REPUBLIC OF NAMIBIA

MINISTRY OF WORKS AND TRANSPORT

DIRECTORATE OF AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION

CIVIL AIRCRAFT ACCIDENT REPORT

ACCID / 09042021 / 01-02

OPERATION	:	PRIVATE
AIRCRAFT	:	AIRCRAFT
LOCATION	:	FARM ROIDINA
DATE	:	04 SEPTEMBER 2021

REPUBLIC OF NAMIBIA

MINISTRY OF WORKS AND TRANSPORT

Tel: (061) 208 8411
Fax: (061) 208 8495
Telex: (50-908) 709
Telegraphic Address: "NAMTRANS

Private Bag 12024
6719 Bell Street
Snyman Circle
Windhoek
Namibia
15 October 2021

19H00
RECEIVED
2020 -10- 19

To : **Minister of Works and Transport**

From : **Director of Aircraft Accident and Incident Investigations**

RE: AIRCRAFT ACCIDENT REPORT

Please find attached the final report on the above subject accident. In accordance with the International Civil Aviation Organization Annex 13- Aircraft Accident and Incident Investigation. – Standard 6.13, final reports shall be published as soon as possible in the interest of accident prevention.

It is recommended that copies of these final reports to be made available to the public and other interested parties upon request. Your approval is therefore sought to release the said report.

pp

Magnus Abraham
Director: Aircraft Accident and Incident Investigations

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FOREWORD

This report presents the factual information, data analysis, conclusions, and safety recommendations reached during the investigation. The purpose of the investigation was to establish the circumstances surrounding this accident.

In accordance with the provisions of Annex 13 to the contention on International Civil Aviation Organization, the accident's analysis, conclusions, and safety recommendations contained therein are intended neither to apportion blame nor to single out any individual or group of individuals. The main objective was to identify the systematic deficiencies and draw lessons, from the occurrence, which might help to prevent accidents and incidents in the future. To this end, many a time, the reader may be interested in whether or not an issue was a direct cause of the accident (that has already taken place), whereas the investigator is mainly concerned with the prevention of future accidents/incidents.

As a result, usage of this report for any purpose other than (the latter and spirit of Annex 13 and other relevant statutes) prevention of similar occurrences in the future might lead to erroneous interpretations and applications.

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ACCIDENT REPORT – EXECUTIVE SUMMARY

Aircraft Registration	**V5-KAI**	**Date of Accident**	04 Sept 2021	**Time of Accident**	10:20 UTC
Type of Aircraft	PIPER CHEROKEE PA 28		**Type of Operation**	Training	
Pilot-in-command license type		Student pilot	**Age** 44	**License valid**	No
Pilot-in-command flying experience		Total flying hours	44.9	Hours on type	33.9
Last point of departure	Farm Roidina , 20 km north of Omaruru, Namibia				
Next point of intended landing	Uis Airfield, 100 km North west of Omaruru, Namibia				
Location of the accident site with reference to easily defined geographical points (GPS readings if possible)					
Farm Roidina, 20 km north of Omaruru, Erongo Region, Namibia S 21 11 17 E 016 03 81					
Meteorological Information	**Wind 070º / 12 Kts CAVOK Temp 35ºC**				
Number of people on board	1	**No. of people injured**	1	**No. of people killed**	0

Synopsis

On the 04 Sept 2021 around 09:20 UTC, a Piper Cherokee 180 with Reg No. V5-KAI took off from the Swakopmund Airfield with one crew on board. The intention was to fly a cross country navigation exercise as part of his hour building requirements towards a private pilot license. After an hour s flight the aircraft arrived overhead the Roidina airstrip 20 km north of Omaruru and the student pilot executed a touch and go landing on runway 04.During the landing roll the student pilot experience directional control and expedite the takeoff. However the vital actions for takeoff was not followed and the aircraft still with full flaps deployed, could not gain height or sufficient airspeed, remaining at 10 feet above ground. A crosswind from the right pushed the aircraft off the centerline to the left and into the tree line where it was badly damage during the crash. The student pilot was injured. The farm owner which became worried for not seeing the aircraft departed rushed to the airstrip where he helped the student pilot out of the wreckage and rushed him to the Omaruru hospital.

The Directorate of Aircraft Accident and Incident Investigations (DAAII) in Namibia was informed by the flight school telephonically about the accident and an official investigation commenced the next day.

The weather at the time of the accident was CAVOK with light winds.

The last Annual Inspection (AI) was carried out and certified on 13 July 2021, in accordance with the Piper Cherokee Maintenance Manual and NAMCARS 2001 by a Namibian AMO with approval No. 066, issued on the 20 Aug 2011, with the expiry date of the 4 Jan 2022, at the total of 3665.7 air frame hours (3558.6 Hobbs). The approval was issued in accordance with Part 145 of the NAMCARS 2001. At the time of the accident, the aircraft accumulated a further 40.4 hours since the last (AI) was certified.

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Contributing factors
Slight cross-wind from the right during take-off. Pilot did not configure aircraft for take-off.
Probable Cause
Collision with obstacle / trees after take-off.

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AIRCRAFT ACCIDENT REPORT

Name of Owner / Operator	**: Klein Windhoek Guesthouse.**
Manufacturer	**: Piper A/C Corp.**
Model	**: Cherokee 180**
Nationality	**: Namibian**
Registration Marks	**: V5 - KAI**
Place	**: Farm Roidina, 20 km northeast of Omaruru Namibia**
Date	**: 04 Sept 2021**

All times given in this report are Co-ordinated Universal Time (UTC), unless otherwise stated.

Disclaimer:

The report is produced without prejudice to the rights of the Directorate of Aircraft Accident Investigations, which are reserved.

Purpose of the Investigations:

In terms of the Aviation Act (Act No 6 of 2016) and ICAO Annex 13, this report was compiled in the interest of the promotion of aviation safety and the reduction of risk of aviation accident or incidents and **not to apportion blame or establish legal liability.**

This report contains facts relating to aircraft accidents or incidents which have been determined at the time of issue.

The report may therefore be revised should new and substantive facts be made available to the investigator.

1. FACTUAL INFORMATION

1.1 History of Flight

1.1.1 On 04th September 2021 at around 09:20 UTC, a Piper Cherokee 180 (PA28) with Registration No. V5-KAI took off from Swakopmund with one crew, a student pilot, on board. The intention was to fly a cross country navigation exercise as part of his training and hour building.

1.1.2 A Flight plan (FPL) was filled and the aircraft was signed out and authorized by the flight school for navigation training exercise.

1.1.3 The first leg of the flight went without incident and the Walvisbay Air Traffic Controller (ATC) could hear the student pilot making all the required radio calls until he left the Walvisbay Terminal area (TMA) airspace heading North-East towards Omaruru.

1.1.4 The prevailing weather en-route was CAVOK with light winds.

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1.1.5 At around 10: 20 UTC the student pilot started his decent from 7500 feet over Omaruru and thereafter joined overhead Farm Roidina at 2000 feet. The farm owner also witnessed the aircraft overhead the airfield. The intention was to do a touch and go on the gravel runway of Farm Roidina and continue to Uis.

1.1.6 However the vital actions for takeoff was not followed and the aircraft still with full flaps deployed, could not gain height or sufficient airspeed, remaining at 10 feet above ground. A crosswind from the right pushed the aircraft off the centerline to the left and into the tree line where it collided with the trees and was badly damage during the crash. The student pilot sustained back and head injuries.

1.1.7 The farm owner became worried when he did not see the aircraft depart again and rushed to the airstrip. He located the wreckage and helped the student pilot out of the wreckage and rushed him to the Omaruru hospital.

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 on impact.

Image 1 Fuselage with wings broken off.

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1.4 Other Damage

1.4.1 There were no other damages.

1.5 Personnel information

Nationality		South African			
Licence No	SPL 73396	Gender	Male	Age	44
Licence valid		No	Type endorsed	Yes	
Ratings		None			
Medical expiry date		30 November 2022			
Restrictions		None			
Previous accidents		None			

Note : The student pilot licence was not signed by the holder.

Flying Experience:

Total hours	44.9
Total past 90-days	4.6
Total on type past 90-days	4.6
Total on type	33.9

1.6 Aircraft information

Image 2 – File photo for illustration purposes only.

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Airframe:

Type	Piper Cherokee 180	
Serial No.	28 - 5220	
Manufacture	Piper A/C Cooperation	
Year of manufacture	1969	
Total airframe hours (at time of accident)	3665.7	
Last annual inspection (hours & date)	3558.6	13 July 2021
Hours since annual inspection	40.4	
Authority to Fly (issue date)	17 Dec 2020	
Authority to Fly (expiry date)	16 Dec 2021	
C of R (issue date) present owner	05 Dec 2017	
Operating categories	Standard F	

Engine:

Type	Lycoming H IO 360 A 4A
Serial No.	L-29865 – 36 A
Hours since New	463.3
Hours since Overhaul	T.B.O. not yet reached

Propeller:

Type	SENSENICH
Serial No.	67EM8S5-0-60
Hours since New	463.3
Hours since Overhaul	T.B.O. not yet reached

1.7 Meteorological Information

1.7.1 The investigator did not obtain a weather report for the area as no satellite weather stations were available in that area.

1.8 Aids to navigation

1.8.1 The aircraft was equipped with standard navigation equipment and a panel mounted GPS

1.9 Communications

1.9.1 The aircraft was equipped with standard communication equipment for this type.

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1.10 Aerodrome information

1.10.1 Not applicable.

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 were they required by the regulation for this type.

1.11.2 The GPS model did not make provision for data downloads.

1.12 Wreckage and impact information

1.12.1 Location of Accident aerial view.

Red Arrow indicating line of approach into tree line. *Straight line indicating runway center line of Runway 04*

This apace was left open intentionally.

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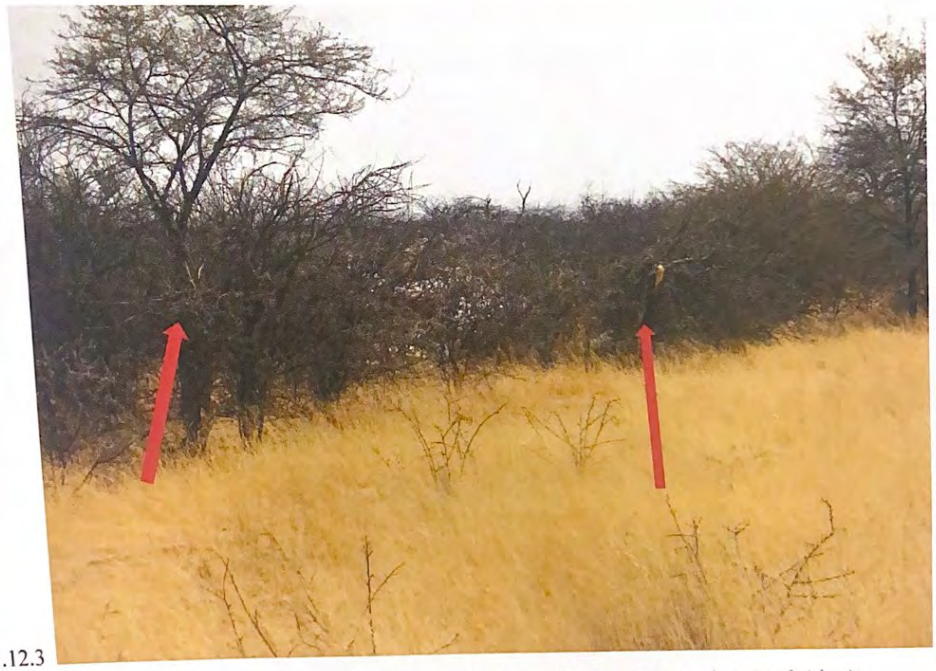
1.12.2

Image 3 Aircraft direction of travel into tree line



1.12.3

Image 4 Left Arrow indicates where aircraft left wing struck the tree Right Arrow indicates where aircraft right wing struck the tree

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1.12.4

Image 5 Arrow indicating the hole in left window where injured pilot was extracted from.

1.13 Medical and pathological information

1.13.1 No medical, toxicological and pathological investigation were carried out.

1.14 Fire

1.14.1 There was no pre or post-impact fire.

1.15 Survival aspects

1.151 The accident was deemed to be survivable due to the slow forward impact speed of the aircraft.

This space was left open intentionally.

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Image 6 The cabin remained intact due to the surrounding trees absorbing most of the impact forces.

1.16 Tests and research

1.16.1 No further test and research was carried out.

1.16.2 No technical assistance from AMO s was required by the DAAII into the accident.

1.17 Organizational and management information

1.17.1 The aircraft was owned by Klein Windhoek Guesthouse and utilized by the Swakopmund flying school for training purposes.

1.17.2 The aircraft was signed out and authorized by the flight school for the navigation training exercise.

1.17.3 After the accident, an Emergency Response Plan was activated and implemented by the owner and instructor of the Swakopmund Flying School.

1.18 Additional Information

1.18.1 None.

1.19 Useful or effective investigation techniques

1.19.1 None.

2. ANALYSIS

2.1 On 04th September 2021 at around 09:20 UTC, a Piper Cherokee 180 (PA28) with Registration No. V5-KAI took off from Swakopmund with one crew, a student pilot, on board. The intention was to fly a cross country navigation exercise as part of his training and hour building.

2.2 The student pilot was the holder of a student pilot license with a valid medical certificate at the time of the accident and had a total of 44, 9 flying hours.

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2.3 The cross country navigation training flight was planned and the aircraft was signed out and authorized by the flight school for the navigation training exercise. A map with calculations was found in the aircraft.

2.4 The aircraft was airworthy and the aircraft logbooks were also found in the aircraft.

2.5 However after landing at Roidina Airstrip the student pilot did not fully configured the aircraft for takeoff as full flaps was still deployed and therefore could not gain height or sufficient airspeed, remaining at 10 feet above ground. A crosswind from the right pushed the aircraft off the centerline to the left and into the tree line where it collided with the trees and was badly damage during the crash. The student pilot sustained back and head injuries

2.6 It was concluded that the engine was working and the propeller was spinning when the aircraft impacted the ground.

3. CONCLUSION

Findings

3.1.1 The pilot was the holder of a student pilot license, validated by the NCAA as per regulation. However the licence was not signed by the holder making it invalid at the time of the accident. The student pilot s medical certificate was valid at the time of the accident.

3.1.2 The pilot did not execute the pre take off vital actions during the touch and go landing and the 30 degree flap setting kept the aircraft speed and climb performance behind the drag curve.

3.1.3 The slight crosswind from the right pushed the aircraft left of the runway 04 centreline and contributed to the accident.

3.1.4 The pilot lost situational awareness during the take-off and drifted into the trees next to the runway.

3.1.5 The Piper Cherokee 180 was airworthy and certified for VFR flight conditions.

3.1.6 The aircraft's flight folio and maintenance records did not reveal any recent problem issues or occurrences since the last MPI and was serviceable at the time of the accident.

3.1.7 The student pilot filed a flight plan to the Omaruru airfield but landed at a different airstrip for the navigation exercise. Although a Flight plan (FPL) was filed, there was no mention of farm Roidina in the FPL. The student pilot filed his route as follows: Swakopmund direct to Omaruru airfield direct to Uis airfield direct back to Swakopmund. If the aircraft was lost it could have delayed the Search and Rescue operations as authorities would be looking for the aircraft in the wrong places and if the student pilot sustained serious injuries, he could have succumbed to his injuries because of the delay.

3.2 Probable cause

3.2.1 Collision with obstacles. (trees)

4. SAFETY RECOMMENDATIONS

4.1 None

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Compiled by:

.....

B. Engelbrecht

Investigator-in-training

.....

Date..15/10/2021

O.V. Plichta

Investigator-in-charge

Released by:

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Date: ...19.10.2021

John Mutorwa (MP)

MINISTER: MINISTRY OF WORKS AND TRANSPORT