

PRELIMINARY ACCIDENT REPORT

Accident and Incident Investigations Division

Accident  
- Preliminary Report -  
AIID Ref No: CA18/2/3/10511



**Figure 1:** The ZU-JBA aircraft as it came to rest post-accident. (Source: Pilot)

Description:

On Saturday morning, 5 October 2024 at 0735Z, a flight instructor (FI) and a student pilot (SP) on-board a Jabiru J400 aircraft with registration ZU-JBA took off on a training flight from Ermelo Aerodrome (FAEO) in Mpumalanga province with the intention to land back at the same aerodrome. Visual meteorological conditions (VMC) by day prevailed at the time of the flight.

The SP was conducting circuit-and-landing exercises. At 0850Z during a touch-and-go landing on Runway (RWY) 13, the aircraft landed hard and, subsequently, leaned to the right during the take-off roll. The FI immediately instructed the SP to abort take-off. Inspection of the aircraft revealed a crack on the right main gear strut. The aircraft was taxied to the hangar for further assessment. The FI and the SP were not injured during the accident.

## Occurrence Details

**Reference Number** : CA18/2/3/10511  
**Occurrence Category** : Accident Category 1  
**Type of Operation** : Training (Part 141)  
**Name of Operator** : ETTC Group  
**Aircraft Registration** : ZU-JBA  
**Aircraft Make and Model** : Jabiru, J400  
**Nationality** : South Africa  
**Registration Marks** : ZU-JBA  
**Place** : On Runway 13 at Ermelo Aerodrome (FAEO)  
**Date and Time** : 5 October 2024 at 0850Z  
**Injuries** : None  
**Damage** : Substantial

## 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) was notified of the occurrence involving a Jabiru aircraft in Mpumalanga province on 5 October 2024 at 0850Z. The occurrence was classified as an accident 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 an off-site investigation. Notification was 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 States did not appoint an accredited representative and/or advisor. The AIID will lead the investigation and issue the final report of this accident in accordance with the CAR 2011 Part 12 and the 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 or 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:*

<https://www.caa.co.za/industry-information/accidents-and-incidents/>

*Notes:*

- Whenever the following words are mentioned in this report, they shall mean the following:  
Accident — this investigated accident  
Aircraft — the Jabiru Aircraft involved in this accident  
Investigation — the investigation into the circumstances of this accident  
Pilot — the pilot involved in this accident  
Report — this accident 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 SACAA, which are reserved.

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<b>Abbreviation</b>	<b>Description</b>
°	Degrees
°C	Degrees Celsius
ACCID	Accident
AGL	Above Ground Level
AIID	Accident and Incident Investigations Division
AP	Approved Person
ATF	Authority to Fly
CAR	Civil Aviation Regulations
CAVOK	Cloud and Visibility OK
C of R	Certificate of Registration
CRS	Certificate of Release to Service
CVR	Cockpit Voice Recorder
FAEO	Ermelo Aerodrome
FDR	Flight Data Recorder
FI	Flight Instructor
ft	Feet
GPS	Global Positioning System
hPa	Hectopascal
kt	Knots
m	Metres
METAR	Meteorological Aerodrome Report
nm	Nautical Miles
QNH	Query Nautical Height
RWY	Runway
SACAA	South African Civil Aviation Authority
SAWS	South African Weather Service
SP	Student Pilot
VFR	Visual Flight Rules
VMC	Visual Meteorological Condition
Z	Zulu (Term for Universal Co-ordinated Time - Zero Hours Greenwich)

# 1. FACTUAL INFORMATION

## 1.1. History of Flight

1.1.1. On Saturday morning, 5 October 2024 at 0735Z, a flight instructor (FI) and a student pilot (SP) on-board a Jabiru J400 aircraft with registration ZU-JBA took off on a training flight from Ermelo Aerodrome (FAEO) in Mpumalanga province with the intention to land back at the same aerodrome. The pair intended to conduct circuit-and-landing exercises. Visual meteorological conditions (VMC) by day prevailed at the time of the flight which was conducted under the provisions of Part 141 of the Civil Aviation Regulations (CAR) 2011 as amended.

1.1.2. At 0850Z during the touch-and-go landing on Runway (RWY) 13, the aircraft landed hard and, subsequently, leaned to the right during the take-off roll. The FI immediately instructed the SP to abort take-off. Post-occurrence inspection revealed a crack in the right main gear strut. The training session was halted, and the aircraft was taxied to the hangar for further assessment. Both the FI and the SP were unharmed during the accident sequence.

1.1.3. The accident occurred at FAEO on RWY 13 at Global Positioning System (GPS) coordinates determined to be 26°29'39.28" South 29°58' 36.51" East, at an elevation of 5651 ft.



**Figure 2:** The accident site. (Source: Google Earth Map)

## 1.2. Injuries to Persons

Injuries	Pilot	Crew	Pass.	Total On-board	Other
Fatal	-	-	-	-	-
Serious	-	-	-	-	-
Minor	-	-	-	-	-
None	2	-	-	-	-
<b>Total</b>	<b>2</b>	-	-	<b>2</b>	-

Note: Other means people on the ground.

## 1.3. Damage to Aircraft

1.3.1. The aircraft's right main wheel strut had a crack.



**Figure 3:** The aircraft post-accident. (Source: Pilot)

#### 1.4. Other Damage

1.4.1. None.

#### 1.5. Personnel Information – Flight Instructor

Nationality	South African	Gender	Male	Age	24
Licence Type	Commercial Pilot Licence (CPL)				
Licence Valid	Yes	Type Endorsed	Yes		
Ratings	Grade 3 Instructor				
Medical Expiry Date	24 June 2025				
Restrictions	None				
Previous Accidents	None				

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

#### Flying Experience:

Total Hours	253.6
Total Past 24 Hours	7.5
Total Past 7 Days	20.6
Total Past 90 Days	45.1
Total on Type Past 90 Days	30.1
Total on Type	50.9

1.5.1. The FI was initially issued a Commercial Pilot Licence (CPL) on 11 September 2024 with an expiry date of 30 September 2025. The aircraft type was endorsed on the pilot's licence.

1.5.2. The FI was issued a Class 1 aviation medical certificate on 24 June 2024 with an expiry date of 24 June 2025 with no medical restrictions.

#### 1.6. Aircraft Information

Aircraft Description: (Source: Pilot's Operating Handbook [POH])

1.6.1 *A Jabiru J400 aircraft type is a light sport aircraft with a high wing, single engine and a fixed tricycle landing gear type with a capacity to carry four occupants.*

**Airframe:**

Manufacturer/Model	Jabiru Aircraft (PTY) LTD; J400	
Serial Number	51	
Year of Manufacture	2018	
Total Airframe Hours (At Time of Accident)	TBD	
Last Inspection (Date & Hours)	13 June 2024	1098.9
Hours Since Last Inspection	TBD	
CRS Issue Date	13 June 2024	
ATF (Issue Date & Expiry Date)	3 September 2019	2 July 2025
C of R (Issue Date) (Present Owner)	1 October 2021	
Type of Fuel Used	Avgas	
Operating Category	Training Part 141	
Previous Accidents	None	

Note: Previous accidents refer to past accidents the aircraft was involved in, when relevant to this accident.

**Engine:**

Manufacturer/Model	Jabiru 3300
Serial Number	33A351
Part Number	Not Applicable
Hours Since New	1094
Hours Since Overhaul	43

**Propeller:**

Manufacturer/Model	P Prop
Serial Number	N4248
Part Number	Not Applicable
Hours Since New	43
Hours Since Overhaul	Not Applicable

- 1.6.2 The aircraft had a valid Authority to Fly (ATF) Certificate that was initially issued on 3 September 2019. The ATF was renewed on 10 June 2024 with an expiry date of 2 July 2025.
- 1.6.3 The Certificate of Registration (C of R) was issued to the current owner on 1 October 2021.
- 1.6.4 The aircraft's Certificate of Release to Service (CRS) was issued on 13 June 2024 at 1098.9 hours with an expiry date of 2 July 2025 or at 1198.9 hours, whichever comes first.



## 1.7 Meteorological Information

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

Wind Direction	110°	Wind Speed	9Kt	Visibility	CAVOK
Temperature	23°C	Cloud Cover	None	Cloud Base	None
Dew Point	TBD	QNH	TBD		

1.7.2 The weather information below was obtained from the South African Weather Service (SAWS) website.

Station: FAEO

Date: 2024-10-05

FAEO 050800Z 09005KT CAVOK 18/M08 Q1034=

FAEO 050800Z AUTO 09005KT //// // // 18/M08 Q1034=

FAEO 050900Z 08007KT CAVOK 20/M09 Q1033=

## 1.8 Aids to Navigation

1.8.1 The aircraft was equipped with standard navigational equipment as approved by the Regulator (SACAA). There were no records indicating that the navigational equipment was unserviceable prior to the flight.

## 1.9 Communication

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

## 1.10 Aerodrome Information

1.10.1 The accident occurred during landing on RWY 13 at FAEO in Mpumalanga province.

Aerodrome Location	Ermelo Aerodrome (FAEO)
Aerodrome Location	Mpumalanga Province
Aerodrome Status	Unlicensed
Aerodrome GPS coordinates	S26° 30' 00.00"/E 029° 59' .00"
Aerodrome Elevation	5700 ft
Runway Headings	13/31
Dimensions of Runway Used	1460 m X 10 m
Heading of Runway Used	13
Surface of Runway Used	Asphalt
Approach Facilities	None
Radio Frequency	124.80 MHz

### 1.11 Flight Recorders

1.11.1 The aircraft was 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 The accident occurred within the aerodrome's boundary. The right main landing gear wheel strut attachment point was found fractured, an indication of damage to the fairing. The overall view of the aircraft was intact after the aborted take-off.



**Figure 4:** The aircraft's right main wheel strut had a crack. (Source: Pilot)

### **1.13 Medical and Pathological Information**

1.13.1 None.

### **1.14 Fire**

1.14.1 There was no pre- or post-impact fire.

### **1.15 Survival Aspects**

1.15.1 The accident was survivable as the FI and the SP were properly restrained by the safety harnesses; the cabin structure was not damaged during the accident sequence.

### **1.16 Tests and Research**

1.16.1 To be discussed in the final report.

### **1.17 Organisational and Management Information**

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

### **1.18 Additional Information**

1.18.1 The information below is an extract from the POH:

*In all Jabiru aircraft, due to the monocoque construction, most of the structure is primary. The components of the aircraft, which are secondary structures, are designed as fairings and are generally removable. Examples of secondary structures are the engine cowls, speed fairings, ventral fins, and wheel spats.*

### **1.19 Useful or Effective Investigation Techniques**

1.19.1 None.

## 2 FINDINGS

### 2.1.1 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 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.

### 2.2 Findings

2.2.1 The FI was initially issued a Commercial Pilot Licence (CPL) on 11 September 2024 with an expiry date of 30 September 2025. The aircraft type was endorsed on the FI's licence and logbook.

2.2.2 The FI was issued a Class 1 aviation medical certificate on 24 June 2024 with an expiry date of 24 June 2025 with no medical restrictions.

2.2.3 The aircraft had a valid Authority to Fly (ATF) that was initially issued on 3 September 2019. The ATF was renewed on 10 June 2024 with an expiry date of 2 July 2025.

2.2.4 The aircraft landed hard during a touch-and-go exercise and, during the take-off roll, leaned to the right.

## 3 ON-GOING INVESTIGATION

3.1 The AIID investigation is on-going, and the investigator will investigate other aspects of this accident which may or may not have safety implications.

## **4 SAFETY RECOMMENDATIONS**

### **4.1 General**

The safety recommendations listed in this report are proposed according to paragraph 6.8 of Annex 13 to the Convention on International Civil Aviation and are based on the conclusions listed in heading 3 of this report. The AIID expects that all safety issues identified by the investigation are addressed by the receiving States and organisations.

### **4.2 Safety Recommendation/s**

4.2.1 None.

## **5 APPENDICES**

5.1 None.

**This report is issued by:  
Accident and Incident Investigations Division  
South African Civil Aviation Authority  
Republic of South Africa**