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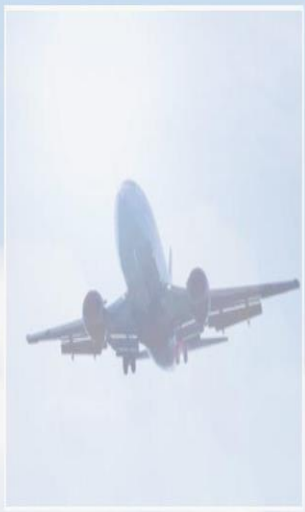
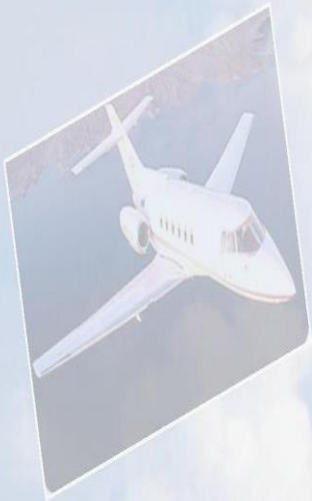
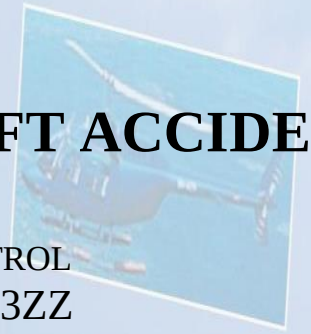




Air Accident Investigation Department of the Bahamas



# AIRCRAFT ACCIDENT REPORT

LOSS OF CONTROL
PA 23-250 N63ZZ
SOUTH BIMINI
BAHAMAS
June 19, 2016

## The Bahamas Air Accident Investigation Department (BAAID)

The Bahamas Air Accident Investigation Department (BAAID) is the independent accident investigation unit under the Bahamas Ministry of Transport & Aviation (MOTA).

The BAAID's function is to promote and improve safety and public confidence in the aviation industry through excellence in:

- Independent investigation of aviation accidents and other safety occurrences
- Safety data recording, analysis and research
- Fostering safety awareness, knowledge and action.

**The BAAID does not investigate for the purpose of apportioning blame or to provide a means for determining liability.**

The BAAID performs its functions in accordance with the provisions of the Bahamas Civil Aviation Act 2016, Civil Aviation (Investigations of Air Accidents and Incidents) Regulations 2017, Bahamas Civil Aviation (Safety) Regulations (BASR) 2015, Schedule 1 and 19, International Civil Aviation Organization (ICAO) Annex 13 and, where applicable, relevant international agreements.

The Bahamas Air Accident Investigation Department is mandated by the Ministry of Transportation and Aviation to investigate air transportation accidents and incidents, determine probable causes of accidents and incidents, issue safety recommendations, study transportation safety issues and evaluate the safety effectiveness of agencies and stakeholders involved in air transportation.

The BAAID makes public its findings and recommendations through accident reports, safety studies, special investigation reports, safety recommendations and safety alerts. When the BAAID issues a safety recommendation, the person, organization or agency is required to provide a written response within 90 days. The response shall indicate whether the person, organization or agency accepts the recommendation, any reasons for not accepting part or all of the recommendation(s), and details of any proposed safety action(s) resulting from the recommendation(s) issued.

Official Copies of accident reports can be obtained by contacting:

Air Accident Investigation Department
2nd Floor, Manx Corporate Center
West Bay Street
P. O. Box N-3727
Nassau N. P., Bahamas
1 (242) 397-5513 or (242) 397-5509

**Additional** copies of the reports can be viewed on the **BAAID**'s website at: http://www.baaid.gov.bs or requested by email: aaid.mota@gmail.com or baaid@bahamas.gov.bs.

**AIR ACCIDENT**
**INVESTIGATION DEPARTMENT**
**MINISTRY OF TRANSPORT & AVIATION**
**MANX CORPORATE CENTER**
**P. O. BOX N-3727**
**WEST BAY STREET**
**NASSAU N. P., BAHAMAS**

# AIRCRAFT ACCIDENT REPORT

**PIPER AZTEC PA 23-250**
**N63ZZ**

**LOSS OF CONTROL**

**SOUTH BIMINI**
**BAHAMAS**

**June 19, 2016**

Abstract: This report provides an explanation of the circumstances surrounding the crash of N63ZZ, a Piper Aztec (PA 23-250) aircraft owned by Griffin William Nathaniel Jr., while attempting a go around maneuver from a proposed landing at the South Bimini International Airport at South Bimini, Bahamas. Based upon eye witness account and the evidence collected, the pilot was intending to land after experiencing an engine failure, but due to another aircraft on the runway during his approach, he decided to execute a go around maneuver, during which time he lost control of the aircraft and crashed a short distance from the runway. A post-crash fire ensued which engulfed the aircraft. The aircraft was destroyed it. Two occupants succumbed to their injuries, both with severe burns about the body. The accident occurred on June 19, 2016 at approximately 4:30 pm local time (2030UTC).

Air Accident Investigation Department of the Bahamas

**BAHAMAS AIR**
**ACCIDENT INVESTIGATION DEPARTMENT**
**MINISTRY OF TRANSPORT & AVIATION**

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## EXECUTIVE SUMMARY

On June 19, 2016 about 4:30pm Eastern Daylight Time (EDT), N63ZZ, a PA-23 aircraft registered to William Nathaniel Griffin Jr. and operated by Mr. Terrence Gibson, crashed into dense bushes approximately ½ mile southeast of the airport at South Bimini International Airport shortly after take-off from runway 10. Reports indicate that the aircraft was returning for a landing after a right engine failure. While attempting to land, another aircraft was on the runway about to depart, as the aircraft (N63ZZ) did not have any communication with the aircraft on the runway and realizing this, the pilot decided to execute a go around maneuver. During the go around maneuver, the aircraft pitched up, loss control, rolled left and plummeted to the ground in a heavily wooded area to the southeast of the airfield. The aircraft was destroyed by impact forces and post impact fire. Both occupants of the aircraft received fatal injuries. The aircraft was travelling from South Bimini to Marsh Harbor Abaco. The aircraft was on a visual flight rules flight plan. Visual meteorological conditions prevailed at the time of the accident.

**The Air Accident Investigation Department determine that the probable cause of the accident was loss of control, attributed to a stalled condition while attempting to execute a go around maneuver.**

Contributing to the cause of this accident was;

- Loss of Situational Awareness.
- Failure to maintain directional control during the go around maneuver.
- Toxicology reports also cannot rule out a sudden cardiac event as a possible contributing factor.

## ABBREVIATIONS AND TERMINOLOGY

*When the following terms are used in this report, they have the following meanings:*

| | | | |
|---|---|---|---|
| ATS | Air Traffic Services | IIC | Investigator-in-Charge |
| ATC | Air Traffic Control | LZ | Landing Zone |
| BAAID | Bahamas Air Accident Investigation Department | MET | Meteorological Office / Department |
| BCAA | Bahamas Civil Aviation Authority | MRB | Main Rotor Blades |
| | | MYNN | Lynden Pindling Int'l Airport |
| BASR | Bahamas Civil Aviation (Safety) Regulations | MYAM | Marsh Harbour Int'l Airport |
| | | METAR | Weather Report furnished by Meteorological Department |
| CB(s) | Cumulonimbus (rain) Clouds | | |
| CFIT | Controlled Flight into Terrain | NM or nm | Nautical Miles |
| C of A | Certificate of Airworthiness | NTSB | National Transportation Safety Board |
| C of R | Certificate of Registration | | |
| CVR | Cockpit Voice Recorder | NVM | Non Volatile Memory |
| DCA | Director of Civil Aviation | PIC | Pilot in Command |
| EST | Eastern Standard Time (-4 hours to convert from UTC) | SMOH | Since Major Overhaul |
| | | TCU | Towering Cumulus Clouds |
| FAA | Federal Aviation Administration | USA | United States of America |
| | | VFR | Visual Flight Rules |
| ICAO | International Civil Aviation Organization | UTC / Z | Universal Coordinated Time / Zulu Time |

## DEFINITIONS

*When the following terms are used in this report, they have the following meanings as per BASR 2015 Schedule 1 and ICAO Annex 13;*

**Accident** - An occurrence associated with the operation of an aircraft which takes place between the times any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which:

a) a person is fatally or seriously injured as a result of:
— being in the aircraft, or
— direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
— direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or

b) the aircraft sustains damage or structural failure which:
— adversely affects the structural strength, performance or flight characteristics of the aircraft, and
— would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories; or for damage limited to propellers, wing tips, antennas, tires, brakes, fairings, small dents or puncture holes in the aircraft skin; or
c) the aircraft is missing or is completely inaccessible.

Note 1.— For statistical uniformity only, an injury resulting in death within thirty days of the date of the accident is classified as a fatal injury by ICAO.
Note 2.— An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.

**Accredited representative** - A person designated by a State, on the basis of his or her qualifications, for the purpose of participating in an investigation conducted by another State.

**Adviser** - A person appointed by a State, on the basis of his or her qualifications, for the purpose of assisting its accredited representative in an investigation.

**Aircraft** - Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

**Causes -** Actions, omissions, events, conditions, or a combination thereof, which led to the accident or incident.

**CFIT -** Controlled Flight into Terrain occurs when an airworthy aircraft under the complete control of the pilot is inadvertently flown into terrain, water, or an obstacle. The pilots are generally unaware of the danger until it is too late.

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

**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.

**Investigator-in-charge -** A person charged, on the basis of his or her qualifications, with the responsibility for the organization, conduct and control of an investigation.
Note.— Nothing in the above definition is intended to preclude the functions of an investigator-in-charge being assigned to a commission or other body.

**Maximum mass -** Maximum certificated take-off mass.

**Operator -** A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

**Preliminary Report** The communication used for the prompt dissemination of data obtained during the early stages of the investigation.

**Safety Recommendation.** A proposal of the accident investigation authority of the State conducting the investigation, based on information derived from the investigation, made with the intention of preventing accidents or incidents.

**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.

**State of Occurrence -** The State in the territory of which an accident or incident occurs.

**State of the Operator -** The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

**State of Registry -** The State on whose register the aircraft is entered.

Note: - In the case of the registration of aircraft of an International operating agency on other than a national basis, the States constituting the agency are jointly and severally bound to assume the obligations which, under the Chicago Convention, attach to a State of Registry. See, in this regard, the Council Resolution of 14 December 1967 on Nationality and Registration of Aircraft Operated by International Operating Agencies which can be found in Policy and Guidance Material on the Economic Regulation of International.

Air Accident Investigation Department of the Bahamas

## FOREWARD

February 22, 2017

Mrs. Glenys Hanna-Martin
Minister
Transport & Aviation
Manx Corporate Center
West Bay Street
P.O. Box N-3727
Nassau, N.P., Bahamas

Madam:

The attached final report summarizes the investigation into the circumstances of the accident involving a Piper Aztec (Pa 23-250) aircraft, registration N63ZZ, registered in the United States of America to Mr. William Nathaniel Griffin Jr. and operated by Mr. Terrence Gibson. This accident occurred on June 19, 2016 at approximately 4:30pm local (2030Z). The aircraft crashed while returning for a landing and executing a go-around maneuver as the pilot aborted his landing approach due to another aircraft being on the runway.

This report is submitted pursuant to Civil Aviation (Investigations of Air Accident and Incident) Regulations, 2017 and Annex 13 to the Convention on International Civil Aviation (ICAO). In accordance with referenced regulations and annex, the fundamental purpose of such investigation 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 report contains facts which have been established up to the time of publication. 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 factual information becomes available.

Regards

Delvin R. Major
Chief Investigator of Air Accidents
Air Accident Investigation Department

**AIR ACCIDENT**
**INVESTIGATION DEPARTMENT**
**MINISTRY OF TRANSPORT & AVIATION**

## TITLE

| | |
|---|---|
| **Registered Owner:** | Mr. William Nathaniel Griffin Jr. |
| **Operator:** | Mr. Terrence Gibson |
| **Manufacturer:** | Piper |
| **Aircraft Type:** | PA-23-250 |
| **Nationality:** | United States of America |
| **Registration:** | N63ZZ |
| **Place of Accident:** | ½ mile southeast of South Bimini Int'l Airport |
| **Date of Accident:** | June 19, 2016 |
| **Notification:** | State of Manufacture, Registry, Design and Operator |
| **Investigating Authority**: | Air Accident Investigation Department |
| **Investigator in Charge:** | Delvin R. Major |
| **Accredited Representative:** | None assigned |
| **Advisors to Acc. Rep.** | None assigned |
| **Releasing Authority:** | Air Accident Investigation Department |
| **Date of Draft Final Report:** | February 22, 2017 |

# 1.0 FACTUAL INFORMATION:

## 1.1 HISTORY OF THE FLIGHT

On June 19, 2016 about 4:30pm Eastern Daylight Time (EDT), N63ZZ, a PA-23 aircraft registered to William Nathaniel Griffin Jr. and operated by Mr. Terrence Gibson, crashed into dense bushes approximately ½ mile southeast of South Bimini International Airport. Shortly after take-off from runway 10, the aircraft returned to the airport. While positioning to land on the opposite runway (runway 28), another aircraft was on the active runway (runway 10) preparing to depart, which resulted in the accident aircraft executing a go around maneuver. There was no communication between the accident and departing aircraft on the runway.

During the go around maneuver, the aircraft pitched up, rolled left, lost control, spun and plummeted to the ground in a heavily wooded area to the southeast of the airfield. The aircraft was destroyed by impact forces and post impact fire. Both occupants of the aircraft received fatal injuries. The aircraft was travelling from South Bimini to Marsh Harbor, Abaco. The aircraft was on a visual flight rules flight plan. Visual meteorological conditions prevailed at the time of the accident.

According to eyewitnesses N63ZZ was undergoing an annual inspection, which commenced in mid-May and this accident flight was the second test flight that occurred after the inspection. The first test flight was unsatisfactory as many items were documented that needed correction. Those items were corrected and a second test flight (the accident flight) was scheduled.

The aircraft departed South Bimini around 4:20 pm enroute to Abaco. A mechanic helper that assisted with the work on the ill-fated aircraft, (who was also eyewitness to the crash), stated that the aircraft engine was having problems starting prior to take off and the mechanic, (who was also a victim), "charged up the battery and did some other maintenance work, after which both engines started." Shortly thereafter the aircraft departed on its "test flight."

The aircraft departed runway 10 at South Bimini Airport. According to airport officials, the pilot did not communicate his intentions to depart or announce his position in the traffic pattern when returning, over the published radio frequency for the airport.

Shortly after departure (less than 5 min) eyewitnesses observed the aircraft returning to the airfield, (which they thought was unusual), and positioning to land on runway 28, (although the active runway was runway 10). Eyewitnesses also stated that they believe the pilot possibly saw the aircraft positioned on the runway and decided to go around. They also stated that the aircraft came in "hot and high" meaning he was coming in to land too fast and at such a high altitude that a safe landing could not be made.

The location and topography of the crash site prevented timely access for rescue. Trees and brush in the area of the accident were approximately 15 to 20 feet high, extremely dense and severely hampered access to the crash site. A road was constructed by heavy equipment to gain access to the crash site for rescue and recovery. No vehicle including the fire truck, could access the site until this road was constructed. Meanwhile the aircraft continued to burn unhampered.

Ground tracks and signature marks observed during post-accident investigation, confirmed eyewitness's account of the aircraft losing control, stalling, and diving left wing over into the ground, as there were no evidence showing a controlled flight path to the scene of the crash.

## 1.2 INJURIES TO PERSONS

| Injuries | Crew | Passengers | Others | Total |
|---|---|---|---|---|
| Fatal | **1** | **1** | | **2** |
| Serious Injuries | | | | |
| Minor / None | | | | |

## 1.3 DAMAGE TO AIRCRAFT

The fuselage, cockpit, all dashboard instrumentation, wings and nose area of the aircraft were completely destroyed by fire. Both engines were burnt to such an extent that any recoverable part for further analysis was not possible.

## 1.4 OTHER DAMAGE

Other than fire damage to the trees in the immediate vicinity of the crash, no other structure or damages occurred as a result of the crash.

## 1.5 PERSONNEL INFORMATION

The pilot in command of the aircraft was a 47 year old male. At the time of the accident he was not in possession of a valid pilot certificate. His previous pilot license issued by the Federal Aviation Administration in the United States of America was revoked on September 10, 2002.

His certificate before it was revoked contained airplane single and multi-engine land, with instrument rating on a commercial pilot license.

His second class medical certificate required to validate his US pilot license had expired since May 17, 2001.

The pilot's flight experience and total times on type of aircraft was unknown.

## 1.6 AIRCRAFT INFORMATION

N63ZZ was undergoing an annual inspection at the time of the crash. The annual inspection commenced in mid-May and this accident flight was the second test flight that occurred during the inspection. The first test flight was unsatisfactory as many items were discovered that needed correction.

Those items were subsequently corrected and a second test flight was scheduled. Prior to the aircraft departing on its second test flight, maintenance issues were again noted and corrected. Engines were hard starting and after the battery was recharged and other work done, the engines started and the aircraft eventually departed.

## 1.7 METEOROLOGICAL INFORMATION

Bahamas Area Forecast issued by the Bahamas Meteorological Department for the period 12 hours from 1800 UTC Sunday 19th June indicated a frontal boundary across the northwestern Bahamas along with unstable air mass which could produce widespread clouds with scattered convection over the islands through the forecasted period.

However, at the time of the accident visual meteorological conditions existed with sunlight still available.

## 1.8 AIDS TO NAVIGATION

Aids to navigation were not a factor in the accident

## 1.9 COMMUNICATIONS

According to airport officials no communications were established between the accident aircraft, the departing aircraft and the airport. Eyewitness reported the aircraft radios were not working at the time of its departure.

## 1.10 AERODROME INFORMATION

South Bimini Int'l Airport has one runway with two access areas for landing and departing traffic. It is oriented on cardinal headings 097 and 277 degrees. Runways available is runway 10 and 28 respectively. The surface is Asphalt with dimensions 5,391 feet long by 100 feet wide.

As the airport is not tower controlled, all communication for departure and arrivals are coordinated on a Unicom frequency of 122.800 MHz

The airport is located on South Bimini Island and is an international port of entry catering to both international and domestic schedule, private and charter aircraft service.

## 1.11 FLIGHT RECORDERS

Regulations did not require this type of aircraft to be outfitted with a flight recorder.

## 1.12 WRECKAGE AND IMPACT INFO

The extent of the destruction to the aircraft due to post-crash fire prevented any further follow up analysis. The fuselage, cockpit, all dashboard instrumentation, wings and nose area of the aircraft were completely destroyed by fire. Both engines were burnt to such an extent that any recoverable part for further analysis was not possible.

Unburnt remnants of the landing gear and flaps were noted which verified the flaps and gears were in the retracted position, evidence also shows the right engine propeller was "feathered." It is believed the engine failed shortly after takeoff which caused the aircraft to return just minutes after takeoff.

### 1.13 MEDICAL AND PATHOLOGICAL

Post mortem analysis of fluid samples taken from the pilot concluded that the medication Tamsulosin was detected in the urine and blood of the pilot, which side effects can include among other things;

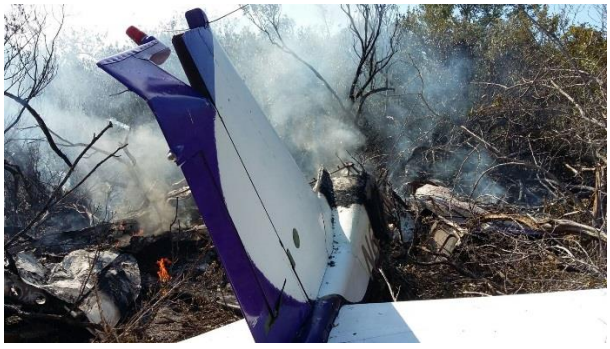
- a light-headed feeling, like you might pass out;
- dizziness, drowsiness, weakness;

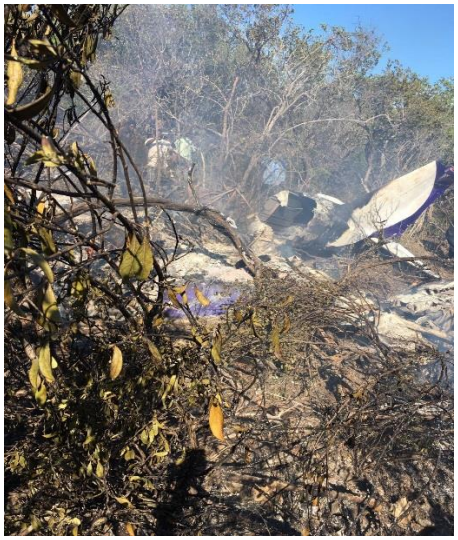
Post mortem also concluded that the cause of death as multiple injuries and blunt force trauma to the head, torso and extremities.

Post-mortem also uncovered the pilot's heart was enlarged, and his left ventricle was thickened. A sudden cardiac event such as an arrhythmia cannot be ruled out as a possible contributory factor to the accident.

### 1.14 FIRE

A fire ensued as a result of the aircraft crash. Due to the topography of the crash site, access to the site was difficult. A road had to be constructed to gain access. No firefighting equipment was able to access the site until a road was constructed to the site. The aircraft was destroyed by the post-crash fire.





### 1.15 SURVIVAL ASPECTS

The location and topography of the crash site prevented timely access for rescue. Trees and brush in the area where the accident occurred were approximately 15 to 20 feet high, extremely dense and severely hampered access to the crash site.

A road had to be constructed by heavy equipment to allow rescue and access to the crash site. No vehicle including the fire truck, could access the site until after this road was constructed. Meanwhile the aircraft continued to burn unhampered.

The pilot was ejected from the aircraft approximately 10 feet ahead and to the left of the aircraft after it struck several trees. He received extensive burns about the body. The passenger was found still in the aircraft, slumped to the left in the area of the seat occupied by the pilot. He was burned beyond recognition.

### 1.16 TESTS AND RESEARCH

No test or research was conducted due to the extent of the post-accident fire which destroyed the aircraft.

## 2.0 ANALYSIS

N63ZZ was undergoing an annual inspection, which commenced in mid-May and this accident flight was the second test flight that occurred after the inspection. The first test flight was unsatisfactory as many items were written up that needed correction. Those items were corrected and a second test flight was scheduled.

Eyewitnesses stated there was an aircraft positioned on runway 10 about to depart while this aircraft was returning to land on runway 28. Again airport officials reported N63ZZ did not communicate on the frequency his predicament and return to the field.

Further investigations revealed that the radios in the aircraft were not working hence the failure to make radio communications prior to takeoff and during the return.

During the process of going around, the pilot positioned the aircraft in a steep, nose up, climb and made a steep turn to the left, at which point the aircraft immediately stalled and dove to the left, into the bushes and the ground.

# 3.0 CONCLUSIONS

## 3.1 Findings

- N63ZZ was undergoing an annual inspection, which commenced in mid-May and this accident flight was the second test flight that occurred during the inspection. The first test flight was unsatisfactory as many items were discovered that needed correction. Those items were corrected and a second test flight was scheduled.

- The aircraft did not have a valid airworthiness certificate as it was undergoing an annual inspection required to render an airworthiness certificate valid.

- The pilot was not in possession of a valid pilot license as his license previously held, was revoked by the United States of America, Federal Aviation Administration on September 10, 2002.

- The pilot last medical was conducted in 2001. According to regulations pilot over age 40 must have a medical every six months in order that their pilot license remain valid.

- No evidence were available to verify this pilot completed a recurrent flight review or any type of recurrent training required by regulations every 2 years for pilots flying privately or not employed with an authorized operator.

- The aircraft departed runway 10 at South Bimini Airport. According to airport officials the pilot did not communicate his intentions to depart or announce his position in the traffic pattern as required by regulations for pilots flying at uncontrolled airports.

- Eyewitnesses stated that the aircraft engine was having problems starting prior to take off and the mechanic, (who was also a victim), charged up the battery and did some other maintenance work, after which both engines started.

- The aircraft was destroyed by impact forces and post impact fire. Both occupants of the aircraft received fatal injuries.

- Post-crash evidence confirmed the propeller of the right engine of the aircraft was “feathered” (not in normal operating position). It is believed the engine failed shortly after takeoff which prompted the pilot to “feather” the propeller, secure the engine and return to the airport just minutes after takeoff.

- The location and topography of the crash site prevented timely access for rescue. A road had to be constructed by heavy equipment to allow rescue and access to the crash site. Meanwhile the aircraft continued to burn unhampered.

- No first responders or rescue vehicles including the fire truck, could access the site until after the dense wooded area was cleared and an access road was constructed. Trees and brush in the area where the accident occurred were approximately 15 to 20 feet high, extremely dense and severely hampered access to the crash site.

- Weather at the time of the crash was Visual Meteorological Conditions. Weather was not a factor in the accident.

## 3.2 Probable Cause

The probable cause of this accident has been determined as loss of control, due to pilot inability to maintain positive control of the aircraft following the failure of an engine, and subsequent go around maneuver.

## 3.3 Contributing Factors

Contributing to the cause of this accident was;

- Loss of Situational Awareness.
- Failure to maintain directional control during the go around maneuver.
- Toxicology reports also cannot rule out a sudden cardiac event as a possible contributing factor.

## 4.0 SAFETY RECOMMENDATIONS:

The circumstances surrounding the accident does not warrant any safety recommendations as current regulations are already in place to discourage findings uncovered during this investigation.

Regulations already exists such as requiring a pilot to have

- A valid pilot certificate.
- A valid medical certificate.
- Regular recurrent training.

Additionally, pilots are required by regulations to

- Make communications while in the vicinity of an uncontrolled airfield.
- Ensure the aircraft is airworthy prior to commencing flight.
- Follow established traffic patterns when entering or exiting an uncontrolled airfield.