



AIB Bulletin

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AIB No.11 Ref. CAV/CC/11/05 **Category: 1.3**
Aircraft Type: Cessna 185 **Reg. 9J-AEI** **Serial No. 18502935**

No. And type of Engines: One TCM IO 520 D23
Year of Manufacture: 1976
Date and Time: 15 August 2005 at 1110 hours
Location: Muze airstrip near Lake Rukwa, Sumbawanga
(07 39.748S 031 32.991E)
Type of Flight: Aerial work (locust spraying)
Persons on Board: **Crew- 3 Passengers -Nil**
Injuries: **Crew- Nil Passengers -Nil**
Nature of Damage: Damage to the left wing, fuselage, and left horizontal stabilizer and left landing gear.
Commander's Licence: CPL
Commander's Age: 58 years
Commanders Experience: 8650 hours of which 6918 were on type.
Last 90 days: 67 hours
Last 28 days: 21 hours
Information Source: Telephone call from Tabora ATS

ALL TIMES UTC

History of the Flight

The aircraft was positioning for a red locust spraying mission which was to take place on that day. It took off from Mpanda airport at 1010 hours with one pilot, one engineer and one mechanic. It was flying under visual flight rules.

9J-AEI arrived at Muze at 1110 hours and flew over the runway. There was no wind sock and the pilot had to use smoke signs in the vicinity to determine the direction of the wind. He subsequently chose to use runway 15. On touch down the aircraft bounced. On regaining the ground it yawed to the right. The application of the right rudder did not correct the situation. The aircraft finally collided with shrubs located just beyond the right edge of runway 15. As it did so, the left main landing gear separated and the left wing hit the ground. The aircraft came to rest just beyond the edge of the runway with the propeller embedded in between trees.

The Bulletin contains facts relating to the accident which have been determined up to the time of issue. This information is published to inform the public and the aviation industry of the general circumstance of the accident at the preliminary/stage and must necessarily be regarded as tentative and subject to alteration or correction if additional evidence becomes available.

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There was no fire and all the three occupants deplaned uninjured. The aircraft sustained substantial damage to the left wing, the fuselage, the left main landing gear and the left horizontal stabilizer.

Other information

One eye witness who was on the apron said that the aircraft bounced twice on touch down and proceeded to veer to the right during the landing roll. One of the occupants of the accident aircraft said that the aircraft approached runway 15 with 30 degrees of flaps and the landing speed was higher than normal. He also reported that 9J-AEI bounced twice on touch down.

Examination of the wreckage

The wreckage was found resting on the right edge of runway 15 pointing about 120 degrees away from the runway centre line. It was resting on the left wing, the right main and the tail wheel. The propeller, which showed substantial external damage, was sandwiched between two trees. The left wing was broken about a third of the way from the tip. There was extensive buckling in the region of the wing root resulting from the wing strike.

The left main landing gear was completely detached from the fuselage. There was a heavy wear mark on the tread and the gear spring bolt was bent indicating the possibility of a heavy landing. All parts of the braking system were found to be in good condition.

When the wreckage was opened up the front bulkhead skin was found wrinkled at the bottom engine mount attachment points. One engine mount had its rubber sheared. Three instrument shock mountings also had their rubber mounts sheared.

The weather

It was reported to be a fine sunny day with haze and the temperature was 32 degrees Centigrade. The weather had no bearing on this accident.

Muze airstrip

Muze airstrip, elevation 2840 feet, has one runway 15/33 which is 1000 metres long and 30 metres wide. The surface is grass and was in good condition at the time of the accident. There are shrubs and trees beyond the edges of the runway.

It was not possible to locate the tyre marks attributable to 9J-AEI. This was because vehicles had been driven on the runway before the arrival of inspectors. The eye witnesses said that the aircraft touched down in the first 200 metres of runway 15. It subsequently came to rest about 350 metres before the end of the runway.

The airstrip is owned by the International Red Locust Control Organization for Central and Southern Africa. This airstrip was constructed for the purpose of spraying locusts which have breeding grounds in the marshes surrounding parts of Lake Rukwa.

The purpose of the flight to Muze airstrip was to load chemicals from the IRLCO stores for a spraying flight around the locust-infested areas near Lake Rukwa.

Analysis and Conclusions

The circumstances of this accident do not point to any technical problems which could have contributed to this accident. There was no wind sock or a weather station at Muze. However, from the testimony of the pilot and eye witnesses there was no strong cross wind at the time of the attempted landing.

The aircraft had been correctly loaded and its mass was well below the maximum allowed landing mass. The left main landing gear separated in the accident sequence. There was however, no evidence of it striking a hole or colliding with any obstacle after touch down. The marks on the tyre and the bending of the spring-fuselage attachment bolt pointed to heavy landing damage. The damage to the front bulkhead as well as the engine and instrument mounts served to confirm the heavy landing.

Maximum braking was not available on the left main landing gear wheel because the left main landing gear was damaged and actually separated in the accident sequence. This damage was the cause of the swing to the right.