PRELIMINARY ACCIDENT REPORT

Accident and Incident Investigations Division

Accident
- Preliminary Report -
AIID Ref No: CA18/2/3/9891

Figure 1: The ZS-EBC aircraft. (https://www.jetphotos.com)

Description:

On Tuesday 30 June 2020, the student pilot was conducting a solo-consolidation circuit training flight at Wonderboom Aerodrome (FAWB) on Runway 11 when the accident occurred. The flight was conducted under Visual Flight Rules (VFR). Before the accident flight, the student completed a pre-solo consolidation circuit training check flight with a Grade III flight instructor and was considered fit to continue with the exercise after completing three circuits. The instructor then reviewed the weather conditions and concluded that they (weather conditions) were suitable for the student pilot to continue with the exercise before authorising the flight, which was planned to include three circuit patterns, with the first two circuits being touch-and-go, and the third circuit being a full stop landing. The accident happened during the second circuit on final approach for Runway 11. The aircraft crashed into the ground and was destroyed; the student pilot was fatally injured.

Reference Number	: CA18/3/2/9891
Name of Owner/Operator	: Professional Flight Centre
Manufacturer	: Piper Aircraft Cooperation
Model	: PA-28-180 Cherokee
Nationality	: South African
Registration Marks	: ZS-EBC
Place	: On a farm behind Pretoria University Faculty of Veterinary Science campus
Date	: 30 June 2020
Time	: 1048Z

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 (CAR) 2011, 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 apportion blame or liability.
Any person who has information regarding this incident should contact the Accident and Incident Investigations Division (AIID) on AIIDinbox@caa.co.za

Investigations process:
The AIID was informed of an accident involving a Piper PA-28-180 Cherokee which occurred on a farm behind Pretoria University Faculty of Veterinary Science campus on 30 June 2020. The accident was reported by Wonderboom (FAWB) Aerodrome control tower on 30 June 2020.

The AIID appointed an investigator-in-charge (IIC). Notifications were sent to the State of Registry, State of Operator, State of Manufacture and Design, and the South Africa Civil Aviation Authority (SACAA). The State of USA assigned an Accredited Representative to the investigation.

The information contained in this preliminary report was derived from the initial factual information gathered by the investigating team during the on-site investigation.

The AIID reports are made available to the public at:
http://www.caa.co.za/Pages/Accidents%20and%20Incidents/Aircraft-accident-reports.aspx

Notes:

1. Whenever the following words are mentioned in this report, they shall mean the following:

Accident – this investigated accident
Aircraft – the Piper Cherokee PA-28-180 involved in this accident
Investigation – the investigation into the circumstances of this accident
Pilot – the pilot involved in this accident
Report – this accident report

2. Photos and figures used in this report were obtained from different sources and may be adjusted from the original for the sole purpose of improving clarity of the report. Modifications to images used in this report were limited to cropping, magnification, file compression; or enhancement of colour, brightness, contrast; or the addition of text boxes, arrows or lines.

Disclaimer:

ABBREVIATION	DEFINITION
AD	Airworthiness Directives
AGL	Above Ground level
ATC	Air Traffic Control
AMO	Aircraft Maintenance Organisation
AMSL	Above Mean Sea Level
C of R	Certificate of Registration
C of A	Certificate of Airworthiness
C of T	City of Tshwane
CVR	Cockpit Voice Recorder
FDR	Flight Data Recorder
VFR	Visual Flight Rules
HP	Horsepower
MPI	Mandatory Periodic Inspection
NW	Nautical Miles
SAWS	South African Weather Service
SB	Service Bulletin
PF	Pilot Flying
RPM	Revolutions per minute
SACAA	South African Civil Aviation Authority
SAPS	South African Police Service
IAW	In Accordance With

1 FACTUAL INFORMATION:

1.1 History of Flight:

1.1.1 On Tuesday 30 June 2020, the student pilot and a Grade III flight instructor reported at the flight school situated at Wonderboom (FAWB) Aerodrome where they prepared for a dual pre-solo consolidation circuit training flight. The student pilot was the pilot flying (PF) and the flight instructor was the pilot monitoring (PM). The student pilot had flown several circuits at FAWB before and was familiar with the circuit patterns and procedures. Before the training started, the weather conditions in the area were checked and were found suitable for the training flight with the wind of not more than 07 knots. The flight was conducted under visual flight rules (VFR) by day. No flight plan was filed. The aircraft was operated under the provisions of Part 141 of the Civil Aviation Regulations (CAR) 2011 as amended. The duo first conducted a short briefing followed by a pre-flight inspection of the aircraft – a Piper PA-28-180.

1.1.2 According to the school flight authorisation sheet entry dated 30 June 2020, about 64 litres of Avgas LL 100 fuel were uplifted. The flight instructor reported that the aircraft was airworthy with no defects recorded in the flight folio. The engine was started and was left to run for a few minutes until the engine instruments had stabilised. The aircraft was taxied towards the threshold of Runway 11 where the engine power checks were carried out. The aircraft was later cleared to take-off and the student pilot opened the throttle and accelerated. The aircraft rotated and climbed to the circuit altitude. Approximately three circuits were conducted. The instructor confirmed that the student pilot was able to handle and fly the aircraft satisfactorily. The instructor assessed the weather conditions again and considered them suitable for the exercise before disembarking the aircraft after the third circuit and allowing the student pilot to conduct a solo consolidation. The student pilot taxied the aircraft towards Runway 11 whereafter she took off and completed one circuit. The accident occurred during the second circuit on a farm behind Pretoria University Faculty of Veterinary Science campus while on final approach for Runway 11, about 2.4 nautical miles (nm) west of FAWB. According to the air traffic control (ATC), at 1048Z, the ZS-EBC made an unreadable transmission. The aircraft was expected to be on base, turning final approach for Runway 11. The ATC kept on instructing ZS-EBC to continue approach on Runway 11, without success.

1.1.3 At 1049Z, the pilot of another aircraft that was at holding point on Runway 11 reported that ZS-EBC appeared to have been involved in an accident. At about the same time, traffic on the downwind saw a black smoke and notified the ATC. The ATC immediately activated the crash alarm and the aerodrome aircraft rescue and fire-fighting (ARFF) team dispatched to the accident site. The South African Police Service (SAPS) and the City of Tshwane (COT) Emergency Medical Services (EMS) were also notified of the accident and they dispatched to the accident scene. The aircraft was found destroyed with the student pilot fatally injured. The ARFF team extinguished the fire from the wreckage. The City of Tshwane (COT) pathological services took care of the deceased student pilot.

1.1.4 The first witness who was working in the Onderstepoort area near the accident site reported that he saw a small aircraft approaching from the west. The aircraft then executed a left turn at a height of about 100 feet above ground level (AGL) before the sudden drop of the left wing and the steep constant descent of the aircraft in a spiral to the ground. The aircraft disappeared from his view. The next thing he heard was the high engine revolutions (revs), followed by a high impact sound. Black smoke emerged from behind the university buildings where he had just seen the aircraft fly over before disappearing.

1.1.5 The second witness who is a business owner in the Onderstepoort area reported that he first saw the aircraft flying very low before making a left turn behind the university buildings. From where he stood, the aircraft's wings were vertical (left wing low and right wing high). He said that the aircraft was so low that he could clearly see every detail on it whilst it was rapidly losing height and shaking. The aircraft disappeared from his view. The next thing he saw were flames and black smoke emerging from behind the university buildings.

1.1.6 During the on-site investigation, a Commercial Pilot Licence (CPL) holder operating from FAWB called the investigator-in-charge (IIC) to share what he experienced while on his aircraft, a Cessna 206, around the time of the accident. He reported that his aircraft was following ZS-EBC (the accident aircraft). He informed the IIC that he experienced severe turbulence on final approach on Runway 11 that he chose to make a full stop landing.

1.1.7 The accident happened during daylight on a ploughed field at Global positioning System (GPS) co-ordinates determined to be S25° 38' 55.5" E28° 10' 30.7" at an elevation of approximately 3991 feet above mean sea level (AMSL).

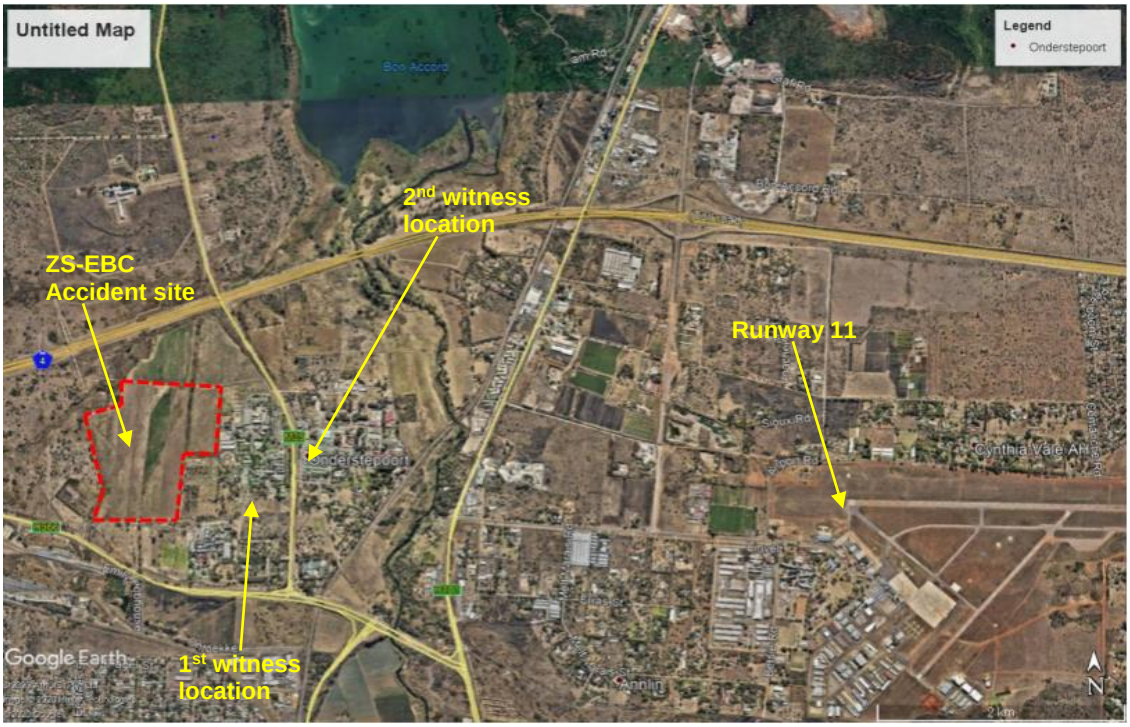

Figure 2: A map showing the accident site and FAWB Aerodrome. (Source Google Maps)

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 during the accident sequence.

Figure 3: The wreckage at the accident site.

1.4 Other Damage

1.4.1 The farmer estimated that approximately 130 bales of Teff hay were burnt and approximately 4 unharvested Teff hay (potentially 400 bales) were also burnt.

*NOTE: Hay is the grass that has been cut and dried to be stored for use as animal food. It is usually fed to animals in winter or during times when drought or other conditions make pasture unavailable.

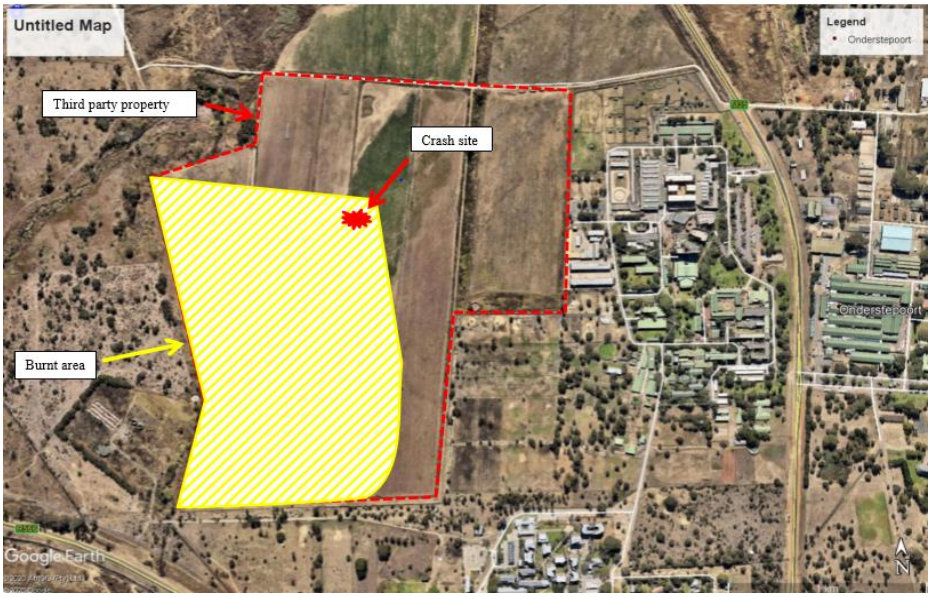

Figure 4: The burnt portion of the farm after the accident. (Source Google Earth)

Figures 5/6: Bales that survived the fire and some that burnt to ashes.

1.5 Personnel Information:

Student Pilot:

Nationality	South African	Gender	Female	Age	16
Licence Number	0275501251	Licence Type	Student Pilot Licence		
Licence Valid	Yes	Type Endorsed	Yes		
Ratings	Nil				
Medical Issue Date	11 September 2019				
Medical Expiry Date	30 September 2024				
Restrictions	Nil				
Previous Accidents	None				

Flying Experience:

Total Hours	24.14
Total Past 90 Days	11
Total on Type Past 90 Days	11
Total on Type	24.14

1.5.1 The student pilot was issued a Student Pilot Licence (SPL) by the SACAA on 11 September 2019 with an expiry date of 30 September 2024. She had a Class 2 medical certificate with no restrictions. The track record of the student pilot's training file showed that she had passed a technical examination of the aircraft she chose to be trained on. Included in the file were airspace rules and procedures for the student pilot's home aerodrome, as well as flight characteristics and operational limitations for the aircraft before she was granted a solo flight. Her initial solo flight was conducted on 26 June 2020 at 20.3 hours total flight time. Her dual check on the day was carried out by the chief flight

instructor (Grade II) in accordance with (IAW) privileges outlined in the Civil Aviation Regulations (CAR) Part 61.17.2(1).

On the day of the accident, the student pilot completed three circuits under the supervision of a Grade III flight instructor and had demonstrated competence. She was considered fit to continue with the exercise, take-off, and flying a standard pattern visually to self-position for an approach and landing. Having reviewed the weather as suitable for the student pilot to continue with the circuit training, the instructor authorised the flight in accordance with his privileges as outlined in the CAR Part 61.16.5(1). The flight was planned to cover three circuit patterns with the first two circuits being a touch-and-go (landing on the runway and taking off again without coming to a full stop), and the third circuit was planned to end with a full stop landing.

Flight Instructor (Pre-solo consolidation flight instructor):

Nationality	South African	Gender	Male	Age	37
Licence Number	0272552084	Licence Type	Commercial Pilot Licence		
Licence Valid	Yes	Type Endorsed	Yes		
Ratings	Instruments Rating: Grade III Flight Instructor				
Medical Issue Date	11 June 2020				
Medical Expiry Date	30 June 2021				
Restrictions	Nil				
Previous Accidents	None				

Flight Instructor Experience:

Total Hours	498.93
Total Past 90 Days	10.3
Total on Type Past 90 Days	5.8
Total on Type	67.22

1.5.2 The instructor held a valid Flying Instructor (FI) rating, which intitled him to conduct flying training on small single-engine aircraft, including the type of aircraft on the day of the accident. His last competency test was carried out on 19 June 2020. He had accumulated about 22 hours of dual flight with the student pilot. The instructor was issued a Class 1 aviation medical certificate on 11 June 2020 with an expiry date of 30 June 2021.

Air Traffic Controller:

Nationality	South African	Gender	Male	Age	39
Licence Number	0856	Licence Type	Air Traffic Services Licence		
Licence Valid	Yes	Type Endorsed	Yes		
Ratings	Aerodrome controller				
Medical Expiry Date	31 October 2021				
Restrictions	Nil				
Previous Accidents	None				

1.5.3 The ATC on duty had signed on for his shift at 0745Z. He had a valid Air Traffic Services (ATS) licence and was certified to provide aerodrome control duties at Wonderboom Aerodrome (FAWB). His last proficiency check was carried out on 8 June 2019 with an expiry date of 19 July 2020. The ATC was issued a Class 3 aviation medical certificate on 23 April 2018 with an expiry date of 31 October 2021.

1.6 Aircraft Information

1.6.1 The Piper PA-28-180 Cherokee is a single-engine, low wing monoplane of conventional design, constructed primarily of aluminium. It has four seats. The aircraft is powered by a carburetted, four-cylinder Lycoming O-360-A3A piston engine rated at 180 HP at 2700 revolutions per minutes (RPM) driving a Sensenich 76EM855-0-60 fixed-pitch propeller. Dual controls are provided on the aircraft as standard equipment with a cable system used between the controls and the surfaces.

Airframe:

Type	PA-28-180 Cherokee	
Serial Number	28-1520	
Manufacturer	Piper Aircraft Corporation	
Year of Manufacture	1963	
Total Airframe Hours (At time of Accident)	5840.9	
Last MPI (Hours & Date)	5804.7	26 November 2019
Hours since Last MPI	36.2	
C of A (Issue Date)	17 November 2017	
C of A (Expiry Date)	30 November 2020	
C of R (Issue Date) (Present owner)	16 October 2017	
Operating Categories	Part 141	
Recommended Fuel Used	Avgas LL 100	

1.6.2 The last 100-hour Mandatory Periodic Inspection (MPI) on the aircraft was completed on 26 November 2019 at 5804.7 tachometer hours. The aircraft was maintained by the aircraft maintenance organisation (AMO) No 0278. The AMO certificate was issued by the Regulator (SACAA) on 28 August 2019 with an expiry date of 31 August 2020.

1.6.3 Examination of a 100-hour maintenance work pack, job card No PA 00763 indicated that all applicable recurring Service Bulletins (SBs) and Airworthy Directives (ADs) were complied with as recommended by the aircraft manufacturer.

1.6.4 The certificate of release to service was issued on 27 November 2019 and due to lapse at 5904.70 tachometer hours when the next inspection will be due or on 27 November 2020, whichever occurs first.

Engine

Type	Lycoming O-360-A30
Serial Number	L-6678-36
Hours Since New	5804.7
Hours Since Overhaul	1287.7

Propeller:

Type	Sensenich 76EM855-O-60
Serial Number	39 160K
Hours Since New	383.11
Hours Since Overhaul	Not Reached

1.7 Meteorological Information

1.7.1 The weather information below was obtained from the South African Weather Service (SAWS). A weather report was obtained for the day and time of the accident for Wonderboom Airport (FAWB).

Wind direction	090°	Wind speed	08kts	Visibility	9999m
Temperature	19°C	Cloud cover	Nil	Cloud base	Nil
Dew point	-2°C	QNH	1028 hPa		

1.7.2 The weather conditions were fine and clear with no reported low-level turbulence. There was a gradual increase in wind speed and not much change in wind direction. The Metar recorded at FAWB at 1000Z is included as an attachment (Figure 7) and contains the following weather variables:

(1) Dry-bulb temperature: 19ºC

(2) Dew-point temperature: -02ºC

(3) Wind direction and speed: 09008kt

(4) Pressure reduced to mean sea level: Q1028hPa

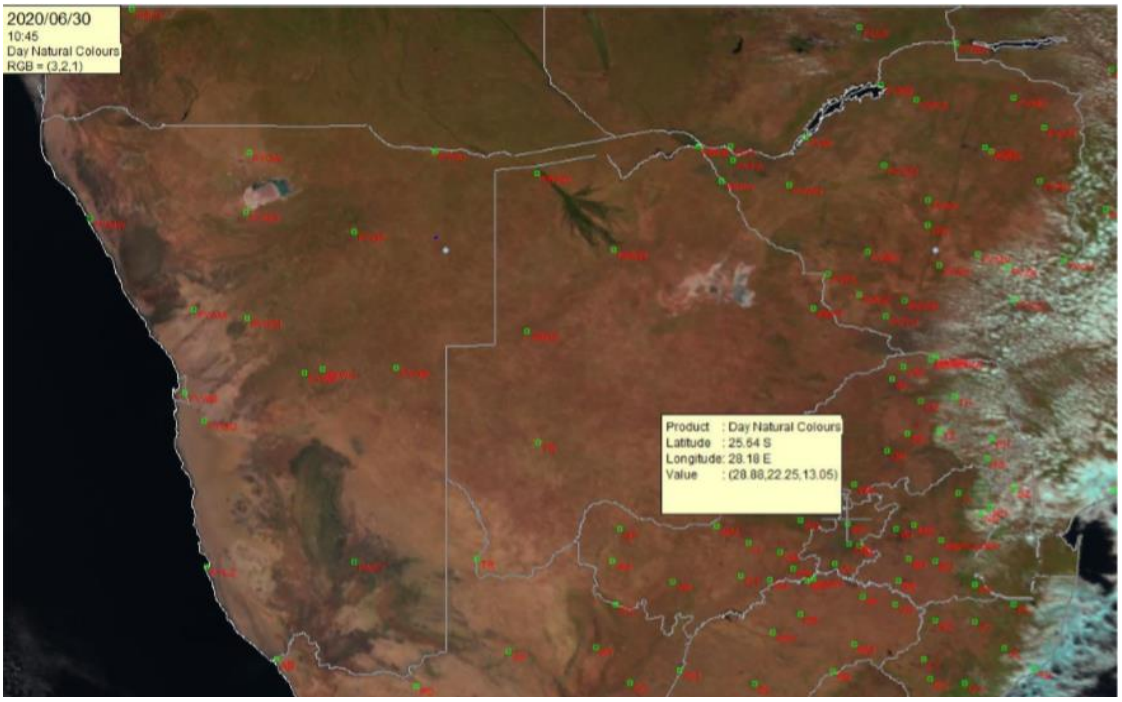

Figure 7: Satellite image indicated clear skies.

1.8 Aids to Navigation

1.8.1 The aircraft was equipped with standard navigational equipment as approved by the Regulator (SACAA) for the aircraft type. There were no recorded defects with the navigation system prior to the flight.

1.9 Communication

1.9.1 The aircraft was equipped with standard communication equipment as approved by the Regulator for the aircraft type. There were no recorded defects with the communication equipment prior to the flight.

1.10 Aerodrome Information

1.10.1 The accident happened approximately 2 nautical miles west of the aerodrome at GPS co-ordinates determined to be: S25° 38’ 55.5” E28° 10’ 30.7” 3991 feet AMSL.

Aerodrome Location	Wonderboom (FAWB)	
Aerodrome Co-ordinates	S2º 39.32” E28º 13.28”	
Aerodrome Elevation	4 095 feet AMSL	
Runway Dimensions	5997 x 98 feet and 4200 x 72 feet	
Runway Designations	11/29	Runway Designations
Runway Used	11	
Runway Surface	Asphalt	
Aerodrome Status	Licensed	
Approach Facilities	Runway lighting and PAPIs	

1.11 Flight Recorders

1.11.1 The aircraft was neither equipped with a cockpit voice recorder (CVR) or a flight data recorder (FDR), nor was it required by regulation to be fitted to this aircraft type.

1.12 Wreckage and Impact Information

1.12.1 The examination of the accident site confirmed that the aircraft was in a left-wing low nose-down attitude when it crashed. The accident happened on a privately-owned farm located behind the university campus at 230º magnetic heading. The aircraft came to rest approximately 98.8 metres from the first point of impact. The fuselage was destroyed by impact and fuel-fed fire that erupted post impact. The distribution of the aircraft parts indicated that the aircraft had little forward momentum on impact. All the aircraft control surfaces were identified at the accident site and the flaps were found in a retracted position. There was no evidence of in-flight break-up or post-impact fire. The left-wing outboard section broke-off during the accident sequence, coming to rest about 65 metres from the main wreckage; fuel from the left wing ignited.

1.12.2 Three propeller strike marks were noticed at the first point of impact, followed by a shallow impression made by the forward edge of the bottom of the engine cowling. The aircraft nosed over, and the right-wing fuel tank raptured; and the engine separated from the cradle during the accident sequence. The propeller also separated from the crankshaft flange and was located about 12 metres from the left side of the main wreckage. (See Figures 8 to 11)

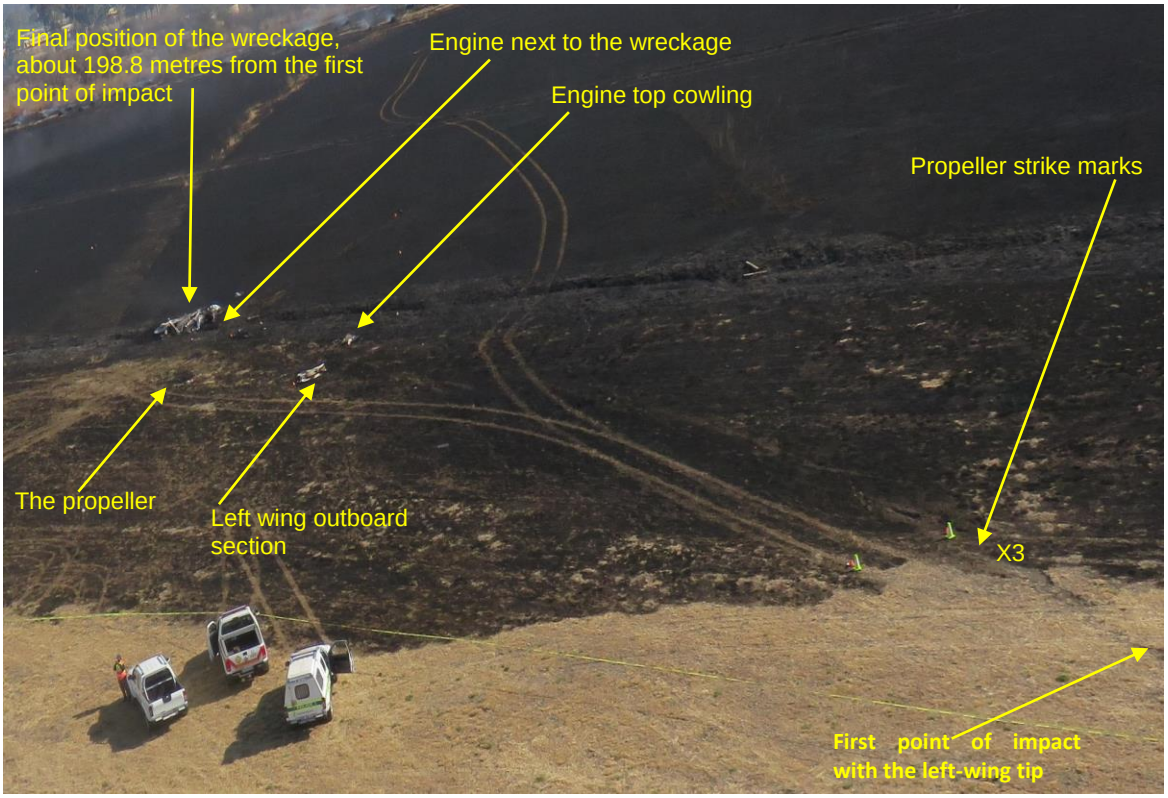

Figure 8: The aircraft's first point of impact and the wreckage layout.

Figures 9/10: The condition of the propeller and the crankshaft flange found at the accident site.

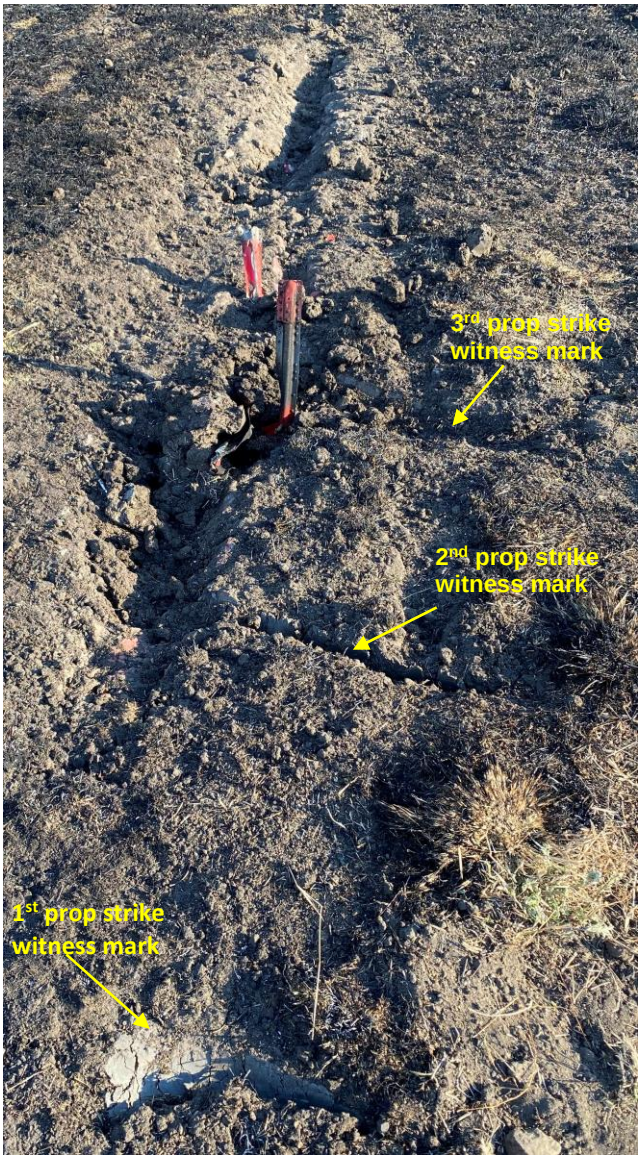

Figure 11: Ground marks left by the aircraft's blades.

1.13 Medical and Pathological Information

1.13.1 To be addressed in the final report.

1.14 Fire

1.14.1 An intense fire started after impact and burnt the fuselage, including the cockpit and cabin areas. There was sufficient fuel on-board (approximately 120 litres) which would have lasted for at least three hours of further flight when the accident occurred. The ignition source could not be established, although there was enough impact-related disruption to the electrical system to have caused arcing at some point in the impact sequence. The fuel could also have ignited from contact with a heat source in the engine.

1.15 Survival Aspects

1.15.1 The accident was considered not survivable as there was damage caused to the cockpit which caused fatal injuries to the pilot.

1.16 Tests and Research

1.16.1 To be discussed in the final report.

1.17 Organisational and Management Information

1.17.1 This was a training flight which was conducted under the provisions of Part 141 of the CAR 2011 as amended.

1.17.2 The training school was issued an Aviation Training Organisation (ATO) certificate by the Regulator on 1 January 2018 with an expiry date of 31 December 2022.

1.17.3 The student pilot was trained and assessed by two instructors at various stages of her training. Both instructors had valid licences and the required instructor ratings to carry out supervisory training.

1.17.4 The AMO No 0278 which carried out the last maintenance inspection on this aircraft prior to the accident flight was issued an AMO approval on 28 August 2019 with an expiry date of 31 August 2020.

1.18 Additional Information

1.18.1 Requirements for a Student Pilot Licence (SPL) (Source CAR Part 62 of 2011 as amended)

61.02.1 An applicant for a SPL shall –
(a) be 15 years or older, except where provided otherwise in Part 62; (b) hold a valid Class 1 or 2 medical certificate issued in terms of Part 67; (c) be registered with an approved aviation training organization for training towards a PPL.

Application for a SPL

61.02.2 The application for a SPL must be made to the Director on the appropriate prescribed form, and must be accompanied by – (a) an original or certified proof of the identity of the applicant; (b) proof of the age of the applicant; (c) a valid Class 1 or Class 2 medical certificate issued in terms of Part 67;

(d) the appropriate aircraft by name on which training will be conducted, provided that in the case of helicopters, that the student pilot will be restricted to two types of aircraft; (e) two recent passport-size photographs of the applicant; and (f) the appropriate fee as prescribed in Part 187.

Issuing of a SPL
61.02.3 (1) The Director shall issue a SPL in the appropriate prescribed form, as by the Director, if the applicant complies with the requirements referred to in regulation 61.02.2.

(2) Upon receipt of the SPL, the holder must immediately affix his or her signature thereon in ink in the space provided for such purpose.
Validity of a SPL
61.02.4 (1) A SPL is valid for a period of 2 years from the date of issue, provided the annual currency fees are paid.

(2) The holder of a valid SPL may not exercise the privileges of that licence unless he or she –

(a) is in the possession of a valid Class 1 or Class 2 medical certificate, issued to him or her in terms of Part 67; and (b) has submitted a copy of the medical certificate to the licensing authority, as required in regulation 61.01.6(6), in the event that the aviation medical examiner

is unable to submit electronic data to the Director.

Privileges and limitations of SPL

61.02.5 (1) The holder of a valid SPL may only fly solo as prescribed in Document SA-CATS 61 for the purpose of training for the applicable pilot licence –
(a) in the type of aircraft in which he or she is undergoing training as endorsed in his or her logbook; (b) after a prior written authorisation thereto for a flight, or a sequence of flights, as prescribed in the relevant curriculum and all such flights are under the supervision of the holder of an appropriate and valid flight instructor rating, or a person appointed by the Chief Flying Instructor, provided that such person is the holder of at least a PPL.
(c) without carrying any passengers; (d) on a flight other than an international flight; and (e) in VMC by day.

1.19 Useful or Effective Investigation Techniques

1.19.1 To be discussed in the final report.

2. Findings

2.1. General

From the available evidence, the following preliminary findings were made with respect to this accident. These shall not be read as apportioning blame or liability to any particular organisation or individual. To serve the objective of this investigation, the following sections are included in the conclusions heading:

2.2 **Findings** — are statements of all significant conditions, events or circumstances in this accident. The findings are significant steps in this accident sequence, but they are not always causal or indicate deficiencies.

2.2.1 The student pilot was issued a Student Pilot Licence (SPL) on 23 October 2019 with an expiry date of 22 October 2020. The student pilot's Class 2 aviation medical certificate was issued on 11 September 2019 with an expiry date of 30 September 2024 with no restrictions. The aircraft type was endorsed in the student pilot's licence. The student pilot's initial solo flight was conducted on 26 June 2020 at 20.3 hours total flight time.

2.2.2 The student pilot was authorised by her supervising flight instructor to conduct the solo consolidation flight following the three circuits training conducted under the supervision of the flight instructor. The flight was conducted under the provisions of Part 141 of the CAR 2011 as amended. The student pilot's licence was issued in accordance with the provisions of Part 61 and subpart 61.02.1 (a, b and c) 61.02.2 (b) and 61.02.5 (1) of the CAR 2011 as amended.

2.2.3 The student pilot had accumulated 24.14 total flight hours using the same aircraft type at the time of accident. The student pilot flew a total of 11 hours in the last 90 days prior to the accident.

2.2.4 According the school flight authorisation sheet entry dated 30 June 2020, the aircraft uplifted about 64 litres of Avgas LL 100 fuel. Following the accident, it was determined that the aircraft had enough fuel to last three more hours. The flight instructor reported that the aircraft was airworthy with no defects recorded in the flight folio.

2.2.5 The weather at the time of the accident was as follows: Wind: 090° at 08kts, Visibility:

9999m, QNH: 1028hPa, Temperature: 19°C and Dew Point: -2°C. The weather conditions were fine and clear and there was no reported low-level turbulence. A witness who is a CPL holder reported that while flying his Cessna 206 around the time of the accident, he experienced severe turbulence on final approach on Runway 11 which led him to make a full stop landing.

2.2.6 The training school was issued an Aviation Training Organisation (ATO) certificate on 1 January 2018 with an expiry date of 31 December 2022.

2.2.7 The aircraft certificate of airworthiness was issued on 17 November 2017 with an expiry date of 30 November 2020.

2.2.8 The aircraft was issued a certificate of registration on 16 October 2017.

2.2.9 The last 100-hour MPI on the aircraft was completed on 26 November 2019 at 5804.7 tachometer hours. The aircraft was maintained by the AMO No 0278. The AMO certificate was issued by the Regulator on 28 August 2019 with an expiry date of 31 August 2020.

2.2.10 Examination of a 100-hour maintenance work pack, job card No PA 00763 indicated that all applicable recurring SBs and ADs were complied with as recommended by the aircraft manufacturer.

2.2.11 The certificate of release to service was issued on 27 November 2019 and was due to lapse on 27 November 2020 or at 5904.70 tachometer hours, whichever occurs first.

2.2.12 There were no reported failures recorded in the flight folio and no reported failures or emergency calls broadcasted by the student pilot prior to the accident. On-site investigation revealed no evidence of pre-existing failures with the aircraft and its systems, and all damages were attributed to the accident.

2.2.13 The aircraft was reported to have been in a steep turn when it lost control before spinning and crashing. This indicated that there was a likelihood that the aircraft may have exceeded its turn and bank limits, resulting in one of the wings losing lift before stalling and entering a spin which the pilot could not recover from, resulting in the aircraft impacting the ground.

2.2.14 The aircraft was destroyed by impact forces and a post-impact fire which led to the student pilot being fatally injured.

3. On-going Investigation

3.1 The AIID investigation is on-going and will be looking into other operational aspects of this occurrence which may or may not have safety implications.

This Report is issued by:

Accident and Incident Investigations Division
South African Civil Aviation Authority
Republic of South Africa