

LIMITED ACCIDENT INVESTIGATION

Reference Number	CA18/2/3/9997						
Classification	ACCID	Date	6 May 2021	Time	1245Z		
Type of Operation	Private (Part 94)						
Location							
Place of Departure	Tankwa Padstal	Place of Intended Landing	Loeriesfontein Airfield				
Place of Accident	Loeriesfontein Airfield (FALF), Northern Cape Province						
GPS Co-ordinates	Latitude	30°54'25" South	Longitude	019°25'33" East	Elevation	2811feet	
Aircraft Information							
Registration	ZU-PBB						
Model/Make	Jabiru J230						
Damage to Aircraft	Substantial	Total Aircraft Hours	808.2				
Pilot-in-command							
Licence Type	National Pilot Licence	Gender	Male		Age	57	
Licence Valid	Yes						
Total Hours on Type	26.7		Total Flying Hours	556.9			
People On-board	1+0	Injuries	0	Fatalities	0	Other (On Ground)	0
What Happened							
<p>On 6 May 2021 at about 1130Z, a Jabiru J230 aircraft with registration ZU-PBB was operated as a private flight from Tankwa Padstal private airstrip with the intention to land at Loeriesfontein Airfield (FALF). On-board the aircraft was a pilot flying solo. The flight was conducted under Visual Flight Rules (VFR) by day. The entire flight was uneventful and lasted approximately 1 hour and 11 minutes.</p> <p>The pilot stated that during approach for landing Runway 23 at FALF, the aircraft experienced a downdraft which caused him to lose control of the aircraft. This resulted in a hard landing in which the propeller struck the ground and the nose gear was damaged. Both the left and right main landing gears were bent during the accident sequence.</p> <p>According to the pilot questionnaire, fine weather prevailed at the time of the accident. Wind direction was 180° at 6 knots; temperature was 18°C with broken clouds at approximately 800 feet.</p> <p>The aircraft sustained substantial damage during the accident sequence, however, there were no injuries reported.</p>							



Figures 1, 2, 3 & 4: Damage to the nose gear strut (top left), one of the propeller blades (top right), left main landing gear (bottom left), and right main landing gear (bottom right). Damages are all consistent with hard landing.

Probable cause: Although the pilot stated that the aircraft was hit by a downdraft and, as a result, lost control, it is likely that the aircraft had an unstable approach which led to a hard landing. It is also possible that the pilot was not familiar with the airstrip.

Note: Definition of downdraft:

- 1. Downdraft is a downward current of gas (such as air during a thunderstorm). Occurs when the heat from the ground warms the surrounding air, which causes the air to rise. The rising pockets of hot air are called thermals. Downdrafts occur on the downwind side of a hill or mountain. Downdrafts are often found in the vicinity of strong thunderstorms. There was no evidence of rain or thunderstorm on the day of the accident.*

There were broken clouds at approximately 800ft on the day of the accident. The accident occurred at about 1230Z and at a temperature of 18 degrees Celsius.

Safety Action/s

None.

Safety Message and/or Safety Recommendation/s

None.

Purpose of the Investigation	
<i>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.</i>	
About this Report	
<i>Decisions regarding whether to investigate, and the scope of an investigation are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, no 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 brief report. The report has been compiled using information supplied in the initial notification, as well as follow-up information 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 accident.</i>	
<i>This report provides an opportunity to share safety message/s in the absence of an investigation.</i>	
<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>	
Disclaimer	
<i>This report is produced without prejudice to the rights of the AIID, which are reserved.</i>	

This report is issued by:

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