

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

BASIC INFORMATION

Aircraft Registration	:	RP-R5837
Aircraft Type/Model	:	Grumman Ag-Cat G164A
Owner/Operator	:	Aerowurkz Aerial Spraying Services
Address of Operator	:	General Aviation Area, Old Airport, Sasa, Davao City
Place of Accident	:	MD Panabo Agri-Ventures Aerodrome Panabo City, Davao Del Norte
Date/Time of Incident	:	June 03, 2014/0551H
Type of Operation	:	Crop Dusting (Aerial Application)
Phase of Operation	:	Take-off roll
Type of Accident	:	Runway overrun during rejected take-off

EXECUTIVE SUMMARY

On June 3, 2014, around 0551H a Grumman AgCat G-164A type of Aircraft took off from MD Panabo Agri-Ventures, Inc. Aerodrome for a regular aerial spraying operation. During takeoff roll, after passing marker number 3 an explosion was heard by the pilot followed by a black thick smoke coming from the engine and subsequently the engine lost its power. The Pilot decided to abort the take off and immediately chopped the power, applied maximum brakes but the aircraft became uncontrollable due to its weight and coupled with the slippery condition of the runway. The aircraft ran over a perimeter fence at the end of the runway and came to stop in a canal 20 meters from the end of the runway. The airplane sustained damage to the airframe, wings, engine and propeller. The pilot who was the sole occupant was able to escape uninjured. No post crash fire ensued after the impact. Visual meteorological conditions 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:

- **CAUSE FACTOR**

- **Primary Cause Factor**

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

- **Contributory Factors**

- a. Failure of the maintenance personnel to replace the CHT gauge, a significant instrument used to monitor the engine cylinder head temperature.
- b. Non adherence to the General Operating Instructions (Vol 1) for R985 engines prescribing the specific temperature limitations.

• **Underlying Cause**

- a. The pre-flight checklist and post flight checklist does not include visual inspection on the area of the cylinderhead cooling fins for exhaust emission stains and exhaust deposits.

SAFETY RECOMMENDATIONS

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

- CAAP-FSIS shall require the operator to adhere to General Operating Instructions for R985 engines on the specific temperature limitations to reduce if not eliminate the problems related to cylinder head separation in the future.
- CAAP-FSIS shall require the operator to establish an acceptable monitoring and recording of aircraft spare parts to prevent parts shortage in the future.
- CAAP-FSIS shall require the operator to incorporate in their pre-flight checklist and post flight checklist visual inspection on the area of the cylinderhead cooling fins for exhaust emission stains and exhaust deposits.