

## AIRCRAFT ACCIDENT REPORT AND EXECUTIVE SUMMARY

				Reference:	CA18/2/3/8856	
<b>Aircraft Registration</b>	ZU-FHC	<b>Date of Accident</b>	23 October 2010		<b>Time of Accident</b>	0845Z
<b>Type of Aircraft</b>	Zenair C701 (kit-built aircraft)		<b>Type of Operation</b>	Private		
<b>Pilot-in-command Licence Type</b>		Commercial	<b>Age</b>	46	<b>Licence Valid</b>	Yes
<b>Pilot-in-command Flying Experience</b>		Total Flying Hours	425,1		Hours on Type	9,8
<b>Last point of departure</b>		Koedoesvlei private aerodrome, Western Cape				
<b>Next point of intended landing</b>		Koedoesvlei private aerodrome, Western Cape				
<b>Location of the accident site with reference to easily defined geographical points (GPS readings if possible)</b>						
Koedoesvlei area at GPS coordinates S32°.45.05' E18°20.48.00' at an elevation of 520 ft AMSL						
<b>Meteorological Information</b>		Clear skies; Visibility 10 km				
<b>Number of people on board</b>	1 + 0	<b>No. of people injured</b>	0	<b>No. of people killed</b>	0	
<b>Synopsis</b>						
<p>On Saturday morning, 23 October 2010, the pilot – the sole occupant on board – took off from Koedoesvlei private aerodrome under visual flight rules in order to perform circuits and touch-and-go manoeuvres. He stated that he had uplifted 60 litres of fuel before departure, conducted a comprehensive pre-flight inspection, and taken off without incident. Several touch-and-goes were performed. Then, during final approach from the south, the aircraft collided with power lines approximately 50 feet high, and struck the ground as a result.</p> <p>The pilot was not injured but the aircraft was destroyed.</p>						
<b>Probable Cause</b>						
<p>The pilot's failure to clear a known obstacle.</p>						
IARC Date			Release Date			



## AIRCRAFT ACCIDENT REPORT

**Name of Owner/Operator** : S F Trust  
**Manufacturer** : Zenith Aircraft Company  
**Model** : Zenair C701  
**Nationality** : South African  
**Registration Marks** : ZU-FHC  
**Place** : Koedoesvlei area, Western Cape  
**Date** : 23 October 2010  
**Time** : 0845Z

*All times given in this report is 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 On Saturday morning, 23 October 2010, the pilot – the sole occupant on board – took off from Koedoesvlei private aerodrome under visual flight rules in order to perform circuits and touch-and-go manoeuvres. According to the pilot, he uplifted 60 litres of avgas before departure and conducted a comprehensive pre-flight inspection. It was the aircraft's first flight of the day
- 1.1.2 The pilot stated that takeoff was uneventful, and he performed several touch-and-goes. Then, during final approach from the south, the aircraft collided with power lines approximately 50 feet high, and struck the ground was a result. The aircraft was destroyed but the pilot was not injured. He unbuckled himself, climbed out unassisted and immediately telephoned the aircraft maintenance organisation (AMO). Engineers were dispatched to recover the aeroplane.
- 1.1.3 The pilot was familiar with the power lines in the area. The accident occurred in daylight at the geographical position S32°45.05' E18°20.48.00' at an elevation of 520 ft above mean sea level (AMSL).



**Figure 1.** The damaged power lines alongside the road.

## 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 was destroyed:

- The undercarriage was destroyed
- Both wings were substantially damaged
- The three-bladed wooden propeller was destroyed
- The engine mountings were substantially damaged
- The aircraft windscreen was destroyed



**Figure 2.** The aircraft after the accident – front view.

## 1.4 Other Damage

1.4.1 Damage was limited to the power lines.

## 1.5 Personnel Information

Nationality	South African	Gender	Male	Age	46
Licence Number	*****	Licence Type	Commercial		
Licence valid	Yes	Type Endorsed	Yes		
Ratings	Night Rating				
Medical Expiry Date	31 July 2011				
Restrictions	None				
Previous Accidents	Nil				

### Flying Experience

Total Hours	425,1
Total Past 90 Days	38,3
Total on Type Past 90 Days	9,8
Total on Type	9,8

## 1.6 Aircraft Information

### Airframe

Type	Zenair C701	
Serial Number	5338	
Manufacturer	Zenith Aircraft Company	
Date of Manufacture	2005	
Total Airframe Hours (at time of accident)	12	
Last Annual Inspection (Hours & Date)	Not reached	None
Hours since Last MPI	Not reached	
Authority to Fly (Issue Date)	18 August 2010	
Authority to fly (Expiry Date)	16 February 2011	
C of R (Issue Date) (Present Owner)	5 February 2010	
Operating Categories	Standard	
Recommended fuel type used	Avgas LL 100	

### Engine

Type	Rotax 912
Serial Number	4406998
Hours since New	12
Hours since Overhaul	TBO not reached

## Propeller

Type	Aero propeller
Serial Number	Unknown
Hours since New	12
Hours since Overhaul	TBO not reached

### 1.7 Meteorological Information

1.7.1 The pilot reported fine weather conditions at the time of the accident:

Wind direction	West	Wind speed	15 kt	Visibility	Good
Temperature	20°	Cloud cover	Clear	Cloud base	No clouds
Dew point	18°				

### 1.8 Aids to Navigation

1.8.1 The aircraft was fitted with the standard navigational aids certified for the type, and, there was no record of failures on these prior to the accident.

### 1.9 Communications

1.9.1 The aircraft was fitted with the standard communications equipment for the type, and there was no report of failures to the system before the accident. There was no recorded communication between the pilot and air traffic control during the flight.

### 1.10 Aerodrome Information

1.10.1 The accident occurred in the Koedoesvlei area at the geographical position S32°.45.05' E18°20.48.00' at an elevation of 520 ft AMSL.

### 1.11 Flight Recorders

1.11.1 The aircraft was not fitted with a Cockpit Voice Recorder (CVR) or a Flight Data Recorder (FDR) and neither was required by regulations to be fitted to this type of aircraft.

### 1.12 Wreckage and Impact Information

1.12.1 The on-site investigation revealed that the aircraft had hit the ground in a nose-down attitude after collision with the power lines. The windscreen, undercarriage and wooden propeller were destroyed. The wings, engine mountings and firewall were substantially damaged.



**Figure 3.** The aircraft after the accident – rear view.

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

1.13.1 The pilot was in possession of a valid aviation medical certificate.

### **1.14 Fire**

1.14.1 There was no pre- or post-impact fire.

### **1.15 Survival Aspects**

1.15.1 The accident was considered to be survivable because the cockpit was still intact after impact.

1.15.2 The pilot was properly secured by the aircraft's safety harnesses.

### **1.16 Tests and Research**

1.16.1 Not considered necessary.

### **1.17 Organisational and Management Information**

1.17.1 This was a private flight.

### **1.18 Additional Information**

1.18.1 None.

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

1.19.1 None.

## **2. ANALYSIS**

- 2.1 Available information indicated that fine weather conditions prevailed in the area at the time of the flight and subsequent accident. The weather was therefore considered not to have had any bearing on the accident. The aircraft was properly maintained in accordance with the manufacturer's approved procedures and no documented evidence was found indicating any defect or malfunction before the flight that could have contributed to or caused the accident.
- 2.2 The pilot held a commercial licence as well as a valid aviation medical certificate issued by the SACAA. During the telephone conversation with the pilot, he indicated that the aircraft had collided with power lines on approach for landing. He was familiar with the aerodrome and the obstacles around the area. It was therefore concluded that the pilot had neglected to maintain a safe altitude in order to clear the obstacles before landing.

## **3. CONCLUSION**

### **3.1 Findings**

- (i) The pilot was the holder of a commercial pilot's licence and the aircraft type was endorsed in his logbook.
- (ii) The pilot was involved in a private flight when the accident occurred.
- (iii) The pilot's medical was valid at the time of the accident.
- (iv) The pilot held a Night Rating at the time of the accident.
- (v) The aircraft was issued with an Authority to Fly, which was valid until 16 February 2011.
- (vi) The weather was good.
- (vii) The accident was considered survivable.

### **3.2 Probable Cause/s**

- 3.2.1 The pilot's failure to clear a known obstacle (power lines).

### **3.3 Contributing factor/s**

- 3.3.1 Poor airmanship.

#### **4. SAFETY RECOMMENDATIONS**

4.1 None.

#### **5. APPENDICES**

5.1 None.

Report reviewed and amended by the Advisory Safety Panel 8 February 2011.

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