

CAV/ACC/4/67

ACCIDENT INVESTIGATION BRANCH

CIVIL AIRCRAFT ACCIDENT

Report on the accident to Cessna
182E Aircraft Registration
Number 5Y-KRY which occurred
on 6th February, 1967 on
Mikumi Airstrip,
Tanzania.

EAST AFRICAN COMMON SERVICES ORGANIZATION

CAV/ACC/4/67

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P.O. BOX 30163,

NAIROBI.

JUNE, 1967

The Secretary-General

Sir,

I have the honour to submit the report into the circumstances of the accident to a Cessna 182E, 5Y-KRV which occurred on 6th February, 1967 on Mikumi Airstrip, Tanzania.

I have the honour to be,
Sir,
Your obedient servant,

J. F. Dunglinson.
DEPUTY CHIEF INSPECTOR OF ACCIDENTS

EAST AFRICAN COMMON SERVICES ORGANIZATION
OFFICE OF THE SECRETARY GENERAL
ACCIDENT INVESTIGATIONS BRANCH

AIRCRAFT ACCIDENT REPORT

AIRCRAFT: Cessna 182E 5Y-KRV
ENGINE: Continental O-470-R
REGISTERED OWNER: Tim Air Charters (Tanzania) Ltd. and the Tanzania Development Finance Co Ltd.
OPERATOR: Tim Air Charters (Tanzania) Ltd.
PILOT: Mr. David Bobman - Uninjured
PASSENGERS: Mr. E. Van Mavrik Brockman)
Mr. Ole Peder Bertlesen) Uninjured
Mr. Jonathan Owako)
PLACE OF ACCIDENT: Mikumi Airstrip, Tanzania.
DATE AND TIME: 6th February, 1967 at 0515 hours approximately.

ALL TIMES IN THIS REPORT ARE G.M.T.

1. Notification

Notification was by signal from Dar es Salaam Air Traffic Services Unit at 0900 on the 6th February.

2. Brief Circumstances

The aircraft, on a charterflight from Dar es Salaam to Mikumi, touched down short of runway 18 whilst carrying out a landing at Mikumi; the nose wheel assembly collapsed and the aircraft came to rest in a nose down attitude on the runway.

There were no injuries and fire did not occur.

3. The Aircraft

5Y-KRV, a Cessna 182E, was constructed by the Cessna Aircraft Company, Wichita, United States of America. The aircraft was issued with a Kenya Certificate of Validation of its American Export Certificate of Airworthiness in August, 1962. This Certificate has been continuously renewed and is valid until the 25th August, 1967. The aircraft was registered in the name of Tim Air Charters Ltd. on the 17th August, 1962 and was subsequently re-registered in the joint names of Tim Air Charters (Tanzania) Ltd. and the Tanganyika Development Finance Co. Ltd., on the 19th July, 1966. The aircraft is classified in the Public Transport Category.

A load sheet was not prepared prior to take-off from Dar es Salaam. A Company estimate of the weight at take off from Dar es Salaam indicates that the aircraft was some 34 lbs. over it's maximum all up weight of 2800 lbs. Assuming a burn off of some 130 lbs. of fuel on the flight to Mikumi the aircraft weight at the time of the accident would have been approximately 2704 lbs. say 96 lbs. under the all up weight.

4. The Pilot

David Bobman, aged 36 years, holds a valid East African Commercial Pilot's Licence first issued on the 17th July, 1966. He also holds a valid East African Flight Radio Telephony Operator's Licence. His Commercial Pilot's Licence is rated, in Group 1, for Cessna 150, 182 and 205 aircraft. His total flying time at the last licence check (17th July, 1966) was 2407.20 hours. Since that time approximately 300 hours were recorded on Cessna 182 aircraft.

5. The Weather

The pilot reported that the weather at Mikumi at the time of the accident was clear with no wind. The weather is not considered to have been a contributory factor in the accident.

6. The Flight

After a flight from Dar es Salaam a normal left hand circuit on Runway 18 was initiated at Mikumi after flying over the airfield. The pilot reported that he applied flap on the down wind leg and, after turning onto final he established an approach speed of 62 - 65 m.p.h. indicated airspeed using 20° of flap. On final the aircraft lost lift and descended rapidly. Power was applied at this point without apparent effect. The aircraft struck the ground on its main wheels some 75 feet short of the runway threshold markers, bounced and touched down again some 50 feet further on, all three wheels striking a mound of earth along-side a drainage ditch across the extended centre line of the runway. From this point the aircraft again bounced and touched down on the runway 42 feet past the threshold markers and on the left side of the runway. The aircraft continued along the runway for a further 50 feet when the nose wheel collapsed. The aircraft rolled for another 105 feet before coming to rest.

7. Inspection

The nose wheel assembly collapsed and was detached from the airframe. The underside of the engine cowling and engine components in the same area were badly damaged. The firewall, front fuselage frame and engine bearer attachments were damaged. Damage to the fuselage skin aft of the main wheel legs was noted.

The propellor tips were badly bent and shock loading of the crank shaft is suspected.

The pilot reports that, when the aircraft came to rest he noted that the flaps were retracted.

8. Observation

The three passengers in a signed joint statement state that "The pilot then turned in very short on to the landing direction and lost height quickly in the turn. On making his final approach on to the runway the aircraft flew very low over a tree, still losing height but less rapidly than in the turn itself." The pilot, when questioned, stated that he did not make a steep diving turn onto final approach.

There is no evidence to indicate that there was a malfunction in the engine which could have caused the lack of response to applied throttle as reported by the pilot and the pilot states that the propeller was in full fine pitch during the approach to land.

Consideration was given to the possibility that the flap switch may have been activated by the front passenger's knee during the approach to land thus causing the aircraft to sink. However, tests show that, with the front passenger strapped into his seat in the normal position, his knee could not reach the flap switch. The front passenger stated that "I do not recall at any time coming into contact with any of the controls of the aircraft." It is, however, possible that the front passenger may have operated the flap switch whilst the aircraft skidded along on it's nose.

9. Conclusion

- (a) The aircraft was correctly documented with the exception that a load sheet had not been prepared before take off on the flight.
- (b) The pilot was properly licenced for the flight.
- (c) At the time of the accident the aircraft was loaded and trimmed within the specified limits.
- (d) The pilot failed to maintain control of the aircraft during the approach to land and struck a mound of earth short of the runway threshold.

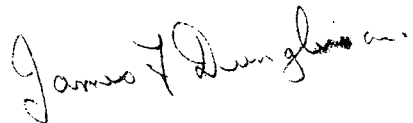
10. Opinion

The accident was the result of the pilot losing control of the aircraft on approach and landing short of the runway where the striking of a mound of soil from a drainage ditch probably initiated the failure of the nose wheel assembly.

Consideration as to why the aircraft lost lift on final approach must be a matter of conjecture in the light of the statements by the pilot and the passengers.

If, in fact, the pilot did make a steep turn onto final approach using 20° flap and at an indicated airspeed of 62 - 65 m.p.h. the aircraft would have been at or very near stalling speed depending on the angle of bank applied and would certainly lose height at an unexpected rate. However, the pilot denies making a steep turn onto final approach.

There is a very slight possibility that, at some stage of the approach the front seat passenger may have, inadvertently, caused the flaps to retract by operating the flap switch; this in view of the relative positions of the flap switch and the front passenger seat is considered to be most unlikely.



J. F. Dunglinson
Deputy Chief Inspector of Accidents