



LIMITED ACCIDENT INVESTIGATION REPORT
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Reference Number		CA18/2/3/10154					
Classification	Accident	Date	7 May 2022	Time	0800Z		
Type of Operation		Training (Part 141)					
Location							
Place of Departure		Cape Winelands Aerodrome (FAWN), Western Cape Province		Place of Intended Landing		Diemerskraal Airfield, Western Cape Province	
Place of Accident		Runway 22 at Diemerskraal Airfield					
GPS Co-ordinates	Latitude	33° 34' 38.4" S	Longitude	18° 54' 58.3" E	Elevation	280 ft	
Aircraft Information							
Registration		ZU-BJI					
Make/Model		Bushbaby 450 (Serial Number: 051)					
Damage to Aircraft		Substantial		Total Aircraft Hours		3137.4	
Pilot-in-command							
Licence Type		National Pilot Licence (NPL)		Gender	Male	Age	51
Licence Valid		Yes					
Total Hours on Type		442		Total Flying Hours		1613	
People On-board	2 + 0	Injuries	0	Fatalities	0	Other (on ground)	0
What Happened							
<p>On Saturday morning, 7 May 2022 at approximately 0730Z, a flight instructor and a student pilot on-board a Bushbaby 450 aircraft with registration ZU-BJI took off on a training flight from the Cape Winelands Aerodrome (FAWN) in the Western Cape province, to Diemerskraal Aerodrome (near Wellington) in the same province. No flight plan was filed for the flight. The flight was conducted under the provisions of Part 141 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The student pilot reported that 30 litres (L) of Avgas 100LL fuel was uplifted before the flight and a pre-flight inspection was carried out with no anomalies found. The student pilot took off and climbed to 2000 feet (ft) above ground level (AGL), cruising at 80 miles per hour (mph). Thereafter, the</p>							

instructor requested him to perform a field inspection on first approach and to remain in the circuit to prepare for a touch-and-go landing.

The student pilot further reported that the instructor clearly briefed him on the base leg to be careful not to accidentally press the brakes as this is an easy mistake to make on Bushbaby aircraft. The first touch-and-go landing was successful. The pair remained in the circuit and prepared for the second landing, which was briefed as a full-stop landing. According to the student pilot, on touch down the aircraft veered off slightly to the left, which was overcorrected by pressing the right rudder; therefore, causing the aircraft to veer off to the right. In an attempt to stop a runway excursion, the student pilot applied full left rudder and inadvertently pressed the left brake, causing the left wheel to lock. This resulted in the aircraft's tail tilting forward and the aircraft nosing over. The aircraft came to rest in an inverted position.

The aircraft sustained significant damage to both wings, propeller, fuselage and empennage; however, both occupants were not injured during the accident sequence.



Figure 1: The aircraft at the accident site. (Source: Operator)

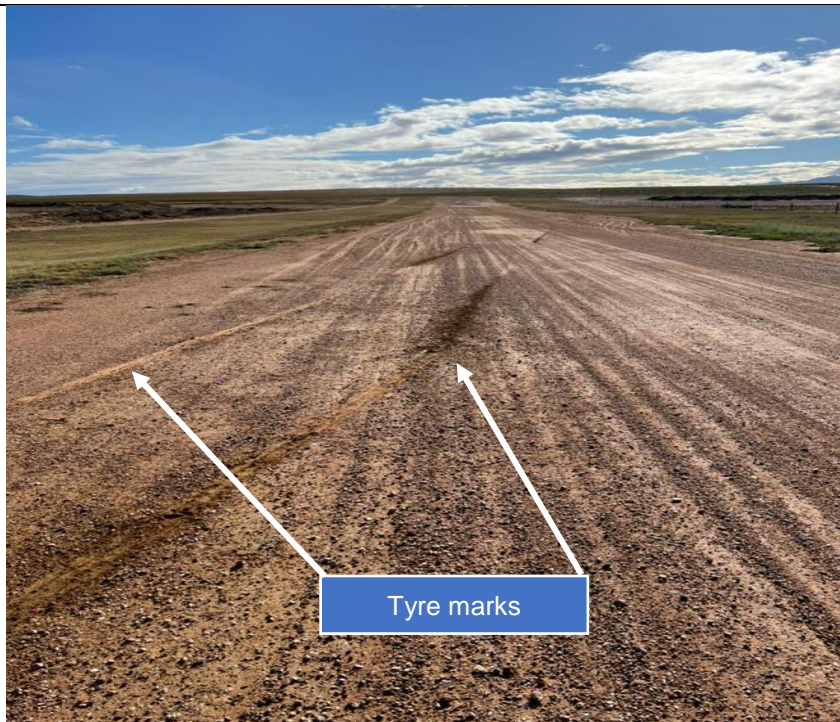


Figure 2: Tyre marks on the runway. (Source: Operator)

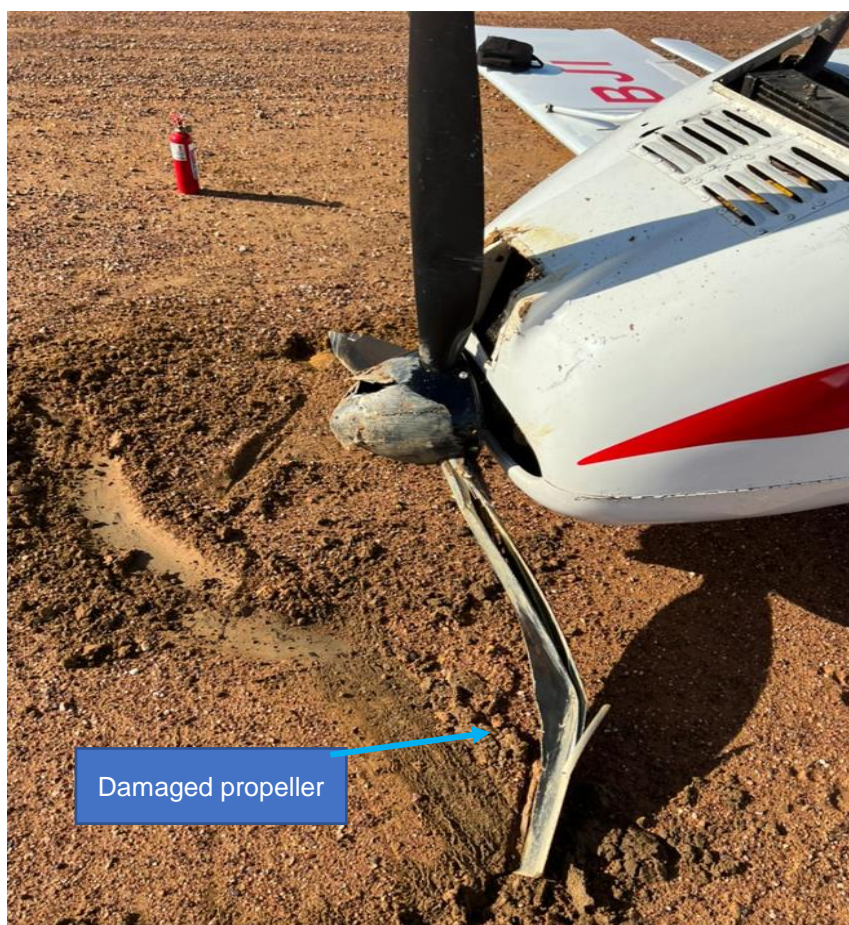


Figure 3: Damaged propeller. (Source: Operator)

- The weather information was sourced from the pilot questionnaire, which indicated that local wind was 135° at 03 knots with fine weather conditions at the time of the accident.



Figure 4: Windsock indicating wind speed and direction. (Source: Operator)

What was found:

- The flight instructor was initially issued a National Pilot Licence (NPL) Aeroplane on 8 January 2003. His last validation was on 9 January 2021 with an expiry date of 8 January 2023. His Class 2 medical certificate was issued on 18 June 2020 with an expiry date of 30 June 2022 with a restriction to wear corrective lenses.
- The student pilot was initially issued a Private Pilot Licence (PPL) Aeroplane on 12 December 2003. His last validation was on 8 December 2021 with an expiry date of 31 December 2022. His Class 2 medical certificate was issued on 18 June 2020 with an expiry date of 30 June 2022 with a restriction to wear corrective lenses.
- The student pilot did not renew his licence until 16 January 2020 when he undertook his currency flight. The Bushbaby 450 aircraft was endorsed on his licence on 11 October 2021. The student pilot had 10.2 flying hours on type and a total of 232.8 flight hours.
- The aircraft was initially issued an Authority to Fly (ATF) on 5 March 2020. His current ATF had an expiry date of 31 March 2023.

- A review of the flight folio revealed no outstanding defects relating to the aircraft's brakes prior to the accident, and the instructor indicated that there were no mechanical anomalies with the aircraft prior to the accident.
- According to the latest Certificate of Release to Service (CRS), the aircraft's last annual inspection was carried out on 24 January 2022 at 3108.3 airframe hours. At the time of the accident, the aircraft had 3137.4 airframe hours. The aircraft accumulated a further 29.1 airframe hours since the said annual inspection.
- The aircraft was issued a flight authorisation letter on 7 May 2022 with an expiry date of 30 May 2022.
- Fine weather conditions prevailed at the time of the flight. The weather had no bearing on this accident.
- The student pilot acknowledged that he inadvertently activated the left brake, causing the left wheel to lock.
- Although the student pilot reported that he applied the left rudder pedal, evidence shows (see Figure 2) that both rudder pedals/brakes were applied excessively whilst trying to get the aircraft back on the centreline, ultimately causing the aircraft to nose over.

Probable cause:

Loss of directional control during landing, which resulted in the aircraft veering off to the right of the runway before it nosed over.

Contributory factor:

Incorrect use of the rudder pedal and braking technique during landing.

Safety Action/s

None.

Safety Message and/or Safety Recommendation/s

None.

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.***

About this Report

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.

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