



Republic of the Philippines
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES

AIRCRAFT ACCIDENT INVESTIGATION AND INQUIRY BOARD

FINAL REPORT

RP-R2354
AG CAT G-164A

OPERATOR: SOUTH PACIFIC AERIAL SPRAYING SERVICES (SPASS)

TYPE OF OPERATION: AGRICULTURAL SPRAYING

DATE OF OCCURRENCE: APRIL 15, 2019

***PLACE OF OCCURRENCE: BRGY. SIGAYAN, LAMBAYONG, SULTAN
KUDARAT, PHILIPPINES***

TABLE OF CONTENTS

(AG CAT G-164A, RP-R2354 Final Report)

Description	Page
Title Page	----- i
Table of Contents	----- ii
Foreword	----- iii
Synopsis	----- iv
List of Acronyms and Abbreviations	-----
1 Factual Information	----- 1
1.1 History of Flight	----- 1
1.2 Injuries to Person	----- 2
1.3 Damage to Aircraft	----- 2
1.4 Personnel Information	----- 2
1.5 Aircraft Information	----- 3
1.5.1 Aircraft Data	----- 3
1.5.2 Engine Data	----- 3
1.5.3 Propeller Data	----- 3
1.6 Meteorological Information	----- 3
1.7 Aids to Navigation	----- 4
1.8 Communications	----- 4
1.9 Flight Recorders	----- 4
1.10 Wreckage and Impact Information	----- 4
1.11 Fire	----- 4
1.12 Search and Survival Aspect	----- 5
1.13 Medical & Pathological Information	----- 5
1.14 Organization and Management Information	----- 5
1.14.1 Operator	----- 5
1.14.2 Maintenance	----- 5
2.0 Analysis	----- 5
2.1 General	----- 5
2.2 Pilot Qualification	----- 6
2.3 Proficiency Flight Test (PFT)	----- 6
2.4 Maintenance Activity	----- 7
2.5 Interview with the Pilot	----- 7
2.6 Loss of Control Inflight (LOC-I)	----- 7
2.7 Company's Safety Action	----- 7
3.0 Conclusions	----- 8
3.1 Findings	----- 8
3.2 Probable Cause	----- 8
4.0 Safety Recommendation	----- 8
Signatories	----- 8

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 an Allied AG CAT Productions, Inc. G-164A, an agricultural aircraft with registration no. RP-R2354 owned and operated by South Pacific Aerial Spraying Services (SPASS) sustained substantial damage following a departure stall at Lambayong Airstrip while enroute to Datu Sangki, Lambayong, Sultan Kudarat on April 15, 2019 at about 0520H.

Notification of Occurrence to National Authority

The notification of accident to AAIB CAAP was relayed by the Operator of the aircraft at 0930H (LOCAL) on April 15, 2019.

Identification of the Investigation Authority

The Aircraft Accident Investigation and Inquiry Board (AAIB), 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 (AAIB) and published at the CAAP website on **19 December 2024.**

Synopsis:

On April 15, 2019 at about 0520H, an Allied AG CAT Productions, Inc. G-164A agricultural aircraft with registration no. RP-R2354, sustained substantial damage following a departure stall at Lambayong Airstrip while enroute to Datu Sangki, Lambayong, Sultan Kudarat. The aircraft is owned and operated by South Pacific Aerial Spraying Services (SPASS), a holder of the Agricultural Aircraft Certificate (AAC) authorized to perform aerial work and agricultural operations. The pilot, who was the sole occupant, sustained minor injuries. Visual meteorological conditions (VMC) prevailed at the time of the accident. The cause of the occurrence was attributed to the failure of the pilot to control the aircraft in flight.

LIST OF ACRONYMS AND ABBREVIATIONS

AAIIB	:	Aircraft Accident Investigation and Inquiry Board
AAC	:	Agricultural Aircraft Certificate
AAOC	:	Agricultural Aircraft Operator Certificate
AMFL	:	Aircraft Maintenance and Flight Log
AMO	:	Approved Maintenance Organization
AMOC	:	Approved Maintenance Organization Certificate
CAAP	:	Civil Aviation Authority of the Philippines
CPL	:	Commercial Pilot License
FSIS	:	Flight Standards Inspectorate Service
LOC	:	Loss of Control
LOC-I	:	Loss of Control Inflight
OFSAM	:	Office of the Flight Surgeon and Aviation Medicine
PCAR	:	Philippine Civil Aviation Regulations
PFT	:	Proficiency Flight Test
PPFT	:	Pilot Proficiency Flight Test
SPASS	:	South Pacific Aerial Spraying Services
RWY	:	Runway
TSN	:	Time since New
TSO	:	Time since Overhaul
VFR	:	Visual Flight Rules
VHF	:	Very High Frequency
VMC	:	Visual Meteorological Condition



1. FACTUAL INFORMATION

Aircraft Registration No. : RP-R2354

Aircraft Type/Model : Allied Ag Cat Production Inc. G-164A

Operator : South Pacific Aerial Spraying Services (SPASS)

Address of Operator : Old International Airport, Sasa, Davao City

Place of Occurrence : Brgy. Sigayan, Lambayong, Sultan Kudarat, Philippines

Date/Time of Occurrence : April 15, 2019/0520H

Type of Operation : Agricultural Spraying

Phase of Flight : Cruise

Type of Occurrence : Departure Stall

1.1 History of Flight

On April 15, 2019 at about 0520H, an Allied AG CAT Productions, Inc. G-164A agricultural aircraft with registration no. RP-R2354, sustained substantial damage following a departure stall at Lambayong Airstrip while enroute to Datu Sangki, Lambayong, Sultan Kudarat. The aircraft is owned and operated by South Pacific Aerial Spraying Services (SPASS), a holder of the Agricultural Aircraft Certificate (AAC) authorized to perform aerial work and agricultural operations. The pilot, who was the sole occupant, sustained minor injuries. Visual meteorological condition (VMC) prevailed at the time of the accident.

An interview with the pilot revealed that he was to ferry the aircraft to the spraying area in Datu Sangki, Lambayong, Sultan Kudarat for his first spraying operation. Upon take-off at Delinanas Lambayong Aerodrome using RWY 18, during the initial climb, the pilot claimed that the climb was flat and decided to return to the runway. However, while initiating a right turn, the aircraft entered into a stall and subsequently crashed into the ground. The aircraft settled on marsh land and caught fire upon impact at Brgy. Sigayan, Lambayong, Sultan Kudarat. The aircraft's final resting point was located at 6° 49.305 N, 124° 34.485 E, and the last heading was 228 degrees. Fire consumed the aircraft engine, cockpit, fuselage, and a portion of the wings.

The pilot was brought to Tacorong City Hospital for initial treatment and was later transferred to the Metro Davao General Hospital, Davao City, for further observation and diagnostic testing. The pilot was in stable condition, but sustained minor injuries to his face and nose.



Figure 1- RP-R2354 being consumed by fire when it crashed landed on a marsh land.

1.2 Injuries to Person (s)

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

1.3 Damage to Aircraft

The aircraft was destroyed. The fire consumed the engine, cockpit, fuselage and a portion of the wings.

1.4 Personnel Information

Gender : Male
 Date of Birth : February 25, 1981
 Nationality : Philippines
 Civil Status : Married
 License Type : 102765-CPL
 Date Issued : July 20, 2015 valid up to 31 July 2020
 Type Rating : Airplane: Single Engine Land-Agcat
 Medical Certificate Validity : September 6, 2019

Last Check Ride	:	November 17, 2017 (Reinstatement)
Total Flying Time (4-14-19)	:	5,737+06 Hours
Total Flying Time on type (Agcat G-164A)	:	4,385+00 Hours

1.5 Aircraft Information

1.5.1 Aircraft Data

Registration Number	:	RP-R2354
Manufacturer	:	Allied Agcat Production Inc.
Country of Manufacturer	:	USA
Type/Model	:	G164A
Serial Number	:	1574
Owner/Operator	:	South Pacific Aerial Spraying Services (SPASS)
Address of Owner/Operator	:	Old International Airport, Sasa, Davao City
Gross Weight	:	1,569.77 Kilograms (Kgs)
Total Time in Service	:	12,862+55 hours as of April 14, 2019
Last 100 hours Inspection Performed	:	January 2, 2019

1.5.2 Engine Data

Manufacturer	:	Pratt & Whitney
Type	:	9-cylinder, single row radial, turbine
Model	:	Wasp Jr. R-985-AN-14B
Engine Serial Number	:	42-22533
Time Since Overhaul (TSO)	:	919+05 hours as of April 14, 2019
Last 100 hours Inspection Performed	:	January 2, 2019

1.5.3 Propeller Data

Manufacturer	:	Hamilton Standard
Type/Model	:	2D30/421
Propeller Serial Number	:	W27813
Propeller Time Since New (TSN)	:	New
Propeller Time	:	740+30 hours as of April 14, 2019
Last 100 hours Inspection Performed	:	January 2, 2019

1.6 Meteorological Information

Visual Meteorological Condition (VMC) prevailed during the accident.



1.7 Aids to Navigation

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

1.8 Communications

The aircraft was equipped with VHF radio which is used to communicate with other pilots in the area and ground personnel.

1.9 Flight Recorders

The aircraft is not equipped with flight recorders and existing CAAP regulation does not require it.

1.10 Wreckage and Impact Information

The aircraft settled on marsh land and caught fire upon impact at Brgy. Sigayan, Lambayong, Sultan Kudarat. The aircraft's final resting point was located at 6° 49.305 N, 124° 34.485 E, and the last heading was 228 degrees. The fire consumed the engine, cockpit, fuselage, and a portion of the wings.



Figure 2- The aircraft wreckage.

1.11 Fire

The aircraft caught fire upon impact.



1.12 Search and Survival Aspect

The pilot survived the accident as he was able to egress the aircraft before the fire broke out.

1.13 Medical and Pathological Information

After receiving initial treatment at Tacorong City Hospital, the pilot was transferred to Metro Davao General Hospital, Davao City for further observation and diagnostic testing. The pilot was in stable condition, but sustained minor injuries to his face and nose. Additionally, the pilot did not report to CAAP-OFSAM for a post-medical examination.

1.14 Organizational and Management Information

1.14.1 Operator

The South Pacific Aerial Spraying Services (SPASS) is a holder of Agricultural Aircraft Operator Certificate (AAOC) number 11-2011009 valid to operate up to March 23, 2020 to perform Aerial Work on (Commercial) Agricultural Operations. As defined in the Operations Specifications, RP-R2354 is included in the list of authorized aircraft for agricultural operations.

1.14.2 Maintenance

SPASS is also a holder of an Approved Maintenance Organization Certificate (AMOC) # AMO-110-12 empowered to operate as an Approved Maintenance Organization in compliance with the requirements of the Philippine Civil Aviation Regulation (PCAR) Part 6 with official address at Old International Airport, Sasa, Davao City, Philippines with limited ratings on Airframe valid up to January 19, 2020. The maintenance function of RP-R2354 is being undertaken by South Pacific Aerial Spraying Services Repair Station.

2.0 ANALYSIS

2.1 General

On April 15, 2019 at about 0520H, RP-R2354 was scheduled to conduct its first spraying activity at Datu Sangki, Lambayong, Sultan Kudarat. On takeoff during the initial climb, the pilot claimed that the climb was flat and decided to return to the runway. However, while initiating a right turn, the aircraft entered into stall and subsequently crashed into the ground. The aircraft settled on marsh land and caught fire upon impact at Brgy. Sigayan, Lambayong, Sultan Kudarat.





Figure 3- The aircraft wreckage after the accident.

2.2 Pilot Qualification

The pilot held a Commercial Pilot License (CPL) 102765, which expires on July 31, 2020. His rating indicated Airplane: Single Engine-Land Agcat. His flying time with the G164 Agcat is 4,385+00 hours, with a dual time of 151+24 hours and a total accumulated flying time of 5,737+06 hours as of April 14, 2019. His last Pilot Proficiency Flight Test (PPFT) was conducted by FSIS, CAAP on November 11, 2017. His medical examination will expire on September 6, 2019, as issued by OFSAM, FSIS, CAAP. Based on the enumerated data, the pilot was qualified to fly the Agcat type of aircraft.

2.3 Proficiency Flight Test (PFT)

The Licensing and Certification Department, FSIS, CAAP, conducted the Proficiency Flight Test (PFT) for the pilot involved in this accident on November 17, 2017 to reinstate his license, following his involvement in an accident on April 15, 2015 that resulted in his grounding from performing flying duties. The pilot successfully completed the conducted PFT, receiving a standard assessment with a validity of two (2) calendar years for a single engine rating, as per PCAR Part 2 para 2.3.2.3 d (2). According to records, the pilot's status in flying the Agcat type of aircraft was current and proficient.

2.4 Maintenance Activity

Review of the Aircraft Maintenance and Flight Log (AMFL) from 7 April to 15 April 2019 (15+35 hours flying time) did not reveal any significant maintenance activity done on the aircraft. No discrepancy was noted except for routinely Pre-flight and Post Inspection.

The Tear down Inspection of the engine used to verify if the aircraft encountered engine trouble during flight was not undertaken because the aircraft engine was consumed by fire during the impact.

2.5 Interview with the Pilot

The pilot stated that RP-R2354 was scheduled to be ferried for a spraying operation about 0500H at Datu Sanki, Lambayong, Sultan Kudarat. As a result, the pilot loaded the aircraft with 600 liters of spraying chemicals and half filled it with fuel. Upon take-off using RWY 18 of Delinanas Lambayong Aerodrome while en-route or approaching the spraying area (Lambayong) at 100 feet altitude, he experienced that the aircraft was massing (cannot climb) despite having full power and all aircraft parameters within normal limits. As a result, he made the decision to return to the station, however the aircraft was already uncontrollable, even after dumping the chemicals. He made a 5-degree bank to the right with speed between 50 and 70 knots, but still, the aircraft went down to its final resting position. In this particular event, it is probable that the aircraft stalled and became uncontrollable, which led to the pilot not being to control the aircraft as it descended towards the ground.

2.6 Loss of Control Inflight (LOC-I)

Loss of control inflight (LOC-I) refers to accidents and incidents in which the pilot has temporarily, or completely, lost the ability to maintain control of an aircraft in flight. LOC-I typically results in an extreme deviation from the intended flight path.

The cause of the aircraft descending during maneuvering cannot be ascertained. By performing an abrupt maneuver to return the aircraft to the runway without ensuring it does not exceed its bank angle, the pilot's lack of situational awareness led to his inability to control the aircraft while cruising within normal range.

2.7 Company's Safety Action

After the accident, the South Pacific Aerial Spraying Services (SPASS) formulated the following plans for the pilot to address the deficiencies noted in this event:

1. To conduct lectures and flying lessons for the involved pilot, emphasizing prevention, recognition, and recovery skills while flying.
2. After retraining, the involved pilot should undergo a CAAP check ride, emphasizing aircraft recovery and control in emergency scenarios like stalls and engine problems.

However, the pilot involved in the accident did not report back to duty, hence the corrective actions have not been implemented. Based on available records, the involved pilot did not renew his license that expired on July 31, 2020.



3.0 CONCLUSIONS

3.1 Findings

- 3.1.1** The aircraft has a current Certificate of Registration valid until February 22, 2024.
- 3.1.2** The aircraft has a current Certificate of Airworthiness valid until January 3, 2020.
- 3.1.3** The pilot has a valid and current commercial pilot license and medical certificate.
- 3.1.4** The aircraft logbook recorded no discrepancy for the past six (6) days.
- 3.1.5** The aircraft has accumulated a total of 12,878+30 hours as of April 15, 2019.
- 3.1.6** The engine time since new (TSN) is 934 + 30 hours.
- 3.1.7** The propeller time since overhaul (TSO) is 758+05 hours.
- 3.1.8** The aircraft completed its 100-hour inspection on January 4, 2019.
- 3.1.9** The engine was consumed by fire upon impact.

3.2 Probable Cause

- a.** The failure of the pilot to control the aircraft in flight (human factor).

4.0 SAFETY RECOMMENDATION

- 4.1** Since the pilot has ceased flying, the safety actions formulated by the operator, which are also part of the safety recommendations, cannot be implemented. There are no other safety recommendations being proposed as a result of the investigations.

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