



THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF COMMUNICATIONS AND TRANSPORT

OFFICE OF THE MINISTER,
ACCIDENT INVESTIGATION BRANCH
P.O. Box 2819
DAR ES SALAAM

ACCIDENT INVESTIGATION BRANCH

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AIB Bulletin

No: 3/98
Ref: CAV/ACC/3/98

Aircraft Type and Registration : Cessna 207, 5H-PAT
No & Type of Engines : One Continental TSI0-520M
Year of Manufacture : 1980
Date & Time (UTC) : 3 February 1998 at 0452 hours
Location : Burka Coffee Estate near Arusha airport
(S03 22 E 036 38)

Type of Flight : Air Charter
Persons on Board : Crew - 1 Passengers - 4
Injuries : Crew - 1-Killed Passengers - 4-Killed
Nature of Damage : Aircraft completely destroyed
Commander's Licence : Commercial Pilot's Licence
Commander's Age : 32 years
Commander's Flying Experience : 1700 hours (of which 300 were on type)
Last 90 days - 183 hours
Last 28 days - 84 hours

Information Source : Telephone call from Kilimanjaro Control Tower

The aircraft was operating a VFR charter flight from Arusha to Zanzibar. It was carrying one pilot and four passengers. The fuel endurance was five hours. Take off was initiated from runway 09 and the aircraft was airborne at 0450 hours. 5H-PAT lifted off before the middle of the runway and was observed to climb normally. Shortly after take off and at a distance of about 1400 metres beyond the end of the active runway the engine was heard to misfire and the aircraft was observed to yaw. It subsequently banked to the left and as it negotiated a left turn it was seen to lose altitude. The engine continued to misfire and the aircraft finally dived

This 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.

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to earth on a coffee plantation. A severe fire ensued and the aircraft was completely destroyed. All the five occupants were killed.

At the time of take off (0450 hours) the Arusha Control Tower was not yet open. (Air Traffic Services Watch at Arusha Airport starts at 0500 hours and ends at 1530 hours). However, a DCA Revenue Officer was in the Tower at the material time. He was monitoring traffic for the purpose of aeronautical charges. The officer picked transmission from 5H-PAT. The pilot made a blind transmission on the Arusha frequency (118.4 MHz) shortly after the aircraft was airborne.

He advised that "there were five souls on board and five hours departure fuel". The pilot subsequently advised that he had some technical problem and was turning back for runway 27. There was no further transmission from 5H-PAT.

THE WRECKAGE

The wreckage was found lying upside down in a coffee estate five metres forward of the impact crater. The crash site was 1200 metres beyond the end of runway 09 and about 200 metres to the right of its extended centre line. Much of the aircraft was completely burnt out. The only recognisable part was the tail plane together with the rear fuselage section which separated in the accident sequence.

The propeller, having separated from the engine on impact with the ground, was found partially embedded in soil in the impact crater. Only one of the three blades was dislocated from the hub. Examination of the damage to the blades showed that the propeller was not under power at the time of impact with the ground.

One of the wings had settled on top of the fuselage indicating that the aircraft was in a spiral dive prior to impact with the ground. The engine also separated.

All the five bodies were recovered from the wreckage. They had sustained multiple fractures and fire burns. Many of the aircraft documents, though partly burnt, were recovered from the wreckage. The aircraft was carrying no baggage. This was because four cases belonging to the passengers had been left behind at Arusha at the insistence of the pilot. They were due to be loaded on the Company scheduled ATR 42 flight to Zanzibar later on that day.

THE ENGINE

The engine, a factory re-manufactured Teledyne Continental IO-520M (10)B Serial number 291 685-R was first examined at the crash site and was later transported to a maintenance hangar at Arusha airport for further examination. Visual inspection showed no precrash damage.

All visible external damage was attributable to impact with the ground and the subsequent fire. Both magnetoes suffered fire damage but they could be turned easily. The turbocharger also showed impact damage.

A strip inspection of the engine was therefore carried out in order to assess the internal condition. Examination of the interior showed nothing untoward. All the parts examined were found to be in normal condition. The engine oil still retained its texture and viscosity.

The aircraft maintenance records which were seized from the company base shortly after the accident showed that the engine had been maintained according to the approved maintenance schedule. At the time of the accident it had done 1245 hours since new. It had 155 hours to run before overhaul.

The Chief Inspector of Accidents has ordered an inspector's investigation into the circumstances of this accident.

APPENDIX

5H-PAT ACCIDENT AIRCRAFT FLIGHT PATH

