

3-02



THE UNITED REPUBLIC OF TANZANIA
Ministry of Communications & Transport
TANZANIA CIVIL AVIATION AUTHORITY
ACCIDENT INVESTIGATION BRANCH

OFFICE OF THE MINISTER
ACCIDENT INVESTIGATION BRANCH
P. O. BOX 2819
DAR ES SALAAM
E-mail: civil-aviation@twiga.com
Website: www.aviationauthority.org

AIB Bulletin

AIB Bulletin No. 3

Aircraft Type & Reg.

No. & type of Engines:

Year of Manufacture:

Date and Time (UTC)

Location:

Type of Flight:

Persons on Board:

Injuries:

Nature of Damage

Commander's Licence:

Commander's Age:

Commander's Experience:

Ref: CAV/CC/3/02

Category: 1.3

Beech Bonanza A36 **Reg.**ZS-DNL **Serial No:**E-3403

One Teledyne Continental IO-550-B39

2001

25th July, 2002 at 6:30 hours

Ngorongoro Airstrip

Latitude: 03° 26 ' S **Longitude:** 035° 09 ' E

Private

Crew - 1 **Passengers** - 3

Crew - 1 **Passengers** - Nil

Extensive damage to aircraft nose, engine, propeller blades fuselage and RH main plane and tail plane

PPL

64 years

1124.05 hours of which 99 hours were on type

Last 90 days 19:65 hrs

Last 28 days 12:50 hrs

Information Source:

Telephone call from the Kilimanjaro Tower.

ALL TIMES UTC

The aircraft had just taken off from runway 27 and was climbing towards the mountainous area beyond Ngorongoro airstrip (elevation 7600 ft). It was carrying a pilot and 3 passengers with unspecified amount/weight of baggage. The cockpit was occupied by a couple and the rear facing seats in the cabin were occupied by another couple. The two forward facing passenger seats were removed to give space for the baggage.

One eye witness said the take off was initiated about 400 metres from runway 27 threshold. The 400 metres portion of the runway is grass-covered while the remaining portion is clear murrum. The full length of the runway is 1700m.

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 circumstances of the accidents at the preliminary/stage and must necessarily be regarded as tentative and subject to alteration or correction if additional evidence becomes available.

Short extracts can be published without specific permission providing that the source is dully acknowledged.

The witness who is also a tour guide working for Conservation Corporation Africa where the occupants had stayed for 3 days had escorted them to the airstrip. According to the Conservative Corporation Africa procedures, the tour guide, when escorting customers, has to remain behind for five minutes after a take off.

It was during this period when the witness observed that after take off ZS-DNL was not climbing as he normally observes other aircraft do. This situation worried him and he decided to climb on top of his vehicle in order to get a better view of what was happening to the aircraft. He saw that the aircraft was descending instead of climbing and after a short while heard a noise as the aircraft hit the ground about 1.5km from the end of runway 27. The place the aircraft came down is known as Maasai Park close to the village called Kimba to the north within the Ngorongoro Conservation Area. Realizing what had just happened the witness quickly drove to the accident scene and radioed his office for help. He reached the accident site in about 5 minutes where he met people who were near the accident site helping the occupants who were already out of the aircraft.

The pilot had sustained injuries on the forehead, the male passenger in the cabin was heard complaining of pain in the left arm. All the occupants were later on airlifted to Nairobi for medical attention. Two eyewitnesses who were present at the site of the crash during the accident said that they were grazing their cattle when they heard and saw the aircraft at its last flying moments. They observed that the aircraft was flying low and unable to climb. The aircraft eventually turned left, cleared some huts at the Maasai Park and hit the ground belly first, bounced thrice before coming to rest.

The herdsmen ran towards the aircraft and removed the rear passenger to a safe distance. A small fire started in the engine area which was put off by the front passenger using the aircraft handheld fire extinguisher. At this moment the tour guide arrived at the accident site and after a while collected the occupants of the aircraft back to the camp hotel for first aid treatment.

The front passenger who was in the co-pilot seat said that whilst taking off the pilot was apparently unable to gain height sufficiently fast enough to climb over the rising slope ahead of the aircraft path. When it was realized that the plane could not gain height, the alternative was to force land (crash land) the aircraft on the same course, as there was not enough height to manouvre out of the situation. This witness said that immediately the plane came to a stand still he was able to open the front passenger door and then opened the back passenger doors to allow the two passengers vacate the plane. He then helped the pilot out of the aircraft as she was bleeding from facial wounds. A small fire started in the engine section. He returned to the aircraft where he picked the handheld fire extinguisher and put off the fire

The aircraft crash landed in an area covered with a lot of grass with its landing gear retracted. It sustained substantial damage to the engine compartment, the engine was found detached from the fuselage and tilted about 85° to the left of the aircraft center line and resting on the right hand cylinders. The engine fire wall was mangled, engine to airframe mounts broken and starter motor adapter sheared off. The engine manifold mount at the bottom separated from the sump. Engine fuel hoses at the fuel control unit had some burning traces.

The propeller blades were found in the feathered position, blades bent in the direction of rotation and one of the blades found loose and the leading edge rotated 180°.

Most of the damage was localized on the aircraft right hand side. The right hand mainplane tip and the associated aileron distorted and bearing soil marks due to ground impact. The right hand elevator horn was torn off and its leading edge bent upwards.

Plenty of fuel was found on both wings. The starboard flap was found forced up by impact while the port flap was still extended about 10°.

Flight control surfaces could be moved from the surface themselves but not through the control column. Rudder pedals jamed with full left rudder.

The inspectors of accidents could not interview the pilot as by the time of their arrival at the site the occupants had already flown to Nairobi for medical attention. However, a written witness statement has been received from the front passenger. The pilot has been requested in writing to provide her statement as well.

The circumstances of this accident are being investigated.
