

The aircraft main tanks and tip tanks were all refueled to full capacity. 5H-EMK subsequently took off for Mahale at 0637 hours. It arrived at Mahale at 0813 hours. Two passengers disembarked and at 0823 hours the aircraft took off for Katavi where it landed at 0919 hours. The remaining passenger disembarked. 5H-EMK took off for Ruaha with only the pilot on board, cruising at 13500 feet. The flight to Ruaha was uneventful. About 60 miles out of Ruaha's Msembe airstrip the pilot initiated a slow descent. She said that the aircraft was flying on the Left main fuel tank for the duration of the flight. Pre-landing checks were carried out and the fuel selector handle was moved from the Left main tank position to the Right main tank. Fifteen seconds later the engine coughed once and then stopped. The pilot tried to restart the engine on a Right main tank while using a hot engine start procedure to no avail. On the second attempt to restart the engine the pilot operated the emergency fuel boost pump while still employing the hot engine start procedure. The engine failed to restart.

The pilot realized that the engine could not be restarted at the obtaining low altitude, and she decided to cut short the approach to runway 11 of Msembe airstrip and land on a road which was straight ahead below the aircraft flight path. She transmitted the 'may day' distress message on 118.2 MHz and on the company HF radio.

In the last part of the flight, the aircraft descended into shrubs and trees. The right main wing clipped a tree and its tip snapped off. The aircraft then ran out of control, rolled to the left, subsequent to which the left main landing gear hit the ground followed by the propeller. The aircraft then ballooned across the road and the main right wing was caught up in a tree causing the left main wing tip to hit the ground. The aircraft subsequently came to rest at this point with the nose section in contact with the ground.

There was neither post impact fuel spillage nor fire. The pilot was not injured and was able to come out of the aircraft on her own. Within a short time, a tourist car with some tourists and a Ruaha National Park Game warden arrived at the crash site. They reported to have seen the approaching aircraft and had realized that it had engine trouble.

Examination of the wreckage

5H-EMK first impacted the trees with the right wing and its tank tip detached. The wing showed some signs of skin distortion and twist toward the root. The left wing failed upwards at the tip, the skin at this area detached from the structure. The wing was distorted.

The belly pod was damaged at the front and the lower engine cowling completely smashed. There was damage to all propeller blades and the hub. There was no visible external damage to the engine or oil spillage. The pilot reported to have smelt fuel after disembarking.

The nose landing gear broke off from the fuselage attachment point; its wheel assembly was crushed by the fuselage. The right main landing gear spring was twisted rearwards as a result of impact with the ground, the attachment bolts to the under floor bulkheads were pulled off. The cabin floor was distorted.

The propeller ground strike marks, the cargo pod and right hand main landing gear marks indicate that the aircraft became uncontrollable after the right wing had hit a tree. The aircraft proceeded to impact the ground with in a nose down attitude.

Weather

The weather was not a factor in this accident.

The Engine

The aircraft was powered by one Factory remanufactured 300 hp Teledyne Continental Motors TSIO 520-MTB engine serial No. 830701-R. By the time of the accident it had logged 262 hours.

This engine was turbocharged. The pilot was of the opinion that vapor lock may have caused to stop in flight.

There were no sign of fuel spillage on the wreckage and the surrounding areas. There was no fuel in the left wing tip tanks. The right main tank was almost full of fuel. Given the aircraft lateral inclination of about 30 degrees towards the left main wing tank, very little residue fuel was seen in the tank. It is also possible that the engine stopped when the left tank lost all the usable fuel.

Survival Aspects

This was a survivable accident. The cabin remained virtually intact. The pilot's seat did not detach from the floor.

Further investigations are being carried out in order to establish the causal factors of this accident.