirrus	Cloud base	10 000 feet
Dew point	N/A				

1.8 Aids to Navigation

1.8.1 The aircraft was fitted with a standard navigation system, approved for the aircraft type and registration. There was no default reported on the instrument prior to the accident.

1.9 Communications

1.9.1 The pilot was communicating with the other aircraft (ZU-SON) on frequency 124.80, while communicating with other aircraft.

1.10 Aerodrome Information

Aerodrome Location	Alverstone Airstrip	
Aerodrome Co-ordinates	S29°43'.096" E030°43'.096"	
Aerodrome Elevation	2730	
Runway Designations	11/29	
Runway Dimensions	540m X25M	
Runway Used	29	
Runway type	Unregistered/ unmanned airfield	
Runway Surface	Grass	
Approach Facilities	None	

1.10.1 The airstrip is very dangerous to land on; with the obstacles on approach you can only approach at a steep angle to make sure that you have cleared the obstacles and land safely with adequate runway left.

1.11 Flight Recorders

1.11.1 The aircraft was not equipped with a flight data recorder (FDR) or a cockpit voice recorder (CVR); neither was this required by the regulations.

1.11 Wreckage and Impact Information

1.11.1 During approach for the landing, the aircraft collided with the power lines, then Telkom lines which were spanned across the threshold of Runway 29. The aircraft impacted with the ground with the left-hand wing leading edge first before skidding for approximately three metres from the first impact mark. The aircraft flipped over and ended up facing in the direction of 160°. The aircraft was destroyed by the impact forces.



The picture shows the obstacles that run perpendicular to the approach of Runway 29.



The picture shows the damage on the glass canopy after flipping over on its roof.

1.13 Medical and Pathological Information

1.13.1 The pilot survived with serious injuries and was treated in hospital.

1.14 Fire

1.14.1 There was no evidence of a pre- or post-impact fire.

1.15 Survival Aspects

1.15.1 The accident was considered survivable as the pilot was properly restrained by safety harness despite the crushed cabin roof and the serious injuries sustained by the pilot.

1.16 Tests and Research

1.16.1 None were carried out.

1.17 Organisational and Management Information

1.17.1 The pilot was both the owner, operator and approved person (person maintaining the aircraft) of the aircraft.

1.18 Additional Information

1.18.1 None.

1.19 Useful or Effective Investigation Techniques

1.19.1 None.

2. ANALYSIS

- 2.1 The investigator reviewed the maintenance records of the accident airplane. There were no discrepancies with the airplane on the day of the accident flight. Following an examination at the accident scene site, it was clear that the airplane engines and propellers were running normally prior to the accident.
- 2.2 The aircraft was serviceable prior to the accident and no record of any malfunction or defect was recorded that could have contributed, or caused the accident. This is also supported by the fact that the pilot reported that prior to the accident, the aircraft was operating normally or as expected.
- 2.3 The investigator reviewed the pilot's flying records which includes the licence, medical certificate and the type rating. The pilot was correctly licensed and fit for the flight as required by the regulations.
- 2.4 Although the pilot reported a down-draft during the approach, it is the investigator's opinion that the prevailing weather conditions at the time of the exercise were not considered to be a factor in this accident, with the reported surface wind being from the north at 10 knots with a little bit of a cross-wind. The pilot reported that as he approached the threshold, the wind speed was not initially a concern from the landing point of view, but as the threshold neared, an input of the rudder was necessary to hold the approach straight. The above statement shows that the pilot was in control of the aircraft until the aircraft collided with the power lines. The aerodrome is grass and the surface is smooth and level for good operation of the aircraft, and was not considered to be a contributing factor during the accident.
- 2.5 Although the pilot reported that he could not see the power lines that the aircraft collided with at any stage, he saw the Telkom phone lines at the other side of the road during approach. It is the investigator's opinion that the pilot was flying low during his approach for a landing because he saw the trees and the Telkom lines and knew about the power lines, as he was familiar with the airstrip. On final approach, the pilot adjusted power as required but the position of the barrier of trees before the runway in the pilot's line of sight did not raise a concern.
- 2.6 The on-site investigation revealed that the height of both the trees and the Telkom lines are shorter than the power lines. The fact that the pilot was adjusting power during approach for a landing shows that the pilot was low and was attempting to make the field. The pilot reported that he could not see the power lines. It is the investigator's opinion that the pilot was flying low during approach for a landing.

- 2.7 The aircraft collided with the power lines, then the Telkom lines which were spanned across the threshold of Runway 29. The aircraft impacted with the ground with the left-hand leading edge first, before skidding for approximately three metres from the first impact mark. The aircraft flipped over on its back, facing in the direction of 160° and was destroyed by post-impact forces.
- 2.7 Although the pilot reported that he had landed on the airstrip on previous occasions, his actions indicated that his understanding of the obstacles was inadequate.

3. CONCLUSION

3.1 Findings

3.1.1 Aircraft:

The aircraft had a valid Authority to Fly and a valid Certificate of Registration.
The aircraft was serviceable prior to the accident.
The aircraft was destroyed by impact forces.
The aircraft collided with the power lines.
The aircraft was low on approach for a landing.

3.1.2 Pilot:

The pilot was properly licensed and medically fit for the flight in accordance with existing regulations.

Although the pilot mentioned that he had landed on the airstrip on previous occasions, his actions indicated that his understanding of the obstacles to the airstrip was inadequate.

The pilot was low on approach and failed to notice the power lines spanned across his flight path.

3.1.3 Owner/Operator:

The pilot was both the owner and the maintainer of the aircraft.

3.1.4 Airport Facility:

The airstrip was unregistered and unmanned.
The airstrip has the hazards of trees, power lines and phone lines on approach for Runway 29.

3.2 Probable Cause/s

- 3.2.1 The aircraft collided with the power lines and Telkom lines due to low flying by the pilot.

3.2.2 Contributory factors:

The pilot failed to see the power lines.

4. SAFETY RECOMMENDATIONS

- 4.1 It is recommended that the SACAA (airport department) in consultation with Eskom should make sure that the power lines on the approach side of the airstrip is properly marked.

5. APPENDICES

- 5.1 Not applicable.

Submitted through the office of the SM.