

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10230					
Classification	Accident	Date	19 October 2022	Time	0800Z	
Type of Operation	Game Capture (Part 137)					
Location						
Place of Departure	Ozabeni Game Reserve, KwaZulu-Natal Province	Place of Intended Landing	Ozabeni Game Reserve, KwaZulu-Natal Province			
Place of Occurrence	Ozabeni Game Reserve, KwaZulu-Natal Province					
GPS Co-ordinates	Latitude	27°35'11.45" S	Longitude	32°39'6.42" E	Elevation	102 ft
Aircraft Information						
Registration	ZS-RBM					
Make; Model; S/N	Robinson; R22 Beta (Serial Number: 1895)					
Damage to Aircraft	Substantial			Total Aircraft Hours	5929.6	
Pilot-in-command						
Licence Type	Commercial Pilot Licence (CPL) Helicopter		Gender	Male	Age	40
Licence Valid	Yes	Total Hours	4630.3	Total Hours on Type	397.1	
Total Hours Past 90 Days	162.7		Total Hours on Type Past 90 Days			18.7
People On-board	1 + 0	Injuries	0	Fatalities	0	Other (on ground) 0
What Happened						
<p>On 19 October 2022, a pilot on-board a Robinson R22 helicopter with registration ZS-RBM took off on a game capture operation at Ozabeni Game Reserve, 3 nautical miles (nm) south-west of Sodwana Bay in KwaZulu-Natal province. The flight was conducted in visual meteorological conditions (VMC) by day and under the provisions of Part 137 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The pilot stated that he had the helicopter doors removed when he started the game capture operation. Later, when it started to rain, he landed the helicopter with the intention to re-fit the doors, which were approximately 8 metres (m) ahead of the helicopter's point of landing. He then lowered the collective and rolled the throttle to the off position, then applied both cyclic and collective friction with the engine set to idle. Thereafter, he disembarked from the helicopter to get the doors. However, as soon as he reached the position where the doors were, he heard the engine revolutions per minute (RPM) spooling up. He then observed the helicopter's nose lift with the tail stinger touching the ground and, eventually, the helicopter got airborne. The helicopter tracked backwards about 15m while yawing slightly to the right. It then descended with the right-skid low and the main rotor blades contacted the ground, followed by the fuselage. The helicopter came to rest on its starboard side. The pilot hurried to the helicopter and switched off the engine.</p> <p>The helicopter sustained substantial damage to the main rotor blades, fuselage, tailboom and the skids. The pilot was not injured during the accident sequence as he was positioned a distance away from the helicopter.</p>						



Figure 1: The helicopter resting on its starboard side. (Source: Pilot)



Figure 2: The substantially damaged helicopter post-accident. (Source: Pilot)

The weather information below was obtained from the Meteorological Aerodrome Report (METAR) that was issued by the South African Weather Service (SAWS) on 19 October 2022 at 0800Z, recorded at Mbazwana Airfield (FAMX) which is located 6.5nm north-west of the accident site.

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Wind Direction	050°	Wind Speed	2kts	Visibility	9999m
Temperature	26°C	Cloud Cover	CAVOK	Cloud Base	CAVOK
Dew Point	23°C	QNH	1021hPa		

Findings

1. The pilot was issued a Commercial Pilot Licence (CPL) Helicopter on 2 June 2022 with an expiry date of 30 June 2023. The pilot had the helicopter type and a culling rating endorsed on his licence. A Class 1 medical certificate was issued to the pilot on 2 June 2022 with an expiry date of 30 June 2023, with no medical restrictions.
2. The helicopter was initially issued a Certificate of Airworthiness (C of A) on 30 November 2015. The reissued C of A had an expiry date of 30 November 2022.
3. The mandatory periodic inspection (MPI) carried out on the helicopter prior to the accident flight was conducted on 26 September 2022, and certified at 5910.8 airframe hours. The helicopter was issued a Certificate of Release to Service (CRS) on 26 September 2022 with an expiry date of 26 September 2023 or at 6010.8 hours of flight time, whichever occurs first unless the helicopter is involved in an accident or becomes unserviceable.
4. The operator was issued an Air Operating Certificate (AOC) with an endorsement of Part 137 and with the G10 operation specification (game culling, counting and herding) by the Regulator (SACAA) on 25 February 2022, and expiring on 28 February 2023.
5. Robinson R22 Pilot's Operating Handbook Section 10: Safety Notice SN-17 states:

Safety Notice SN-17

Issued: Nov 84 Rev: Feb 89; Jun 94

NEVER EXIT HELICOPTER WITH ENGINE RUNNING

Several accidents have occurred when pilots momentarily left their helicopters unattended with the engine running and rotors turning. The collective can creep up, increasing both pitch and throttle, allowing the helicopter to lift off or roll out of control.

Probable Cause

The helicopter was left unattended whilst the engine and the rotors were still running; as a result, the helicopter momentarily lifted off uncommanded before it impacted the ground.

Contributing Factors

Deteriorating weather conditions.

Safety Action

None.

Safety Message

Pilots are advised to adhere to safety notices as stipulated in the Pilot's Operating Handbook, as well as remain in charge of the flight controls whenever the engine is running and the rotors are turning.

<p>About this Report</p> <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>
<p>Purpose</p> <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>
<p>Disclaimer</p> <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**