



AIRCRAFT ACCIDENT REPORT

FINAL REPORT Controlled Flight into Terrain (Water)

**Beechcraft Baron BE-58
N3162W
S/N 419
Normans Cay, Exuma Bahamas
September 8, 2005**

Report A0617791



**Flight Standards Inspectorate
Bahamas Department of Civil Aviation**

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NONE



October 30, 2007

Mr. Cyril Saunders
Director
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Sir

The attached report summarizes the investigation into the circumstances of the accident involving Beech 58 Baron aircraft N3162W, owned, operated and registered to a private individual (Mr. Stephan C. Fenner). This accident occurred on 8 September, 2005. The accident occurred in waters approximately 300 yards off of runway 05 on Normans Cay, Exuma, Bahamas at coordinates N24° 35.12' W 076° 49.58'

This report is submitted pursuant to Part XII, Regulation 80, and Schedule 19 of the Bahamas Civil Aviation (Safety) Regulation (CASR 2001) and in accordance with Annex 13 to the Convention on International Civil Aviation Organization (ICAO).

In accordance with Annex 13 to the Convention on International Civil Aviation (ICAO), and Schedule 19 of the Bahamas Civil Aviation (Safety) Regulations (CASR April 17, 2001), the fundamental purpose of such investigations is to determine the circumstances and causes of these events, with a view to the preservation of life and the avoidance of similar occurrences in the future. It is not the purpose of such investigations to apportion blame or liability.

This information is published to inform the aviation industry and the public of the circumstances surrounding this accident. The contents of this Report may be subjected to alterations or corrections if additional information becomes available.

The information being released is factual in nature and does not provide any analysis or recommendations.

Philip C. Romer
Investigator in Charge
Flight Standards Inspectorate
Department of Civil Aviation (Bahamas)

APPROVED FOR RELEASE AS A PUBLIC DOCUMENT



Participants in the Investigation

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IIC
Airworthiness

John Lovell

National Transportation Safety Board **Accredited Representative**

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Hartzell Propeller
Teledyne Lycoming
Teledyne Lycoming

Propeller Manufacturer
Engine Manufacturer
Engine Manufacturer





ABBREVIATIONS, TERMINOLOGY

AIS	Automatic Information Services
AMM	Aircraft Maintenance Manual
AMT	Aviation Maintenance Technician
ATS	Air Traffic Services
CASR	Bahamas Civil Aviation (Safety) Regulations (April 17, 2001)
C of A	Certificate of Airworthiness
C of R	Certificate of Registration
CG	Center of Gravity
CVR	Cockpit Voice Recorder
DCA	Director of Civil Aviation
DFDR	Digital Flight Data Recorder
DOO	Director of Operations
DRTL	Disaster Response Team Leader
DS	Director of Safety
CAD	Civil Aviation Department
EDT	Eastern Daylight Time (-5 hours (-4DT) to convert from UTC)
ERM	Emergency Response Manual
FAA	Federal Aviation Administration
FSI	Flight Standards Inspectorate
ICAO	International Civil Aviation Organization
ILS	Instrument Landing System
IFR	Instrument Flight Rules
IMC	Instrument Meteorological Condition
LH	Left Hand
MLG	Main Landing Gear
MALSF	Medium-intensity Approach Lighting System (with sequenced flashers)
MD	Manager of Dispatch
MCM	Maintenance Control Manual
MM	Maintenance Manual
MET	Meteorological Office / Department
MIRL	Medium Intensity Runway Lights
MM	Maintenance Manual
MYEM	ICAO Airport Designation – Governors Harbour
NM or nm	Nautical Miles
NTSB	National Transportation Safety Board
RCA	Root Cause Analysis
RH	Right Hand
RII	Required Inspection Item
SEP	Survival and Emergency Procedures Training
T/L	Technical Log
TSBC	Transportation Safety Board of Canada
USA	United States of America
VFR	Visual Flight Rules
VOR	(Very High Frequency) Omni-directional Range Station
VMC	Visual Meteorological Conditions
UTC / Z	Universal Coordinated Time / Zulu



DEFINITIONS When the following terms are used in this report, they have the following meanings as per CASR 2001 and ICAO Annex 13;

“Aircraft Accident”– means an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage or the aircraft is missing or completely inaccessible.

"Fatal injury" - means any injury which results in death within 30 days of the accident.

“Flight recorder” - Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation.

"Incident" - means an occurrence other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations.

“Investigation”- A process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and, when appropriate, the making of safety recommendations.

“Serious injury” - means any injury which:

- Requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received;
- Results in a fracture of any bone (except simple fractures of fingers, toes, or nose);
- Causes severe hemorrhages, nerve, muscle, or tendon damage;
- Involves any internal organ; or
- Involves second or third degree burns, or any burns affecting more than 5 percent of the body surface.
- Involves verified exposure to infectious substances or injurious radiation.

“Serious incident” - An incident involving circumstances indicating that an accident nearly occurred.

“State of Design” - The State having jurisdiction over the organization responsible for the type design

“State of Manufacture” - The State having jurisdiction over the organization responsible for the final assembly of the aircraft.

"Substantial damage" - means damage or failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component. Engine failure or damage limited to an engine if only one engine fails or is damaged, bent failings or cowling, dented skin, small punctured holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wingtips are not considered "substantial damage" for the purpose of this Report.



FLIGHT STANDARDS INSPECTORATE
CIVIL AVIATION DEPARTMENT
(Bahamas)

AIRCRAFT ACCIDENT REPORT
Controlled Flight into Terrain (Water)

REPORT No. 0617791

Beechcraft Baron BE-58
N3162W
S/N 419

September 8, 2005

A. BASIC INFORMATION

Operator: Private Individual

Manufacturer: Raytheon Aircraft Company

Place of Accident: 0.6119 nautical miles southwest of Airport at Normans Cay, Exuma Bahamas at coordinates N24° 35'.120" W76°49'.580.

Investigating Authority: Manager - Flight Standards Inspectorate

Investigator in Charge: Philip Romer– Aviation Safety Inspector

Notification: State of Manufacturer / Design
Federal Aviation Administration (FAA)
National Transportation Safety Board (NTSB)

Party to Investigation: Jim Jelinski - FAA
John Lovell – NTSB
Eric Thomas – Continental Engines
Paul Yoos - Beechcraft

Releasing Authority: Director - Bahamas Civil Aviation Department

Date of Report: October 30, 2007



B. SYNOPSIS:

The Flight Standards Inspectorate was notified by the Nassau Control Tower of this accident. On September 8, 2006 about 1350 eastern daylight time (1850Z) a Raytheon (Beechcraft) BE-58 Model aircraft, registration number N3162W registered to and operated by a private individual as a Title 14 CFR part 91 personal flight, impacted the Atlantic Ocean in the vicinity of Norman's Cay, Exuma Bahamas. The aircraft crashed in approximately twenty (20) feet of water, 300 yards off the shoreline of Norman's Cay (0.6119 nautical miles southeast of the Norman's Cay Airport).

The State of Manufacture of the airframe and engines (United States) was advised of the accident on that day and invited to participate in the investigation. The NTSB as well as the FAA were also notified and made party to the investigation. The aircraft was a United States registered aircraft operating as a Title 14 CFR part 91.

Visual Meteorological Conditions prevailed at the time of the accident. An outbound visual flight plan was on file. N3162W operated as a private flight. The flight originated from Nassau International Airport to Norman's Cay, Exuma. The airplane sustained substantial damage. The pilot was the lone occupant of the aircraft. The Pilot in Command held an Airline Transport Pilot rating multiengine land, Commercial pilot, single engine land.

FACTUAL INFORMATION:

1.1 History of the Flight

On September 8, 2006 about 1350 EDT (1850Z), a Raytheon (Beechcraft) BE-58 aircraft, registration N3162W crashed in waters approximately 0.6119nm from Norman's Cay Airport. The aircraft crashed in approximately 20 feet of water 0.6119 yards off the southern shoreline of Norman's Cay. The aircraft was destroyed from impact forces. The accident flight originated from Nassau International Airport to Norman's Cay, Exuma on a visual flight plan. Visual Meteorological Conditions existed at the time of the accident and was not a factor in the accident.

The aircraft was operated by a private individual under the provision of 14 Code of Federal Regulation (CFR) Part 129.14.

The accident occurred at 0.6119 nautical miles southwest of Airport at Normans Cay, Exuma Bahamas at coordinates N24° 35' .120" W76°49' .580

1.2 Injuries to persons Pilot injuries were fatal.

1.3 Damage to aircraft The aircraft was destroyed by the impact forces.

1.4 Other Damage - No other damage noted.

1.5 PERSONNEL INFORMATION

The pilot age 42 held a Federal Aviation Administration (FAA) Airline Transport Pilot Certificate. The pilot's most recent second class medical was issued March 31, 2005 with no limitations. The pilot flight and duty times, as well as his last proficiency checks are unknown. FAA records indicated no accident or incident history or enforcement action.



1.6 AIRCRAFT INFORMATION – GENERAL

The Beechcraft BE-58 is a low wing, twin engine, propeller-driven, pressurized airplane. The accident airplane, serial number 419 was manufactured in 1973. It was registered as N3162W. It was registered to Stephen C. Fenner.

1.7 Meteorological information

Aviation Digital Data Service (ADDS)

METAR Report

Report was for The Central and Southeast Bahamas on 8 September, 2005 indicated that the wind at the time of the report for 1800Z was 190 degrees at 16 knots. A scattered cloud layer was reported at 2,000 feet. The temperature was reported at 34 degrees.

Bahamas Area Forecast

Valid from 1800Z

Special Features. None

Significant Weather - over Bahamas Scattered to broken clouds from 6,000 to 8,000 feet. Few towering cumulus and cumulonimbus with tops to 18,000 feet. Isolated showers and thundershowers mainly in the northwest and central Bahamas. Local vicinity heavy shower and thundershowers with moderate turbulence in or near towering Cumulus and cumulonimbus.

1.8 Aids to Navigation

No problems with any navigational aids were reported.

1.9 Communications

No external communications difficulties were reported. Communications were established with the Nassau Air Traffic Radar Control and subsequently the Nassau Control Tower.

1.10 Airport Information

The accident occurred 0.6 nm Southwest of Runway 03 at Normans Cay Airport. Normans Cay (MYEN) airport is situated at coordinates N24 36.01' W 76 48.58'. It is 45 nm on a heading of 127 degree, (southeast) of Lynden Pindling Int'l Airport, Nassau, Bahamas. The runway is orientated 030 and 210 degrees magnetic. It has an asphalt surface 3,000 feet long x 70 feet wide.

1.11 Cockpit Voice Recorder

The aircraft was not equipped with a Cockpit Voice Recorder as regulations did not require its installation.

1.12 Wreckage and Impact Information

The accident aircraft and wreckage area were examined on September 10, 2005. All major components of the aircraft were accounted for at the scene.



The initial impact was located approximately 300 yards or .6nm southwest of the threshold of runway 03 at Normans Cay Airport. The aircraft came to rest on a heading of approximately 327 degrees.

The underside of both wing, both propellers, and the underside of the fuselage bore the main impact of the impact. The right wing was still attached to the fuselage. The right engine was separated from the right wing. The left wing was still attached to the fuselage. The left engine was still attached to the left wing. The cockpit and empennage were separated by the impact behind seats 3 and 4. The aircraft main wreckage was found separated from the fuselage and was found approximately 100 yards from the tail section. Ailerons were attached with no visible impact or damage, flap handle showed 60 degree. The horizontal stabilizer, vertical stabilizer, rudder and elevator remained intact with the empennage after separation from the fuselage.

The instrument panels were intact.

1.13 Medical and Pathological Information

A post mortem examination was conducted on September 9, 2005 at 9:30am by Pathologist Dr. Govinda Raju. Provisional anatomical diagnosis revealed “polytrauma with fracture of upper extremity bones, contusion of lungs, airway obstruction.”

External and internal examination results were unremarkable. Blood, urine and stomach contents were preserved for chemical analysis.

On September 15, 2005, post mortem specimens regarding Mr. Fenner were submitted to the Forensic Science Laboratory at the Royal Bahamas Police Force for toxicological analysis. The results were as follows;

1. Blood –
 - a. not less than 28 milligrams of alcohol (ethanol) per milliliters of blood were detected.
 - b. Hydrocodone (hydroquinone) detected.
2. Urine – urine sample contained not less than 68mg of alcohol per 100ml of blood.

Note: Based on the findings of the toxicological report, it is difficult to determine if the presence and amount of alcohol or Hydrocodone (separately or in conjunction), in Mr. Fenner’s system at the time of the accident, contributed to the accident.

1.14 Fire

Post crash inspection and analysis ruled out any possibility of an in-flight fire as reported by witness on the ground.

However, a fuel-fed fire erupted on impact.

1.15 Survival Aspects

Accident was not survivable.



1.16 Tests and research

Post accident inspections were done by the following companies on the following components;

NTSB – Fuel Strainers drain valves and fuel tank.

TCM - Engines

RAC – Fuel Tank, Fuel Filter

Hartzell – Propeller

The summary of the work done during the inspections of the above components are outlined in Section 3 – Conclusions.

1.17 Not Applicable

2.0 ANALYSIS:

None

3.0 CONCLUSIONS

The probable cause of this controlled flight into terrain is undetermined.

The following information summarizes the inspections that were conducted on the various components inspected after the accident;

National Transportation Safety Board – components examined were right fuel strainer, right drain valve, debris from the right fuel tank, left drain valve.

Teledyne Continental Motors did an inspection of both engines.

Right and left engines revealed the following;

1. The inspection did not reveal any abnormalities that would have prevented normal operation and production of rated power.
2. The fuel pump rotated freely and there were no abnormalities present. The fuel pump drive was intact and undamaged.
3. Spark plugs (lower) were inspected utilizing a boroscope. Plugs exhibited normal operational signatures and salt water corrosion signature.
4. Fuel Manifold valve remained attached. The valve exhibited normal operating signatures and the filter was unobstructed.
5. Fuel nozzles and lines remained attached and visually appeared undamaged.
6. Fuel screen exhibited normal operational signatures and was unobstructed.
7. The inlet filter and valve screen did not contain obstructions or contaminants.



Hartzell Propeller

1. Both propellers were operating in a similar manner at the time of impact. The propellers were both rotating and not feathered. Blade damage suggested impact at low or moderate power.
2. There were no discrepancies noted that would preclude normal operation. All damage was consistent with impact damage.

Based on the findings of the toxicological report, it is difficult to determine if the presence and amount of alcohol or Hydrocodone (separately or in conjunction), in Mr. Fenner's system at the time of the accident, contributed to the accident.

4.0 SAFETY RECOMMENDATIONS:

None

