

**LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL**

<b>Reference Number</b>	CA18/2/3/10251					
<b>Classification</b>	Accident	<b>Date</b>	13 January 2023	<b>Time</b>	0900Z	
<b>Type of Operation</b>	Private (Part 94)					
<b>Location</b>						
<b>Place of Departure</b>	Rhino Park Airfield, Gauteng Province		<b>Place of Intended Landing</b>	Rhino Park Airfield, Gauteng Province		
<b>Place of Occurrence</b>	Runway 09 at Rhino Park Airfield, Gauteng Province					
<b>GPS Co-ordinates</b>	<b>Latitude</b>	25°49'52.84" S	<b>Longitude</b>	28°32'26.43" E	<b>Elevation</b>	4 776 feet
<b>Aircraft Information</b>						
<b>Registration</b>	ZU-ISK					
<b>Make; Model; S/N</b>	Jabiru; J400 (Serial Number: 0054)					
<b>Damage to Aircraft</b>	Substantial		<b>Total Aircraft Hours</b>	407.4		
<b>Pilot-in-command</b>						
<b>Licence Type</b>	Private Pilot Licence (PPL) Aeroplane		<b>Gender</b>	Male	<b>Age</b>	43
<b>Licence Valid</b>	Yes	<b>Total Hours</b>	80.9	<b>Total Hours on Type</b>	62.6	
<b>Total Hours 30 Days</b>	3.5		<b>Total Flying on Type Past 90 Days</b>	21.9		
<b>People On-board</b>	1 + 0	<b>Injuries</b>	0	<b>Fatalities</b>	0	<b>Other (on ground)</b> 0
<b>What Happened</b>						
<p>On 13 January 2023, a pilot on-board a Jabiru J400 aircraft with registration ZU-ISK took off on a private flight from Rhino Park Airfield in Gauteng province with the intention to land at the same airfield. The flight was conducted in 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 he took off from Runway 09 at Rhino Park Airfield and routed to the general flying area (GFA) for sightseeing. Approximately an hour later, the aircraft returned to Rhino Park Airfield for landing on Runway 09. The pilot stated that he landed the aircraft at a speed of about 80 knots (kts). According to the Jabiru J400 Owner's Manual, the landing speed is 65 kts. The pilot further stated that as the nose wheel contacted the runway surface, the aircraft veered off to the left, and he could not steer straight. The pilot applied the right rudder to correct the anomaly, but the aircraft continued to veer off to the left of the runway and, during that time, the nose gear oleo bent. This caused the propeller to strike the ground whilst the right wing tip outboard leading edge also contacted the ground.</p> <p>The aircraft sustained damage to the nose wheel oleo, right wing leading edge fairing, and the propeller. There were no injuries reported.</p>						



**Figures 1 and 2:** The bent nose landing gear oleo and a split propeller on the trailing edge side. (Source: Operator)



**Figure 3:** Damaged right-wing leading-edge area and fairing. (Source: Operator)

### Findings

1. The pilot was initially issued a Private Pilot Licence (PPL) Aeroplane by the SACAA on 3 January 2023 with an expiry date of 30 November 2023.
2. The pilot was issued a Class 2 medical certificate on 1 October 2021 with an expiry date of 31 October 2023. The pilot had no medical restrictions.
3. At the time of the accident, the pilot had flown a total of 80.9 hours, of which 62.6 hours were

on the aircraft type.

4. This flight was conducted under the provisions of Part 94 of the CAR 2011 as amended.
5. The Certificate of Registration (C of R) was issued to the current owner on 24 June 2022.
6. The aircraft was issued a Certificate of Release to Service (CRS) on 25 November 2022 at 403.2 airframe hours, with an expiry date of 24 November 2023 or at 503.2 airframe hours, whichever occurs first unless the aircraft is involved in an accident or becomes unserviceable, in which case the certificate is invalid for the duration of the period. The aircraft had logged 407.4 total hours at the time of the accident; meaning that it had been flown a further 4.2 hours since the last inspection.
7. The aircraft was initially issued an Authority to Fly (ATF) on 23 December 2020. The ATF was renewed on 13 December 2022 with an expiry date of 31 December 2023.
8. The aircraft was airworthy at the time of the flight. The duration of the flight was 1 hour. Approximately 140 litres of Avgas 100LL fuel remained in the aircraft tanks.
9. The aircraft landed hard on its nose wheel, which caused the oleo to bend to the left.
10. The pilot stated that he was unable to steer the nose wheel, and the aircraft was not responding to the rudder input. Following the accident, the aircraft maintenance organisation (AMO) that recovered the aircraft stated that their investigation of the rudder and steering control system as well as the main wheel brakes revealed no faults on these controls and systems.
11. The pilot stated that the aircraft landed at a speed of approximately 80 kts. According to the Jabiru J400 Owner's Manual, the landing speed is 65 kts. Based on this information, it is likely that the aircraft was unstable during approach for a landing.

#### **Probable Cause(s)**

The approach speed was high, and the aircraft was unstable and as a result, the landing was hard. This caused the nose gear oleo to bend upon touchdown, and the aircraft veered off to the left of the runway.

#### **Contributing Factor(s)**

Unstable approach.

#### **Safety Action(s)**

None.

#### **Safety Message**

The pilots are encouraged to adhere to the speed prescribed in the Pilot's Operating Handbook (POH) from decent, through to approach and down to flare to avoid or minimise the risk of hard landings which may lead to accidents and injuries.

#### **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 desk top enquiries 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 to apportion blame or liability.*

**Disclaimer**

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**This report is issued by:**

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