

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

**BASIC INFORMATION**

Aircraft Registration	:	RP-C8220
Aircraft Type/Model	:	Cessna 152
Owner/Operator	:	Leading Edge International Academy, Inc.
Address of Owner	:	Poro Point Free Port Zone, San Fernando City La Union
Date/Time of Accident	:	April 2, 2013/ 0205 UTC
Type of Operation	:	Flight Training
Phase of Operation	:	Cruising
Type of Occurrence	:	Forced landing
Place of Accident	:	Three (3) nautical miles north of Plaridel Airport

**EXECUTIVE SUMMARY**

On April 2, 2013 0930H/ 0230 UTC, a Cessna 152 type of aircraft with Registry Number RP-C8220 took off at RWY 35 of Plaridel Airport. After airborne and climbing, the pilot's noticed that the cylinder head temperature (CHT) was going higher at 390 F (max. 500 F). The pilot performed leveled off at 500 feet to let CHT go down and stabilize. Upon reaching the training area, both pilots noticed that the oil temperature was almost on the red line, the oil pressure was going low also, RPM decreasing and the engine was experiencing vibration. Since the airplane could not maintain the altitude and descending rapidly, the pilot decided to make a forced landing at the rice field and tower was advised of their position about 3 nautical miles north of the airport. The aircraft sustained major damage and the pilots egressed the aircraft safely and without injury

**PROBABLE CAUSE**

The Aircraft Accident Investigation and Inquiry Board determined that the probable causes of this accident are the following:

- **Primary Factors:**

Engine power-loss was due to internal mechanical failure (Material Factor).

Piston rings of Cylinder no.2 was broken/ separated by force into several pieces due to Material Failure.

- **Contributory Factor:**

The Pilot in Command (PIC) failed to discontinue the flight and return immediately to the station on the first abnormal indication in engine parameters.

The maintenance personnel failed to determine the most appropriate corrective actions based on the maintenance manuals or to the trouble shooting guide manuals due to occurrence of recurring engine discrepancies. (Increasing Cylinder Head Temperature & low Oil pressure)

- **Underlying Factor:**

Inadequate company standardization of pilots (FI) to make good judgement on certain maintenance related concerns on flight.

Inadequate company maintenance standards resulted in recurring discrepancy and un-amended regulatory records of change engine.

## **SAFETY RECOMMENDATIONS**

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

- Maintenance personnel of LEIAI must undergo re-training on Lycoming power plant course and or undergo advance maintenance trouble shooting course.
- All corrective maintenance action must be in accordance to manufacturer trouble shooting manuals.
- Establish Standard Operating Procedures for the entire operations that any sign of abnormality on the engine parameters has to discontinue the flight and land as soon as practicable for corrective Maintenance Actions.
- CAAP airworthiness inspectors for LEIAI shall be further trained to identify non-compliance to maintenance standards and require the recording of appropriate corrective actions.
- Satellite flight staging facilities of ATO shall be evaluated according to standards before any flight can be staged thereat.
- Require the company to submit its maintenance line personnel and managers for in-house supervised review on airworthiness regulatory standards by qualified CAAP airworthiness inspectors.