



Republic of the Philippines
DEPARTMENT OF TRANSPORTATION
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA Road, Pasay City 1300

AIRCRAFT ACCIDENT INVESTIGATION AND INQUIRY BOARD

FINAL REPORT

RP-C8230 **TECHNAM P2010**

OPERATOR: FIRST AVIATION ACADEMY, INC.

TYPE OF OPERATION: FLIGHT TRAINING

DATE OF OCCURRENCE: JANUARY 5, 2020

***PLACE OF OCCURENCE: SUBIC BAY INTERNATIONAL AIRPORT,
SUBIC, ZAMBALES, PHILIPPINES***

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(Technam P2010, RP-C8230 Final Report)

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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 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.



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MIA Road, Pasay City 1300
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FINAL REPORT

TITLE: Incident involving a Tecnam P2010 type of aircraft with Registry Number RP-C8230 operated by First Aviation Academy that had a nose wheel separation following a bounced landing at RWY 07, Subic Bay International Airport, SBFZ, Subic, Zambales Philippines on January 5, 2020/0917H

Notification of Occurrence to National Authority

The Notification of incident to AAIIB CAAP was relayed by the Operator of the aircraft at 0955H (LOCAL) on January 5, 2020.

Identification of the 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 conducted the investigation.

Organization of the Investigation

In accordance with provisions of Philippine Civil Aviation Regulation (PCAR) Part 13, an Investigator-In-Charge was 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 **7 March 2022**.

Synopsis:

On January 5, 2020 at around 0917H, a Tecnam P2010 with Registry Number RP-C8230 operated by First Aviation Academy sustained damage following a bounced landing resulting on the separation of the nose landing gear from the strut assembly at Subic Bay International Airport (SBIA). The Student Pilot (SP) did not sustain any injury as a result of the event. The aircraft sustained damage on the Nose Landing Gear, both propeller blades, engine mount and shock absorber. The probable cause of the event was attributed to the failure of the Student Pilot to perform proper bounce landing recovery.

LIST OF ACRONYMS AND ABBREVIATIONS

AAIIB	:	Aircraft Accident Investigation and Inquiry Board
ATOC	:	Aviation Training Organization Certificate
CAAP	:	Civil Aviation Authority of the Philippines
CAVU	:	Ceiling and visibility Unlimited
CPL	:	Commercial Pilot License
FAA	:	Federal Aviation Administration
FI	:	Flight Instructor
IR	:	Instrument Rating
OFSAM	:	Office of the Flight Surgeon and Aviation Medicine
PPL	:	Private Pilot License
SBIA	:	Subic Bay International Airport
SP	:	Student Pilot
SPL	:	Student Pilot License
VFR	:	Visual Flight Rules
VHF	:	Very High Frequency



1. FACTUAL INFORMATION

Aircraft Registration No.	:	RP-C8230
Aircraft Type/Model	:	Tecnam P2010
Operator	:	First Aviation Academy, Inc.
Address of Operator	:	Bldg. 8303 SW Apron B, Subic Bay International Airport, SBFZ, Subic, Zambales, Philippines
Place of Occurrence	:	Subic Bay International Airport, SBFZ, Subic, Zambales, Philippines
Date/Time of Occurrence	:	January 5, 2020 / 0917H
Type of Operation	:	Flight Training
Phase of Flight	:	Landing
Type of Occurrence	:	Nose gear collapsed

1.1 History of Flight

On January 5, 2020 at around 0917H, a Tecnam P2010 with Registry Number RP-C8230 operated by First Aviation Academy sustained damage following a bounced landing resulting on the separation of the nose landing gear from the strut assembly at Subic Bay International Airport (SBIA). The Student Pilot (SP) did not sustain any injury as a result of the event. The actual wind condition reported by the tower was wind at 060 degrees at 13 knots.

The aircraft took-off around 0900H for her the SP's first solo flight. The flight was uneventful until during landing at runway 07 when the SP was not able to control the aircraft and bounced four (4) times before coming into a full stop. The bounce resulted to the separation of the nose landing gear. The aircraft final position was between intersection of runway 07 and taxiway Echo. The aircraft sustained damage on the Nose Landing Gear, both propeller blades, engine mount and shock absorber.

1.2 Injuries to Person (s)

Injuries	Crew	Passengers	Others	TOTAL
Fatal	0	0	0	0
Serious	0	0	0	0
Minor	0	0	0	0
None	2	0	0	2

1.3 Damage to Aircraft

The aircraft sustained substantial damage.

1.4 Other Damages

The runway sustained propeller strike marks and scrape caused by the broken nose landing gear strut.



Figure 1: Shows the propeller strike and runway scrape marks.

1.5 Personnel Information

1.5.1 Student Pilot

Gender	:	Female
Date of Birth	:	August 8, 1994
Nationality	:	Filipino
License	:	147806-Student Pilot License (SPL)
Expiration Date	:	July 5, 2021
Medical certificate	:	Valid until July 5, 2021
Date of last medical	:	July 5, 2019
Total Time	:	15 + 00 Hours
On type (P2010)	:	15 + 00 Hours

1.6 Aircraft Information

1.6.1 Aircraft Data

Registration Mark	:	RP-C8230
Manufacturer	:	Costruzioni Aeronautiche Tecnam.
Type/Model	:	Technam P2010
Serial Number.	:	062
Date of Manufactured	:	2018
Aircraft Total Time	:	263.2 Hours
Certificate of Airworthiness valid up to	:	April 10, 2020
Certificate of Registration issued on	:	February 28, 2019
Gross Weight	:	1,160 Kilograms (Kgs.)

1.6.2 Engine Data

Manufacturer	:	Lycoming
Type/Model	:	10-36-M1A
Serial Number Engine	:	L3722-51E
Time Between Overhaul	:	2000 hours
Time Since Overhaul	:	N/A
Time Since New	:	263.2 Hours

1.6.3 Propeller Data

Manufacturer	:	MT Propeller
Type/Model	:	MT-188-R-145-4G
Propeller Serial Number	:	17078
Time Between Overhaul	:	On Condition
Time Since Overhaul	:	N/A
Time Since New	:	263.2 Hours

1.7 Meteorological Information

Ceiling and visibility unlimited (CAVU). CAVU is a Cloudless (or scattered cloud) conditions with visibility in excess of ten kilometers.

1.8 Aids to Navigation

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

1.9 Communication

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

1.10 Aerodrome Information

Airport Name	:	Subic Bay International Airport
Airport Identification	:	RPLB
Airport Operator	:	Subic Bay Metropolitan Authority
Runway Direction	:	07/25
Runway Dimensions (07)	:	2,744 X 45 meters
Runway Dimensions (25)	:	2,744 X 45 meters
Runway Elevation	:	6.20 meters AMSL
Runway Surface	:	PCN 66 R/B/W/T Concrete/Asphalt
THR coordinates and Site at AD	:	14 47 40.016N, 120 16 16.917E

1.11 Flight Recorder

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

1.12 Wreckage and Impact Information

The aircraft final position was between intersection of runway 07 and taxiway Echo. The aircraft sustained damage on the Nose Landing Gear, both propeller blades, engine mount and shock absorber.

Figure 1: RP-C8320 after the nose landing gear separation from the strut assembly and propeller strike



1.13 Medical and Pathological Information

Post-accident medical examination conducted by CAAP-OFSAM on January 8, 2020 revealed no significant findings.

1.14 Fire

There was no post impact fire observed during on-site investigation.

1.15 Survival Aspects

The event was survivable.

1.16 Test and Research

No test was conducted since the missing cotter pin and the castle nut were not recovered.

1.17 Organizational and Management Information

The First Aviation Academy, Inc. is a holder of Aviation Training Organization Certificate (ATOC) number 2019-02 issued on August 9, 2019 valid until August 8, 2020. Their base of operation is located in Southwest Apron B. Subic Bay International Airport, Subic Bay Freeport Zone, Subic, Zambales. The Pilot School offers single and multi-engine courses such as Private Pilot (PPL), Commercial Pilot License (CPL), Flight Instructors Course (FI) and Instrument Rating (IR). The schools authorized aircraft are composed of two (2) single engine Technam P2010 and one (1) multi-engine Technam P2006T. The school is also utilizing AATD Redbird MCX model 1 and model 2 as synthetic flight trainer. The FAA's maintenance requirement is contracted to Aviation Hub Asia, Inc.

2.0 ANALYSIS

2.1 General

On January 5, 2020 at around 0917H, a Tecnam P2010 with Registry Number RP-C8230 operated by First Aviation Academy sustained damage following a bounced landing resulting on the separation of the nose landing gear from the strut assembly at Subic Bay International Airport (SBIA). The Student Pilot (SP) did not sustain any injury as a result of the event. The actual wind condition reported by the tower was wind at 060 degrees at 13 knots.

The aircraft took-off around 0900H for her the SP's first solo flight. The flight was uneventful until during landing at runway 07 when the SP was not able to control the aircraft and bounced four (4) times before coming into a full stop. The bounce resulted to the separation of the nose landing gear. The aircraft final position was between intersection of runway 07 and taxiway Echo. The aircraft sustained damage on the Nose Landing Gear, both propeller blades, engine mount and shock absorber

2.2 Initial Check

Before the SP was released for first solo, she undergone initial check from another Flight Instructor (FI). The initial check started at around 0700H. They performed two traffic patterns to correct her airspeed, altitude and heading. Accordingly, the SP's performance was within limits. On the third pattern, she was instructed to do a go around procedures. The SP was able to execute the go around procedure properly. The fourth traffic pattern was terminated by a full stop landing. The SP was able to land the aircraft and performed necessary procedures within standard. The SP was endorsed by the FI for final check as part of the procedures before the first solo.

2.3 Final Check

The FI who conducted the initial check endorses the SP to another FI who conducted the final check. A briefing was made regarding the performance of the SP during the initial check. Before commencing the final check, a briefing was also made by the FI on the final check that will be conducted. They performed three traffic patterns with two touch and gos and one full stop landing. According to the FI's evaluation, the SP was very knowledgeable of the aircraft, the call outs, procedures and aircraft handling were all within standards. Based on the performance on the final check the SP was endorsed to be released for her first solo.

2.4 First Solo

At around 0900H the SP took off for her first solo. She followed the normal traffic pattern until base and finals. The approach was also normal until the late stages. As the SP flared the aircraft, it touched down and bounced. Subsequently, there was a second bounce followed by the aircraft pitched nose down. The aircraft struck the runway with its nose wheel, the nose landing gear broke and the aircraft came to a stop on the runway.

The incident happened because the SP failed to do the proper porpoise/bounce landing recovery. It is evident by the nose wheel landing after the initial bounce. On the other hand, she could have initiated a go-around and attempt to land the aircraft again.



Figure 2: Shows the final position of the aircraft of taxiway echo.

3.0 CONCLUSION

3.1 Findings

- 3.1.1 The Student Pilot time was 15+00 hours.
- 3.1.2 The aircraft has valid certificates of registration and airworthiness.
- 3.1.3 Student Pilot has a valid and current Pilot license and Medical Certificate.
- 3.1.4 The aircraft has accumulated a total time of 262+42 hours as of January 5, 2020.
- 3.1.5 The engine has accumulated a total time since new of 262+42 hours as of January 5, 2020.
- 3.1.6 The propeller has accumulated a total time since new of 262+47 hours as of January 5, 2020.
- 3.1.7 No discrepancy was recorded in the aircraft logbook for the past seven (7) day

3.2 Probable Cause

3.2.1 Primary Cause

- a. Failure of the Student Pilot to perform proper bounce landing recovery.

3.2.2 Contributory Cause

- a. Failure of the Student pilot to execute go-around during the initial bounce.

4.0 SAFETY RECOMMENDATIONS

Following the event, the First Aviation Academy, Inc immediately implemented the following safety actions:

- 4.1 The Student Pilot was subjected to re-training with emphasis to the following:
 - a. Bounce/Porpoise Landing recovery
 - b. Go-around After Series of Bounces
 - c. Additional Landing Maneuvers to Ensure proficiency.

The SP has accumulated additional 6.1 hours in Redbird MCX simulator for the re-training including the company check ride. The documents were provided to AAIB as evidence of the re-training conducted.

The safety deficiencies presented in this report have been fully addressed and no further safety actions are being recommended.

-END-

