

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10213					
Classification	Accident	Date	24 August 2022	Time	0815Z	
Type of Operation	Private (Part 94)					
Location						
Place of Departure	George Aerodrome (FAGG), Western Cape Province		Place of Intended Landing	Douglas Airfield (FADC), Northern Cape Province		
Place of Occurrence	Runway 08 at Beaufort West Aerodrome					
GPS Co-ordinates	Latitude	32° 18' 00.00"S	Longitude	022° 40' 00.00"E	Elevation	2929 ft
Aircraft Information						
Registration	ZU-TDH					
Make; Model; S/N	Shadow Lite; Jabiru J 230 (Serial Number: 988)					
Damage to Aircraft	Substantial		Total Aircraft Hours	5.0		
Pilot-in-command						
Licence Type	National Pilot Licence (NPL)		Gender	Male	Age	74
Licence Valid	Yes	Total Hours	1487.4	Total Hours on Type	5.3	
Total Hours 30 Days	2.9		Total Flying Hours on Type Past 90 Days		5.3	
People On-board	1+0	Injuries	0	Fatalities	0	Other (on ground) 0
What Happened						
<p>On 24 August 2022, a pilot on-board a Jabiru J230 aircraft with registration ZU-TDH departed George Aerodrome (FAGG) in the Western Cape province for Douglas Airfield (FADC) in the Northern Cape province. The pilot had planned a fuel uplift stop at Beaufort West Aerodrome (FABY) in the Western Cape province due to insufficient fuel tank capacity to reach the planned final destination at (FADC). The private 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 stated that a pre-flight inspection was conducted, and no anomalies were identified. The aircraft had 122 litres (l) of fuel on-board. According to the pilot, take-off proceeded as planned. The pilot flew to FABY to refuel before heading to FADC. During approach for Runway (RWY) 08 at FABY, the pilot noticed the strong wind that was blowing from the north. The aircraft touched down as planned, followed by the landing roll towards the end of the runway. Whilst approaching the end of the runway, a gust of wind lifted the left wing, causing the right-wing tip and the propeller blades to contact the runway surface. Thereafter, the aircraft veered off to the left-side of the runway. The pilot was able to regain control and stopped the aircraft a few metres before the edge of the runway.</p> <p>The aircraft sustained substantial damage to the right-wing tip and the propeller blades tips. The pilot was not injured during the accident sequence.</p>						



Figure 1: Damage to the right-wing tip (left) and the wing scrape marks on the runway surface (right).



Figure 2: Damage on one of the propeller blades tip (left), and the propeller strike marks on the runway surface (right).



Figure 3: The aircraft after the accident.

Findings

- The pilot was initially issued a National Pilot Licence (NPL) by the Regulator (SACAA) on 1 July 2010. His licence was reissued on 27 January 2022 with an expiry date of 26 January 2024. His Class 4 medical certificate was issued on 23 October 2020 with an expiry date of 31 October 2023, with an endorsement to make use of corrective lenses when flying. The pilot conducted his aircraft conversion on 2 June 2022 and was signed off at 1.3 hours. The aircraft type was endorsed on his licence.
- The aircraft was issued a Certificate of Registration by the Regulator on 28 April 2022. The aircraft was issued a Certificate of Authority (CoA) to fly by the Regulator on 11 July 2022 with an expiry date of 10 July 2023. The aircraft was issued a Certificate of Release to Service (CRS) by an approved aircraft maintenance organisation (AMO) on 8 June 2022 at 0.0 hours (new) with an expiry date of 8 June 2023 or at 50 hours of flight time. The aircraft took off with 122l of fuel on-board. The pilot had planned to refuel at FABY.
- The aircraft had approximately 72l of fuel remaining at the time of landing at FABY.

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

The aircraft has a total fuel capacity of 140 litres (l) (37 US gallons). The fuel is divided between two wing tanks at total capacity of 67.5l each and a 5l header tank. The total usable fuel is 135l.

- Strong weather conditions prevailed at FABY at the time of landing. The official weather report provided by the South African Weather Service (SAWS) for 24 August 2022 was as follows:

FABY 240800Z AUTO 34028G42KT 25/M01 Q1018.

Wind Direction: 340°

Wind Speed: 28 Gusting 42kt

Air Temperature: 25°C

Dew Point: Moderate 01

QNH: 1018

The information below is an extract from the aircraft type Jabiru-J230 POH.

Cross wind landing: *The J230 has been approved for operation in crosswind of up to 14 knots.*

When landing in a strong cross wind, use a wing low, crab or a combination method of drift correction. Avoid a prolonged hold off by allowing the aircraft to settle onto the runway in a slightly nose high and wing low attitude, touching down on the runway into the wind mainwheel first followed by the other mainwheel and then the nose gear in quick succession. In strong and/or gusty wind conditions, it may be desirable to make the final approach at a slightly higher than normal airspeed with partial or no flap selected.

Probable Cause

The aircraft landed in strong wind conditions, which led to loss of control; subsequently, the right-wing tip scraped the runway surface during the landing roll.

Contributing Factor

Insufficient fuel which compelled (the pilot) to land in strong wind conditions.

Safety Action(s)
None.
Safety Message
<ul style="list-style-type: none"> • To prevent such accidents from recurring, pilots are advised to always adhere to the CARs for safety rules to prevent injuring people and/or causing damage to property. • Pilots should conduct proper flight planning for fuel upliftment whilst still having sufficient fuel on-board in case they had to divert to another aerodrome or make an early fuel stop due to unforeseen events.
About this Report
<p><i>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.</i></p> <p><i>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.</i></p>
Purpose
<p><i>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.</i></p>
Disclaimer
<p><i>This report is produced without prejudice to the rights of the AIID, which are reserved.</i></p>

This report is issued by:

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