



Ref: 7900

SOUTH AFRICAN CIVIL AVIATION AUTHORITY**ACCIDENT REPORT – EXECUTIVE SUMMARY**

Aircraft Registration	ZS-RJU	Date of Accident	29 December 2004	Time of Accident	0845Z
Type of Aircraft	MBB BO-105-CBS4		Type of Operation		Air Ambulance Operation
Pilot-in-command Licence Type	Commercial	Age	44	Licence Valid	Yes
Pilot-in-command Flying Experience	Total Flying Hours	6 903.8		Hours on Type	331.7
Last point of departure	East London Aerodrome (FAEL)				
Next point of intended landing	Provincial Hospital in Port Elizabeth				

Location of the accident site with reference to easily defined geographical points (GPS readings if possible)

33.4nm East of Port Elizabeth along the coastline on the beach.

Meteorological Information	Surface wind; 090°/10-15kts, Temperature 25°C, CAVOK				
Number of people on board	1 + 3	No. of people injured	0	No. of people killed	0

Synopsis

The pilot, accompanied by two paramedics and a patient was engaged in an air ambulance flight, transferring a patient from East London to the Provincial Hospital in Port Elizabeth. The patient was an ambulatory case for pacemaker insertion.

With fine weather conditions prevailing at the time, and the pilot decided to fly along the coast from East London to Port Elizabeth. Approximately 50 minutes into the flight, and flying at a height of approximately 400 feet AGL (above ground level) the pilot and occupants heard a loud bang, followed by an increase in pitch sound, with the aircraft yawing to the left and right-hand side. The pilot immediately lowered the collective pitch lever and analyzed the engine conditions as he thought he might have encountered an engine failure, which appeared to be normal. With an open area of beach in front of him he elected to land straight ahead.

Due to limited height available and a tail wind component present he executed a skid on landing on the sand at a higher speed than anticipated. After skidding for a distance of approximately 15m, the left skid dug into the soft sand and the aircraft ground looped through 180° before coming to a halt. None of the occupants were injured in the event and they evacuated the aircraft, including the patient who was mobile at the time. After contact was established with the East London Metro Services office several hours later, another air ambulance helicopter was dispatched from Port Elizabeth to the scene, which uplifted the patient and transferred him to hospital. Another helicopter was dispatched from East London, which uplifted the pilot and the two paramedics and transferred them back to East London.

The aircraft was recovered from the beach and was taken to an approved maintenance organization for further examination and analysis. It was assessed that the main transmission assembly could not be rotated by hand and showed signs of overheating in the area of the planetary drive train. The magnetic plug was removed and inspected, which contained a substantial amount of metal particles.

The last MPI inspection prior to the accident was certified on 1 October 2004 at 9 433.1 airframe hours. Since the inspection was certified a further 54.0 hours were flown.

Probable Cause

Following the seizure of the main transmission unit during flight the pilot executed a hard landing onto the beach due to insufficient height, which was aggravated by a substantial tail wind condition, this caused the left front skid gear assembly to dig into the soft sand, and swung the aircraft through 180° before coming to a halt in a nose high attitude.