



Aviation Short Investigation Final Report

Engine Failure enroute involving
PA-23, N222AH

Great Harbor Cay, Berry Island, Bahamas, on 12th January, 2018

AAID Aviation Occurrence Investigation

AO-18-000003

Final Report – 31 July, 2018

The Air Accident Investigation Department (AAID)

The Air Accident Investigation Department (AAID) is the independent accident investigation department under the Bahamas Ministry of Tourism and Aviation (MOTA) charged with the responsibility of investigating all aviation accidents and incidents in the Bahamas.

The AAID'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 AAID does not investigate for the purpose of apportioning blame or to provide a means for determining liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the AAID endeavors to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

The AAID performs its functions in accordance with the provisions of the Bahamas Civil Aviation Act 2016, Civil Aviation (Investigations of Air Accidents and Incidents) Regulations and Amendment Regulations 2017, International Civil Aviation Organization (ICAO) Annex 13 (Eleventh edition, July 2016 – latest revision) and, where applicable, relevant international agreements.

The Air Accident Investigation Department is mandated by the Ministry of Tourism 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 objective of a safety investigation is to identify and reduce safety-related risk. AAID investigations determine and communicate the safety factors related to the transport safety matter being investigated.

The AAID makes public its findings and recommendations through accident reports, safety studies, special investigation reports, safety recommendations and safety alerts. Unless otherwise indicated, recommendations in this report are addressed to the regulatory authorities of the State having responsibility for the matters with which the recommendation is concerned. It is for those authorities to decide what action is taken. When the AAID issues a safety recommendation, the person, organization or agency is required to provide a written response without delay. 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:

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

Engine Failure enroute PA23, N222AH

What Happened?

On the 12th January at approximately 11:30 am local, Piper Aztec N222AH was involved in an occurrence near the Great Harbour Cay Airport, Berry Islands, Bahamas. The aircraft departed the Chub Cay Airport, Berry Islands with 5 souls on board, (1 Crew, 4 passengers) enroute to Grand Bahama International Airport.

The pilot reported to the AAID by telephone interview, that while enroute, he experienced a right engine failure that resulted in a significant loss of altitude. As the aircraft was unable to maintain altitude on the left engine alone, he decided to divert and attempt a landing at nearby Great Harbour Cay airport.

However, with the continued loss in altitude the pilot stated he opted to execute a controlled landing in an area of mangroves approximately 2 miles SE of the Great Harbour Cay Airport to avoid crashing into trees that were between his position and the runway at Great Harbour Cay.

It was reported that the pilot was the only occupant to receive injuries (minor) and the aircraft received damages as a result (extent unknown). All occupants of the aircraft were able to walk to the main land of Great Harbour Cay where they were assisted by locals. Individuals post-crash reported to the AAID that this flight was a regularly scheduled flight conducted by this pilot on the route between San Andros, Great Harbour Cay and Freeport. The AAID was unable to confirm whether this accident flight was a for-hire flight.

Due to the inaccessibility of the crash site, the AAID was unable to conduct the on-site phase of the investigation. A limited scope investigation was therefore conducted. The weather at the time in Great Harbour Cay was visual meteorological conditions.

Despite repeated requests of the pilot, the maintenance records for the aircraft were never made available to the AAID for review. Communication was sent to the Director General of the Bahamas Civil Aviation Authority (BCAA) advising the BCAA to conduct a parallel investigation due the findings of the investigation outlined under “Investigation Findings” below. This summary final report is completed without the benefit of the maintenance status and history of this aircraft being established.



Investigation Findings

- The aircraft registration certificate¹ of N222AH had been expired since 30th April 2016, having last been issued 4th April 2013 for a three year period². Federal Aviation Regulations (FAR) 91.203 requires an effective registration certificate for operation. It should be noted that the Federal Aviation Administration (FAA) reached out to the registered owner on 1st March and again on 1st June 2016 regarding this matter, however, they received no response. Without a valid **registration certificate**, the **airworthiness certificate** of the aircraft becomes invalid. (*An aircraft without a valid registration certificate is essentially a “stateless” aircraft*).
 - Between 30th April, 2016 and 12th January, 2018 N222AH while stateless and considered unairworthy, was used to conduct operations in the airspace of the Bahamas.
- According to records provided by the Bahamas Civil Aviation Authority, the pilot was not in possession of a valid Bahamas issued pilot certificate (license)³ or valid medical certificate (since 2011 up to the time of this occurrence), as required by regulations.
 - The pilot was issued a Bahamas Private Pilot Certificate on November 13, 2008, however, it had **expired** with the expiration of his Bahamas issued medical certificate since April 30, 2011.
- According to records provided by the Federal Aviation Administration, the pilot in command of the aircraft was in possession of an **expired** “second class” medical certificate since June 2016, during which time he operated within the airspace of the Bahamas with this expired certificate up to the date of this occurrence. FAR 61.23(d) allows a period of validity of 24 calendar months from date of examination, for medical certificates for airmen over 40 years of age. The date of the pilot’s last medical examination and medical certificate issuance was May 2014. At the time of this issuance the pilot was 46 years old, hence his medical certificate expired since (June) 2016.
- Under US Code of Federal Regulations 14 CFR 61.23 (a)(3)(i) and (d)(3)(ii) Medical certificates: Requirement and duration.
 - (a) Operations requiring a medical certificate. Except as provided in paragraphs (b) and (c) of this section, a [person](#) -
 - (3) Must hold at least a third-class [medical certificate](#) -
 - (i) When exercising the privileges of a private pilot certificate, recreational pilot certificate, or student pilot certificate, except when operating under the conditions and limitations set forth in [§ 61.113\(i\)](#);
 - Having an expired medical certificate invalidates all privileges that can be exercised by the holder of that airman pilot certificate.

¹ *“Does expiration of registration affect an aircraft’s airworthiness certificate? According to the FAA.gov website https://www.faa.gov/licenses_certificates/aircraft_certification/aircraft_registry/reregistration_faq/, because an aircraft with an expired registration is **not registered**, its airworthiness certification would be **considered ineffective**. Without registration the aircraft is **not** authorized for flight. Once registration is restored, the airworthiness certificate not having been surrendered, revoked or terminated would become effective again provided the aircraft is otherwise compliant with maintenance, inspections, and any other requirements for an effective airworthiness.*

² *When is it Time to Renew an Aircraft’s Registration? Aircraft registration expires three years after an aircraft was registered or last renewed. The registration renewal date-to-file is scheduled five months before the expiration.*

³ *Although the pilot was in command of a USA registered aircraft, he was flying in the Bahamas airspace when the accident occurred, therefore he was required to be in possession of a valid Bahamas issued license and medical as required by CAGR.*

Crew Experience

Pilot

The captain was a 49 year old male at the time of the accident. He had been issued a United States Private Pilot License January 22, 2009, with single engine land privileges. He subsequently was issued an airplane multi-engine land rating with instrument privileges in a single engine aircraft. As he had not demonstrated instrument proficiency in a multi engine aircraft, his private pilot certificate bore the limitation “Airplane Multiengine VFR Only”

The Aircraft

N222AH was a fixed-wing, twin-engine normally aspirated aircraft. It had retractable landing gear, was an all metal airplane and was designed to combine multi-engine power, performance, and safety with smooth, easy handling characteristics and operational adaptability. Official records obtained from the Federal Aviation Administration (FAA) showed N222AH was registered in the United States of America to Doreen C. Finch of Miami Dade, Florida. The registration certificate was issued by the FAA on 4th April, 2013 with expiration date of 30th April, 2016.

Weather

The weather in Great Harbour Cay at the time of the occurrence was Visual Meteorological Conditions (VMC) and was not a factor in the occurrence.

Safety Action

Whether or not the AAID identifies safety issues in the course of an investigation, relevant organizations may proactively initiate safety action in order to reduce their safety risk.

Previously Issued Recommendations Reiterated and Reclassified in this Report

As a result of the findings of this investigation into this accident, the Air Accident Investigation Department reiterates the following safety recommendations previously sent to the attention of the Director General of the Bahamas Civil Aviation Authority (BCAA) for action. Safety Recommendation issued in correspondence on January 17, 2018 and again in Recommendation SI-18-004 dated 12th February 2018 recommended the BCAA take action and conduct a parallel investigation to determine how and why an airman with an invalid private pilot certificate was able to;

1. Conduct regularly scheduled commercial operations between Andros and Freeport Grand Bahama
2. Conduct operations in a “stateless” and by extension “unairworthy” aircraft in the airspace of the Bahamas.
3. Conduct operations in the airspace of the Bahamas, when his medical certificate, and by extension, his private pilot certificate privileges was expired and made invalid respectively, since 2016.

Correspondence of March 12, 2018 and again in revised Recommendation SR18-007 of May 1, 2018 recommended that the BCAA ensure all Bahamas citizens who are owners / operators of foreign registered aircraft, to ensure they are in possession of required **Bahamas issued pilot certificate** (license) while operating those foreign registered aircraft in the airspace of the Bahamas.

Additionally, correspondence on March 12, 2018 as well as revised Recommendation SR18-008 of May 1, 2018 recommended that the BCAA take action to ensure all Bahamas citizens who are owners /

operators of foreign registered aircraft, they are in possession of required **medical certificates** while operating those foreign registered aircraft in the Bahamas airspace.

Recommendation SR18-009 also recommended the BCAA institute policies and procedures to require all converted and validated license applicants be familiar with Bahamas air law, procedures and policies and conduct knowledge and skill testing applicable to flying in the Bahamas airspace, prior to the issuance of a Bahamas converted or validated airman certificate.

Previously Issued Recommendations Classified in this Report

The following previously issued recommendations are classified in this report as:

- Safety Recommendation SI-18-004 - “Open, Acceptable Response”

The BCAA, Safety Oversight Department (SOD) has engaged the assistance of the Federal Aviation Administration to address the finding relative to the registration and airworthiness status of the aircraft N222AH. Additionally the SOD has proposed a plan of action to address the unauthorized commercial operations being conducted by airmen without a required Air Operator Certificate authorization.

- Safety Recommendation SI-18-007 - “Open, Acceptable Response”

The BCAA has satisfactorily addressed this recommendation and have proposed a plan of action to ensure all airmen operating in the airspace of the Bahamas are in possession of a required Bahamas issued license.

- Safety Recommendation SR18-008 - “Open, Acceptable Response”

The BCAA has satisfactorily addressed this recommendation and have proposed a plan of action to ensure all airmen operating in the airspace of the Bahamas are in possession of a required medical certificate.

- Safety Recommendation SR18-009 - “Open, Acceptable Response”

The BCAA has satisfactorily addressed this recommendation and have proposed a plan of action to ensure all airmen operating in the airspace of the Bahamas are familiar with Bahamas air law and procedures and undergo a knowledge and skill testing prior to other state’s licenses being rendered valid.

Safety Message

The Accident Investigation Department understands that while it is the pilot’s responsibility to ensure they are in possession of the required valid documents for themselves, as well as the equipment they are operating, prior to acting as a required crew member, the regulatory authority also has a responsibility to conduct regular surveillance and impromptu inspections of those documents and aircraft to ensure they are in compliance with regulations.

The investigation into this accident found that the operator of this aircraft was not in possession of the required medical certificate issued by the USA or the Bahamas, which in turn invalidated the privileges

that could be exercised by the use of his private pilot certificate. The investigation also found that the registration certificate for the aircraft had expired, which also invalidated the airworthiness certificate of the aircraft. Both certificates (airman and aircraft) are required by regulations prior to operating the aircraft and acting as a required flight crew member.

The Accident Investigation Department strongly believes that a broad information and campaign needs to be waged by the regulatory authority in the media (social, radio, television and print) and at all airports in the country to alert the general public on the dangers of travelling with individuals or companies that has not been properly certified by the regulatory authorities. Certification of an individual or company to act as a commercial operator can greatly reduce the chances of an individual or operator conducting operations without required valid documents. There is also a greater chance the maintenance and airworthiness status of the aircraft would be scrutinized more by the authorities, if an individual or company becomes certified.

Additionally, the AAID believes greater engagement, emphasis, awareness and encouragement needs to occur regularly between the regulatory authority and the aviation community, inviting them to dialogue and not only making it easier for them to be certified, but addressing the benefits of and repercussions of not being a certified operator. This dialogue also needs to address the penalties that may be imposed on anyone who choose not be certified, should they be found conducting illegal operations or operating without required documentation.

The Accident Investigation Department also believes that greater coordination and cooperation amongst the authorities, (BCAA, customs, immigration, and police) and the service providers (fixed based operators, Air Traffic Control, Nassau Airport Development Company, Airport Authority) is essential to identifying persons and companies (local and international) engaged in unauthorized commercial operations.

About this report

Decisions regarding whether to conduct an investigation, and the scope of an investigation, are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, a limited-scope, fact-gathering investigation was conducted in order to produce a summary report, and allow for greater industry awareness of potential safety issues and possible safety actions.

By the Air Accident Investigation Department



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