



MEDIA STATEMENT

2 OCTOBER 2009

**STATUS REPORT: INVESTIGATION INTO THE CAUSE OF AN ACCIDENT INVOLVING
A JETSTREAM 41 AIRCRAFT SHORTLY AFTER TAKE OFF FROM DURBAN
INTERNATIONAL AIRPORT ON 24 SEPTEMBER 2009**

The objective of an accident investigation is to establish the cause (s) of the accident and to take steps to prevent a further occurrence. As such the objective is not to apportion blame or liability.

The purpose of this investigation is therefore to ensure that the investigation is conducted in the most effective and comprehensive way to establish the cause(s). The investigation team is committed to adhering to the International Provisions defined in Annex 13 to the Convention on International Civil Aviation, of which South Africa is a signatory.

To date no evidence has been identified that requires the Commissioner for Civil Aviation (CCA) to implement any action, such as the prohibition of further flight by Jetstream aircraft, nor to suspend any approvals granted to the operator.

Passengers can continue to make use of South African operators with confidence in that their safety is being overseen to the best of its ability by the South African Civil Aviation Authority (SACAA).

The process followed to date and in future is in compliance with internationally accepted practices. On arrival at the accident scene, the team of accident investigators, commenced with the onsite investigation which included the photographing and video-taping of the accident site and wreckage. It should be noted that the first priority following an accident is to render assistance to injured parties. The investigators will await completion of this process prior to taking control of the accident site, so as not to interfere with any rescue operation.

Following completion of the initial assessment and documenting of the accident site, a decision was made to remove the wreckage to a hanger at Johannesburg, where a more detailed investigation and strip down of selected components could be made. This had been done with the support and cooperation of the operator.

The South African investigation team has since been joined by an Accredited Representative (AR) from the Air Accident Investigation Branch (AAIB) of the United Kingdom, who is being assisted by Advisors from the AAIB and the aircraft manufacturer. The National Transportation Board (NTSB) of the United States of America (USA) has nominated a non-travelling AR, but with an Advisor from the engine manufacturer on site.

Actions taken to date include:

- The aircraft wreckage is being examined in detail for defects and to exclude factors that are not relevant to the cause of the accident;
- The Cockpit Voice Recorder (CVR) and Digital Flight Data Recorder (DFDR) have been hand carried to the AAIB facilities in the UK and data has been successfully downloaded. Both recorders were fully functional and data retrieved is of good quality;
- The Air Traffic Control recordings have been obtained and are being transcribed and analyzed;
- The engines have been removed from the airframe and will be shipped to the manufacturer in the USA where they will be stripped down in the presence and under supervision of the Investigators, accredited representatives, advisors and observers from the operator;
- Compilation and review of relevant records in respect of the aircraft maintenance, operational and crew records is ongoing.

Factual information obtained to date can be summarised as follows:

- Aircraft design and certification requirements for a multiple-engine aircraft are that it should be able to continue take-off once passing the decision speed, climb, fly en route and continue to a landing, should one engine become inoperative. This is demonstrated during the aircraft certification process at maximum take-off mass.
- The Jetstream 41 aircraft requires an operating crew of two pilots and meets all of the required certification criteria for a twin-engined turboprop aircraft, even at its maximum certificated mass.
- It is a requirement that pilots be trained and competent to take-off, fly, and land such aircraft with one engine inoperative. Pilots are required to maintain competency and are assessed a minimum of every six months to ensure that such competency is maintained.
- Operators define standard operating procedures (SOPs) which pilots are to follow during the various emergencies that may occur. Such competency is again verified during an actual flight test or in a simulator.
- Smoke was observed to originate from the no. 2 or right-hand engine during the take-off roll and ATC advised the crew accordingly. This was only transmitted to the pilot during take-off rotation, thus excluding the possibility of rejecting the take-off. Duration of the take-off roll was about 18 seconds.

- The no.2 or right-hand engine failed on rotation and a power reduction occurred on the no. 1 engine as the aircraft climbed to about 450 ft. above sea level.
- The aircraft was seen to climb and thereafter descend and impact terrain. (Total time from start of the take-off roll until impact was about 50 seconds);
- Rescue and fire-fighting services responded appropriately;
- The three crew members on board received injuries to various degrees of severity and a member of the public was also injured at the accident site;
- Investigators have as yet to interview the crew members and the bystander, due to their medical conditions.

With reference to the above factual information, the aircraft's mass was such that it should have been able to have continued to climb and return to land on one engine. It is therefore necessary to address the following factors that may shed further light as to the cause of the accident:

- The reason for the power reduction experienced on the no.1 engine, which will include continued analysis of the DFDR and CVR information;
- Analysis of any human factor aspects, such as whether the power reduction on engine No. 1 resulted from an incorrect identification of the failed engine, or a decision to land the aircraft as soon as possible, or other factors unknown at this time, that necessitated a deviation from standard operating procedures to continue the flight on one engine;
- Verification that the no.1 engine had in fact been serviceable throughout the flight by means of a strip-down examination;
- Strip-down of the no 2. engine to establish the cause of this engine's failure.

The investigation will be ongoing with participation by the accredited parties.

The Aircraft Accident and Incident Investigation Division (AIID) of the South African Civil Aviation Authority (SACAA) wishes to acknowledge and thank the above participants and the operator for their assistance and services rendered to date.

It is trusted that the investigation will lead to the introduction of corrective actions, should any deficiencies be identified, to ensure the continued safety of passengers transported in South African airspace and on South African aircraft.

-ENDS-

About the SACAA:

The South African Civil Aviation Authority (SACAA) was established on 1 October 1998 following the enactment of the South African Civil Aviation Authority Act, No.40, in September of the same year. The SACAA promotes and maintains a safe, secure and sustainable civil aviation environment, by regulating and overseeing the functioning and development of the industry in an efficient, cost-effective, and customer-friendly manner according to international standards.

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