

**INTERIM STATEMENT**

The information provided herein is of an interim nature. Readers are advised that new information may become available that may alter this interim statement prior to the publication of the final report.

1. The South African Civil Aviation Authority (SACAA), Accident and Incident Investigation Division (AIID) are conducting a safety investigation into a non-fatal accident, involving an aircraft with registration markings ZS-JBE. The incident occurred on 20 January 2017 on the runway 18 at Hoedspruit Airport in Limpopo Province of South Africa.
2. The investigation is being conducted in accordance with international protocol set out by the International Civil Aviation Organisation (ICAO) in Annex 13. The investigation team includes Investigator In-Charge (IIC) from the South African Civil Aviation Authority and representatives from the Accident and Incident Investigation Division (AIID).

### 3. History of flight

- 3.1 The aircraft was used on a training flight at Hoedspruit Airport (FAHS). There were three pilots (Instructor and two training pilots) on board. The Instructor was evaluating the two training pilots in a CPL validation test flight. According to FAHS ATC, they reported that the aircraft undercarriage failed during landing on Runway 18.
- 3.2 The instructor stated that during the flight, he pulled the fuel lever and gave instructions to the training pilot to do a simulated emergency landing on Runway 18 at FAHS. As soon as the engine power decreased to below 1500 rpm, the landing gear audible warning sounded to show that the gear was not extended. He continued with procedural checks as required and when certain that they will reach the runway, he extended the landing gear and immediately lowered the flaps. After he extended the gear the audible warning sound immediately stopped. The fact that the warning sound stopped, the training pilot accepted that the gear was down-and-locked. He then continued with the landing on the runway. During touch down the landing gear unexpectedly collapsed. A belly landing followed wherein the aircraft sustained substantial structural damage. The occupants did not sustain any injuries.

- 3.3 The accident occurred during daylight meteorological conditions at geographical positions determined to be 24°21'.17" S 031°03'01" E, at an elevation of 1742 feet above mean sea level (AMSL)
4. Although the investigation is on-going, the following findings have been made:
- 4.1. The PIC had a valid commercial pilot licence (CPL), Beechcraft F33A type rating endorsed and Class 1 aviation medical certificate with no restrictions.
- 4.2. The Instructor and two training pilots were engaged in a training flight at Hoedspruit Airport (FAHS). All three pilots had valid licences with type rating endorsed. They certificates with no restrictions. They were all considered as being medically fit for the flight.
- 4.3 All three pilots were very familiar with the performance capabilities of the aircraft and they were capable of safely handling it on the training flight.
- 4.4 The aircraft had a valid Standard Certificate of Airworthiness (C of A) and authorised to be used under CAR, Part 91. Prior to them embarking on the training flight, the pilots carried out a pre-flight and they were satisfied that the aircraft was serviceable. The aircraft had sufficient quantity of fuel. There was no evidence of any pre-accident defects identified.
- 4.4.1 During the flight the Instructor informed the training pilot flying of his intention that he must carry out a simulated emergency landing. However, during the landing the aircraft experienced a landing gear collapse on the runway. After the gear collapsed the aircraft impacted the runway on its belly followed by a propeller strike. The aircraft damage was limited to the belly and propellers. The pilots did not sustain any injuries.
- 4.5 According to the training pilot flying, he explained that immediately after the Instructor pulled the fuel control lever and the engine power decreased to below 1500 rpm, the landing gear warning horn sounded intermittently which indicated that the gear was not extended. In response he then extended the landing gear.
- Note:** The POH indicates that when the electrical system is operative, the landing gear may be checked for full down with the gear position lights, provided the landing gear RELAY circuit breaker is engaged. The landing gear position indicator lights are located above the landing gear switch handle. Three greens lights, one for each gear are illuminated whenever the landing gear are down-and-locked. The red light illuminates anytime one or all of the landing gear are in transit or in any intermediate position.
- 4.6 According to the training pilot, while the landing gear was in transit to the extended position, he immediately selected the flaps to change its position down. It implies that both electrical systems i.e. landing gear and flaps were operative resulting in an overload which resulted in the landing gear electric motor driving the actuator assembly RELAY circuit breaker became disengaged. The training pilot's

observation was it is most probably the reason why the landing gear did not extend to the down-and-locked position before the landing.

4.7 Post the incident, the landing gear system was checked by the Approved Maintenance Organisation for any defect or malfunction and the landing gear was tested and found serviceable.

5. The following safety recommendation has been issued by the AIID.

5.1 None

6. The AIID investigation is on-going and will be looking into other aspects of this accident which may have safety implications.

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