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-C8054
TEXTRON AVIATION INC. CESSNA 172M

OPERATOR: LEADING EDGE INTERNATIONAL AVIATION ACADEMY, INC. (LEIAAI)

TYPE OF OPERATION: FLIGHT TRAINING

DATE OF OCCURRENCE: JUNE 23, 2023

PLACE OF OCCURRENCE: SAN FERNANDO AIRPORT (RPUS), CANAOAY, SAN FERNANDO CITY, LA UNION, 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.

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FINAL REPORT

TITLE: A serious incident involving a Cessna 172M type of aircraft with Registry Number RP-C8054 owned and operated by Leading Edge International Aviation Academy, Inc.that had a runway excursion at San Fernando Airport (RPUS), Canaoay, San Fernando City, La Union, Philippines on June 23, 2023/0900H.

Notification of Occurrence to National Authority

The notification of serious incident to AAIIB-CAAP was relayed by the Operator of the aircraft to the OIC, AAIIB through to the Operation Center-CAAP at 0900H (LOCAL) on June 24, 2023.

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 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 on the CAAP website on **29 November 2023.**

Synopsis:

On or about 0900H, June 23, 2023, a Cessna 172M type of aircraft with Registry Number RP-C8054 operated by Leading Edge International Aviation Academy, Inc (LEIAAI) had a runway excursion at San Fernando Airport, Canaoay, San Fernando City, La Union, Philippines. The Student Pilot (SP) on board was not injured however the aircraft sustained major damage as a result of the incident. The Aircraft Accident Investigation and Inquiry Board determined that the cause factor of this serious incident was attributed to the pilot's failure to execute the go-around procedures during unstable approach for landing.

LIST OF ACRONYMS AND ABBREVIATIONS

AAIIB	:	Aircraft Accident Investigation and Inquiry Board
AMO	:	Approved Maintenance Organization
AIP	:	Aerodrome Information Publication
CAAP	:	Civil Aviation Authority of the Philippines
OFSAM	:	Office of the Flight Surgeon and Aviation Medicine
PCAR	:	Philippine Civil Aviation Regulation
SP	:	Student Pilot
RPUS	:	San Fernando Community Airport
VFR	:	Visual Flight Rules
VMC	:	Visual Meteorological Conditions

1. FACTUAL INFORMATION

Aircraft Registration No.	:	RP- C8054
Aircraft Type/Model	:	Textron Aviation Inc. Cessna/ C172M
Operator	:	Leading Edge International Aviation Academy, Inc.
Address of Operator	:	2F Col Godofredo M Juliano (Ret) Bldg., L14 B86 Bayani Road Corner Roxas Ave., AFPOVAI Phase 5. Western Bicutan, Taguig City, Philippines.
Place of Occurrence	:	San Fernando Airport (RPUS), Canaoay, San Fernando City, La Union, Philippines.
Date/Time of Occurrence	:	June 23, 2023 at about 0900H/0100 UTC
Type of Operation	:	Flight Training
Phase of Flight	:	Landing
Type of Occurrence	:	Runway side excursion

1.1 History of Flight

On or about 0900H, June 23, 2023, a Cessna 172M type of aircraft with Registry Number RP-C8054 sustained damage due to a runway excursion after landing at San Fernando Airport, Canaoay, San Fernando City, La Union, Philippines. The aircraft is being operated by Leading Edge International Aviation Academy, Inc. under PCAR Part 3. The Student Pilot (SP) on board was not injured. Visual meteorological conditions prevailed at the time of the incident, and a training flight plan was filed.

The student pilot was released for first solo flight by his flight instructor within the traffic pattern. The aircraft, while on landing roll veered to the right and departed the concrete pavement of the runway. Without informing the tower of the situation, the student pilot managed to bring the aircraft back to the cemented portion of the runway and was taxiing back toward the ramp. A post-flight inspection of the aircraft shows that the aircraft sustained damage to the propeller blade and left main gear brake assembly. A review of the document shows that the aircraft and student pilot's documentation are in proper order. There were no significant remarks listed on the aircraft logbook before the incident.

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Figure 1. The aircraft bent propeller blade.

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**

1.3 Damage to Aircraft

The aircraft sustained substantial damage.

1.4 Other Damages

There were no reported other damages within the area.

1.5 Personnel Information

1.5.1 Student Pilot (SP)

Gender	:	Male
Date of Birth	:	November 09, 1992
Nationality	:	Filipino

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License	:	157706-SPL
Valid up to	:	January 25, 2025
Type rating	:	Single Engine Land-C172
Medical Certificate Valid up to	:	January 25, 2025
Time on Aircraft	:	26+35 Hours as per Pilot logbook
Grand Total time	:	26+35 Hours as per Pilot logbook

1.6 Aircraft Information

1.6.1 Aircraft Data

Registration Mark	:	RP-C8054
Manufacturer	:	Textron Aviation Inc.
Country of Manufacturer	:	USA
Type/Model	:	Textron Aviation Inc. Cessna/C172M
Operator	:	Leading Edge International Aviation Academy, Inc.
Serial No.	:	17267341
Date of Manufacture	:	1976
Certificate of Airworthiness valid up to	:	March 22, 2024
Certificate of Registration valid up to	:	September 19, 2025
Category	:	Normal
Number of Aircrew	:	1
Airframe total time	:	6,479+04 Hours

1.6.2 Engine Data

Manufacturer	:	Lycoming
Type	:	Piston
Type/Model	:	Lycoming/ O-320-E2D
Engine SN#	:	L-29993-27A
Engine total time	:	10,087+06 Hours as per aircraft logbook

1.6.3 Propeller Data

Manufacturer	:	McCauley
Type	:	Fixed Pitch
Type/Model	:	Constant Speed/ IC 160/DTM7553
Propeller SN#	:	AME44006
Propeller total time	:	2109+06 Hours as per aircraft logbook

1.7 Meteorological Information

Visual Meteorological Conditions (VMC) prevailed at the time of the incident.

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1.8 Aids to Navigation

The flight was carried out under Visual Flight Rules (VFR). Using VFR, the pilot must be able to operate the aircraft with visual references to the ground and visually avoiding obstructions and other aircraft.

1.9 Communication

The aircraft is equipped with a standard radio transceiver, communications were carried out between the pilot and air traffic controller within the area.

1.10 General Information

San Fernando Community Airport (RPUS) is located at San Fernando Airport, Canaoay San Fernando City, La Union 2500 Philippines and is listed as Community Aerodrome Facility under the Air Traffic Management Service Aerodrome Information Publication (AIP).

1.10.1 Aerodrome Information

Aerodrome Name	:	San Fernando Community Airport (RPUS)
Coordinates	:	163540.2182N 1201811.2422E
Aerodrome Operator	:	Poro Point Management Corporation, Poro Point Freeport Zone
Runway Direction	:	01 /19 (007º 02’ MAG)/(187º 02’ MAG)
Runway Length	:	212 meters
Runway Width	:	45 meters
Runway Elevation	:	4.659M (15.285FT)
Surface	:	PCN 46 R/A/W/T CONC
Apron	:	Surface: CONC. Strength: PCN 49 R/B/W/T
Types of traffic permitted	:	VFR
AD Operator	:	Airport Operations: 0000 - 0800. Rescue and firefighting service: 2200 - 0800.
Security	:	H24
Restaurants	:	At the town proper
Transportation	:	Vehicle for hire.
Visual Ground Aids	:	Standard day markers and wind direction indicator.
Facilities	:	Clinic, rescue and firefighting equipment, radio transceivers and land transportation.
AD category for fire fighting	:	CAT IV
Rescue equipment	:	Two (2) fire trucks. Ziegler V8 fire truck with water capacity of 9 000 liters and foam capacity of 900 liters. SIDES VMA 28 fire truck with water capacity of 2,500 liters and foam capacity of 300 liters.

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Capability for removal of disabled aircraft	:	Nil.
Runway (RWY) and Taxiway (TWY) markings and light (LGT)	:	RWY designation markings, threshold markings, RWY centerline markings, Touchdown zone markings, RWY side stripes, Aiming points, Distance-to-go, Yellow lines to taxiway. TWY: TWY centerline markings.
Aerodrome Obstacles	:	01/19 APCH zone: Trees, antenna, and high tension wire

1.11 Flight Recorders

The aircraft is not equipped with any flight recorders and existing Philippine Civil Aviation Regulation does not require it.

1.12 Wreckage and Impact Information

A post flight inspection of the aircraft shows that the aircraft sustained damage on the propeller blade and left main gear brake assembly.

Figure 2: Dent on the propeller blade tip

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Figure 3: The boulder rock that the aircraft propeller blade hit.

Figure 4: The aircraft's left main landing gear with grasses still stuck at the wheel.

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Figure5: Broken part of the aircraft's left main landing gear assembly.

Figure 6 and 7- Dent on part of the aircraft's left main landing gear assembly

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1.13 Medical and Pathological Information

The pilot was subjected to medical and drug tests after the occurrence and was found to have no significant medical findings. He had also undergone the post-flight accident medical examination conducted by the Office of the Flight Surgeon and Aviation Medicine (OFSAM). OFSAM recommended the pilot to a CAAP Psychologist and Psychiatrist for evaluation and clearance due to the observed depressive mood and/or possible debriefing (stress). A psychiatric report published on August 8, 2023, revealed that the pilot has a working impression of depressive disorder requiring treatment. Temporarily unfit to fly due to depressive disorder.

1.14 Fire

No evidence of post impact fire was noted during on-site investigation as a result of the accident.

1.15 Search and Survival Aspects

The pilot of the aircraft was secured by seatbelt and a harness which remained intact during the flight. No search operation was deployed since the occurrence was at a controlled aerodrome facility.

1.16 Organization and Management Information

1.16.1 Operator

Leading Edge International Aviation Academy, Inc. (LEIAAI) has an Aircraft Training Organization Certificate (ATOC) #2008-14 is authorized to perform Flight ang Ground training operations that provides private pilot course, commercial pilot course, flight instructor course and refresher for single engine land services. LEIAAI flight operations is located at San Fernando Community Airport, Canaoay, San Fernando City, La Union. The aircraft RP-C8054, is listed on their ATOC Operations specification.

1.16.2 Maintenance

The maintenance function of RP-C8054 is being undertaken by Leading Edge International Aviation Academy, Inc. Approved Maintenance Organization (AMO) with a current Certificate number 90-10 with facility located at San Fernando Community Airport.

2.0 ANALYSIS

2.1 General

During the interview, it was revealed that the student pilot (SP) was released for his first solo by his flight instructor after five touch-and-go with one go-around when the incident happened. The SP said that the aircraft floated after breaking the glide on his approach. It touched down beyond the intended landing point on the runway. The SP also said that he had difficulty slowing down the aircraft while applying brakes. Several witnesses saw that the SP was fast in his

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approach and during the landing roll. While turning to the right, the aircraft went out towards the grassy portion of the runway. Without informing the tower of the runway excursion, the SP manages to bring the aircraft back to the cemented portion of the runway.

This serious incident started to occur during the approach and landing phases of the flight. The aircraft, while on finals, was fast on its approach to landing. A poorly executed approach and touchdown, if not properly managed, can lead to directional control difficulty. The SP did not monitor his descent against the required vertical profile, and the landing zone was way off the target point. The SP was, in a way, not stabilized for the approach. and should have aborted the landing. A review of the school training and procedure manual revealed that there was no unstabilized approach during landing and recovery techniques guidance included in the manual.

There are many interventions that have been created by the regulatory body to assist in reducing the risk of accidents in the approach and landing phases of flight. One of these is a stabilized approach criteria, which was designed to assist the pilot in flying a safe approach and landing. Operators are to provide guidance on unstabilized approaches during landing and recovery techniques in the applicable manuals. It is recommended to ensure that recognition and recovery information for unstabilized approaches is available to all pilots by adequately briefing them on the proper techniques to be used. The absence of such procedures and guidance in their training manual resulted in the student pilot's failure to apply the necessary corrections during an unstable approach. Inclusion of such procedures in the manual is essential to mitigating the errors of pilots during landing.

On the other hand, a review of the progress flight report and grade slip of the student pilot's previous flights shows that most of the common remarks of the flight instructor were about his fast operation during the taxiing of the aircraft. This was evident during his landing roll, wherein he said he had difficulty slowing down the aircraft. The landing process must never be considered complete until the aircraft decelerates to the normal taxi speed during the landing roll or has been brought to a complete stop when clear of the landing area. Moreover, without informing the tower of the aircraft having a runway excursion, the SP managed to bring the aircraft back to the cemented portion of the runway and was taxied toward the ramp. A review of the school training and procedure manual also reveals that it does not include after landing roll and taxi back procedures.

A main landing gear teardown and assessment were conducted by the Operator's AMO. The MLG inspection conducted also revealed that there was no MLG malfunction or failure that caused the incident. Witnesses after the interview stated that the aircraft was still fast during the landing roll. A post-flight inspection of the aircraft shows that the aircraft sustained damage to the propeller blade and left main gear brake assembly.

3.0 CONCLUSION

3.1 Findings

a. The pilot was qualified on the Textron Aviation Inc., Cessna C172 type of aircraft.

b. The pilot has a valid Student Pilot License and medical certificate issued by the CAAP.

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c. The aircraft has current Certificates of Airworthiness.

d. The aircraft was certified, equipped, and maintained in accordance with CAAP-PCARs and approved procedures.

e. The aircraft was properly released for flight without any discrepancies noted on its logbook.

3.2 Probable Cause

3.2.1 Primary Cause Factor

a. Failure to execute the go-around procedures during unstable approach for landing.

3.2.2 Contributory Cause Factor

a. Fast approach during landing.
b. Lack of situation awareness.

4.0 SAFETY RECOMMENDATIONS

As a result of the Operator's safety actions, the safety deficiencies presented in this report have been fully addressed therefore no further safety recommendations are being proposed.

5.0 SAFETY ACTIONS

As a result of the serious incident, the Operator initiated safety corrective actions to mitigate the recurrence of the same incident:

5.1 Stan-eval flight to the FI and SP with emphasis on final approach, go-around and taxiing procedures.

5.2 Inclusion in the school training and procedure manual of:
a. Stabilized approach standards.
b. After landing roll and taxi back procedure.
c. Impending brake failure.
d. Procedures to be followed in case of accident/ incident on the runway.

5.3 Reinforced safety briefing prior to first soloing to address and help alleviate mental stress factors on SP.
5.4 Safety meeting was conducted to all pilots on the topic:
5.5 Go-around procedures during unstable approach for landing.
5.6 Situation awareness

-END-

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