

**LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL**

<b>Reference Number</b>	CA18/2/3/10428						
<b>Classification</b>	Accident	<b>Date</b>	2 March 2024		<b>Time</b>	1335Z	
<b>Type of Operation</b>	Private (Part 94)						
<b>Location</b>							
<b>Place of Departure</b>	Klerksdorp Airfield (FAKD), North West Province		<b>Place of Intended Landing</b>		Bona-Bona Game Lodge Airfield, North West Province		
<b>Place of Occurrence</b>	Runway 17 at Bona-Bona Airfield						
<b>GPS Co-ordinates</b>	<b>Latitude</b>	27°01'06.03" S	<b>Longitude</b>	26°13'16.66" E	<b>Elevation</b>	4 605 ft	
<b>Aircraft Information</b>							
<b>Registration</b>	ZU-FNS						
<b>Make; Model; S/N</b>	Shadow Lite CC; Jabiru J430 (Serial Number: 791)						
<b>Damage to Aircraft</b>	Substantial			<b>Total Airframe Hours</b>	492.3		
<b>Pilot-in-command</b>							
<b>Licence Type</b>	Private Pilot Licence (PPL)		<b>Gender</b>	Male		<b>Age</b>	65
<b>Licence Valid</b>	Yes	<b>Total Hours</b>	199.24		<b>Total Hours on Type</b>	53.0	
<b>Total Hours 30 Days</b>	29.0		<b>Total Flying Hours on Type Past 90 Days</b>		29.0		
<b>People On-board</b>	1 + 0	<b>Injuries</b>	0	<b>Fatalities</b>	0	<b>Other (On the ground)</b>	0
<b>What Happened</b>							
<p>On Saturday afternoon, 2 March 2024, a pilot on-board a Jabiru J430 aircraft with registration ZU-FNS took off on a private flight from Klerksdorp Airfield (FAKD) in the North West province with the intention to land at Bona-Bona Airfield which is in the same province. The flight was conducted under visual meteorological conditions (VMC) by day and under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The pilot reported that a pre-flight inspection on the aircraft revealed nothing abnormal. The aircraft had 85 litres (l) of Avgas 100LL fuel in the tanks. At 1300Z, the pilot commenced with the take-off roll in a southerly direction with flaps selected to first notch. The aircraft climbed to 6 500 feet (ft), travelling at 110 knots indicated air speed (KIAS). Upon arrival at Bona-Bona Airfield, the pilot followed the unmanned airfield joining procedure. After inspecting the windsock, the pilot deduced that the wind favoured Runway 17 (southerly heading) which is 1 300 metres (m) in length. According to the pilot, the aircraft was stable on final approach for Runway 17, and touchdown was uneventful. However, during the landing roll, the pilot lost directional control of the aircraft and it veered to the left and exited the runway.</p>							

During that sequence, the left main wheel axle bent, and the propeller blade tips struck the ground. The aircraft came to a halt on the grass area, approximately 25m from the left edge of the runway. The aircraft sustained substantial damage; however, no injuries were reported.

The accident occurred during daylight at Global Positioning System (GPS) co-ordinates determined to be 27°01'06.03" South 26°13'16.66" East, at an elevation of 4 605 feet (ft).



**Figure 1:** Aerial view of Bona-Bona Airfield. The yellow arrow shows the direction of landing.  
(Source: Google Earth)



**Figure 2:** The aircraft at the accident site with the damaged left main gear wheel axle. (Source: Pilot)



**Figure 3:** The damaged blade tip. (Source: Pilot)

Meteorological Information

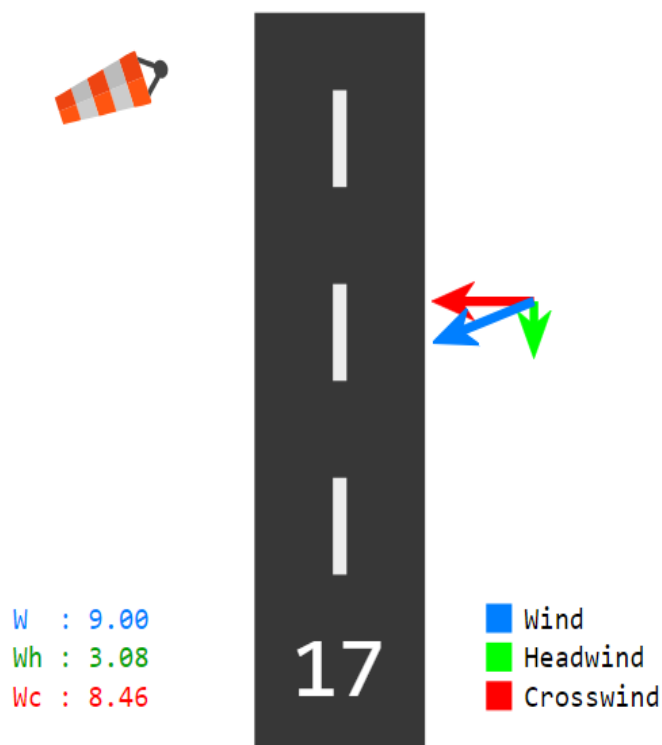
The meteorological aerodrome report (METAR) for FAMM on 2 March 2024 at 1400Z was obtained from the South African Weather Service (SAWS) aviation website: [www.aviation.weathersa.co.za](http://www.aviation.weathersa.co.za)

021400Z AUTO 24009KT //// // ///// 27/12 Q1020=

Wind Direction	240°	Wind Speed	09 knots	Visibility	9999 m
Temperature	27°C	Cloud Cover	Nil	Cloud Base	CAVOK
Dew Point	12°C	QNH	1020hPa		

Crosswind Component (Source: [e6bx.com/wind-components/](http://e6bx.com/wind-components/))

The crosswind component at the time of the flight was calculated at 8.46 knots from the right. A Jabiru J430 aircraft has a maximum crosswind velocity of 14 knots demonstrated at full (40°) flaps setting.



**Figure 4:** The calculated wind component.

### Aerodrome

Bona-Bona Airfield is unlicensed with one asphalt runway. The runway is orientated 17/35 and is 1 300m long and 45m wide. Runway 17 has a downhill slope of 0.02%. Approaches to both runway ends are obstacle free, making for easy, uncomplicated approaches. Runway lights are not installed; therefore, all arrivals and departures are restricted to official day time.

### **Findings**

#### 1. Personnel Information

- 1.1 The pilot had a Private Pilot Licence (PPL) that was initially issued on 17 March 2022. The pilot had flown a total of 199.24 hours, of which 53.0 hours were on the aircraft type. The aircraft type was endorsed on the pilot's licence.
- 1.2 The pilot was issued a Class 2 aviation medical certificate on 17 August 2023 with an expiry date of 12 August 2024. He was required to wear corrective lenses for defective distance, intermediate and near vision (VML) when flying an aircraft.

## 2. Aircraft Information

- 2.1 The last 50-hour annual inspection that was conducted on the aircraft before the accident flight was certified on 1 February 2024 at 482.5 airframe hours. The accident occurred at 492.3 total flight hours. The aircraft accrued 9.8 hours since the last inspection.
- 2.2 The aircraft had a valid Authority to Fly (ATF) Certificate that was initially issued by the Regulator (SACAA) on 8 July 2021. The latest ATF certificate was issued on 18 July 2023 with an expiry date of 31 July 2024. The aircraft was airworthy when it dispatched for the flight.
- 2.3 The aircraft's Certificate of Registration (C of R) was issued to the present owner on 29 July 2022.
- 2.4 The aircraft was issued a Certificate of Release to Service (CRS) on 1 February 2024 with an expiry date of 31 July 2024 or at 582.5 airframe hours, whichever occurs first.
- 2.5 The pilot would have had no challenges maintaining the runway centreline during the 8.46 knots crosswind as the aircraft is certified to operate in conditions of up to 14 knots crosswind without difficulty.

### **Probable Cause**

It is likely that the aircraft was unstable on final approach and landed hard, which caused the left main landing gear axle to bend. The pilot lost directional control of the aircraft and it veered off to the left of Runway 17.

### **Contributing Factors**

None.

### **Safety Action**

None.

### **Safety Message**

In the interest of safety, pilots should be vigilant in critical phases of flight such as take-offs and landings to avoid injury and damage to property.

### **About this Report**

*The decision to conduct a limited investigation is based on factors including whether the cause is known and the evidence supporting the cause is clear, the level of safety benefit likely to be obtained from an investigation, and that will determine the scope of an investigation. For this occurrence, a limited investigation has been conducted, and the Accident and Incident Investigations Division (AIID) has relied on the information submitted by the affected person/s and organisation/s to compile this limited report. The report has been compiled using information supplied in the initial notification, as well as from follow-up desktop inquiries to bring awareness of potential safety issues to the*

*industry in respect of this occurrence, as well as possible safety action/s that the industry might want to consider in preventing a recurrence of a similar occurrence.*

*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**

*In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011 and ICAO Annex 13, 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 apportion blame or liability.*

**Disclaimer**

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

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