

PRELIMINARY ACCIDENT REPORT

Accident and Incident Investigations Division

Accident  
- Preliminary Report -  
AIID Ref No: CA18/2/3/9942



**Figure 1:** The aircraft as it came to rest. (Source: Owner)

**Description:** The pilot reported that the engine stopped shortly after take-off; as a result, he executed a forced landing on a gravel road approximately 500 metres (m) from the take-off flight path. On touch down, the undercarriage collapsed and the aircraft veered off to the right-side of the road.

## INTRODUCTION

**Reference Number** : CA18/2/3/9942  
**Name of Owner** : Mbega Trust  
**Name of Operator** : Carel Jacobsz  
**Manufacturer** : Piper Aircraft Corporation  
**Model** : PA-46-350P  
**Nationality** : South African  
**Registration Marks** : ZS-JJJ  
**Place** : Koedoesberg Game Farm-Pongola, KwaZulu-Natal Province  
**Date** : 13 January 2021  
**Time** : 05:15Z

### **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 was notified to the Accident and Incident Investigations Division (AIID) on 13 January 2021. The investigator co-ordinated with all authorities by initiating the accident investigation process according to CAR Part 12 and investigation procedures. The AIID is leading the investigation as the Republic of South Africa is the State of Occurrence.

#### *Notes:*

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

- *Accident — this investigated accident*
- *Aircraft — the Piper Aircraft PA-46-350P*
- *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 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.



<b>ABBREVIATION</b>	<b>DESCRIPTION</b>
AIID	Accident and Incident Investigations Division
AMO	Aircraft Maintenance Organisation
AMSL	Above Mean Sea Level
ATF	Authority to Fly
CAA	Civil Aviation Authority
CAR	Civil Aviation Regulations
C of R	Certificate of Release
CVR	Cockpit Voice Recorder
E	East
FDR	Flight Data Recorder
ft	Feet
GPS	Global Position System
IIC	Investigator-in-charge
kt	Knot/s
M	Metre/s
MPI	Mandatory Periodic Inspection
QNH	Query: Nautical Height
SACAA	South African Civil Aviation Authority
UTC	Co-ordinated Universal Time
VFR	Visual Flight Rules
Z	Zulu (Universal Co-ordinated Time – Zero Hours Greenwich)

## 1. FACTUAL INFORMATION

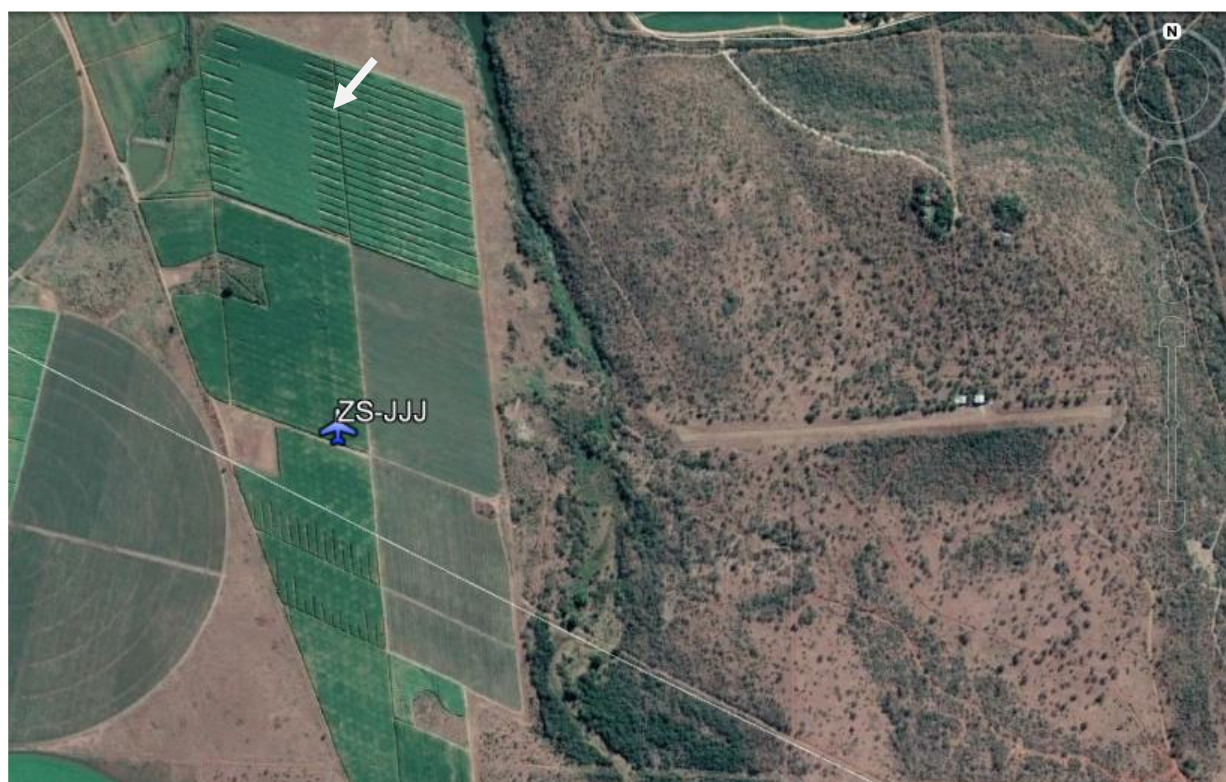
### 1.1. History of Flight

1.1.1 On Wednesday 13 January 2021, a pilot on-board a Piper aircraft PA-46-350P took off from Koedoesberg Game Farm private airstrip on a private flight around the Pongola area in KwaZulu-Natal Province.

1.1.2 The pilot's intention for this flight was to practise instrument flight approaches at Pongola Airfield (FAPL) non-directional beacon (NDB) called PGL in preparation for his licence renewal, which was to be conducted in a week's time from then. The flight was conducted under the provisions of Part 91 of the Civil Aviation Regulations (CAR) 2011 as amended.

The pilot reported that the engine stopped shortly after take-off; as a result, he executed a forced landing on a gravel road situated approximately 500 metres (m) from the take-off flight path. On touch down, the undercarriage collapsed, and the aircraft veered off to the right-side of the road. The propeller blades made contact with the ground and broke off during the forced landing and the aircraft came to rest on its belly. The pilot sustained serious injuries during the accident.

1.1.3 The accident occurred on a gravel road 500m from the take-off flight path at Global Positioning System (GPS) co-ordinates determined to be 27°34'69" S 031°41'2.91" E at an elevation of 913 feet (ft) above mean sea level (AMSL).



**Figure 2:** The approximate flight path and the accident location. (Source: Google Earth)



## 1.2. Injuries to Persons

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

## 1.3. Damage to Aircraft

1.3.1 The aircraft sustained substantial damage during the accident sequence.



Figure 3: The damaged aircraft post-accident. (Source: Owner)

## 1.4. Other Damage

1.4.1 None.

## 1.5. Personnel Information

Nationality	South African	Gender	Male	Age	69
Licence Number	0270065279	Licence Type	Private Pilot (PPL)		
Licence Valid	Yes	Type Endorsed	Yes		
Ratings	Night, Instruments				
Medical Expiry Date	31 January 2021				
Restrictions	Corrective				
Previous Accidents	None				

### Flying Experience:

Total Hours	6654
Total Past 24 Hours	2.6
Total Past 7 Days	1.3
Total Past 90 Days	20.5
Total on Type Past 90 Days	17
Total on Type	772.2

1.5.1 The pilot was initially issued a Private Pilot Licence (Aeroplane) on 21 July 1972, and validation was carried out on 20 January 2020 with an expiry date of 31 January 2021.

1.5.2 The pilot was issued a Class 2 aviation medical certificate on 10 January 2020 with an expiry date of 31 January 2021.

### 1.6. Aircraft Information

#### Airframe:

Manufacturer/Model	Piper Aircraft Corporation, Piper PA-46-350P Malibu	
Serial Number	4636430	
Year of Manufacturer	TBA	
Total Airframe Hours (At Time of Accident)	909.9	
Last MPI (Date & Hours)	11 June 2020, 875.3 hours	
Hours Since Last MPI	34.6	
C of A (Issue Date)	15 June 2011	
C of A Expiry Date	30 June 2021	
C of R (Issue Date) (Present Owner)	20 May 2011	
Type of Fuel Used in the Aircraft	Jet A-1	
Operating Categories	Part 91 (Standard Normal Category)	
Previous Accidents	None	

1.6.1 The aircraft was issued a Certificate of Airworthiness on 15 June 2011 with an expiry date of 30 June 2021, operating under standard normal category (aeroplane).

1.6.2 The last mandatory periodic inspection (MPI) was carried out on 11 June 2020 with the next MPI due on 11 June 2021 or at 975.3 hours, whichever comes first.

#### Engine:

Manufacturer/Model	Pratt & Whitney Corporation, PT6A-35
Serial Number	RR0208
Hours Since New	909.9
Hours Since Overhaul	Not Yet reached

**Propeller:**

Manufacture/Model	MT Propeller, MTV-161-ECFR(P)
Serial Number	110070
Hours Since New	635.0
Hours Since Overhaul	Not yet reached

**1.7. Meteorological Information**

1.7.1 The weather information below was obtained from the pilot's questionnaire:

Wind Direction	None	Wind Speed	None	Visibility	Good
Temperature	25°C	Cloud Cover	Nil	Cloud Base	Nil
Dew Point	N/A	QNH	Unknown		

**1.8. Aids to Navigation**

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

**1.9. Communication**

1.9.1 The aircraft was equipped with standard communication equipment as required 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 aircraft accident took place approximately 500m from Pongola Airfield.

Aerodrome Location	Pongola Airfield (FAPL)	
Aerodrome Co-ordinates	S27°21' 41.8" E031°26'20.0"	
Aerodrome Elevation	942 feet (AMSL)	
Runway Designations	34	16
Runway Dimensions	698m x 18m	698m x 18m
Runway Used	34	
Runway Surface	Asphalt	
Approach Facilities	NDB	



## 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 regulation to be fitted to this type of aircraft.

## 1.12 Wreckage and Impact Information

1.12.1 The accident occurred shortly after take-off from Runway 34 during a forced landing on a gravel road approximately 500m from the take-off runway following an engine stoppage. The aircraft veered off to the right-side of the road and came to rest on the verge of it (the road).



**Figure 4:** The aircraft as it came to rest. (Source: Owner)

## 1.13 Medical and Pathological Information

1.13.1 To be discussed in the final report.

## 1.14 Fire

1.14.1 There was no evidence of a pre- or post-impact fire.

## 1.15 Survival Aspects

1.15.1 The accident was considered survivable as there was no damage to the cockpit and cabin areas which could have 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 private flight which was conducted under the provision of Part 91 of the Civil Aviation Regulations (CAR) 2011 as amended.

1.17.2 The aircraft maintenance organisation (AMO) which carried out the MPI prior to the accident flight was in possession of an AMO certificate which was issued by the SACAA on 1 September 2020, with an expiry date of 31 August 2021, following an AMO audit conducted on 18 August 2020. According to the Operations Specifications, the AMO had the required ratings and had been authorised to carry out maintenance on the aircraft type.

## **1.18 Additional Information**

1.18.1 To be discussed in the final report.

## **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:

- **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.

2.1.1 The pilot was initially issued a Private Pilot Licence (Aeroplane) on 21 July 1972, and validation was carried out on 20 January 2020 with an expiry date of 31 January 2021.

The pilot was issued a Class 2 aviation medical certificate on 10 January 2020 with an expiry date of 31 January 2021.

- 2.1.2 The aircraft was issued a Certificate of Registration on 20 May 2011. The aircraft was issued a Certificate of Airworthiness on 15 June 2011 with an expiry date of 30 June 2021.
- 2.1.3 The last MPI was carried out on 11 June 2020, with the next MPI due on 11 June 2021 or at 975.30 hours, whichever occurs first. The aircraft was issued a Certificate of Release to Service (CRS) on 11 June 2020 with an expiry date of 11 June 2021 or at 975.30 hours.
- 2.1.4 The private flight was conducted under the provisions of Part 91 of the CAR 2011 as amended and in visual flight rules (VFR) by day.
- 2.1.5 The pilot reported that the aircraft had a total of 378 litres of fuel when it crashed. Fuel spillage was reported at the crash site following the accident.
- 2.1.6 The pilot reported that shortly after take-off, the aircraft experienced a total power failure before the engine stopped.
- 2.1.7 The pilot made an unsuccessful forced landing on the road, and the aircraft sustained substantial damage.

### **3. On-going Investigation**

- 3.1 The AIID investigation is on-going and the investigator/s will be looking into the cause of the engine stoppage and other aspects of this accident 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**