

# FINAL REPORT OF AIRCRAFT ACCIDENT 6Y-JJK

Submitted March 21, 2003 by  
Jamaica Civil Aviation Authority  
Flight Safety Division

## SUMMARY

On Monday, February 13, 2003 a Jamaican registered Cessna 150L aircraft [6Y-JJK], operated by Wings Jamaica, left The Tinson Pen Aerodrome on a charter flight, at approximately 08:20 AM local time, for Montego Bay. The aircraft landed safely in Montego Bay.

Approximately 45 minutes into the return flight, out of Montego Bay [10:30 am local time], the pilot experienced engine problems, and was forced to land in an orange grove near Bog Walk in St. Catherine.

As a result, the aircraft suffered major damage, but there was no injury to the pilot or anyone on the ground.

## AT THE ACCIDENT SITE

### **External inspection**

On arrival at the accident scene at approximately 12:10 PM, on Monday, February 13, 2003 the aircraft was found facing a South Westerly direction, resting on its nose with the left wing low.

The RH main wheel had left a skid mark approximately 30 feet long. There was no skid mark left by the left wheel.

The nose landing gear had broken away from its mount and had been pushed up into the engine, damaging it and causing it to be completely drained of oil.

One propeller blade had been damaged [bent backward, near the tip].

The left wing seemed to have struck a tree and was broken just outboard of the wing strut, that outboard section was hanging down.

The right wing had struck a tree, which caused damaged to the leading edge, adjacent to the wing strut.

The left aileron was up and the right down, the rudder was in the full right position.

The RH fuel tank when dipped, showed approximately 1(one) inch of fuel. The LH tank was empty. The fuel line to the carburetor was disconnected and approximately 1 (one) fluid ounce of fuel drained out.

### **Inside the cockpit**

The mixture control was at full lean, the throttle was closed and battery switch was in the off position.

The flap position indicator showed the flaps to be between 0 and 5 degrees.

The RH rudder pedal was in the full forward position.

Both fuel gauges registered empty after power was restored.

No record of any of the two legs of this flight was found in the journey log

### **INVESTIGATION**

In an interview with the pilot subsequent to the accident, and a review of the aircraft records, several observations were made:

- The aircraft has a capacity of 26 gallons of which only 22.5 is usable fuel. The pilot stated that, for flight planning purposes, fuel consumption is calculated at 6 gallons per hour. Therefore a full tank will give less than 4 hours of flying time. The pilot stated that it was the Company's policy to report to Air Traffic Services, that full tank fuel endurance is four (4) hours.
- The aircraft was fueled by the pilot on the previous evening (12<sup>th</sup>) and had flown twice before he flew it that morning to Montego Bay. The pilot stated that he did not know the duration of the flight, flown on the 12<sup>th</sup> after he fueled the aircraft. He further stated that, he thought that the flight prior to his flight on the 13<sup>th</sup> was for 1(one) hour. A review of the journey log showed that it was for 1.1 hours. Prior to departure for Montego Bay, the journey log showed, based on the previous pilot's calculations, that the aircraft had approximately 12 gallons of fuel, which is good for 2 hours of endurance.
- The pilot stated that, on the morning of the accident, he heard the previous pilot of the aircraft [the flight immediately before his], reporting to Air Traffic Services that he had 4 (four) hours of fuel.
- The pilot did not carry out a preflight inspection, prior to the flight to Montego Bay. He carried out what he called "an abbreviated pre-flight inspection", during which he looked inside the tanks and estimated the fuel quantity to be 3 (three) hours fuel. He did not physically measure the quantity [using a dip stick].

- A review of the journey log showed, that there had been a problem with the right hand fuel gauge, and it had been in the deferred defects log, between January 8<sup>th</sup> and 27<sup>th</sup>. The pilot, on the morning of the accident, however suspected the left hand gauge to have been defective.
- The total time flown, from the time the aircraft was fueled on the 12<sup>th</sup> to the time the engine stopped on the 13<sup>th</sup> is estimated to be 4.2 hours.
- On arrival into Montego Bay, the pilot did not shut down the aircraft and did not perform a pre-flight inspection (as is the Company's procedure).

### CONCLUSION

Based on the evidence, it is apparent that the pilot failed to follow numerous procedures that are written in the Company's Procedures Manual. He further made several incorrect assumptions which together, led to him not knowing the exact quantity of fuel on board the aircraft, prior to his departure for Montego Bay.

Therefore, based on the physical evidence, the aircraft records and the information gathered from the pilot, it would appear that, because of pilot miscalculation, there was an engine failure, due to fuel starvation, which led to this emergency landing.