



# AIB Bulletin

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**AIB Bulletin No.2**

**Ref:** CAV/ACC/2/06

**Category:** 1.2

**Aircraft Type & Reg:**

Cessna 402B **Reg.** 5H-ZAL

**Serial No.** 0640

**No. & type of Engines:**

Two Continental TSIO 540E

**Year of Manufacture:**

1974

**Date and Time (UTC):**

8 March 2006 at 0752 hours

**Location:**

North Mara (Nyamongo)

airstrip, 115 nm north

east of Mwanza

(01 25 25.60S 034 32 35.8E)

**Type of Flight:**

Air charter

**Persons on Board:**

**Crew** -1 **Passengers** - 6

**Injuries:**

**Crew** -Nil **Passengers** - Nil

**Nature of Damage:**

Visible damage confined to nose

cone and both

propellers

**Commander's Licence:**

CPL

**Commander's Age:**

51 years

**Commander's Experience:**

11500 hours of which about

2000 were on type

**Last 90 days** 174 hours

**Last 28 days** 37 hours

**Information Source:**

E-mail message from ATS

**ALL TIMES UTC**

## History of the Flight

The aircraft was operating a charter flight to transport six passengers from Mwanza to Africa ya Mashariki Gold Mines located at Nyamongo in northern Tanzania. Take off from

Mwanza was initiated at 0705 hours. At 0707 hours 5H-ZAL reported airborne. The pilot said that the flight to Nyamongo was uneventful.

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*The Bulletin contains facts relating to the accident which have been determined up to the time of issue. This information is published to inform the public and the aviation industry of the general circumstance of the accident at the preliminary/stage and must necessarily be regarded as tentative and subject to alteration or correction if additional evidence becomes available.*

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At 0750 hours the aircraft was seen flying over Nyamongo town. According to eye witnesses, the aircraft made a straight-in approach to runway 29 which was not favoured by the wind.

The aircraft landed in the middle of the runway and was observed to roll down the remaining length. It was later seen to overrun the end of the runway and as it did so, the nose landing gear struck a drainage trench and collapsed. 5H-ZAL came to rest in a sisal plantation located just beyond the end of the runway. There was no fire and all the occupants deplaned uninjured.

At the time of the accident the weather was reported to be fine with unlimited visibility. Another pilot, who was at the airstrip, estimated the wind as 10 knots and gusty, favoring runway 11.

### **Wreckage information**

The aircraft was inspected at the crash site. Temporary repairs were made at Nyamongo and the aircraft was later ferried to the company AMO in Nairobi for more detailed inspections and repairs. Inspections established the following damage to the aircraft:

1. Both propellers bent beyond the allowed limits.
2. The right wing fuel tank rear bulkhead fractured and tank rivets pulled causing a fuel leak. Damage appears to have been caused by fuel surge when the aircraft came to an abrupt stop.
3. Fuselage forward bulkhead frames and skin panels buckled.
4. Nose landing gear drag link assembly and gear actuating rod fractured.
5. Fuselage nose cone damaged.
6. Both nose landing gear doors damaged.

7. Both pitot masts torn off.
8. Avionics antenna on fuselage lower surface damaged.
9. Fuselage top skin panel above forward baggage bay buckled.
10. Nose wheel well side skin panels torn.
11. Right main landing gear wheel well rear diaphragm rivets pulled and under wing panels skin panels creased.
12. Left under wing skin panels adjacent to wheel well creased.

### **North Mara airstrip**

North Mara airstrip (some times called Nyamongo or Placer Dome airstrip), elevation 4300 feet, has one runway 11/29 which is 1200 metres long and 23 metres wide. The surface is compressed murram with loose gravel. By the time of the accident the runway was in good condition. There is a wind sock located halfway down the runway. There is also a hill located about 400 metres short of runway 29.

There are heavy stones located on the left hand side near the end of runway 29. The airstrip is owned and operated by the Africa ya Mashariki Gold Mines. It is not licensed.

### **Flight Crew**

The pilot was born on 9 September 1954 at Budadiri, Uganda. He held a Commercial Pilot's License which was issued on 19 July 2004 on the strength of his Uganda Airline Transport Pilot's License. At the time of the accident he had logged a total flying experience of 11,537 hours of which about 2,000 were on the type. His last Recency Training on Cessna 402 took place in September 2004.

### **Analysis**

The circumstances of the accident did not point to any defects in the aircraft which could have contributed to the overrun. Tyre marks attributable to 5H-ZAL showed signs of braking during the landing roll. The loose gravel on this runway surface has never been featured as a significant factor affecting aircraft braking effort.

The overrun appears to have been caused by the late touch down and the significant tail wind that existed at the time of the attempted landing.

The aircraft did not follow the normal procedure of executing a circuit around the airfield to ascertain the direction of the wind from the wind sock before making the final approach.

### **Safety Recommendations**

1. In the light of this accident, pilots should take note of the dangers associated with making straight-in approaches without considering the direction of the wind.
2. Operators of airstrips should ensure that drainage trenches are rounded off for smooth passage of aircraft overrunning the end of the runway.
3. Procedures governing flight crew recency training should be followed without fail.
4. The company should adhere to training procedures stipulated in the approved company operations manual.
5. Operators should abide to the Regulations governing operations into unlicensed airstrips.
6. The heavy stones located on the left hand side of runway 29 clearway should be removed.
7. Crew training among operators should be a *no go* item at AOC renewals and surveillance inspections.