

MINISTRY OF COMMUNICATION AND TRANSPORT
ACCIDENT INVESTIGATION BRANCH

CIVIL AIRCRAFT ACCIDENT NO. CAV/ACC/2/83 ✓

REPORT ON THE ACCIDENT TO CESSNA 185F
AIRCRAFT REGISTRATION NUMBER 5H-MRU
WHICH OCCURRED ON 10TH MAY, 1983
AT BUESI DARAJANI ALONG TUNDUMA -
KALULU ROAD, TANZANIA (10° 43'S, 36° 44'E)

AIRCRAFT ACCIDENT REPORT NO. CAV/ACC/2/83

AIRCRAFT TYPE: CESSNA 185
NATIONALITY AND REGISTRATION MARKS: 5H-MRU
ENGINE: ONE CONTINENTAL IO-520-D
REGISTERED OWNER: MISSIONARY AVIATION FELLOWSHIP
P.O. BOX 491, DODOMA, TANZANIA
OPERATOR: MISSIONARY AVIATION FELLOWSHIP
P.O. BOX 491, DODOMA, TANZANIA
PILOT: 1 UNINJURED
PASSENGERS: NIL
PLACE OF ACCIDENT: BUESI DARAJANI ALONG TUNDURU -
KALULU ROAD, TANZANIA (10°43'S,
36°44'E)
DATE: 10TH MAY, 1983
TIME: 0917 HOURS

ALL TIMES IN THIS REPORT ARE GMT

SYNOPSIS

Having taken off from Mbesa for Songea, the aircraft encountered bad weather enroute. The pilot tried to make a forced landing on a muddy road. In the process, the port main wheel got stuck in soft ground and the aircraft nosed over. The lone pilot escaped without injury.

FACTUAL INFORMATION

1.1. History of the Flight

On the morning of May 10, 1983 the aircraft took off from Mbesa on a 50 minute flight to Songea with an endurance of 3½ hours. There were no passengers.

The pilot stated that the weather was cloudy, and during the night there had been some light showers but there was no rain during take-off. He had tried to contact the Missionary Aviation Fellowship (MAF) Headquarters at Dodoma at 0400 hours on company HF radio in order to file a flight plan with the Dodoma Control Tower and to obtain a weather report for Songea to no avail because there was no one on watch. 5H-MRU again made another unsuccessful attempt to contact Dodoma immediately after take-off (at 0429 hours).

Some 12 to 14 minutes after take-off from Mbesa the aircraft encountered low cloud and moderate drizzle upon which the pilot turned North East to go round the rain. Unable to do so he headed back to Mbesa but, when he observed that the weather around him was deteriorating further he decided to bring down the aircraft on a stretch of road leading from Matamanga to Kalulu.

On touch down the pilot braked heavily to slow down the aircraft but near the end of the landing roll the port main wheel dug in a soft patch of earth and tipped the airplane on its nose. The aircraft was substantially damaged. The pilot escaped without injury. He was given shelter by workers at a nearby camp.

1.2 Injuries to Persons

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

1.3 Damage to Aircraft

There was substantial damage to the starboard wing, propeller and port main undercarriage.

1.4 Other Damages

Nil

1.5 Personnel Information

The Pilot, 33, a British national, held a Tanzanian Commercial Pilot's licence No. HP 161 issued on December

22nd 1980. He also held various licences as follows: United Kingdom Commercial Pilot's Licence, Multiengine and Instrument Rating No. 81509 issued on 26/7/1974 USA Commercial and Instrument Rating No. 2260374 issued on 27/5/1977.

Tchad Commercial and Instrument Rating No. 035 issued on 8/2/1977.

He had logged 2641.6 hours and 228^h.8 in Command. In the last six months he had flown 108.8 hours. The approximate total experience on Cessna 185 was 1400 hours in Command and 100 hours P2/P3. He also held a current Radio Ops Licence No. H-337 which was kept valid in line with the CPL No. HP 169.

1.6 Aircraft Information

The aircraft, a Cessna 185 Skywagon Serial Number 185 01814 powered by one Continental IO-520-D engine was manufactured by the Cessna Aircraft Company at Wichita, Kansas, USA in 1970. It arrived in Tanzania in possession of a US Standard Certificate of Airworthiness and a US Registration No. N70750. It was given a Tanzania Registration No. 5H-MRU on July 30th 1980 and a Tanzanian Certificate of Airworthiness had since been kept current. The aircraft was registered in the Public Transport Category (passenger/cargo).

1.6 Loading and C of G Disposition

The C of G was within specified limits under the loading conditions at the time of the accident.

1.7 Meteorological Information

There is no weather station at Mbesa nor is there one at the nearest town of Tunduru. The pilot said that just before take-off from Mbesa the weather was cloudy, and during the night, there had been light showers. There was no rain when he took off. He said that he had tried to contact the Missionary Aviation Fellowship (MAF) Headquarters at Dodoma about half an hour before departure at 0400 hours in order to file a flight plan with the Dodoma Control Tower and to obtain a weather report for Songea to no avail. This was because MAF Headquarters was not on watch at that time. He made another unsuccessful attempt to contact the Dodoma Headquarters immediately after taking off at 0429 hours.

The Meteorological Department Head Office in Dar es Salaam reported that satellite pictures had indicated the formation of air extensive active cloud band over the Indian Ocean a day before (9/5/83) which was moving in a general South-Southward direction. By the morning of the accident the cloud band had just merged with a frontal cloud which was extending from the Indian Ocean across Madagascar and the Mocambique Channel, and was now spreading over Tanzania Coastal areas penetrating inland to the Southern shores of Lake Nyasa.

The weather reports from Songea for the time at which 5H-MRU commenced the flight from Mbesa were as follows:

	TIME GMT	WIND SPEED	VISI- BILITY	CLOUD OCT	BASE	TEMP/ HUNIDIRY (Mb)	PRESS
METAR HTSO	0400	00000	9999	7sc	018	19/18	1021
METAR HTSO	0500	00000	9999	7sc	018	20/28	1022

This recorded weather information is practically the same as the weather conditions reported by the pilot just before take-off.

1.8 Aids to Navigation
Not applicable.

1.9 Communications
Shortly after take-off the pilot tried to contact the mission Headquarters in Dodoma but could not do so. This was because it was too early in the morning and the radio personnel were not yet on radio watch. However he remained in radio contact with Mbesa till he executed the forced landing.

1.10 Aerodrome Information
Not applicable.

1.11 Flight Recorders
Not required by regulations. None fitted.

1.12 Wreckage Information
The aircraft was found lying inverted on its nose and the port wing in contact with a muddy road embarkment ridge (kirb). The starboard wing having hit a tree on the landing roll was badly damaged and bent. The port wing was slightly damaged. The propeller was bent. The fire proof bulhead was damaged. The port undercarriage was broken off its mounting.

1.13 Medical and Pathological Information

Not applicable.

1.14 Fire

There was no fire.

1.15 Survival Aspects

The aircraft had almost been brought to a stand-still when it tipped over on its nose. The pilot opened the door and escaped uninjured. This was survivable accident.

1.16 Examination of the Wreckage

Visual examination of the wreckage showed that the damages on the aircraft were consistent with having struck a tree and tipping on its nose in the course of the landing roll. There was no evidence of pre-crash failure.

1.17 Tests and Research

Nil.

2. ANALYSIS AND CONCLUSION

2.1 Analysis

There is no evidence to show that the attempted forced landing was necessitated by anything other than a deterioration of weather conditions along the route taken by the aircraft. Eye witnesses at the accident site reported an unusually heavy rain on the day of the accident.

The Meteorological Department in Dar es Salaam had predicted the onset of bad weather at least one day before. The Dar es Salaam Met Headquarters disseminates weather information to outstations through a network of Radio Telephone. The nearest such stations available for the pilot at Mbesa were Songea and Mtwara. It was incumbent upon the pilot to contact either of the two stations for weather information. Such contacts could be effected by telephone from a nearby town of Tunduru (about 60 minutes drive by landrover). Alternatively, the pilot should have resorted to police aid. There is no police station at Mbesa. The nearest police station is also at Tunduru

The pilot said that he had not been able to make the booking for enroute weather information on the previous day because the flight had been arranged too late during the night. He had flown in that area for two months and had observed that for the previous seven days it had been.

These conditions were typical of that season of the year. Due to the short duration of the flight (50 minutes) the pilot did not expect any sudden deterioration of the weather along the route.

The Meteorological Department did infact monitor the approach of such unseasonal weather conditions but did not issue any warning to airmen. This, they said, was because the severity of the predicted weather conditions along the Southern Tanzania regions were not of the order that necessitated such a warning.

3. CONCLUSION

(a) Findings

1. The pilot was properly licensed
2. The aircraft documents were in order
3. The aircraft was in possession of a valid certificate of airworthiness and had been properly maintained.
4. The pilot executed a precautionary landing due to bad weather. The Pilot did not make it a point to obtain enroute weather forecast prior to departure.

(b) Cause

The accident was caused by the aircraft tipping over on its nose when the port main gear got stuck in soft ground during a forced landing.

C. Newa

CHIEF INSPECTOR OF ACCIDENTS