

PRELIMINARY ACCIDENT REPORT

Reference number : CA18/2/3/9727
Name of owner : Calitz GS
Name of operator : Private (Part 91)
Manufacturer : Robinson Helicopter Company
Model : R22 Beta II
Nationality : South African
Registration marks : ZS-HBP
Place : Thaba Thala Safaris Game Reserve, Eastern Cape
Date : 15 August 2018
Time : ±0800Z

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.

The information provided herein is of a **preliminary nature**. Readers are advised that new information may become available that may alter this preliminary report prior to the publication of the final report. Any person with information that might assist in investigating the cause of the accident are requested to present information or themselves to the Accident and Incident Investigation Division of the SACAA, or send an e-mail to AiidInbox@caa.co.za

This report is issued in accordance with Civil Aviation Regulation (CAR) 2011 Part 12.05.1(2)(a) and ICAO Annex 13 Paragraph 7.1 or 7.2, whichever is applicable.

1. The South African Civil Aviation Authority (SACAA) is conducting a safety investigation into a fatal helicopter accident involving a Robinson R22 Beta II, with registration markings ZS-HBP. The accident occurred on Wednesday morning 15 August 2018 in a game reserve in the Sterkstroom district in the Eastern Cape.
2. The investigation is being conducted in accordance with international protocol as set out by the International Civil Aviation Organization (ICAO) Annex 13. The investigation team consist of an investigator-in-charge (IIC) and a co-investigator from the SACAA. The investigation team arrived on site the following morning.

3. History of flight

- 3.1 According to available information, the pilot arrived at the game reserve on Tuesday afternoon 14 August 2018 after driving from Cradock. The helicopter was loaded onto a trailer and was towed to the game reserve by a vehicle that was driven by the pilot. He then stayed at the game reserve overnight and the game darting operation commenced the following morning with fine weather conditions prevailing.
- 3.2 The next morning the pilot, accompanied by a veterinarian, commenced with dart the antelope (lechwes) from the helicopter for capture and transport to a buyer in Namibia. At the time of the accident they had managed to dart 11 animals out of 75 that were earmarked for capture.
- 3.3 As the veterinarian darted the animals, a ground support team moved in and physically captured the animals, which were then loaded onto a truck and given an antidote to revive them.
- 3.4 The veterinarian was seated on the left side in the two-seater helicopter, of which both doors had been removed. He was secured to the helicopter factory fitted safety harness by means of a special safety harness, also referred to as a monkey chain.
- 3.5 The helicopter was found lying on its left side. The tail boom was severed and both main rotor blades were found to have separated from the main rotor hub assembly. One main rotor blade was lying in close proximity to the main wreckage, the other main rotor blade was approximately 82 m away. The main wreckage was lying 21 m from a set of power lines, which consisted of three wires, 1.5 m apart in the horizontal plane and approximately 10 m (33 ft) above ground level. The two supporting pylons were 192 m apart. The wires were intact, and there was no disruption of the power supply in the area. The middle wire displayed evidence of arcing, as can be seen in Figures 2 and 3.
- 3.6 The scene was contaminated as the ground impact marks were destroyed by people that rushed to the scene to assist the two occupants as well as emergency services.
- 3.7 An Eastern Cape Provincial Ambulance was dispatched to the scene as well as a private EMS company. A local farmer with a Robinson R22 was also called and landed at the site, but was unable to airlift the seriously injured pilot.

- 3.8 The EMS helicopter from East London was also notified of the accident, but could not reach the accident site due to inclement weather conditions along the coast and the escarpment on the day.
- 3.9 The veterinarian succumbed to his injuries on the scene of the accident and the pilot was transported via road ambulance to a private hospital in Queenstown. Following an assessment of his medical condition, he was transferred to a private hospital in East London where he underwent surgery. Approximately two weeks after the accident the pilot was transferred by an air mercy flight from East London to Pretoria where he was admitted to a private hospital in the city. By the time this report was concluded, the pilot was still in hospital.
- 3.10 The accident occurred during daylight conditions, at a geographical position that was determined to be 31°33'11.1" South 026°29'42.9" East at an elevation of 4413 feet above mean sea level (AMSL).



Figure 1: The main wreckage as it came to rest with electrical conductors visible to the right

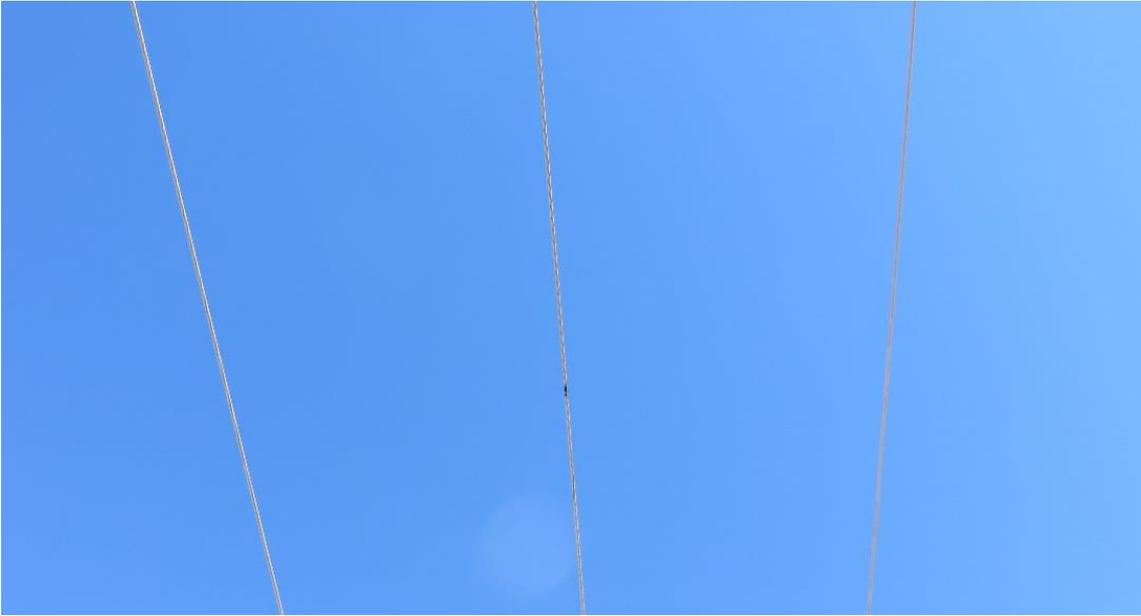


Figure 2: A view of the three wires with the arcing visible on the middle wire



Figure 3: The middle wire of the three, displaying evidence of arcing

4. Findings

Although the investigation is still on-going, the following findings have been made:

- 4.1 The pilot was the holder of a valid commercial pilot licence (helicopter). He renewed his licence on 15 December 2017 with an expiry date of 31 December 2018. The helicopter type was endorsed on his licence.

- 4.2 He was in possession of a Class 1 aviation medical certificate, which was renewed on 28 November 2017 with an expiry date of 30 November 2018.
- 4.3 The helicopter had a valid release to service certificate as well as a valid certificate of airworthiness with an expiry date of 11 January 2019.
- 4.4 The last maintenance inspection that was carried out on the helicopter prior to the accident flight was certified on 8 June 2018 at 1 898.6 airframe hours. Following the inspection, a further 94.8 hours were flown with the helicopter.
- 4.5 The last flight folio entry was on 4 August 2018 with the Hobbs meter reading entered as 740.6. Available evidence indicates that an additional 4.2 hours were subsequently flown with the helicopter for which there were no entries in the flight folio.
- 4.6 According to available information the helicopter was refuelled from 200 litre drums, but the investigation team did not see these drums during the field investigation phase.
- 4.7 Fine weather conditions prevailed at the time of the accident, and weather was not considered to have had any bearing on the accident.
- 4.8 The main wreckage was found lying on its left side some 21 meters from a set of power lines (Figure 2), which consisted of three wires 1.5 metres apart in the horizontal plane and approximately 10 m (33 ft) above ground level. The middle wire displayed evidence of arcing.
- 4.9 The veterinarian was seated on the left side and was secured to the helicopter factory-fitted safety harness by an additional safety harness to allow for additional manoeuvring while darting the animals. He succumbed to his injuries on the accident scene.
- 4.10 The pilot was seriously injured during the accident sequence and was attended to on the accident scene by paramedics. He was transported to a private hospital in Queenstown by road ambulance and from there to a private hospital in East London.
- 4.11 Approximately two weeks after the accident the pilot was transferred by an air mercy flight from East London to Pretoria where he was admitted to a private hospital in the city. By the time this report was concluded, the pilot was still in hospital.

5. Recommendations

5.1 No safety recommendation has been issued.

6. Conclusion

6.1. The SACAA investigation is on-going. We will be looking into other aspects of this accident that may or may not have safety implications.

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