



AIRCRAFT ACCIDENT REPORT AND EXECUTIVE SUMMARY

				Reference:	CA18/2/3/8779	
Aircraft Registration	ZU-BMX	Date of Accident	12 April 2010		Time of Accident	1300Z
Type of Aircraft	KIS TR-1		Type of Operation	Private		
Pilot-in-command Licence Type		Private	Age	57	Licence Valid	No
Pilot-in-command Flying Experience		Total Flying Hours	399,5		Hours on Type	Unknown
Last point of departure		Petit Aerodrome (FARA)				
Next point of intended landing		Petit Aerodrome (FARA)				
Location of the accident site with reference to easily defined geographical points (GPS readings if possible)						
Petit Aerodrome (FARA) at the GPS coordinates S26° 05' 169" E028° 23' 436"						
Meteorological Information		Surface wind: light and variable; Temperature: 25°C; Visibility: > 10 km				
Number of people on board	1 + 0	No. of people injured	0	No. of people killed	1	
Synopsis						
<p>A witness assisted the pilot to move the aircraft, from which the engine cowling had been temporarily removed, from the hangar at Petit aerodrome. The pilot then taxied the aircraft on runway 21 to check the engine parameters, and afterwards taxied back at speed. The aeroplane lifted from the ground and stalled, and the left wing struck the ground, followed by the nose. The aircraft spun around, skidded for a few metres and caught fire.</p> <p>The pilot was fatally injured and the aircraft was destroyed by post-impact fire.</p>						
Probable Cause						
<p>The aircraft entered a stall from which the pilot could not recover. The left wing struck the ground, followed by the nose.</p>						
IARC Date				Release Date		



AIRCRAFT ACCIDENT REPORT

Name of Owner : Stand thirty-eight Benoni CC
Name of Operator : Private
Manufacturer : TRI Technologies Inc.
Model : KIS TR-1
Nationality : South African
Registration Marks : ZU-BMX
Place : Petit Aerodrome
Date : 12 April 2010
Time : 1300Z

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 A witness assisted the pilot to move the aircraft, from which the engine cowling had been temporarily removed, from the hangar at Petit aerodrome. The pilot then started the aircraft with the intention of test-running the engine. According to this witness, the pilot taxied the aircraft to runway 21 and on his return, taxied faster and became airborne. He lost control and the aircraft's left wing struck the ground. The aeroplane spun around and skidded for approximately 10 m before bursting into flames.
- 1.1.2 According to a second witness, who was also a family member, the pilot went to the airfield to install a new battery in the aircraft. After he had done this, he decided to do an engine ground run-up to check the correct operation of the engine. On the third run-up, the aircraft became airborne, the pilot lost control, and the aeroplane struck the ground, fatally injuring the pilot.

1.2 Injuries to Persons

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

1.3 Damage to Aircraft

1.3.1 The aircraft was destroyed.



Figure 1. The wreckage of ZU-BMX.

1.4 Other Damage

1.4.1 Minor damage to crops alongside the airfield.

1.5 Personnel Information

Nationality	South African	Gender	Male	Age	57
Licence Number	*****	Licence Type	Private		
Licence valid	No	Type Endorsed	No		
Ratings	Nil				
Medical Expiry Date	31 August 2010				
Restrictions	Corrective lenses				
Previous Accidents	Yes (see note below)				

- 1.6 Note: On 5 May 2002, the pilot was unable to control an aircraft after experiencing a sudden gust of wind on touchdown and the right wing made contact with the ground.

Flying Experience

Total Hours	399,5
Total Past 90 Days	2,0
Total on Type Past 90 Days	Unknown
Total on Type	Unknown

- 1.6.1 Note: according to the pilot's logbook, there was no indication of the hours on type.

1.7 Aircraft Information

Airframe

Type	KIS TR-1	
Serial Number	108	
Manufacturer	TRI Technologies Inc	
Year of Manufacture	1998	
Total Airframe Hours (at time of accident)	Unknown	
Last Annual Inspection (Date & Hours)	25 August 2008	52,30
Hours since Last Annual Inspection	Unknown	
Authority to fly (Issue Date)	04 August 2008	
Authority to fly expiry date	25 July 2009	
C of R (Issue Date) (Present Owner)	15 November 2007	
Operating Categories	Private	

- 1.7.1 Note: there was no record of aircraft operating hours after the last annual inspection.

Engine

Type	Subaru 2.2 Legacy
Serial Number	38307638L 89L
Hours since New	Unknown
Hours since Overhaul	Unknown

Propeller

Type	Warp Drive 68
Serial Number	T7513
Hours since New	Unknown
Hours since Overhaul	Unknown

- 1.6.2 Note: there is a possibility that the propeller had the same number of hours as the aircraft, as it was fairly new. The aircraft is believed not to have flown since 2008 due to the fact that it was undergoing maintenance on the engine.

1.8 Meteorological Information

1.6.1 Weather information as obtained from the South African Weather Services:

Wind direction	Variable	Wind speed	5 kt	Visibility	> 10 km
Temperature	25°C	Cloud cover	Nil	Cloud base	Nil
Dew point	13°C				

1.8 Aids to Navigation

1.8.1 The aircraft was fitted with standard navigational equipment for the type. No abnormalities were reported prior to the accident.

1.9 Communications

1.9.1 The aerodrome was registered and uncontrolled; therefore it is unknown whether or not the pilot broadcast a mayday call. The frequency used on this aerodrome was 133.2 MHz

1.10 Aerodrome Information

Aerodrome Location	FARA	
Aerodrome Co-ordinates	S26° 04' 54" E028° 24' 00"	
Aerodrome Elevation	5 460 feet	
Runway Designations	03	21
Runway Dimensions	1 300 m X 30 m	1 300 m X 30 m
Runway Used	21	
Runway Surface	Grass	
Approach Facilities	None	

1.11 Flight Recorders

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

1.12 Wreckage and Impact Information

1.12.1 The aircraft was taxiing on runway 21 at Petit aerodrome. The aircraft suddenly became airborne, drifted to the left of the runway and the left wing struck the ground, followed by the nose. The aeroplane spun around approximately 90° and skidded for about 10 m before coming to a halt. Post-impact fire broke out, destroying the aircraft.

1.12.2 The distance from the runway to the wreckage was approximately 40 m. The aircraft came to rest about 7,5m from the first point of impact.

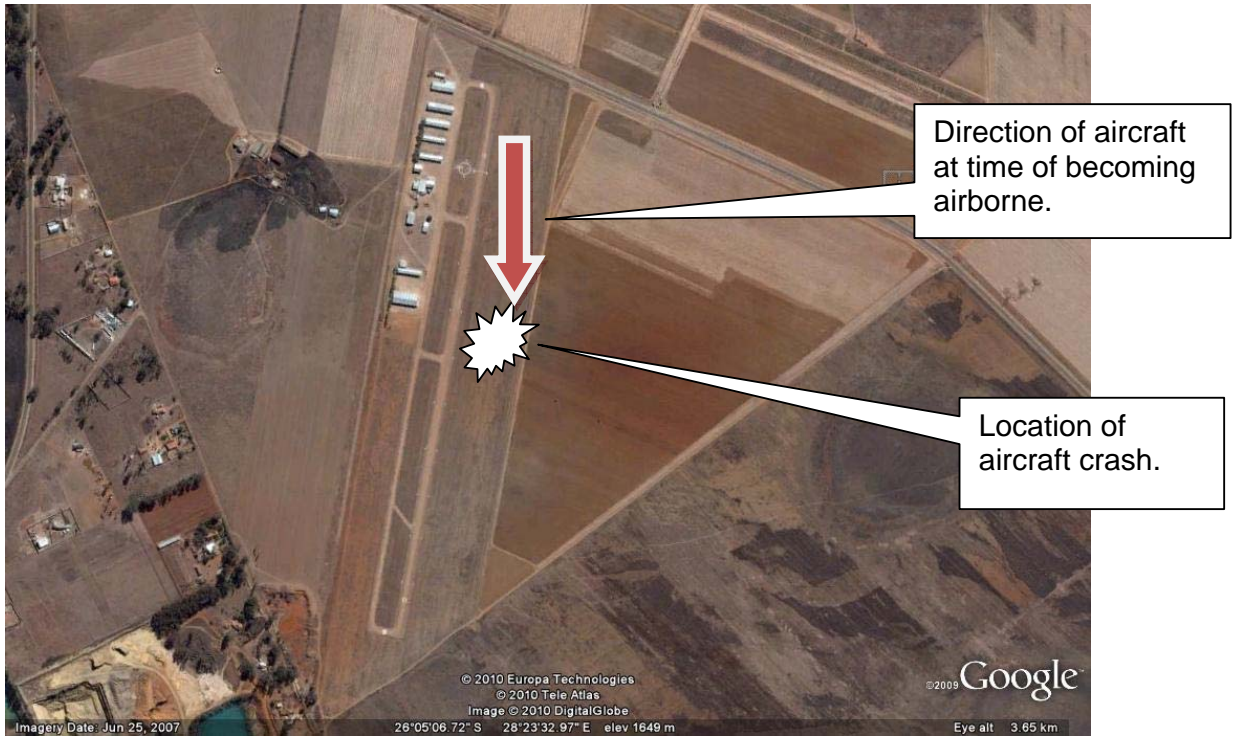


Figure 2. Satellite view of aerodrome.



Figure 3. The engine cowling, which was removed before the ground-runs.



Figure 4. Points of impact.



Figure 5. The position of the wreckage relative to the runway.

1.13 Medical and Pathological Information

1.13.1 The results of the post-mortems and toxicology tests were not available at the time of compiling this report. Should the results, once received, indicate that medical conditions may have affected the performance of the pilot, this will be considered as new evidence and the report will be revised.

1.14 Fire

1.14.1 A post-impact fire ensued, destroying the aircraft. This was a private aerodrome with no fire and rescue service available. The Rynfield fire and rescue, approximately 7 km away, was despatched.

1.15 Survival Aspects

1.15.1 The accident was considered not survivable. The pilot was trapped inside the aircraft when the fire started.

1.16 Tests and Research

1.16.1 The engine was running at the time of the accident.

1.17 Organisational and Management Information

1.17.1 This was a private flight.

1.17.2 The person who conducted the repairs on the engine had not been approved by the Aeroclub of South Africa.

1.18 Additional Information

1.18.1 There was no technical report on the engine. The aircraft had not flown since it was under new ownership and was undergoing engine maintenance at the time.

1.18.2 The pilot had more than 399.5 hours of flying experience. Shortly after he took ownership of the aircraft, it became apparent that the engine was faulty and needed to be repaired before the aeroplane could be flown. The maintenance personnel responsible for these engines were approached by the pilot requesting assistance with the repairs. Because of delays caused by parts availability, the engine repair and installation were completed in April 2010.

1.19 Useful or Effective Investigation Techniques

1.19.1 None.

2. ANALYSIS

- 2.1 Although the pilot had a valid pilot's licence and medical certificate, he was not rated on the aircraft type. On the day of the accident, he taxied the aeroplane on runway 21. During the second taxi, the aircraft lifted from the ground approximately 500 m from the runway threshold. The engine cowling was not fitted to the aircraft, indicating that it was not the pilot's intention to fly the aircraft. In addition, the aircraft was not airworthy for takeoff.
- 2.2 The fact that the top engine cowling was not fitted probably disturbed the airflow and caused increased drag, resulting in a stall with an extreme bank to the left. The aircraft was close to the ground at the time, and the left wing struck the ground. The pilot had very limited time to recover from the stall due to the insufficient height available.
- 2.3 The aircraft was totally destroyed by the post-impact fire.
- 2.4 Information from the South African Weather Services revealed that fine weather conditions prevailed in the area at the time of the accident. The weather was not a contributory factor to the accident.

3. CONCLUSION

3.1 Findings

- 3.1.1 According to the records, the pilot had an invalid licence as he was not rated on the aircraft type. It was not the pilot's intention to fly the aircraft.
- 3.1.2 The records indicate that the pilot had flown two hours during the previous ninety days but not on that particular aircraft type.
- 3.1.3 The pilot had a valid medical certificate with an expiry date of 31 August 2010.
- 3.1.4 The aircraft had an invalid authority to fly certificate issued on 04 August 2008 with an expiry date of 25 July 2009, therefore there are no records of the hours at the last annual inspection.
- 3.1.5 The aircraft had been registered under the current owner's name since 25 November 2007.
- 3.1.6 The aircraft stalled and the left wing struck the ground, followed by the nose wheel. The aeroplane spun approximately 90 degrees.
- 3.1.7 The aircraft was flown without an engine cowling fitted.
- 3.1.8 The aircraft was operating under VMC conditions.
- 3.1.9 Weather was reported as fine at the time of the accident.

3.2 Probable Cause/s

- 3.2.1 The aircraft entered a stall from which the pilot could not recover, resulting in the left wing and then the nose striking the ground.

4. SAFETY RECOMMENDATIONS

- 4.1 None

5. APPENDICES

- 5.1 None

Report reviewed and amended by the Advisory Safety Panel 17 August 2010.

-END-