

|   |
|---|
| <b>SHORT REPORT AND EXECUTIVE SUMMARY</b> |
|---|

|  |                |  |                          |                             |                              |        |
|--|----------------|--|--------------------------|-----------------------------|------------------------------|--------|
|  |                |  |                          | Reference:                  | CA18/2/3/1150                |        |
| <b>Aircraft Registration</b>   | ZS-KEW         | <b>Date of Accident</b>  | 23 November 2016         |                             | <b>Time of Accident</b>      | 07:10Z |
| <b>Type of Aircraft</b>  | GRUMMAN G-164B |  | <b>Type of Operation</b> |                             | Commercial Training Part 137 |        |
| <b>Pilot-in-command Licence Type</b>   |                | Commercial   | <b>Age</b>               | 46                          | <b>Licence Valid</b>         | Yes    |
| <b>Pilot-in-command Flying Experience</b>  |                | Total Flying Hours   | 770.1                    |                             | Hours on Type                | 25     |
| <b>Last point of departure</b>   |                | Middelburg Airfield (FAMB), Mpumalanga South Africa  |                          |                             |                              |        |
| <b>Next point of intended landing</b>  |                | Middelburg Airfield (FAMB), Mpumalanga South Africa  |                          |                             |                              |        |
| <b>Location of the accident site with reference to easily defined geographical points (GPS readings if possible)</b>   |                |  |                          |                             |                              |        |
| (GPS position: S 25°41'52.55", E 029°26'36.32"), elevation 4910ft  |                |  |                          |                             |                              |        |
| <b>Meteorological Information</b>  |                | Wind direction:010; Air temperature: 25; Wind speed: 5kt; Visibility: 9999; Cloud cover: 2/8;Cloud base: NVT |                          |                             |                              |        |
| <b>Number of people on board</b>   | 1              | <b>No. of people injured</b>   | 0                        | <b>No. of people killed</b> | 0                            |        |
| <b>Synopsis</b>  |                |  |                          |                             |                              |        |
| <p>The pilot was engaged on agricultural crop spraying training (Ag Nav.) when the accident occurred. According to the pilot statement, he took off from Runway 02 and made a left turn towards the place where he was going to conduct his training. Upon arrival in the area, the pilot marked a pivot point and began his training whereby he conducted 4 uneventful swap spraying patterns consisting of 2 circles. During completion of the 5<sup>th</sup> swap spray as he was making a right turn to align for the 6<sup>th</sup> round, he noticed the aircraft was flying too low and slow.</p> <p>The pilot attempted to recover the aircraft speed by adding power and dropping the nose. He then noticed that collision was inevitable when he noticed a tree in front of him. He then took evasive actions however the aircraft's right wing tip collided with tree top and crashed.</p> <p>The aircraft came to stop approximately 58 meters facing the direction it came from. The aircraft sustained substantial but the pilot was not injured during the accident sequence.</p> |                |  |                          |                             |                              |        |
| <b>Probable Cause</b>  |                |  |                          |                             |                              |        |
| <p>The aircraft crash was due to collision with the tree in an attempt to regain forward speed following a stall during a crop spraying training exercise.</p>   |                |  |                          |                             |                              |        |
| SRP Date   | 28 March 2017  |  | Release Date             | 04 April 2017               |                              |        |



## AIRCRAFT ACCIDENT REPORT

**Name of Owner** : Platorand Lugbesspruiting CC  
**Name of Operator** : Platorand Lugbesspruiting CC  
**Manufacturer** : Schweizer Aircraft Corporation  
**Model** : Grumman G-164B  
**Nationality** : South African  
**Registration Marks** : ZS-KEW  
**Place** : Middelburg Airfield  
**Date** : 28 November 2016  
**Time** : 07:10Z

*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 of the Investigation:**

*In terms of Regulation 12.03.1 of the Civil Aviation Regulations (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 establish legal liability.*

### **Disclaimer:**

*This report is produced without prejudice to the rights of the CAA, which are reserved.*

## **1. FACTUAL INFORMATION**

### **1.1 History of Flight**

1.1.1 The pilot was engaged on agricultural crop spraying training (Ag Nav.) when the accident occurred. According to the pilot statement, he took off from FAMB and made a left turn towards the place where he was going to conduct his training. Upon arrival in the area, the pilot marked a pivot point and began his training whereby he conducted 4 uneventful swap spraying patterns consisting of 2 circles. During completion of the 5<sup>th</sup> swap spray as he was making a right turn to align for the 6<sup>th</sup> round, he noticed the aircraft was flying too low and slow.



Figure 1: Google view of the accident site

- 1.1.2 The pilot attempted to recover the aircraft speed by adding power and dropping the nose. He then noticed that collision was inevitable when he noticed a tree in front of him. He then took evasive actions however the aircraft's right wing tip collided a tree top causing the aircraft to crash. The aircraft came to stop approximately 58 meters facing the direction it came north-westerly and the pilot was not injured during the accident sequence.
- 1.1.3 The accident occurred during daylight meteorological conditions in an open area 0.62 nautical miles outside Middleburg airfield in the direction 171.8 from the threshold of Runway 20, with GPS co-ordinates: S 25°41'52.55", E 029°26'36.32" and a field elevation of 4910ft.

## 1.2 Investigation Revealed the Following:

- 1.2.1 According to the available information, the pilot was licensed with the aircraft endorse on his license. He held a valid medical certificate. The pilot has approximately 25 flying hours on the aircraft type and a total of 770.1 flying hours experience with other aircraft types.

1.2.2 According to the available information, the aircraft was equipped and maintained in accordance with approved procedure by a regulator approved aircraft maintenance organisation. All damages to the aircraft and its components were accounted for and attributed to as a result of the impact damages.



**Figure 2:** Shows the aircraft after the accident

1.2.3 The pilot stated that he stalled the aircraft during an exercise while moving at a low height and a slow forward speed.

1.2.4 The aircraft collided with some tree during an attempt to gain forward speed following an early attempt of a stall correction.

1.2.5 The aircraft sustained substantial damages on the fuselage, wings, cockpit elevators and engine mountings.

- 1.2.6 The aircraft had enough fuel on board with its weight within the limits as per load calculations specified in the pilot's operating hand book of the aircraft type.

## **2. CONCLUSION**

### **2.1 Findings**

- 2.1.1 According to the available records, the aircraft was equipped and maintained by a regulator approved aircraft maintenance organisation in accordance with approved procedures.
- 2.1.2 According to the available recorded evidence, the pilot was license and qualified for the flight. The aircraft was endorsed on his license and he was also in possession of a valid medical certificate. He had approximately 25 flying hours experience on the aircraft type.
- 2.1.3 The pilot stated that he stalled the aircraft during his crop spraying practice exercise.
- 2.1.4 Following a stall the aircraft collided with a tree on its right wing and crashed.
- 2.1.5 No test on any of the aircraft components was conducted. All damages on the aircraft controls and fuselage were accounted for and attributed to as results of impact forces.

### **2.2 Probable Cause/s**

- 2.2.1 The aircraft crash was due to collision with a tree in an attempt to regain forward speed following a stall during a crop spraying training exercise.

## **3. SAFETY RECOMMENDATIONS**

- 3.1 None

## **4. APPENDICES**

- 4.1 None