



ACCIDENT REPORT
[Final]

AIRCRAFT 6Y-JCF

WILDCANE, ST. ANN &
TINSON PEN AERODROME
[March 26, 2011]

ACCIDENT REPORT

Aircraft Registration: **6Y-JCF**

Date of Accident: **Saturday, March 26, 2011**

FOREWORD

This report is a technical document reflecting the findings of the Jamaica Civil Aviation Authority (JCAA) regarding the circumstances surrounding the accident which has been investigated, with its causes and consequences.

In accordance with the provisions of the JCAR and Annex 13 to the Convention on International Civil Aviation, the investigation was exclusively of a technical nature, without having been targeted at the assignment of blame or liability. The investigation has been carried out without having necessarily used legal evidence procedures and with no other basic aim than that of preventing future similar accidents.

Consequently, any use of this report for the purpose other than that of preventing future accidents, may lead to erroneous conclusions or interpretations.

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Abbreviations

AD	Airworthiness directive
AGL	Above ground Level
AMO	Approved Maintenance Organization
CATC	Caribbean Aviation Training Centre
JCAA	Jamaica Civil Aviation Authority
JCAR	Jamaica Civil Aviation Regulations
MTOW	Maximum Take-Off Weight
NMIA	Norman Manley International Airport
VFR	Visual Flight Rules

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Synopsis

On the morning of Saturday, March 26, 2011, a Cessna 172R aircraft, registration 6Y-JCF was being piloted by a student of the Caribbean Aviation Training Centre on a long cross-country flight from the Tinson Pen Aerodrome to the Donald Sangster International Airport in Montego Bay, to the Ian Fleming International Airport/Boscobel and back to the Tinson Pen Aerodrome, when the pilot conducted an unauthorized excursion from his planned routing, to fly over the property of his relatives living in Alexandria and Wildcane, St. Ann.

Based on the evidence gathered, during a slow, low flight above Wildcane, the aircraft hit a tree. The pilot then abandoned his flight plan and returned to the Tinson Pen Aerodrome, where he landed the disabled aircraft which ran off the runway unto the grass.

The pilot was not injured, neither was anyone on the ground but the aircraft suffered extensive damage.

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1. FACTUAL INFORMATION

1.1 History of the Flight

On Saturday, March 26, 2011 a Cessna 172R aircraft, registered 6Y-JCF was being piloted by Student Pilot, on a long cross-country flight (the pilot's second cross-country solo). The planned route was Tinson Pen, Sangster, Boscobel, Tinson Pen. The aircraft had fuel for 4.5 hours of flight, sufficient for the route planned. The pilot departed the Tinson Pen Aerodrome at 7:25 am, local time, on his way to Sangster on what he described as a normal flight, cruising at an altitude of 4, 500 feet (AGL) when he decided to divert and fly instead over Alexandria and Wildcane in St. Ann, in an apparent 'fly over' of the homes of both sets of his grandparents.

According to his testimony, he first flew over Alexandria without incident then headed for his next destination. He further stated that, overhead Wildcane, at an altitude of 2,500 feet (AGL), he performed a pre-manoeuvre check then initiated slow flight over the home of the second set of grandparents. He also stated that while recovering from slow flight, he inadvertently retracted all flaps at once, which caused the aircraft to rapidly descended and hit the top of a tree. The aircraft, he said, had difficulty climbing out after hitting the tree. He subsequently managed to regain control of the aircraft, and immediately made checks to see the extent to which the aircraft might have been damaged and discovered that the right main gear was bent up, the wheel fairing was missing and the right hand elevator was also damaged.

He stated that he then circled in order to climb and attained an altitude of 3,000 feet (AGL) then headed for the Tinson Pen Aerodrome. He further said in his statement that along the way, he continued to climb, first to 3, 800 feet (AGL) then 4, 500 feet (AGL) before descending to land at the Tinson Pen Aerodrome.

At the Tinson Pen Aerodrome, the Student Pilot's testimony is that, he landed on the left main gear, then the nose gear but as the aircraft slowed, it veered to the right and off the runway where it came to rest on the grass. He then initiated normal shut-down and exited the aircraft. He was met by the aircraft operator and members of the airport fire service.

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1.2 Injuries to persons

There were no injuries to the pilot or anyone on the ground. The pilot was the only occupant of the aircraft.

Injuries	Fatal	Serious	Minor
Crew	0	0	0
Passenger	0	0	0
Others	0	0	0

1.3 Damage to aircraft

The aircraft sustained extensive damage to its wing, fuselage, horizontal & vertical stabilizers and landing gear. [See Appendix 'A' for pictures.]

1.4 Other damage

The only collateral damage appears to be that done to the tree which was hit by the aircraft.

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1.5 Personnel information

1.5.1 Identification

The pilot was thirty-three (33) years of age and the holder of a Jamaican Student Pilot Licence, with a Medical Certificate, valid until July 31, 2012. The pilot's last medical examination was completed January 1, 2011 and he was assessed as fit to hold a Student Pilot Licence. His training records were reviewed and it was determined that he had satisfactorily completed all the required training and was deemed qualified to fly solo.

Pilot-In-command	Student Pilot
Age/Sex	33/Male
Nationality	Jamaican
Qualification	Student Pilot Licence
Date of Issue	June 1, 2011
Date of Expiry	July 31, 2013
Total Flying Hours	66.2 hours

1.5.2 Instructor's Qualification and Records

The files of the Student Pilot's most recent instructors were carefully examined, and it was found that their licences, medical certificates and instructor ratings, were valid throughout the period in which he was under their training.

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1.6 Aircraft information

The aircraft was owned and operated by Caribbean Aviation Training Centre, and was at the time of the accident being maintained by Tara Couriers Services Limited, an Approved Maintenance Organization (AMO).

The Cessna, Model # 172R aircraft, is a high wing monoplane, powered by a 160 horsepower (rated), Textron Lycoming IO-360-L2A piston engine.

1.6.1 Identification

Make	Cessna Aircraft Company
Model	172R
Serial number	17281110
Registration	6Y-JCF
MTOW	2,450 lbs
Owner/Operator	Caribbean Aviation Training Centre

1.6.2 Certificate of Airworthiness

Category	Transport (Passenger)
Date of Issue	December 8, 2010
Date of Expiry	December 7, 2011

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1.6.3 Maintenance

A review of the aircraft's maintenance records since the last Certificate of Airworthiness (C of A) was issued, December 8, 2010, revealed no evidence of any unusual or recurring defects.

All the maintenance had been accomplished in accordance with the Approved Maintenance Schedule and there were no outstanding Airworthiness Directives (AD's), Mandatory Service Bulletins or airworthiness defects.

The total airframe time as recorded in the ADLOG Aircraft Maintenance Records at the time of the accident, was 2, 820.6 hours.

The engine total time since overhaul was 834.0 hours and the last maintenance action completed was a Cessna, Phase II Inspection, carried out at 2, 782.8 Hours.

Total Airframe Hours: 2, 820.8 hours

Total engine Hours (since O/H): 834 hours

Hours at last Inspection: 2, 782.8 (Cessna Phase II)

1.7 Meteorological Information

The pilot was given a weather briefing from the Jamaica Meteorological Service for a route from Tinson Pen to Sangster to Ian Fleming/Boscobel, which indicated that the worst weather to be expected, would be scattered clouds based at 2, 200 feet above ground level (AGL), (i.e. less than ½ the sky covered in clouds, which indicated good weather for the flight).

The forecast for the Norman Manley International Airport (NMIA), indicated that broken cloud layers at 3, 400 feet, AGL (i.e. more than ½ but less than all of the sky covered in clouds) would be encountered, beginning at 1500 hours local time, and for the Donald Sangster International Airport, the broken cloud layer would be based at 2, 200 feet AGL beginning at 1200 hours local time. A sky condition of broken cloud layers is not as favourable for Visual

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Meteorological Information (contd.)

Flight Rules (VFR) flying, especially since the base of these clouds would be far lower in the mountains between Tinson Pen and Montego Bay. This weather information was not given to the pilot nor would it have been, since the estimated arrival time back at Tinson Pen was 11:30 am, local time.

1.8 At the Aerodrome

Jamaica Civil Aviation Authority (JCAA) Inspectors, investigators, arrived at the site (Tinson Pen Aerodrome) at approximately 9:30 am, local time, the day of the accident.

The Inspectors immediately ordered the runway closed then took custody of the aircraft records. They then proceeded to the site where the aircraft had come to rest and took pictures, inspected the wreckage and surrounding area for possible evidence.

1.8.1 Inspection of runway and surrounding areas

The runway as well as the path the aircraft travelled after landing, were examined. Evidence was found on the runway and beneath the aircraft.

What appeared to be fragments from a tree were found in two locations on the runway, close to where the aircraft appeared to have touched down. One piece of fragment contained a piece of metal which appeared to have come from the aircraft. The other piece contained no metal fragments.

After the aircraft had been removed, two seed pods were found in the area where the aircraft had rested. These pods which appeared to have come from the tree the aircraft had struck, were gathered as evidence.

The skid marks on the runway, indicated that the pilot attempted a normal landing on runway 14 but veered off to the right, midway the 3rd and 4th runway edge lights unto the grass and came to rest on the right wing, with the aircraft facing in a southwesterly direction.

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1.8.2 Inspection of aircraft

An inspection of the aircraft at the site, revealed that it sustained extensive damage to the RH wing (leading edge, tip and lower skin), RH horizontal stabilizer, vertical stabilizer, RH main landing gear as well as the tail section of the fuselage in the area where the vertical and horizontal stabilizers are attached.

1.8.3 Eyewitness Report

One eye witnesses to the landing at the Tinson Pen Aerodrome, a member of the Airport Fire Station, stated the following:

"At approximately 0835 hours on the morning of the incident, I observed aircraft 6Y-JCF coming in to land on Runway 14. It appeared to be a normal landing but as soon as it touched down, the RH main landing gear collapsed and the aircraft veered to the right and came to rest on the grass, approximately 1/3 the length of the runway. We rushed to the aircraft and saw the pilot coming out. He appeared not to be hurt. There was no fire nor was there any evidence of a fuel leak. We continued to observe the aircraft until the arrival of the JCAA Inspectors."

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2. Analysis

According to the evidence gathered, it can be determined that:

1. The aircraft was properly maintained during the period of being registered in Jamaica.
2. The aircraft was serviceable for its departure on the day of the accident.
3. The aircraft had fuel for 4.5 hours of flight, sufficient for the route planned.
4. The pilot was in possession of a valid pilot licence and medical certificate.
5. The pilot was qualified and fit for the proposed flight. He had completed his training syllabus as required, and was authorized to fly solo. At the time of departure for this flight, he had acquired 66.2 total flying hours of which 16.4 hours were cross country flights, including 3.2 hours solo cross country, and 6.2 hours were solo flights (non-cross-country). All times were recorded in the pilot's logbook in accordance with JCARS 2004, Schedule 10.100, as amended.
6. The pilot was given a weather briefing from the Jamaica Weather Service for a route from Tinson Pen to Sangster to Ian Fleming/Boscobel to Tinson Pen.
7. The pilot received a weather briefing for the route, Tinson Pen to Montego Bay to Tinson Pen. The pilot air-filed his routing from Tinson Pen to Montego Bay with the Norman Manley International Airport (NMIA) Tower.
8. The pilot made an unauthorized excursion from his filed flight plan and flew over Alexandria and Wildcane, St. Ann, contrary to JCAR, Tenth Schedule, Section 10.345.
9. The pilot flew too low over a built-up area contrary to JCAR, Tenth Schedule, Section 10.500
10. The aircraft was able to proceed past Wildcane and returned to the Tinson Pen Aerodrome where it landed.

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3. Conclusion

3.1 Findings

The available evidence indicated that the aircraft was in a serviceable condition and the weather was not a factor. The pilot had not been flying according his file flight plan and had diverted to 'fly over' his family's property. The aircraft stalled and hit a tree, causing severe damage to the fuselage, RH wing, RH horizontal stabilizer, vertical stabilizer and the RH main landing gear. Upon landing at the Tinson Pen Aerodrome, the aircraft veered to its right as a result of the broken landing gear, then came to rest on the grass.

3.2 Causes

Based on the testimony of the pilot, the damage sustained by the aircraft and the other evidence available, the most probable causes of the accident are:

- The pilot flew too low
- He mishandled the aircraft causing it to stall and could not recover in time before hitting the tree

4. Recommendations

It is the recommendation of the investigating team that:

- The licence of the Student Pilot be suspended for three (3) months for low flying
- He must undergo remedial ground school and flight training
- He must be given extensive safety awareness as well as risk management training –

before he can apply to have his licence renewed.