

AIRCRAFT ACCIDENT REPORT AND EXECUTIVE SUMMARY

				Reference:	CA18/2/3/8850	
Aircraft Registration	ZU-XML	Date of Accident	13 October 2010		Time of Accident	1130Z
Type of Aircraft	SA Ravin 500		Type of Operation		Private	
Pilot-in-command Licence Type		Commercial	Age	53	Licence Valid	Yes
Pilot-in-command Flying Experience		Total Flying Hours	530		Hours on Type	131,8
Last point of departure		Wonderboom Aerodrome (FAWB)				
Next point of intended landing		Krugersdorp Aerodrome (FAKR)				
Location of the accident site with reference to easily defined geographical points (GPS readings if possible)						
Krugersdorp Aerodrome (FAKR)						
Meteorological Information		Surface wind: 15 kts gusting 25 kts; Temperature: 23°C; Visibility: >10 km				
Number of people on board	1 + 0	No. of people injured	0	No. of people killed	0	
Synopsis						
<p>The pilot took off from Wonderboom Aerodrome for Krugersdorp Aerodrome on a private flight. During the final approach at Krugersdorp, he experienced a downdraft two to three metres from the threshold of runway 08. The pilot reduced power while landing in a downdraft. He lost directional control, the aeroplane rolled over the taxiway, and the left wing struck a fence pole, bringing the aircraft to a halt.</p> <p>The pilot suffered minor injuries, and the aircraft sustained substantial damage to the left wing, pitot tube and tail plane.</p>						
Probable Cause						
Loss of directional control during the landing due to a downdraft, resulting in the aircraft colliding with a hanger door extension.						
IARC Date				Release Date		

AIRCRAFT ACCIDENT REPORT

Name of Owner/Operator : Troll Air CC
Manufacturer : SA Ravin Aircraft CC
Model : Ravin 500
Nationality : South African
Registration Marks : ZU-XML
Place : Krugersorp Aerodrome
Date : 13 October 2010
Time : 1130Z

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 Wonderboom Aerodrome for Krugersdorp Aerodrome on a private flight. According to him, the wind during takeoff was blowing at 15 kts gusting to 20 kts, and the flight was bumpy. The windsock at Krugersdorp on runway 08 indicated that the wind was blowing from approximately 030° and gusting 20kts. The pilot said that on final approach, he encountered a crosswind and applied the rudder to compensate for the wind. Two to three metres from the threshold, he experienced a downdraft and had to compensate by adding power. He then reduced power but despite this, the aircraft was forced onto the runway at a speed of 70-80 kt. The pilot was unable to maintain directional control with the rudders, and the aircraft rolled over the taxiway, coming to halt when its left wing struck a fence pole.

1.2 Injuries to Persons

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

1.3 Damage to Aircraft

1.3.1 The aircraft sustained damage to the undercarriage, left wing and tailplane.

1.4 Other Damage

1.4.1 A fence pole was damaged.

1.5 Personnel Information

Nationality	Norwegian	Gender	Male	Age	53
Licence Number	*****	Licence Type	Commercial		
Licence valid	Yes	Type Endorsed	Yes		
Ratings	Instrument; Night rating				
Medical Expiry Date	31 December 2010				
Restrictions	Corrective lenses				
Previous Accidents	None				

Flying Experience

Total Hours	530
Total Past 90 Days	40,9
Total on Type Past 90 Days	33,5
Total on Type	131,8

1.6 Aircraft Information

Airframe

Type	500	
Serial Number	0905021	
Manufacturer	SA Ravin	
Year of Manufacture	2009	
Total Airframe Hours (at time of accident)	148,7	
Last Annual Inspection (Date & Hours)	14 January 2010	19,0
Hours since Last MPI	129,7	
Authority to Fly (Issue Date)	9 June 2010	
C of R (Issue Date) (Present Owner)	19 August 2009	
Operating Categories	Private	

Engine

Type	Lycoming IO 540
Serial Number	L-33848-48E
Hours since New	148,7
Hours since Overhaul	TBO not yet reached

Propeller

Type	Hartzell
Serial Number	DY7881B
Hours since New	130,7
Hours since Overhaul	TBO not yet reached

1.7 Meteorological Information

1.7.1 Weather information in the area at the time of the incident, as obtained from the South African Weather Services:

Wind direction	030°	Wind speed	15kts Gusting 25kts	Visibility	> 10 km
Temperature	23°C	Cloud cover	1-2 octa	Cloud base	2 500 ft
Dew point	12°C				

1.8 Aids to Navigation

1.8.1 The aeroplane was fitted with standard navigational instruments as approved by the regulator for this aircraft type. No abnormalities were reported prior to the accident.

1.9 Communications

1.9.1 The aeroplane was fitted with standard communication equipment as approved by the regulator for this aircraft type. No abnormalities were reported prior to the accident.

1.10 Aerodrome Information

Aerodrome Location	FAKR	
Aerodrome Co-ordinates	S260453.93 E0274332.44	
Aerodrome Elevation	5 499 ft	
Runway Designations	08	26
Runway Dimensions	842 m x 29 m	842 m x 29 m
Runway Used	08	
Runway Surface	Asphalt	
Approach Facilities	None	

1.11 Flight Recorders

1.11.1 The aircraft was not equipped with a flight data recorder or cockpit voice recorder. Neither was required by regulation to be fitted to this aircraft type.

1.12 Wreckage and Impact Information

1.12.1 During the final approach for landing, the pilot experienced a downdraft. The aircraft was forced onto the runway, rolled over the taxiway and collided with extension of the hangar door before coming to a halt. The aeroplane remained intact after the impact.



Figure 1. The aircraft after the accident.

1.13 Medical and Pathological Information

1.13.1 None

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 had been properly restrained with a safety harness.

1.16 Tests and Research

1.16.1 None.

1.17 Organisational and Management Information

1.17.1 This was a private flight.

1.17.2 The Approved Person who certified the last annual inspection on the aircraft prior to the accident had been in possession of a valid Approved Person accreditation issued by the Aero Club of South Africa.

1.18 Additional Information

1.18.1 None.

1.19 Useful or Effective Investigation Techniques

1.19.1 None.

2. ANALYSIS

2.1 The pilot took off from Wonderboom Aerodrome for Krugersdorp Aerodrome on a private flight. The wind was at 15 kts gusting 20 kts. During the landing at Krugersdorp, the pilot experienced a downdraft. The pilot reduced power which caused him to lose directional control of the aircraft once it touched down. When landing with the wind shear the aircraft must be landed with sufficient power. The aeroplane rolled over the taxiway and came to a halt when the left wing struck hanger door guide.

3. CONCLUSION

3.1 Findings

3.1.1 The pilot had a valid commercial pilot's licence at the time of the accident.

3.1.2 The pilot experienced a downdraft during the approach to landing.

3.1.3 According to available records, the aircraft was properly maintained.

3.1.4 The aircraft had a valid authority to fly due to expire on 14 January 2011.

3.1.4 Weather was a contributory factor to the accident.

3.2 Probable Cause/s

3.2.1 Loss of directional control during the landing due to a downdraft, resulting in the aircraft colliding with a hangar door extension.

4. SAFETY RECOMMENDATIONS

4.1 None.

5. APPENDICES

5.1 None.

Compiled by:

Koketjo Babili

Date:

For: Director of Civil Aviation

Investigator-in-charge:

Date:

Co-Investigator:

Date: