

PRELIMINARY SERIOUS INCIDENT REPORT

Accident and Incident Investigations Division

Serious Incident
- Preliminary Report -
AIID Ref No: CA18/3/2/1434



Figure 1: The file picture of the ZS-TDJ aircraft. (Source: Operator)

Description:

On 16 December 2023, a Piper PA28-161 aircraft registered ZS-TDJ with the call sign AVIC123 took off on a navigational flight from George Airport (FAGG), Western Cape province, with the intention to land back at the same aerodrome. The solo student pilot on-board the aircraft had planned to fly from FAGG to Plettenberg Airfield (FAPG), Willowmore Aerodrome (FAWO), Oudtshoorn Airport (FAOH) and Mossel Bay Aerodrome (FAMO) before returning to FAGG. Take off at FAGG was uneventful. The student pilot headed to FAPG and, during the joining procedure, he broadcasted his position and intention to conduct a touch-and-go landing. At the time of joining, there was active traffic in the aerodrome. The student pilot's last broadcast was whilst at downwind position. He was observed closely behind the ZU-IJR aircraft that was on final approach for landing without reporting his position. ZU-IJR pilot landed on the grass area alongside Runway 30, which was the active runway in use.

Occurrence Details

Reference Number : CA18/3/2/1434
Occurrence Category : Category 1
Type of Operation : Training
Name of Operator : AIFA
Aircraft Registration : ZS-TDJ
Aircraft Make and Model : Piper PA-28-161
Nationality : South African
Place : Plettenberg Bay Airfield
Date and Time : 16 December 2023 at 0740Z
Injuries : None
Damage : None

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.

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.

Investigation Process

The Accident and Incident Investigations Division (AIID) of the South African Civil Aviation Authority (SACAA) was notified of the occurrence involving a Piper Cherokee and PA-28-161, which occurred at Plettenberg Bay Airfield, Western Cape province, on 16 December 2023 at 0740Z. The occurrence was classified as a serious incident according to the CAR 2011 Part 12 and the International Civil Aviation Organisation (ICAO) STD Annex 13 definitions.

The AIID has appointed an investigator-in-charge to conduct the full investigation. The investigator did not dispatch to the accident site for this occurrence. Notifications were sent to the State of Registry, Operator, Design and Manufacturer in accordance with the CAR 2011 Part 12 and the ICAO Annex 13 Chapter 4. The State of Registry, being the United States of America (USA), did not appoint an accredited representative and advisor. The AIID will lead the investigation and issue the final report of this serious incident in accordance with the CAR 2011 Part 12 and ICAO Annex 13.

The information contained in this preliminary report is derived from the information gathered during the on-going investigation into the occurrence. Later, an interim report or the final report may contain altered information in case new evidence is found during the on-going investigation that requires changes to the information depicted in this report.

The AIID reports are made available to the public at:

<http://www.caa.co.za/Pages/Accidents%20and%20Incidents/Aircraft-accident-reports.aspx>

Notes:

- Whenever the following words are mentioned in this report, they shall mean the following:
Serious Incident — this investigated serious incident
Aircraft — the Piper PA-28-161 involved in this serious incident
Investigation — the investigation into the circumstances of this serious incident
Pilot — the pilot involved in this serious incident
Report — this serious incident report*
- Photos and figures used in this report were taken from different sources and may have been 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 addition of text boxes, arrows, or lines.*

Disclaimer

This report is produced without prejudice to the rights of the AIID, which are reserved.

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Abbreviation	Description
°	Degrees
'	Minute
"	Second
°C	Degrees Celsius
ACC	Aircraft Communication Centre
AGL	Above Ground Level
AIID	Accident and Incident Investigations Division
ALT	Altitude
AMSL	Above Mean Sea Level
ATO	Approved Training Organisation
C of A	Certificate of Airworthiness
C of R	Certificate of Registration
CRS	Certificate of Release to Service
FACT	Cape Town International Airport
FAGG	George Airport
FAPG	Plettenberg Airfield
FAMO	Mossel Bay Airfield
FAOH	Oudtshoorn Airport
FAWO	Willowmore Airfield
ft	Feet
GND	Ground
hPa	Hectopascal
kt	Knots
m	Metres
METAR	Meteorological Aerodrome Report
MHz	Megahertz
nm	Nautical Miles
POH	Pilot's Operating Handbook
QNH	Altitude Above Mean Sea Level
RWY	Runway
SACAA	South African Civil Aviation Authority
SAWS	South African Weather Service
TCAS	Traffic Collision Avoidance System
TWR	Tower
Z	Zulu (Term for Universal Co-ordinated Time - Zero Hours Greenwich)

1. FACTUAL INFORMATION

1.1. History of Flight

- 1.1.1. On Saturday, 16 December 2023 at approximately 0740Z, three aircraft were involved in a near miss collision on Runway 30 (RWY30) at Plettenberg Bay Airfield. A Safari-LSA aircraft with registration ZU-IJR took off from Highway Airfield in Knysna to Plettenberg Bay Airfield (FAPG) in the Western Cape province; it was operated under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended. A Cessna aircraft with registration ZS-FFB was on a private flight in the vicinity of FAPG under the provisions of Part 91 of the CAR 2011 as amended. The Piper PA-28-161 aircraft with registration ZS-TDJ and a call sign AVIC123 was on a solo navigational training flight from George Airport (FAGG) with the intention to conduct touch-and-go landings at various aerodromes in the Western Cape province; it was operated under the provisions of Part 141 of the CAR 2011 as amended. All flights were conducted under visual meteorological conditions (VMC) by day.
- 1.1.2. According to the student pilot who was on-board the ZS-TDJ aircraft, he had planned to fly from FAGG on a navigational training flight to Plettenberg Airfield (FAPG), Willowmore Airfield (FAWO), Oudtshoorn Airport (FAOH), Mossel Bay Aerodrome (FAMO) and back to FAGG. All the aerodromes are located in the Western Cape province. Take off from FAGG was uneventful. The student pilot headed to the first aerodrome which was FAPG. Upon entering the FAPG airspace, he broadcasted his position and intentions on the radio frequency 124.8 Megahertz (MHz). As he was listening to the radio, he heard that there was another aircraft (ZS-FFB) that had requested to backtrack, and another aircraft (ZU-IJR) which was inbound and had advised that it will extend its downwind turn.
- 1.1.3. According to the ZU-IJR pilot, he took off on a private flight (coastal flight) from Knysna Highway Airfield to FAPG. He stated that he maintained radio broadcast on frequency 124.8-MHz, as well as listened to frequency 128.2-MHz for George Airport (FAGG) traffic approach. About 10 nautical miles (nm) from the west of FAPG, the ZU-IJR pilot broadcasted his position and that he was inbound for FAPG at 1500 feet (ft) above ground level (AGL) at coastline. Another pilot on-board the ZS-FFB broadcasted that he was on final approach for Runway (RWY) 30 at FAPG.
- 1.1.4. At approximately 5nm west of FAPG whilst on approach, a pilot on-board a Cessna Longitude with registration T7-KFL was heard confirming that he had ZU-IJR on traffic avoidance system (TCAS) and was going to join left downwind for RWY 30. ZU-IJR acknowledged and advised that he would make a descend from 1500ft to 1200ft on early left downwind to accommodate the faster T7-KLF aircraft. The pilot acknowledged and thanked ZU-IJR pilot. A moment later, ZU-IJR pilot heard a broadcast from ZS-TDJ pilot stating that he was inbound for FAPG at 2500ft. At this time, T7-KLF had landed safely and vacated the active runway. ZS-FFB called in and asked ZU-IJR if he (ZS-FFB) could enter the runway and backtrack to the holding point of RWY 30. ZU-IJR pilot confirmed and advised that he will extend his left downwind for RWY 30. ZS-FFB backtracked and positioned at holding point RWY 30. Moments after, ZU-IJR called FAPG traffic and advised that he was turning left base for RWY 30 and that he intended to land on the grass area adjacent RWY 30 for a full stop. ZU-IJR called FAPG traffic again and advise that he was on final approach for RWY 30, landing on the grass area. Upon hearing this information, ZS-FFB called to ask ZU-IJR if his position at the holding point was okay, to which he confirmed it was.

- 1.1.5. ZU-IJR landed safely on the grass on the left alongside RWY 30. As ZU-IJR pilot was completing the ground roll, the pilot suddenly noticed ZS-TDJ approaching for a touch-and-go landing before he had a chance to call in that he was clear off the active runway. According to ZS-FFB pilot, at no point did ZS-TDJ broadcast final approach for RWY 30. Following the touch-and-go landing, ZU-IJR pilot called ZS-TDJ on the radio and stated that he needed to make more calls, but ZS-TDJ did not respond. The next broadcast from ZS-TDJ (AVIC123) was when the aircraft was 5nm north-west of Plettenberg Bay routing to Willowmore Airfield (FAWO).
- 1.1.6. According to ZS-FFB pilot, ZU-IJR landed on the grass area as per his advice; before he could broadcast clear off the runway, ZS-TDJ came in for a touch-and-go landing without having made any calls.
- 1.1.7. The serious incident occurred under visual meteorological conditions on RWY 30 at FAPG. The aircraft did not sustain damage and no persons were injured.



Figure 2: Aerial view of FAPG. (Source: Google Earth)

1.2. Injuries to Persons

ZS-TDJ

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

Note: Other means people on the ground.

ZU-IRJ

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

Note: Other means people on the ground.

- 1.2.1. None of the aircraft occupants sustained injuries during this occurrence as there was no collision or crash that took place.

1.3. Damage to Aircraft

- 1.3.1. None of the aircraft sustained damage.

1.4. Other Damage

- 1.4.1. None.

1.5. Personnel Information

Student Pilot (ZS-TDJ)

Nationality	Egyptian	Gender	Male	Age	21
Licence Type	Student Pilot Licence (SPL)				
Licence Valid	Yes	Type Endorsed	Yes		
Ratings	None				
Medical Expiry Date	Class 2; 30 June 2027				
Restrictions	None				
Previous Incidents	None				

Note: Previous incidents refer to past incidents the pilot was involved in, when relevant to this incident.

Flying Experience:

Total Hours	80
Total Past 24 Hours	2.7
Total Past 7 Days	5.4
Total Past 90 Days	33.4
Total on Type Past 90 Days	33.4
Total on Type	80

- 1.5.1 The student pilot, an Egyptian national, had a South African Student Pilot Licence (SPL) that was initially issued by the Regulator (SACAA) on 13 July 2022 with an expiry date of 23 July 2024. His Class 2 medical certificate was issued on 21 June 2023 with an expiry date of 30 June 2024 with no restrictions. The aircraft type was endorsed on the student pilot's licence,

and his training was conducted on the aircraft type. The student pilot had accumulated approximately 80 flying hours between 16 August 2022 and 16 December 2023.

Pilot (ZU-IJR)

Nationality	South African	Gender	Male	Age	62
Licence Type	Commercial Pilot Licence (CPL)				
Licence Valid	Yes	Type Endorsed	Yes		
Ratings	None				
Medical Expiry Date	Class 1; 30 November 2024				
Restrictions	VML (correction for defective distant, intermediate and near vision) and SSL (Special restriction as specified XARALTA treatment)				
Previous Incidents	None				

Note: Previous serious incidents refer to past serious incidents the pilot was involved in, when relevant to this incident.

Flying Experience:

Total Hours	1701.5
Total Past 24 Hours	1.3
Total Past 7 Days	2.7
Total Past 90 Days	28.5
Total on Type Past 90 Days	7.3
Total on Type	367.3

- 1.5.2 The pilot had a Commercial Pilot Licence (PPL) which was initially issued by the Regulator on 23 January 2015. His licence renewal was issued on 22 February 2023 with an expiry date of 29 February 2024. The pilot's Class 1 medical certificate was issued on 3 November 2023 with an expiry date of 30 November 2024 with no restrictions.

1.6. Aircraft Information

The information below is an extract from the Pilot's Operating Handbook (POH)

- 1.6.1. *The Piper PA-28 Cherokee is a family of light aircraft built by Piper Aircraft and designed for flight training, air taxi, and personal use. The PA-28 family of aircraft is all-metal, unpressurised, single-engine, piston-powered airplanes with low-mounted wings and tricycle landing gear. They have a single door on the co-pilot side.*

Airframe:

Manufacturer/Model	Piper Aircraft Corporation	
Serial Number	Piper PA28-161	
Year of Manufacture	2012	
Total Airframe Hours (At Time of Serious incident)	4644.5	
Last Inspection (Date & Hours)	31 October 2023	4594.4
Hours Since Last MPI	50.1	
CRS Issue Date	31 October 2023	
C of A (Issue Date & Expiry Date)	18 October 2023	31 October 2024
C of R (Issue Date) (Present Owner)	21 September 2023	

Type of Fuel Used	Avgas 100LL
Operating Category	Part 141
Previous Incidents	None

Note: Previous serious incidents refer to past serious incidents the pilot was involved in, when relevant to this incident.

Engine:

Manufacturer/Model	Lycoming O-320-D3G
Serial Number	L-20569-39E
Hours Since New	4644.5
Hours Since Overhaul	496.9

Propeller:

Manufacturer/Model	Sensenich 74DM6-O-60
Serial Number	A 63261
Hours Since New	4644.5
Hours Since Overhaul	496.9

1.6.2. A preliminary review of the ZS-TDJ aircraft maintenance records (airframe, engine and propeller) and mandatory periodic inspections was conducted. All manufacturer's Service Bulletin (SB), Service Instruction (SI) and Technical Service Instruction (TSI) were adhered to. The aircraft had a valid Certificate of Airworthiness (C of A) that was issued by the Regulator on 18 October 2023 with an expiry date of 31 October 2024. After the mandatory periodic inspection (MPI) was conducted, the aircraft was issued a Certificate of Release to Service (CRS) on 31 October 2023.

1.6.3. The following information is an extract from the aircraft Pilot's Operating Handbook

A SAFARI light sport aircraft (LSA) is an amateur build aircraft manufactured by Kitplanes for Africa of South Africa. It has a single engine and is equipped with low wings and a fixed landing gear system.

Airframe:(ZU-IJR)

Manufacturer/Model	Kitplanes for Africa (PTY) LTD/ SAFARI-LSA	
Serial Number	25-01-16 SAF	
Year of Manufacture	2012	
Total Airframe Hours (At Time of Serious incident)	440.6	
Last Inspection (Date & Hours)	4 November 2023	431.6
Hours Since Last MPI	9	
CRS Issue Date	31 October 2023	
ATF (Issue Date & Expiry Date)	13 March 2023	28 February 2024
C of R (Issue Date) (Present Owner)	14 March 2019	
Type of Fuel Used	Avgas 100LL	
Operating Category	Part 94	
Previous Incidents	None	

Note: Previous serious incidents refer to past serious incidents the pilot was involved in, when relevant to this incident.

Engine:

Manufacturer/Model	Rotax 912ULGT
Serial Number	6772172
Hours Since New	440.6
Hours Since Overhaul	TBO not yet reached

Propeller:

Manufacturer/Model	I/O
Serial Number	DR3/72/36452
Hours Since New	440.6
Hours Since Overhaul	TBO not yet reached

- 1.6.4. A review of the maintenance records revealed that the aircraft was maintained in accordance with the manufacturer's prescribed procedures as stipulated in the maintenance manual. The aircraft had a valid Authority to Fly Certificate (ATF) that was issued by the Regulator on 13 March 2023 with an expiry date of 28 February 2024. After an annual inspection was conducted on ZU-IJR, a Certificate of Release to Service (CRS) was issued on 4 November 2023 at 431.6 airframe hours with an expiry date of 3 November 2024 or at 531.6 airframe hours, whichever comes first.

1.7. Meteorological Information

- 1.7.1. The weather information below was obtained from the pilot questionnaire which he recorded at FAPG on 16 December 2023 at 0740Z.

Wind Direction	20°	Wind Speed	7kt	Visibility	9999m
Temperature	20°C	Cloud Cover	None	Cloud Base	None
Dew Point	15°C	QNH	hPa		

1.8. Aids to Navigation

- 1.8.1. The aircraft were equipped with standard navigational equipment as approved by the Regulator. There were no records indicating that the navigational equipment was unserviceable for both aircraft prior to the incident.

1.9. Communication

- 1.9.1. The aircraft were equipped with a standard communication system as approved by the Regulator. There were no recorded defects with the communication system of both aircraft prior to the incident.

1.10. Aerodrome Information

1.10.1. Plettenberg Aerodrome (FAPG) has a single runway.

Aerodrome Location	Western Cape Province
Aerodrome Status	Licensed
Aerodrome GPS coordinates	34°5'17.7" South, 023°19'45.4" East
Aerodrome Elevation	465 feet (ft)
Runway Headings	13/30
Dimensions of Runway Used	1 240m X 20m
Heading of Runway Used	30
Surface of Runway Used	Asphalt
Approach Facilities	None
Radio Frequency	124.8 MHz

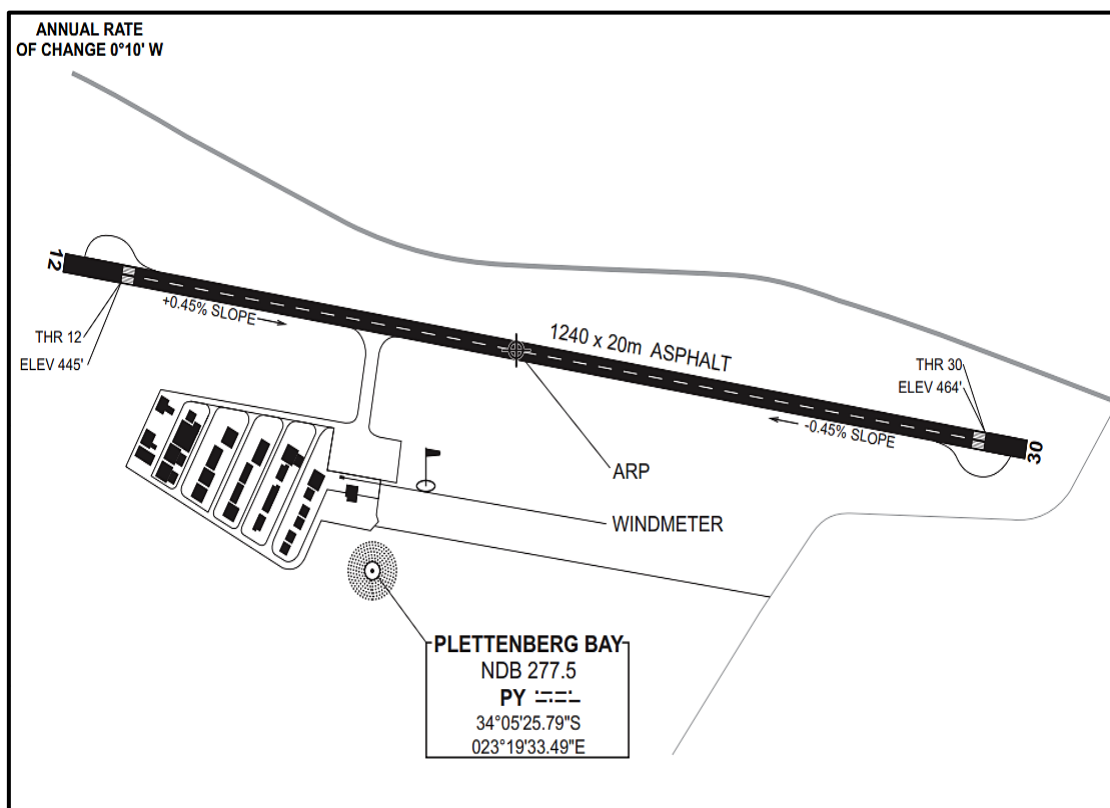


Diagram 1: Schematic of FAPG.

1.10.2. According to the ZU-IJR pilot, he landed the aircraft on a grass area alongside RWY 30.

1.10.3. The following information needs to be considered when operating at FAPG:

- All instrument flight rules (IFR) departures must contact FAGG tower (TWR) on 118.90-MHz or FATC E INFO on 124.7-MHz before entering the FAGG TMA.
- All traffic departures are to contact FACT ACC E on 124.7-MHz passing 2000ft ALT before requesting clearance from FAGG APP.
- Pilots to exercise caution due to glider activity taking place between sunrise and sunset at Stanley Island, 1200ft AMSL-GND, 34° 01' 00"S, 023° 24' 00"E, broadcast on 124.8-MHz.

1.11. Flight Recorders

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

1.12. Wreckage and Impact Information

1.12.1. All aircraft were intact with no defects as none of them was involved in any collision or impact during the incident.

1.13. Medical and Pathological Information

1.13.1. None.

1.14. Fire

1.14.1. None.

1.15. Survival Aspects

1.15.1. All occupants of the three aircraft survived the occurrence as there was no impact or collision involved.

1.16. Tests and Research

1.16.1. None.

1.17. Organisational and Management Information

1.17.1. The ZS-TDJ aircraft was operated as a training flight under the provisions of Part 141 of the CAR 2011 as amended.

1.17.2. The aircraft maintenance organisation (AMO) that conducted maintenance on the ZS-TDJ aircraft had an AMO certificate that was issued by the Regulator on 25 October 2023 with an expiry date of 31 January 2024.

1.17.3. The approved training organisation (ATO) that operated the aircraft had an ATO Certificate that was issued by the Regulator on 1 November 2020 with an expiry date of 30 November 2025. The ATO's training operations specification certificate was issued on 20 March 2023 with an expiry date of 30 November 2023 with the aircraft endorsed on it.

1.17.4. ZU-IJR was operated as a private flight under the provisions of Part 94 (None-Type Certified Aircraft) of the CAR 2011 as amended.

1.18. Additional Information

1.18.1. The ATO has an Unmanned Joining Procedure document NOP-1.26 which is included in their training programme.

1.19. Useful or Effective Investigation Techniques

1.19.1. None.

2. FINDINGS

2.1. General

From the available evidence, the following preliminary findings were made with respect to this incident. These shall not be read as apportioning blame or liability to any organisation or individual.

To serve the objective of this investigation, the following sections are included in the conclusions heading:

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

2.2. Findings

- 2.2.1. The student pilot of ZS-TDJ had a South African Student Pilot Licence (SPL) that was issued by the Regulator on 13 July 2022 with an expiry date of 23 July 2024. His Class 2 medical certificate was issued on 21 June 2023 with an expiry date of 30 June 2024 with no restrictions.
- 2.2.2. The student pilot's licence was endorsed with the aircraft type, and his training was also conducted on the aircraft type. The student pilot had accumulated approximately 80 flying hours between 16 August 2022 and 16 December 2023.
- 2.2.3. The pilot of ZU-IJR had a Private Pilot Licence (PPL) which was initially issued by the Regulator on 23 January 2015. His licence renewal was issued on 22 February 2023 with an expiry date of 29 February 2024. The pilot's Class 1 medical certificate was issued on 3 November 2023 with an expiry date of 30 November 2024 with no restrictions.
- 2.2.4. The ZS-TDJ aircraft had a valid Certificate of Airworthiness (C of A) that was issued by the Regulator on 18 October 2023 with an expiry date of 31 October 2024.
- 2.2.5. The ZU-IJR aircraft had a valid Authority to Fly (ATF) Certificate that was issued by the Regulator on 13 March 2023 with an expiry date of 28 February 2024.
- 2.2.6. The mandatory periodic inspection (MPI) was conducted on ZS-TDJ and was issued a Certificate of Release to Service (CRS) on 31 October 2023.

- 2.2.7. An annual inspection was conducted on ZU-IJR and was issued a Certificate of Release to Service (CRS) on 4 November 2023 at 431.6 airframe hours with an expiry date of 3 November 2024 or at 531.6 airframe hours, whichever comes first.
- 2.2.8. The aircraft maintenance organisation (AMO) that conducted maintenance on ZS-TDJ was had an AMO certificate that was issued by the Regulator on 25 October 2023 with an expiry date of 31 January 2024.
- 2.2.9. The Approved Training Organisation (ATO) that operates the ZS-TDJ aircraft had an ATO Certificate that was issued by the Regulator on 1 November 2020 with an expiry date of 30 November 2025. The ATO's training operations specification certificate was issued on 20 March 2023 with an expiry date of 30 November 2023 with the aircraft endorsed on it.
- 2.2.10. According to the schematic for FAPG, there is a single runway with no indicated grass runway alongside the main runway in use.
- 2.2.11. The ZU-IJR pilot flew over ZS-FFB and landed the aircraft on the grass area parallel to RWY 30.

3. ON-GOING INVESTIGATION

- 3.1 The AIID investigation is on-going and the investigator will investigate other 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**