

CAV/ACC/3/72

EAST AFRICAN COMMUNITY

ACCIDENT INVESTIGATION BRANCH,

P.O. BOX 30163,

NAIROBI.

FEBRUARY, 1973

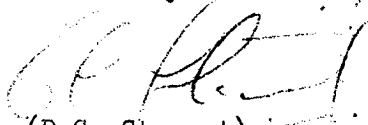
The Chairman,
Communications Council,
ARUSHA.

Sir,

I have the honour to submit a report by Mr. R.W. King,
Inspector of Accidents, into the circumstances of the accident to
Cessna 182, Aircraft Registration Number N6251A, which occurred on
26th January, 1972 at Kibati Village, Tanzania.

I am, Sir,

Your obedient servant,


(D.C. Stewart)

CHIEF INSPECTOR OF ACCIDENTS.

DCS/ZH

CAV/ACC/3/72

ACCIDENT INVESTIGATION BRANCH

CIVIL AIRCRAFT ACCIDENT

Report on the accident to Cessna 182,
Aircraft Registration Number N6251A
which occurred on the 26th Jan.,
1972 at Kibati (Kalatu) village
Tanzania.

EAST AFRICAN COMMUNITY

ACCIDENT REPORT

ACCIDENT INVESTIGATION BRANCH,

Civil Aircraft Accident Report No. CAV/ACC/3/72

AIRCRAFT: Cessna 182 N6251A.
ENGINE: Continental O-470L
OWNER AND OPERATOR: James A. Twing
5930 Sumner,
Portland, Oregon 97218
U.S.A.
PILOT: James Arthur Twing.
PASSENGERS: Nil.
PLACE OF ACCIDENT: Kibati (Kalatu) Tanzania.
DATE AND TIME: 26th January, 1972. Approx 1620 hours.

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

S U M M A R Y

The aircraft flying from Tabora to Morogoro, Tanzania was scheduled to arrive at 1558 hours. Radio communication was made with the aircraft approx. 15 mins after the departure from Tabora, but no further contact was made. Police reports later stated that an aircraft had crashed near the Village of Kibati, Tanzania at approximately 1620 hours.

Kibati is approximately 100 kilometers due north of Morogoro. The aircraft was severely damaged after hitting a tree and a tree stump in an attempt to land on a winding road running south out of the village. The aircraft caught fire. The pilot died as a result of the accident.

1. INVESTIGATION

1.1 History of the Flight

The aircraft departed Tabora at 1328 hours on a V.F.R. flight to Morogoro, Tanzania where the pilot was to attend a conference. The scheduled arrival at Morogoro was 1558 hours. Sunset being 1613 hours.

Fifteen minutes from Tabora radio contact was established but after this no further communication was received.

The aircraft did not reach its destination and the whereabouts was not known until a Police report stated that an aircraft had crashed near Kibati, a small village approximately 100 kilometers due north of Morogoro, in Tanzania.

In attempting to land the aircraft on a winding road leading south from the village, the pilot was unable to avoid a tree twenty meters to the right of his approach to the only straight stretch of the road available. This resulted in the aircraft's left wing touching the ground and cart wheeling into a tree stump to the left of the road.

Fire broke out consuming the fuselage and inner portions of both wings. The pilot, the sole occupant of the aircraft did not survive the accident.

1.2 Injuries to Persons.

Injuries	Crew	Passengers	Others
Fatal	1	-	-
Non-Fatal	-	-	-
None	-	-	-

1.3 Damage to Aircraft

There was severe damage to the aircraft.

1.4 Other Damage

Nil.

1.5 Crew Information

James Arthur Twing, born 6th October, 1921, held a private pilot's licence rated for single engined land planes, issued by the Federal Aviation Administration Department of Transport, U.S.A. on the 4th September 1970.

This licence was endorsed with a limitation that the holder shall wear corrective lenses.

His total flying experience at the time of the accident was approximately 300 hours. Most of this time was not experienced in East Africa.

1.6 Aircraft Information

N6241A, A Cessna 182 Serial No. 33051 powered by one Continental O-470L engine was constructed by the Cessna Aircraft Company of Kansas, U.S.A. in 1956. The aircraft was purchased by the owner on 21st April, 1971 and had/certificate /a of Airworthiness which remained valid while maintained in accordance with the Federal Aviation Regulation.

All the aircraft log books were destroyed in the fire, which engulfed the aircraft and the only known data is recorded as information gathered from other sources and cannot be regarded as anything but estimates.

The aircraft was maintained by a resident engineer licensed appropriately and the last inspection was dated 10th December 1971, this being a 25 hour inspection. The next inspection due was a 100 hour inspection approximately 10 hours after the accident. The total number of hours flown by the aircraft is not known, this applies also to the engine and propeller.

There is no record of a specific weight and balance schedule for the aircraft nor are there any details of the exact contents of the aircraft at the time of the accident. In the wreckage a number of small items were found which indicated the possible carriage of medical requisites.

1.7 Meteorological Information

The meteorological observation recorded at the time of the flight from Tabora to Dodoma gave 3-4/8 cu at 4500/4800 ft. A.G.L. with 1 CB at 5000 ft. at approximately 1400 hours, changing to 1/8 CB at 4500 ft. and 1-4/8 cu at 4000 ft. at approximately 1700 hrs. The visibility was above 10 km. through-out.

The weather report Dodoma to Morogoro 1-3/8 cu at 3000/3500 ft. 1/8 cu at 4000/4500 ft. at approximately 1630 hrs. again with visibility above 10 kms.

The winds at 5000 ft. between Tabora and Dodoma were 080 to 140 at 10 knots changing to 060 at 10 knots between Dodoma and Morogoro.

1.8 Aids to Navigation

The aircraft being totally destroyed, there is no record of equipment fitted to the aircraft to receive Radio navigational aids.

1.9 Communications

None was received from the aircraft after clearance from Tabora.

1.10 Aerodrome and Ground Facilities

Not applicable to this accident.

1.11 Flight Recorder

No recorder was fitted to the aircraft nor was one required to be fitted.

1.12 The Wreckage

Initial impact was the right wing with a tree approximately 30 meters from the crash site. This was followed by the left wing striking the verge of road, the verge was approximately 30 cms. above the level of the road surface. This resulted in a cartwheel action, the aircraft coming to rest against a large tree stump. Both wings were severely damaged and at impact with the tree stump the fuel system was damaged and fire broke out. The port wing exploded and the fuel cell was hurled 20 meters from the wreckage. There was complete destruction of the fuselage rear-wards of the engine bulkhead, melting the aluminium alloy materials that were too bulky to actually be consumed by the fire.

1.13 Fire

The cause of the fire was probably due to fuel vapour and fuel spillage due to the damaged wings. Ignition may have been the result of damaged electrical circuits and or heat from the engine.

1.14 Survival Aspects

Due to the attitudes that the aircraft must have assumed during the time of the first impact with the tree and final position and attitude at rest the pilot would have undergone violent changes in directional forces, followed by the intense fire, with no immediate rescue facility, it is doubtful if the accident was survivable when considering that the pilot was alone.

1.15 Tests and Research

From evidence obtained from persons in the village there was no reason to believe that the aircraft was suffering any malfunction before the accident as it was seen and heard to be circling above the village before the landing attempt was made.

On investigation of the engine and its components no damage was found other than that resulting from the crash.

1.16 Medical Aspect

The pilot was required to wear corrective lens when flying.

2. ANALYSIS AND CONCLUSIONS

2.1 Analysis

The flight plan having been filed for Tabora to Morogoro and the pilot's intention of attending a conference at Morogoro gives no indication as to any desire to be in the vicinity of the crash site.

The winds prevailing at the time of the flight were not sufficient to cause the amount of drift that was necessary to account for his position. The physical layout of the railway was a natural landmark that would have been coincident with his planned flight path.

In a written statement a witness mentioned that the pilot had approximately 100 hours flying experience in East Africa, operating mainly from the Heri Mission Airstrip, Musoma, during this period it was noticed that he was not in the habit of carrying any maps and did not make frequent use of the available radio aids. It was also noticed that due to his predominant occupation with his medical practice he would often leave his departure risking his arrival at destination with insufficient daylight. This was a factor of the fatal flight.

The time of his planned arrival at Morogoro was 1550 hours, sunset at that date being 1613. As he had covered a similar distance from his departure point to the point of the crash, a similar close margin of available daylight would occur. Eye witnesses saw the landing lights switched on before the pilot had chosen his approach path which may account for his not seeing the first tree which the aircraft struck.

2.2 Conclusions

1. There was no available evidence that the documentation was in order.
2. There was no available evidence that the aircraft was properly maintained. There being no monitoring by the local Airworthiness Authority as the aircraft was not registered in the territory of operation.
3. No evidence of pre-crash failure was found.
4. There was no evidence available of its centre of gravity being within limits or that his fuel was sufficient for the flight.
5. The pilot in command was properly licensed.
6. No special V.F.R. clearance was requested by the pilot to fly after sunset.

2.3 Cause

The accident was caused by the pilot failing to land the aircraft after dark at a place unfamiliar and unplanned at the commencement of the flight, due to an unrecognised change of track to a position approximately 100 kms. due north of his intended destination.

(R. W. KING)

INSPECTOR OF ACCIDENTS

February, 1973.

RWK/ZH