

LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/2/3/10474							
Classification	Accident			Date	1 August 2024		Time	1515Z
Type of Operation	Private (Part 91) – Game Capture							
Location								
Place of Departure	Alpha Farm in Jakkalsfontein, Free State Province			Place of Intended Landing	Alpha Farm in Jakkalsfontein, Free State Province			
Place of Occurrence	Alpha Farm in Jakkalsfontein, approximately 45 nautical miles (NM) south-west of Bram Fischer International Airport (FABL), Free State Province							
GPS Co-ordinates	Latitude	29°42'49" S	Longitude	025°38'33" E	Elevation	4 340ft		
Helicopter Information								
Registration	ZS-HEM							
Make; Model; S/N	Schweizer Helicopter Corporation; 269C (Serial Number: 1201014)							
Damage to Helicopter	Substantial			Total Helicopter Hours	1 589.6			
Pilot-in-command								
Licence Type	Private Pilot Licence (PPL)		Gender	Male		Age	30	
Licence Valid	Yes	Total Hours	1020.4		Total Hours on Type	1 020.4		
Total Hours 30 Days	35.3		Total Flying on Type Past 90 Days	144.1				
People On-board	1+0	Injuries	1	Fatalities	0	Other (on ground)	0	
What Happened								
<p>On Thursday, 1 August 2024 at approximately 0900Z, a pilot on-board a Schweizer 269C helicopter with registration ZS-HEM took off on a game-capture flight from Alpha Farm in Jakkalsfontein, Free State province, with the intention to return to the same farm. The flight was conducted under visual meteorological conditions (VMC) by day and under the provisions of Part 91 of the Civil Aviation Regulations (CAR) 2011 as amended.</p> <p>The ground crew driver stated that the pilot intended to guide a herd of springboks into a boma at the farm located approximately 45 nautical miles (nm) south-west of Bram Fischer International Airport (FABL). The pilot and the ground crew driver communicated via a handheld two-way radio. The driver drove along the farm's perimeter fence on the right-side of the springboks whilst the pilot flew the helicopter.</p> <p>The pilot instructed the driver to reposition the vehicle to the left of the springboks. As the driver repositioned the vehicle as directed, he heard a loud sound (bang). The driver turned to check the origin of the noise and noticed that the helicopter had crashed. He immediately used his mobile phone to notify the local South African Police Service (SAPS) and the Emergency Medical Services</p>								

(EMS) about the accident whilst he made his way to the crash scene to assist the pilot. Upon arrival at the scene, the driver noticed that the pilot had sustained serious injuries and was unconscious. He then administered cardiopulmonary resuscitation (CPR); however, the pilot was unresponsive. After assessing if it was safe to move him, he carried him to the vehicle and rushed him to the hospital. He saw the ambulance that was on its way to the accident scene whilst he was en route to the hospital, and he stopped it. The paramedics took over the care of the pilot. The SAPS officials also responded to the accident site and secured it.

The investigation revealed that the helicopter was operated close to the ground. The pilot's focus was on the springboks that were deviating from going into the boma. The pilot then transitioned the helicopter backwards, but the tail rotor blades struck an anthill (and the rotor blades were severed). As a result, the pilot lost control of the helicopter and it rolled to the right and crashed next to the fence. The helicopter rested on its right side; it was destroyed during the accident sequence.



Figure 1: The final resting position of the helicopter. (Source: SAPS)



Figure 2: The tail rotor blades marks on the anthill. (Source: SAPS)

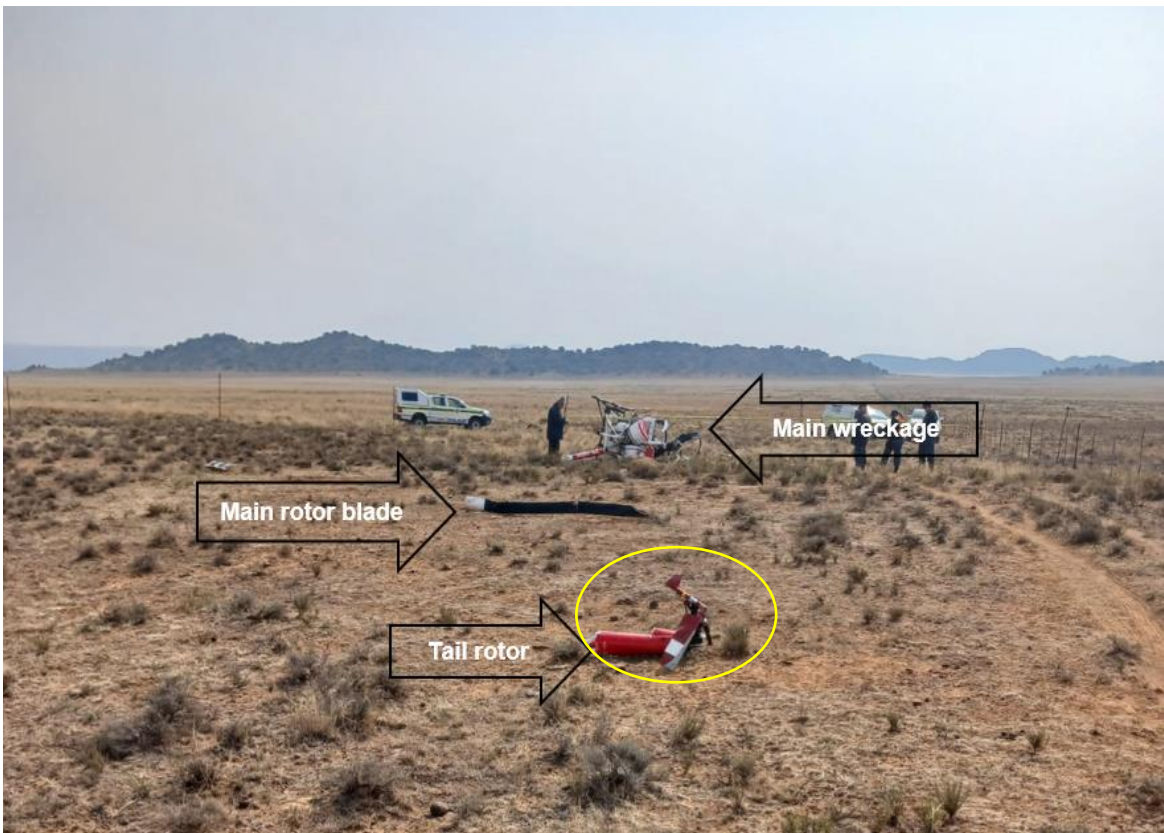


Figure 3: The accident scene depicting the wreckage, main rotor blade and tail rotor post-accident. (Source: SAPS)

Findings
<ol style="list-style-type: none"> 1. The pilot was initially issued a Private Pilot Licence (PPL) helicopter on 27 July 2016. His licence was reissued on 28 February 2023 with an expiry date of 28 February 2025. The pilot was appropriately rated to operate the helicopter, and the rating was endorsed on his licence. The pilot had 1020.4 total flying hours on the helicopter type. 2. The pilot was issued a Class 2 aviation medical certificate on 17 February 2023 with an expiry date of 29 February 2028 with no medical restrictions. 3. The mandatory periodical inspection (MPI) of the helicopter was conducted on 28 June 2024 at 1 583.5 total airframe hours with an expiry date of 28 June 2025 or at 1 683.5 hours, whichever comes first. The Certificate of Release to Service (CRS) was issued on 28 June 2024 after the MPI was conducted. The helicopter had accrued 6.1 hours after last MPI. 4. The Certificate of Airworthiness (C of A) was initially issued on 30 May 2015. The C of A was reissued on 17 October 2023 with an expiry date of 17 October 2024. The Certificate of Registration (C of R) was issued to the present owner on 10 July 2018. 5. The tail boom was severed during the accident, and both main rotor blades separated from the helicopter. 6. The pilot sustained serious injuries; he does not recall how the accident occurred. 7. The helicopter was operated close to the ground and the tail rotor blades struck an anthill whilst the pilot was focussed on the springboks he was herding.
Probable Cause(s)
The helicopter's tail rotor blades struck an anthill whilst the helicopter was operated close to the ground. As a result, the tail boom was severed and the pilot lost control; the helicopter rolled to the right and crashed.
Contributing Factor(s)
Loss of situational awareness of the ground's proximity.
Safety Action(s)
None.
Safety Message and/or Safety Recommendation/s
None.
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**