

CAV/ACC/5/76

ACCIDENT INVESTIGATION BRANCH

CIVIL AIRCRAFT ACCIDENT

Report on the Accident to Piper PA 32-300,
Aircraft Registration Number 5Y-AEG
which occurred on the 8th January,
1976 at Mantare Airstrip,
about 40 Kilometers S.E. of
MWANZA AERODROME, TANZANIA.

EAST AFRICAN COMMUNITY

ACCIDENT INVESTIGATION BRANCH
CIVIL ACCIDENT REPORT CAV/ACC/5/76

AIRCRAFT TYPE & REG.: PIPER PA 32-300, 5Y-AEG
ENGINE: ONE LYCOMING 10-540-KIAS
OWNER: TIM AIR CHARTERS
OPERATOR: TIM AIR CHARTERS
PILOT: GODFREY MWELA, UNINJURED
PASSENGERS: FOUR, BRUISED
PLACE OF ACCIDENT MANTARE AIRSTRIP, ABOUT 40 KILOMETERS
S.E. OF MWANZA AERODROME, TANZANIA.
DATE & TIME: 8TH JANUARY, 1976 AT 1120 HOURS

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

SUMMARY:

The aircraft was on a flight from Dodoma to Mwanza estimating Mwanza at 1050 hours. At 1045 hours the pilot reported to the tower that he was diverting to Malya because of bad weather at Mwanza, and gave his estimated time of arrival at Malya as 1115 hours. The pilot saw bad weather enroute to Malya and decided to land at Mantare Airstrip.

The pilot states that after touch-down, he saw cows crossing the airstrip so he decided to overshoot but he noticed that he was not gaining speed so he decided to abandon overshoot. The aircraft overran the airstrip, hit trees and a hut and was extensively damaged. The pilot was not injured but the 4 passengers got some bruises.

1. INVESTIGATIONS:

1.1. History of the Flight

On 8th January, 1976, the pilot filed a VFR Flight Plan to operate a charter flight from Dar es Salaam to Dodoma, Mwanza, Dodoma and back to Dar es Salaam. When the aircraft was taxiing out of Dar es Salaam, the Controller advised the pilot that there was no fuel at Mwanza and the pilot requested the Controller to amend the flight plan to read Dar es Salaam/Tabora/Mwanza/Dar es Salaam. The pilot wanted to pass through Tabora to uplift fuel. The aircraft took off from Dar es Salaam at 0440 hours.

On the way to Tabora, the pilot says he encountered bad weather and diverted to Dodoma where he landed at 0720 and took off at 0730 hours after refuelling and headed for Tabora where he landed at 0910 hours. After refuelling the aircraft took off at 0930 hours for Mwanza estimating to land at Mwanza at 1050 hours.

At 1045 hours, the pilot informed the Controller at Mwanza that he was diverting to Malya because of bad weather at Mwanza and stated that he estimated to land at Malya at 1115 hours.

The pilot states that the weather on the route to Malya was also bad so he decided to land at Mantare airstrip which was on the same route to Malya.

At 1120 hours the aircraft reached Mantare airstrip but after touch-down, the pilot says he saw cows crossing the airstrip and he decided to overshoot to avoid the cows. He stated the aircraft did not get enough speed so he abandoned the overshoot. The aircraft overran the strip, hit trees and a hut and the two wings were broken off the fuselage. The fuselage came to rest on the portside with the door facing upper side.

When the investigation team visited the scene of accident on 9th January, 1976, no eye witness was available to be interviewed.

1.2 Injuries to Persons

<u>Injuries</u>	<u>Crew</u>	<u>Passengers</u>	<u>Others</u>
Fatal	Nil	Nil	Nil
Non-fatal	"		
Bruises	Nil	4	Nil

1.3 Damage to Aircraft

The aircraft suffered substantial damage.

1.4 Other Damage

The aircraft damaged several orange and paw-paw trees and a grass hut after overrunning the airstrip.

1.5 Crew Information

The Pilot, Mr. Godfrey Mwela was born on 24th December, 1945, at Bukoba, Tanzania. He holds an East African Commercial Pilot's Licence No. 1640(T.107) issued on 17th September, 1975 and valid until 9th September, 1976. He is qualified to fly Cessna 210 and Piper PA.32 as pilot in command while operating for commercial purposes. He also holds an East African Radio Telephony Licence (R/T) No. 2274(T.208) issued on 8th January, 1971 and kept valid so long as his pilot licence is valid.

1.5.1 Experience

On 8th January, 1976, he had 2852 hours broken down as follows:-

<u>Day</u>		<u>Night</u>	
<u>Solo</u>	<u>Dual</u>	<u>Solo</u>	<u>Dual</u>
2651.55	113.05	78.45	08.15

His experience on PA.32 was 208.10 hours as pilot-in-command and 00.30 hours dual.

1.6 Aircraft Information

The aircraft is a Piper PA 32-300 Serial No. 32-40034 powered by one Lycoming 10-540-KIAS engine and manufactured by Piper Aircraft Corporation Vero Beach, U.A.S. in 1966.

It arrived in East Africa in possession of an Export Certificate of Airworthiness No. E-71489 issued on 16th November, 1966 by U.S.A. An East African Certificate of Airworthiness No. 433 was issued on 2nd February, 1967 valid until 1st February, 1968.

This Certificate of Airworthiness has been kept current until the previous validity which was due to expire on 15th January, 1976.

The aircraft had flown 4580.40 hours since new. The engine had completed 3372.45 hours since new and 1312.25 since overhaul. The propeller a Hartzell model HC-C2YK-IBF Serial No. CH7721 had completed 701.10 hours since overhaul.

When the aircraft arrived in East Africa on 2nd February, 1967, it was registered in the name of M.C.M. and Co. of Box 24779 Nairobi, but since then it has changed ownership as follows:-

On 10th November, 1971 was registered in the name of K.D.S. Ltd., Box 41822, Nairobi.

On 25th November, 1972 it was registered in the name of Aviation Services Nairobi, and National Industrial Credit, Box 19122, Nairobi.

On 22nd April, 1974, it was registered in the name of Tim Air Charters (T) Ltd., Box 804, Dar es Salaam (current owners)

1.6.1 Maintenance History

The aircraft was maintained to an approved schedule Ref. TIM/MS/3 Issue 1, by Tim Air Charters' Licensed Engineers. All maintenance required by these schedules had been carried out.

Last check IV carried out on 12-11-73 at 2974.25 hours
Last check III carried out on 13-11-72 at 2408.50 hours
Last check II carried out on 6-12-75 at 4453.55 hours
Last check I carried out on 27-12-75 at 4532.45 hours

Airframe total hours since new was 4580.40 hours
Engine " " " " " 3372.45 hours
Engine " " " overhaul was 1312.25 hours
Propeller total hours since overhaul was 701.10 hours

1.6.2 Aircraft Weight and Centre of Gravity Limits

The aircraft weight and centre of gravity were within the prescribed limits.

1.7 Meteorological Information

The pilot stated that the weather at Mantare airstrip was clear but that it started to rain 5 minutes after the accident. On landing, he found the airstrip wet. He was not able to estimate the direction and speed of the wind but he said he estimated the direction and speed by observing smoke from nearby houses and that he landed into wind.

.....4/

There is no meteorological station at this airstrip and there was no weather forecast for these areas available but the weather report at Mwanza at 11.00 hours was as follows:-

Wind direction	- 270°
Wind speed	- 05 knots
Visibility	- more than 10 km
Cloud	- 2 CB 2400ft. - 7 AS 10,000ft.
Temperature	- 21°
Dew Point	- 17
QNH	- 1015

There was slight rain with thunderstorms from 1030 to 1200 hours.

1.8 Aids to Navigation

Not applicable.

1.9 Communications

At 1045 hours, the pilot reported to the Controller at Mwanza that he was diverting to Malya because of bad weather at Mwanza. The pilot reported that before he landed at Mantare, he tried to call Mwanza on 118.1 mhz but did not get a reply. He did not try to raise Area Control Centre.

1.10 Aerodrome and Ground Facilities

Mantare airstrip about 40 km S.E. of Mwanza is about 300 metres long and 20 metres wide and lies in South/North direction. It has grass and an appreciable slope all along the length. It also has a foot-path in the middle of the strip longitudinally and a road runs across the northern end of the strip. The strip has no runway number markings to show the boundaries. Areas around the strip have been cultivated and animals graze around. On inspection there was no evidence to show that the strip is used by aircraft at all as it appeared deserted. There is a Missionary Village nearby who might have been using the strip some years ago.

1.11 Flight Recorder

Not fitted and none was required to be fitted.

1.12 Inspection of the Wreckage

The aircraft overrun the landing strip and the port wing struck an orange tree, the impact severed the wing off the fuselage. As the aircraft swerved to the right, the starboard wing hit a hut breaking the starboard wing off the fuselage. The fuselage came to rest on the port side with the door facing upper side. All the landing gears were ripped off their attachment points. The propeller was bent and engine shock loaded. The right rear seat was detached from the retainer. The port stabilator was badly damaged and both wings completely destroyed. All broken off components remained tied to the fuselage by control cables. There was no fuel or electric fire.

The following instruments and control settings were recorded:-

Altimeter 4000ft. (barometric setting 29.92"HG)

Compass - 330°

Fuel - Right Tip - No indication
Right Main - 5 gallons
Left Tip - 5 gallons
Left Main - 10 gallons

Magnetos - off

Throttle - Closed

Mixture - Lean

Propeller - Fine

Flaps - down 25°

1.13 Fire

Fire did not occur

1.14 Survival Aspect

The accident was survivable. Only the passengers got slight ~~Bruises~~.

2. Analysis and Conclusions

2.1 Analysis

Mantare Airstrip is a short narrow unused airstrip with an appreciable slope along all the strip length. The pilot had never landed at this airstrip before but he stated he knew it existed because he had on several occasions seen it from the air. He did not know the condition of the airstrip as he states that on landing he found the strip was wet. Although the pilot stated that he made a low pass over the airstrip before landing, it is not possible that he was able to make most appropriate judgement because on touchdown, there were cows on the strip and he landed down slope on a short wet grass airstrip. There was no wind sock to assess the wind direction although the pilot says he assessed the wind by observing smoke from houses nearby.

There was no evidence to show that any systems of the aircraft had failed to function prior to the crash. The brakes were not considered to have failed.

2.2 Conclusion

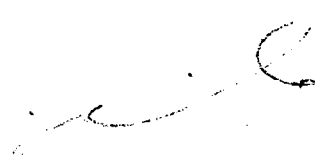
2.2.1 Findings

- (a) The aircraft was properly maintained in accordance with the approved maintenance schedule.
- (b) The aircraft was properly certificated and all the associated documents were in order.

- (c) The AD 75-24-02 which calls for inspection of seat retaining mechanism at 100 hours had been complied with on 27th December, 1975. Although there was a requirement to fasten seat belts around unoccupied seats, the seat belt for the unoccupied **right rear** seat was not fastened around the seat and the seat was found to have been detached from the retainer.
- (d) The aircraft was properly loaded and the centre of gravity within limits.
- (e) The pilot was properly licensed and qualified to fly a Piper PA 32-300 aircraft. His pilot licence was valid.

2.2.2. Cause

The report concludes that the pilot landed down slope on a short, unused, wet airstrip and having decided to overshoot, decided to abandon overshoot and as the strip was short, overran the airstrip and crashed.


J. Ojambo
DEPUTY CHIEF INSPECTOR OF ACCIDENTS