



Ref: 0187

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

Date of Incident	6 December 2000	Time of Incident	0945Z		
Aircraft Registration	ZS-RIL	Type of Aircraft	Aero Commander 680FL		
Pilot-in-command Licence Type	Commercial		Licence Valid	Yes	
Pilot-in-command Flying Experience	Total Flying Hours	380	Total Hours on Type	5.6	
Type of Operation	Private				
Last point of departure	FAGM (Rand Airport)				
Next point of intended landing	FACT (Cape Town International Airport)				

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

Runway 19 FACT

Meteorological Information	CAVOK				
Number of people on board	1+5	No. of people injured	Nil	No. of people killed	Nil

Synopsis

The pilot was on a private flight from FAGM to FACT with five passengers on board. The aircraft was refuelled to capacity on 5 December 2000 with a total fuel quantity of 640 litres of Avgas 100LL. The aircraft departed FAGM at 0545 Z on 6 December 2000. At 0942Z the pilot reported that they were low on fuel and that the left-hand engine had failed. At that stage the aircraft was approximately 28 nm from FACT and 15 nm from FAFK. The ATC suggested to the pilot to divert to Fisantekraal aerodrome. The pilot did, however, elect to continue to FACT due to the fact that he was unfamiliar with FAFK and that FACT had emergency facilities, if required. At approximately 0955Z, 10 minutes after the left-hand engine failed, the pilot reported that the right-hand engine had also failed. At that stage the aircraft was approximately 5 nm to the North East of FACT.

The pilot continued with a glide approach and landed safely at 0959Z on runway 19 at FACT. The aircraft was towed to a nearby AMO and inspected. It was noted that both sides of the fuselage under wing area had green vertical run marks and that the left-hand fuel tank dust-cover was not fitted and the opening had been taped closed with duct tape. A total of seven litres of fuel was then drained from the aircraft after which all tanks were refuelled to capacity with 560 litres in the centre tank and 110 litres in each outboard tank giving a total fuel capacity of 780 litres (205 U.S. Gal.). Both engines were subsequently ground run and found to operate normally. On 9 December 2000 another 19 litres of Avgas was uplifted before the aircraft was flown back to FAGM with no further incident.

Probable Cause

The aircraft departed FAGM with insufficient fuel onboard for the flight to FACT. This caused depletion of the aircraft's fuel supply, which resulted in engine failure and a forced landing at Cape Town International Airport. If the tanks were indeed filled to capacity and a proper pre-flight inspection had been carried out prior to the flight, approximately 54 U.S. Gal. should still have been available at the time that engine failure occurred, even at the reduced maximum fuel tank capacity of 206 U.S. Gal. It is therefore very likely that a proper pre-flight inspection was not carried out prior to the flight and that the aircraft's fuel tanks were not filled to capacity.

Another possibility is that the aircraft's tanks were indeed filled to capacity and that fuel was vented overboard, through the left-hand tank cap, which had only been taped over and was not fitted with a proper lid.