

# AIRCRAFT ACCIDENT INVESTIGATION AND INQUIRY BOARD

# **FINAL REPORT**

<u>RP-C119</u> PA-23-250

**OPERATOR: SKYLINE AVIATION88 INCORPORATED** 

TYPE OF OPERATION: GENERAL AVIATION

DATE OF OCCURRENCE: AUGUST 31, 2019

PLACE OF OCCURRENCE: ABOUT 2KMS FROM ISLA KAMPANARIO, BRGY PAPAYA, NASUGBU, BATANGAS, PHILIPPINES

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# FOREWORD

This report was produced by the Aircraft Accident Investigation and Inquiry Board (AAIIB), Civil Aviation Authority of the Philippines, MIA Road, Pasay City, Philippines.

The report is based upon the investigation carried out by the AAIIB in accordance with Annex 13 to the Convention on International Civil Aviation, Republic Act 9497 Section 42, and Philippine Civil Aviation Regulation Part 13.

Readers are advised that the AAIIB investigates for the sole purpose of enhancing aviation safety. Consequently, AAIIB reports are confined to matters of safety significance and may be misleading if used for any other purpose. It should be noted that the information in AAIIB reports and recommendations is provided to promote aviation safety, and in no case is it intended to imply blame or liability.

Furthermore, no part of the AAIIB report or reports relating to any accident or investigation shall be admitted as evidence or used in any suit or action for damages arising out of any matter mentioned in such report or reports.



# FINAL REPORT

**TITLE**: Accident involving a Piper Aztec PA-23-250 Registry Number RP-C119 owned and operated by Skyline Aviation88 ditched into the sea following a right-hand (RH) engine failure on August 31, 2019, at around 1330H at about 2 kilometers from Isla Kampanario, Brgy. Papaya, Nasugbu, Batangas.

# **Notification of Accident to National Authority**

The Notification of incident to AAIIB CAAP was relayed by the Operator of the aircraft at 1500H (LOCAL) on Aiugust 31, 2019.

# Identification of the Accident Investigation Authority

The Aircraft Accident Investigation and Inquiry Board (AAIIB), the mandated accident investigation organization within the Civil Aviation Authority of the Philippines (CAAP) as the state of Occurrence/Registry/ Operator is conducting the investigation

# **Organization of the Investigation**

In accordance with provisions of Philippine Civil Aviation Regulation (PCAR) Part 13, an Investigator-In-Charge and Deputy Investigator-In Charge were appointed.

# Authority Releasing the Report

The Final investigation report was released by Aircraft Accident Investigation and Inquiry Board (AAIIB) and published at the CAAP website on **<u>2 April 2025</u>**.

# Synopsis:

On August 31, 2019 at around 1300H, a Piper Aztec PA-23-250 Registry Number RP-C119 owned and operated by Skyline Aviation88 ditched into the sea following a right-hand (RH) engine failure about 2 kilometers from Isla Kampanario, Brgy. Papaya, Nasugbu, Batangas. Nearby fishermen rescued both the pilot and the observer from the aircraft. Visual meteorological conditions prevailed at the time of the accident. The failure of the RH engine and non-feathering of the propeller was not determined due to non-retrieval of the aircraft wreckage.

# LIST OF ACRONYMS AND ABBREVIATIONS

- AAIIB : Aircraft Accident Investigation and Inquiry Board CAAP : Civil Aviation Authority of the Philippines
- CPL : Commercial Pilot License
- PCG : Philippine Coast Guard
- RH : Right Hand
- RPM : Revolution Per Minute
- VFR : Visual Flight Rules
- VHF : Visual High Frequency



# **1. FACTUAL INFORMATION**

Aircraft Registration No.	:	RP-C119
Aircraft Type/Model	:	PA-23-250
Operator	:	Skyline Aviation88 Incorporated
Address of Operator	:	Bldg. I, West Maintenance Area, Manila Domestic Airpo Pasay City
Place of Occurrence	:	About 2kms from Isla Kampanario, Brgy Papaya, Nasugbu, Batangas, Philippines
Date/Time of Occurrence	:	August 31, 2019/ 1330H
Type of Operation	:	General Aviation
Phase of Flight	:	Cruise
Type of Occurrence	:	Ditched into the sea due to RH engine failure

# 1.1 History of Flight

On August 31, 2019, at around 1330H, a Piper Aztec PA-23-250 with Registry Number RP-C119 and operated by Skyline Aviation88 Inc. ditched into the sea following a righthand (RH) engine failure. Nearby fishermen rescued both the pilot and the observer from the aircraft. The crash site is located about 2 kilometers from Isla Kampanario, Brgy. Papaya, Nasugbu, Batangas. Visual meteorological conditions prevailed at the time of the accident.

According to the pilot, the aircraft took off from Cuyo Principal Airport at about 1130H bound for Sangley Airport, Cavite. The flight was cruising at 4000 feet and uneventful until 40 NM to Sangley Airport. While on initial descent, the pilot observed a decreasing fuel flow on the RH engine. The fuel flow continued to decrease until the RH engine stopped. The aircraft continued its descent towards Sangley Airport and leveled off at 2,500 feet with one engine inoperative. While approaching Nasugbu, Batangas, about 30 NM from Sangley Airport, the pilot observed that the aircraft was starting to descend and could not maintain altitude. As the aircraft continued to descend, the pilot opted to

ditch the aircraft near Campanario Island, Barangay Papaya, Nasugbu, Batangas. Both occupants were able to exit the aircraft while it was sinking and were rescued by nearby fishermen. The pilot sustained serious injuries, while the passenger sustained minor injuries. They were brought to the Barangay Hall for emergency treatment and later transferred to Metro Balayan Medical Center, Balayan, Batangas for medical attention.



Figure 1: Approximate ditching point

Injuries	Crew	Passengers	Others	TOTAL
Fatal	0	0	0	0
Serious	1	0	0	1
Minor	0	1	0	1
Missing	0	0	0	0
None	0	0	0	0

# 1.2 Injuries to Person (s)

# 1.3 Damage to Aircraft

The aircraft sustained substantial damage.

#### **1.4 Other Damages**

No other damaged was reported as a result of the accident.

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## **1.5 Pilot Information**

Gender	: Male
Date of Birth	: January 2, 1953
Nationality	: Philippines
License	: 103962-Commercial Pilot (CPL)
Expiration Date	: December 31, 2019
Medical certificate	: Valid until March 9, 2019
Date of last medical	: November 28, 2018
Total Time	: 20,000+00 Hours
On type (PA-23-250)	: 620+20 Hours

## **1.6 Aircraft Information**

# 1.6.1 Aircraft Data

Registration Mark	:	RP-C119
Manufacturer	:	Piper Aircraft, Corp.
Type/Model	:	PA-23-250 Piper Aztec
Serial Number.	:	27-2594
Date of Manufactured	:	1969
Aircraft Total Time	:	12, 654+08 hours as of August 31,
		2019.
Certificate of Airworthiness valid up to	:	June 18, 2020.
Certificate of Registration valid up to	:	January 23, 2020
Gross Weight	:	2,019 Kilograms (Kgs.)

## 1.6.2 Engine Data

Manufacturer
Type/Model
Serial Number Engine
Time between Overhaul
Time Since Overhaul RH
Time Since Overhaul LH
Time Since New RH
Time Since New LH

- : Avco Lycoming
- : IO-540-C4B5
- : L-7062-48/L-1394-48A
- : 2,000+00
- : 1,363+46 hours as of August 31, 2019
- : 1,319+36 hours as of February 4, 2018
- : 2,999+22 hours as of June 15, 2019 2,564+00 hours as of June 15, 2020

# 1.6.3 Propeller Data

Manufacturer Type/Model

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#### : HC-E2YR2RBS

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Propeller Serial Number	
Time Between Overhaul	
Time Since Overhaul	
Time Since New RH	
Time Since New LH	

- : A277/BP-8968E
- : 2,000 hours
- : 411+03 hours as of February 5,2019
- : 1,293+53hours as of August 31, 2019.
- : 1, 349+36 hours as of August 31, 2019.

## 1.7 Meteorological Information

Presence of cumulonimbus clouds were observed while approaching Batangas area. Cumulonimbus is a dense, towering vertical cloud, forming from water vapor carried by powerful upward air currents. If observed during a storm, these clouds may be referred to as thunderheads. Cumulonimbus can form alone, in clusters, or along cold front squall.

## 1.8 Aids to Navigation

The flight was carried out under Visual Flight Rules (VFR).

## **1.9 Communications**

Aircraft is equipped with operational Very High Frequency (VHF) transceiver used for communicating with aerodrome personnel and pilots in the area.

# 1.10 Flight Recorder

The aircraft is not equipped with flight recorders and neither relevant regulation requires it.

# 1.11 Wreckage and Impact Information

The aircraft sustained substantial damage. The aircraft ditched into the sea following a right hand (RH) engine failure.

# 1.12 Fire

There was no post-crash fire reported.

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# 1.13 Medical and Pathological Information

Post-accident medical examination conducted to the Pilot by CAAP-OFSAM revealed no significant findings.

## **1.14 Survival Aspects**

The accident was survivable, the cockpit was still intact after the aircraft ditched into the water.

## 1.15 Test and Research

No test was conducted since the wreckage was not recovered from the water.

# 2. ANALYSIS

# 2.1 General

On August 31, 2019, at around 1330H, a Piper Aztec PA-23-250 with Registry Number RP-C119 and operated by Skyline Aviation88 Inc. ditched into the sea following a right-hand (RH) engine failure. Nearby fishermen rescued both the pilot and the observer from the aircraft. The crash site is located about 2 kilometers from Isla Kampanario, Brgy. Papaya, Nasugbu, Batangas. Visual meteorological conditions prevailed at the time of the accident.

According to the pilot, the aircraft took off from Cuyo Principal Airport at about 1130H bound for Sangley Airport, Cavite. The flight was cruising at 4000 feet and uneventful until 40 NM to Sangley Airport. While on initial descent, the pilot observed a decreasing fuel flow on the RH engine. The fuel flow continued to decrease until the RH engine stopped. The aircraft continued its descent towards Sangley Airport and leveled off at 2,500 feet with one engine inoperative. While approaching Nasugbu, Batangas, about 30 NM from Sangley Airport, the pilot observed that the aircraft was starting to descend and could not maintain altitude. As the aircraft continued to descend, the pilot chose to ditch it near Campanario Island, Barangay Papaya, Nasugbu, Batangas. The ditching point is approximately 24 NM from Sangley Airport (Figure 2).





Figure 2: Distance to Sangley Airport

# 2.2 Aircraft Search and Retrieval

On September 5, 2019, Southern Tagalog Coast Guard personnel conducted an underwater survey to locate the aircraft. The team proceeded to Brgy. Papaya, Nasugbu, Batangas, to continue the search and retrieval operation of RP-C119. At around 0910H, the team arrived in the vicinity of the crash site, about 3NM away from the shoreline. Several dives were made; however, they yielded negative results due to the bad weather conditions prevailing in the area caused by the southwest monsoon. The diving operations were temporarily terminated at around 1140H. No follow-up dive was conducted because of the poor visibility underwater caused by the bad weather.

On October 8, 2019, another dive attempt was conducted by Southern Tagalog Coast Guard personnel in order to survey the location of the aircraft. The personnel of the Philippine Coast Guard arrived at the crash site around 0830H and performed several diving operations. The diving operations yielded a negative result, leading to their termination around 1140H.

On October 9, 2019, the personnel of PCG Southern Tagalog continued the search and retrieval operation for the aircraft. The team arrived at Brgy. Papaya, Nasugbu, Batangas, where they utilized a fishing boat equipped with SONAR to detect the exact location of the aircraft. The dive started at about 0900H and lasted until 1100H, yielding a negative result.

On October 10, 2019, another search was conducted. The diving operation started at around 0825H at the vicinity of 0.20 NM from the shoreline of Campanario Island at a

depth of 40 meters. The aircraft wreckage was in the vicinity. The PCG personnel took underwater video and pictures (Figure 3). At 0940H, the activity ended.

On October 11, 2019, the PCG personnel continued the underwater video and photo documentation until 1430H. The video and photos were turned over to the operator, who later furnished the office of AAIIB.

Several attempts to retrieve the aircraft yielded negative results because of the location's depth, which was around 40 meters. The water's condition and poor visibility due to the frequent rains caused by the southwest monsoon complicate the retrieval process. The presence of marine life and the potential harm to the ecosystem were carefully considered, as the wreckage lies within corals.

Consequently, on October 14, 2019, the Sangguniang Barangay in Barangay Papaya passed a resolution during a special session. This resolution requested that the owner and CAAP discontinue the retrieval of the aircraft wreckage. The purpose of this request is to prevent any damage to the coral reefs and to establish the wreckage as a fish sanctuary for the benefit of local fishermen. The circumstances and location of the aircraft wreckage were studied to determine whether salvage operations are still practicable. The expense and effort of a salvage operation, including the damage it will cause to the corals, were considered. After consultation with the parties concerned, a decision was made to discontinue the retrieval operation.



Figure 3: Various underwater photos of the wreckage

# 2.3 Flight Operations

The flight was cruising at 4000 feet and uneventful until 40 NM to Sangley Airport. While on initial descent, the pilot observed a decreasing fuel flow on the RH engine. The pilot observed that the engine's RPM was also decreasing from 2200 RPM to 2000 RPM. The RPM continued to decrease, and at 1000 RPM, the pilot decided to feather the propeller. The propeller did not go to the feather position after several tries. The fuel flow continued to decrease until the RH engine stopped.

A review of the Piper Aztec Owner's Handbook, Section III, Page 36, revealed that feathering of Hartzell propellers can only be done while the failed engine is still rotating and the RPM is above 1000 RPM. This is because the centrifugal force due to rotation is necessary to hold out a stop pin, which keeps the propeller from feathering each time the engine is stopped on the ground. Therefore, if an engine freezes up, it will not be possible to feather its propeller.

The aircraft's loss of performance and reduced overall efficiency were the result of the significant aerodynamic drag of a non-feathered propeller, making it difficult for the remaining engine to maintain altitude and airspeed. Additionally, the remaining engine will have to work harder to compensate for the drag created by the non-feathered propeller. This can result in uneven thrust distribution, causing the aircraft to yaw or roll, making it challenging for the pilot to maintain con

# **3.0 CONCLUSIONS**

# 3.1 Findings

- **a.** The pilot possesses a valid and current Commercial Pilot License and Medical Certificate.
- **b.** The Aircraft has valid Aircraft Certificate of Registration and Certificate of Airworthiness.
- **c.** Aircraft altitude was not maintained during single engine operation.
- **d.** No significant findings in the aircraft logbook for the past 7 days.
- **e.** The aircraft was ditched in the vicinity of Nasugbu, Batangas.
- **f.** The two occupants sustained injuries and was rushed to the nearest hospital.
- **g.** The aircraft was not recovered from the accident site.

# 3.2 Probable Cause

a. The AAIIB was unable to determine the specific cause of the RH engine failure and nonfeathering of the propeller due to the non-retrieval of the aircraft wreckage.

# **4.0 SAFETY RECOMMENDATIONS**

a. Without the benefit of an examination of the aircraft, engine, and propeller systems, the investigation was unable to determine the specific cause of the RH engine failure and non-feathering of the propeller. As a result, the absence of substantiating evidence hindered the investigation's ability to develop safety recommendations related to the aircraft.

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