

**CIVIL AVIATION AUTHORITY OF THE PHILIPPINES**  
**Aircraft Accident Investigation and Inquiry Board**  
**Aircraft Accident Report**

**BASIC INFORMATION**

Aircraft Registration No. : RP-R2923

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

Owner/Operator : Mindanao Rainbow Agricultural Development Services, Inc.

Address of Operator : Solidwood Hangar, General Aviation Area Davao International Airport, Davao City

Date/Time of Accident : March 31, 2017/0730H

Type of Operation : Agricultural Spraying

Phase of Operation : Cruise

Type of Occurrence : Forced landing due to loss of engine power

Place of Accident : Sumipru Subasta Banana Plantation, Barangay Subasta, Calinan District, Davao City

**EXECUTIVE SUMMARY**

On March 31, 2017, about 0730H, an Allied Ag cat Productions, Inc. G-164A agricultural aircraft with registration no. RP-R2923 sustained substantial damage following a forced landing due to loss of engine power while on a swath run at Barangay Subasta, Calinan District, Davao City.

The aircraft is being operated by Mindanao Rainbow Agricultural Development Services, Inc., a holder of Agricultural Aircraft Certificate (AAC) authorized to perform agricultural aerial work operations.

The pilot has just finished several swath run of his 4<sup>th</sup> load when he heard a popping sound followed by loss of engine power.

At about 80 feet above ground level, the pilot immediately dumped the remaining chemicals and elected to force land the aircraft in a banana plantation.

The aircraft collided with banana plants and banana guy wires before it came in contact with the ground.

The aircraft sustained damage to the engine and engine mounts, propeller blades, airframe, both wings leading edge and main landing gears.

The pilot who was the sole occupant evacuated the aircraft and did not sustain any injuries.

The crash site is located about 8 kilometers south of Calinan Aerodrome where the flight originated with coordinates 07 09. 182N 125 27. 010E.

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

## **PROBABLE CAUSE**

The Aircraft Accident Investigation and Inquiry Board determined that the probable cause of this accident was:

- **Primary Cause Factor**

Separation of cylinder head from cylinder barrel that subsequently resulted to loss of engine power. (Material failure)

- **Contributory Factors**

Non adherence by the pilot to the General Operating Instructions (Vol 1) for R-985 engines prescribing the specific temperature limitations.

- **Underlying Cause**

The pre-flight checklist and post flight checklist do not include visual inspection on the area of the cylinder head cooling fins for exhaust emission stains and exhaust carbon deposits.

## **SAFETY RECOMMENDATIONS**

As a result of this investigation, the Aircraft Accident Investigation and Inquiry Board made the following safety recommendations:

- CAAP-FSIS to ensure adherence by the operator to the General Operating Instructions for a R-985 engines on the specific temperature limitations to reduce if not eliminate the problems related to cylinder head separation in the future.
- CAAP-FSIS to ensure that the operator incorporates in their pre-flight checklist and post flight checklist visual inspection on the area of the cylinder head cooling fins for exhaust emission stains and exhaust carbon deposits.