

JAMAICA CIVIL AVIATION AUTHORITY

AVIATION OCCURRENCE

FINAL REPORT

Occurrence Number: JA-2008-03

Type of Occurrence: Accident

Operator Name: Private Operator

Type of Aircraft: Cessna U206F

Registration: N1161Q

Occurrence Location: Approx 17 miles NE of Kingston, Jamaica. N18:06.13 W76:40.19

Date and Time: 08 August 2008 at approximately 5:15 PM Local Time.

HISTORY OF THE FLIGHT

The pilot and passenger took off in the aircraft from Ken Jones Aerodrome, Portland, Jamaica at approximately 5:00 PM local time, for a day Visual Flight Rules (VFR) flight to Tinson Pen Aerodrome, Kingston.

The aircraft was flown on a direct track towards Tinson Pen, over the Blue Mountains.

At approximately 5:15 PM local time the aircraft crashed into the north face of a steep ridge near John Crow Peak in the Blue Mountains, which was covered with heavy tropical vegetation. The crash site was at about 5,000 feet above sea level, and about 200 feet below the top of the ridge.

INJURIES

	CREW	PASSENGERS	OTHERS	TOTAL
FATAL	-	-	-	-
SERIOUS	1	1	-	2
MINOR	-	-	-	-
TOTAL	1	1	-	2

DAMAGE

Except for the empennage, the aircraft was destroyed by a post-impact fire.

PERSONNEL INFORMATION

	Captain
PILOT LICENCES	Commercial Pilot License, Jamaica. Commercial Pilot License, U.S.A.
MEDICAL EXPIRY DATE.	Jamaican, 31 January 2009 U.S.A., 12 February 2009
TOTAL FLYING HOURS.	2354.6
TOTAL HOURS LAST 90 DAYS	78.4
HOURS ON TYPE LAST 90 DAYS	58.2
TOTAL HOURS ON TYPE	1100.0
HOURS ON DUTY PRIOR TO OCCURRENCE	6
HOURS OFF DUTY PRIOR TO OCCURRENCE	23

Instructor Rating renewed 02 May 2007.

Jamaican Instrument Rating expired 01 July 2002.

AIRCRAFT INFORMATION

REGISTRATION	N1161Q
YEAR OF MANUFACTURE	1975
MANUFACTURER'S SERIAL NUMBER	U20602851
CERTIFICATE OF AIRWORTHINESS DATE	12 June 1975
TOTAL AIRFRAME TIME	Approx 1810 Hrs
MAXIMUM ALLOWABLE TAKE OFF WEIGHT	3600 Lbs

The aircraft was equipped with shoulder harnesses for the front seats.

METEOROLOGICAL INFORMATION

The pilot reported clear VFR conditions at the area where the accident occurred.

REGULATORY, ORGANIZATIONAL AND MANAGEMENT INFORMATION

The aircraft was registered in the USA in the Private Category to an owner with an address in Broward County, Florida. The registered owner was a Jamaican and US citizen residing in Jamaica, and was involved in the Jamaican aviation industry.

The owner was a qualified Aircraft Maintenance Engineer with an FAA license, therefore was legally qualified to maintain the aircraft.

The aircraft was maintained in accordance with the FAA regulations.

The aircraft was insured for commercial purposes, and the coverage included Jamaica.

An undocumented, verbal agreement had been made between a construction company in Jamaica and the owner of the aircraft, whereby the company provided the funds for the purchase and operation of the aircraft, and the aircraft was operated and managed by the aircraft's owner for the purposes of the company's business, transporting company personnel, directors, their families and other people on company business around Jamaica. The aircraft was not operated for hire or reward.

The construction company hired the pilot on the recommendation of the owner. The pilot had both Jamaican and US Commercial Pilot licenses with valid medical certificates. The pilot was qualified to fly the aircraft, and he had about 1,100 hours on the C206 type with a Jamaican operator.

The aircraft was purchased on 31 January 2008 in Florida, and flown to Jamaica by the owner on 04 February 2008. There is no evidence that the Jamaica Civil Aviation Authority (JCAA) was informed of the owner's intention to operate the aircraft in Jamaica, and the JCAA has no documentation or correspondence relating to this aircraft. The aircraft did not leave Jamaica between the date of arrival and the date of the accident.

The Jamaica Civil Aviation Regulations 2004, as amended, Tenth Schedule, Sub-paragraph 10.017 (b) "Operation of Foreign Registered Aircraft In Jamaica", states, in part, "No person may operate a foreign registered aircraft in Jamaica for other than commercial air transport operations for more than 30 days in any calendar year unless approved by the Authority."

The JCAA did not grant any such approval to the owner. The owner indicated that he was not aware of this requirement.

ADDITIONAL INFORMATION

On leaving Ken Jones Aerodrome, the aircraft had sufficient fuel to fly for 3.5 hours.

The weight and centre of gravity of the aircraft were within the prescribed limits at take-off and at the time of the accident.

The pilot did not file a flight plan, nor was one required by regulation, as the destination was less than 25 miles from the departure point.

The pilot did not inform anyone on the ground that he intended to fly a direct route to Tinson Pen Aerodrome. He made this decision because the weather was clear. The more usual route is to go west along the coast to the area of Buff Bay, then inland up the valley, because the mountains are usually cloud-covered.

The pilot reported that the aircraft was in good condition, and there was no malfunction of the engine, or any other part of the aircraft. The pilot did not suffer from any form of incapacitation.

The pilot reported that when he realized the aircraft would not clear the ridge, he applied full power, pulled the nose up, then banked the aircraft to the left. He recalled the stall warning sounding before the aircraft hit the trees.

After the impact with the ground, the pilot opened his door and fell out to the left. The passenger exited from the same door, as there was no door on the right side. Before they left the aircraft they saw smoke in the cockpit, and the aircraft started to burn after they got out.

At the time of impact, the pilot and passenger were wearing the seat belts, but not the installed shoulder harnesses.

The pilot and passenger managed to escape and get clear of the aircraft, which was destroyed by a post-impact fire.

The crash site was located on the face of a cliff, and had extremely loose soil.

Immediately after the accident, the pilot was able to make a cel phone call to his employer to report the accident, and told his employer he was not sure of the aircraft's location. He made some other calls, and received a call from the JDF search helicopter, and then the cel phone battery was discharged.

On the following day they slid down the steep terrain to a position about 1,000 feet below the crash site. Here they were in an open area, and felt they had a better chance of being seen by the helicopter crew.

The pilot had a broken jaw, and sustained multiple bruises to the face and limbs, a broken leg and was going into a state of shock at the time of recovery, when he was given intravenous re-hydration. The passenger was suffering from hypertension and had a high blood pressure reading, multiple facial bruises especially to the left eye, and a severely battered right knee cap.

SURVIVAL

Jamaican Civil Aviation Regulations 2004, as amended, Seventh Schedule, Sub-Paragraph 7.280(a), (Survival Kit), stated "No person shall operate an aircraft over designated land areas where search and rescue would be especially difficult without carrying life-saving equipment including means of sustaining life."

No Survival Equipment was on board the aircraft.

The Aeronautical Information Publication, Jamaica, Gen 3.6 "Search and Rescue", made no mention of "designated land areas where search and rescue would be especially difficult", nor were such designated areas known to the Jamaica Defense Force (JDF) Air Wing.

SEARCH AND RESCUE

Jamaican Civil Aviation Regulations 2004, as amended, Seventh Schedule, Sub-Paragraph 7.290(b), (Emergency Locator Transmitter (ELT)), stated "No person shall operate an aircraft over designated land areas where search and rescue would be especially difficult unless it is equipped with at least one automatically activated ELT".

The aircraft was equipped with a standard ARC/Cessna portable Emergency Locator Transmitter, which was fixed to the fuselage just aft of the baggage compartment. The aircraft's maintenance records indicated that the ELT was checked on 04 February 2008, and that the battery was due for replacement in November 2009.

There was no report of any ELT signal being picked up from the crash site.

Jamaican Civil Aviation Regulations 2004, as amended, Seventh Schedule, Sub-Paragraph 7.285(a), (Devices for Emergency Signaling), stated “No person shall operate an aircraft over designated land area where search and rescue would be especially difficult without carrying devices to make the necessary ground to air emergency signals to facilitate rescue.”

No device for emergency signaling was on board.

The Search and Rescue operation by the JDF was commenced by helicopter on the evening of the accident. The search was hampered by the fact that the route taken by the pilot was not known. Initial searches were conducted west of Ken Jones Aerodrome, in the vicinity of Buff Bay, and along the most common route taken by aircraft flying VFR from Ken Jones Aerodrome to Tinson Pen Aerodrome, until about 2:00 PM on Saturday 09 August 2008. The search was then redirected to the direct route, and the crash site was found that evening.

The search continued the subsequent day, 10 August 2008. JDF personnel were dropped at the crash site, and they found the pilot and passenger about 1,500 meters from the crash site, down the slope. They were then winched out by the helicopter and flown to hospital in Kingston.

The Search and Rescue operation by the JDF did not locate the wreckage and the survivors until about 40 hours after the accident, when the pilot and passenger, both seriously injured, had endured two nights without food, water, shelter or medical attention. The reason for this was that the heavy tropical foliage closed over the aircraft after it struck the trees, and nothing but a small piece of white sheet metal was visible to the helicopter crew. Also, the exact location was not known, and the terrain was extremely rugged and precipitous.

ANALYSIS

In the absence of any mechanical failure, pilot incapacitation or weather-related phenomenon, the investigation was unable to determine any reason for the cause of the accident, other than that the pilot flew the aircraft too close to the mountain ridge.

Although there were regulations in place regarding Survival Equipment, Devices for Emergency Signaling and Emergency Locator Transmitter, these referred to “designated land areas where search and rescue would be especially difficult” which were not defined, not mentioned in the Jamaica Aeronautical Information Publication, and not known by the Jamaica Defence Force Air Wing, the body responsible for Search and Rescue in Jamaica. Also, other information regarding the requirements was not specified and thus these regulations were not enforceable by the JCAA.

The pilot and passenger were not wearing the installed shoulder harnesses at the time of impact. Had they been wearing the shoulder harnesses their injuries, especially to the head, might have been less.

The Search and Rescue operation, although ultimately successful, might well have never located the wreckage or the survivors, and the survivors would have perished if the search had lasted much longer. The cost of the search in fuel, helicopter time and manpower was greatly increased by the length of the search.

In the case of this accident, where the aircraft was immediately consumed by fire, even if there had been survival equipment and a signaling device on board, the crew would not have been able to extract them from the aircraft before it burned. However, had these been available to the crew the search would probably have taken far less time, and the survivability of the accident would have been greatly enhanced.

FINDINGS

FINDINGS AS TO CAUSES AND CONTRIBUTING FACTORS

1. The pilot flew too close to the mountain ridge.
2. The pilot did not inform anyone on the ground as to his intended route.

FINDINGS AS TO RISK

1. The Jamaican Civil Aviation Regulations regarding Survival Equipment, Devices for Emergency Signaling and Emergency Locator Transmitters were not well defined, and were not enforceable.
2. No Survival Equipment or Devices for Emergency Signaling were on board the aircraft.
3. The pilot and passenger were not wearing the installed shoulder harnesses.

OTHER FINDING

The operation of this U.S. registered aircraft in Jamaica for more than 30 days was not approved by the JCAA, as is required by regulation, nor was the owner aware of this requirement.

SAFETY RECOMMENDATIONS

1. The Jamaican Civil Aviation Regulations regarding Survival Equipment, Devices for Emergency Signaling and Emergency Locator Transmitters should be well defined, and should be enforced by the JCAA.
2. The Jamaican Civil Aviation Regulations regarding the operation of foreign registered aircraft in Jamaica for more than 30 days should be more stringent, and the JCAA should conduct more surveillance and oversight of these aircraft.