

CAV/ACC/15/75

ACCIDENT INVESTIGATION BRANCH

CIVIL AIRCRAFT ACCIDENT

Report on the Accident to Cessna 182N
Aircraft Registration Number 5H-MOL
which occurred on the 26th June, 1975
At 1400 hours, at Sumbawanga Airstrip.

E A S T A F R I C A N C O M M U N I T Y

ACCIDENT REPORT

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CIVIL AIRCRAFT ACCIDENT REPORT NO: CAV/ACC/15/75

AIRCRAFT TYPE & REGISTRATION: CESSNA 182N 5H-MOL
ENGINE : (ONE) CONTINENTAL O-470-R
REGISTERED OWNER : TANZANIA GOVT. (GAME DIVISION)
OPERATOR : " " "
PILOT : EDWARD K.A. TAYARI - UNINJURED.
PASSENGERS : 2 - "
PLACE OF ACCIDENT : SUMBAWANGA AIRSTRIP.
DATE & TIME : 26-6-1975 AT 1400 HRS.

ALL TIMES IN THIS REPORT ARE GMT

SUMMARY

On a flight from Kigoma to Sumbawanga, the aircraft overran the strip. The aircraft ended up on its back, with considerable damage. The pilot, who claims the brakes failed to stop the aircraft, and the 2 passengers, were uninjured.

INVESTIGATION

1.

1.1. HISTORY OF FLIGHT

On 26-6-75, the pilot who was on a government flight, filed a VFR TRU PLN TABORA/MALAGARASI/KIGOMA/SUMBAWANGA/TABORA.

The aircraft departed Tabora at 0600 hours. The flight through the route segment stations, until during landing at Sumbawanga, was uneventful.

At 1400 hours, with a slight southerly wind, and visibility better than 10 km, the pilot landed on RWY 25. His approach speed was 85 MPH with a 20° flap angle.

The aircraft overran the strip which the pilot attributed to inefficient brakes. The pilot stated that his point of touch down was about 500 metres from the threshold at the beginning of the RWY, but an airport attendant, who was at the time standing along the strip, identified the point of touch down to be only about 350 metres from the opposite end of the strip.

1.2. INJURIES TO PERSONS

<u>Injuries</u>	<u>CREW</u>	<u>PASSENGERS</u>	<u>OTHERS</u>
FATAL	NIL	NIL	NIL
NON FATAL	NIL	NIL	NIL
NONE	1	2	NIL

1.3. DAMAGE TO AIRCRAFT

Aircraft suffered substantial damage to the fuselage, fin, mainplanes, nose leg, windshield and propeller.

1.4. OTHER DAMAGE

NONE.

1.5. CREW INFORMATION.

The pilot, Mr. E.K.A. TAYARI, was born on 4th April, 1950 at SIKONGE in Tabora Region. He qualified for an East African Private Pilot's Licence No. X13 on 2nd August, 1972. It expired on 23rd June, 1973. He renewed it on 28th June, 1973 to expire on 18th April, 1975. It was subsequently renewed on 23rd April, 1975 to expire on 18th April, 1977.

He also holds an East African R/T Licence No.X13 and kept valid in line with the PPL.

1.5.1 EXPERIENCE. On 2nd August, 1972 he had total flying experience of 100 hrs 10 mins as follows:-

DAY

P.1:- 40.25 hrs.

P.2:- 59.45 hrs.

At the time of the accident he claimed to his credit a total of 210 hrs of which about 40 hrs being solely on type- Cessna 182 N.

1.6. AIRCRAFT INFORMATION.

The aircraft, a Cessna 182N, Serial No.182-60593, arrived in East Africa with an FAA Export Certificate of Airworthiness No. E 103481 dated 29.3.71. On 7.5.71 an East African Certificate of Airworthiness No.125 was issued. Subsequent renewals of this C/A had been done, the last renewal of which was on 22.5.75 to expire on 21.5.76.

The aircraft had flown a total of 1915.30 hrs. since manufacture.

The engine, a Continental O-470-R, Serial No.211117-70R had completed 1776.20 hrs. since new.

The propeller, a McCAULEY, Model 2A34C201/90DA-8, Serial No.724199 had completed 815.30 hrs. since new.

1.6.1. MAINTENANCE HISTORY.

The aircraft was registered in the Private Category and was maintained by TANZANAIR to their approved Maintenance Schedule reference MS/TAS/1 Issue 1. A check 1 inspection was completed in accordance with this schedule on 11.6.1975 at their engineering base Dar es Salaam. All maintenance required by this schedule was upto date.

Airframe total hours since the last Check 111, completed at the C of A renewal in 1973, stood at 967.10 hrs.

Airframe total hours since check 2: 74.10

" " " " " 1: 20.10

All FAA Airworthiness Directives and DCA notices applicable to the aircraft, its engine, propeller and equipment had been complied with.

1.6.2. AIRCRAFT WEIGHT & 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 visibility at the time was better than 10 km and the wind was southerly and in favour of RWY 25. He further stated that although the sun's glare was almost direct into the landing direction, this did not interfere with his vision.

1.8. AIDS TO NAVIGATION.

Not applicable.

1.9. COMMUNICATIONS.

Not applicable.

1.10. AERODROME AND GROUND FACILITIES.

SUMBAWANGA, a 1520x 20 metres grass strip, is located 0758 S/3140E, at an altitude of 5920 feet above mean sea level. The RWY is identified as 07&25 with the former having a slope % of +0.58.

The airstrip is owned and maintained by the Tanzania Government.

1.11. FLIGHT RECORDER.

Not fitted and none required to be fitted.

1.12. INSPECTION OF THE WRECKAGE.

Examination of the wreckage, which ended lying on its back, revealed the following damage:-

(a) Windshield - broken.

- (b) Nose wheel - ripped off.
- (c) Propeller - One of the blades bent rearwards.
- (d) Main planes - extensively buckled. Starboard wing tip torn about 12 inches from leading edge.
- (e) Lower side of engine cowl and the area adjacent to the nose leg - suffered extensive scratches.
- (f) Fuselage - fuselage bent downwards viewed with the aircraft lying on its back. Both main leg saddles failed and wrinkles are prevalent around areas adjacent to the leg saddles and the area immediately below the cockpit floor.
- (g) Empennage - apart from what appeared to be a slightly bent fin, there was no other visible damage.
- (r) Inside the aircraft, brake fluid could be seen running down the rudder/brake pedals from the master cylinder.
- (i) The tyres, brake pads/discs/pipe lines were in good condition.

1.12.1 POSITION OF CONTROLS/SWITCHES etc.

Magneto switch - ON
Master Switch - ON
Battery - Disconnected
Mixture - Full rich
Throttle - CLOSED.
Propeller pitch - decrease RPM (Coarse pitch?)
Rudder trimmer - slightly nose left.
Fuel datum - ON
Manifold pressure - 25" Hg.
Elevator trimmer - neutral
Flaps - Fully up.

1.14 FIRE

There was no fire.

1.15. SURVIVAL ASPECT.

The accident was survivable. The pilot and the 2 passengers, got out uninjured.

1.16 TESTS ON THE BRAKES.

Although, as mentioned earlier, the brake fluid had drained from the master cylinder, a simple test on the brakes found them to be spongy (owing to air in the system) but otherwise appeared to function satisfactorily.

1.16.1.

OBSERVATIONS.

- (a) The pilot claims that he touched down about 500 metres from the threshold at the beginning of the RWY. The airport attendant, who at the time was standing along the strip, identified the aircraft's point of touch down to be about 350 metres from the other end of the strip. This position was identified later by independent witnesses and the Investigator.
- (b) The skid marks immediately after touch down indicated that the brakes when applied, were working satisfactorily. After this the marks faded off. This would tend to suggest that the pilot may in all probability have considered overshooting.

2.

ANALYSIS AND CONCLUSION.

2.1.

ANALYSIS

The pilot attributed the cause of this accident to inefficient brakes.

- (a) He stated that prior to departure from Kigoma, he performed a check on the brakes at full power and that the brakes failed to hold. If this is true, then he must be criticised for taking off with partially defective brakes.
- (b) Assuming the above to be true and that he touched down at the point he claimed, with a southerly wind, the aircraft could have come to a stop well before the end of the strip, which is 1520 metres long.

2.2.

CONCLUSION

2.2.1.

FINDINGS.

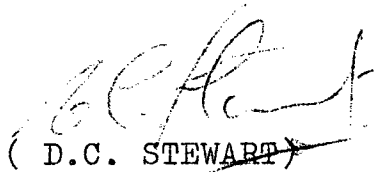
- (a) The aircraft was properly maintained in accordance with an approved Maintenance Schedule.
- (b) The aircraft was properly certified and all the associated documents were in order.
- (c) There was no evidence of pre-accident failure or malfunction of the aircraft or its systems.
- (d) The pilot was properly licensed and his licence was valid at the time of the accident.
- (e) The aircraft overran the airstrip after landing some 350 metres from the threshold on the opposite end of the strip.

2.2.2.

CAUSE.

The report concludes that the pilot landed a considerable distance down the strip, and bearing in mind that he may have considered aborting the landing and trying to take off again,

could not stop the aircraft before it overran
the end of the runway.



(D.C. STEWART)
CHIEF INSPECTOR OF ACCIDENTS

OE/JAO