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Subject: CEN24LA036 - Engine Examination

Contact: FAA Inspector Jay Dankoff; Lycoming Investigator Troy Helgeson

- The engine was examined at ATP by FAA Inspector Dankoff and Lycoming investigator Troy Helgeson.
- The cowlings, the top spark plugs, and valve covers were removed for the examination.
- The engine was rotated by hand via the propeller. And compression was felt at Cylinders number 1, 2, and 3. No compression was felt at Number 4 cylinder. Further examination revealed that the number 4 exhaust valve was stuck open, and the number 4 push rod was bent.
- The cylinder was borescope inspected and no anomalies noted.
- Both magnetos produced sparks at all leads when the engine was rotated. The spark plugs appeared normal as compared to the Champion Aviation check a Plug chart AV-27.
- All of the fuel injectors were found clear.
- The cylinders on this engine displayed the letter "C" stamped inside a circle on the cylinders.
- A review of the maintenance records showed that Service bulletin 388C was not completed. (Procedure to Determine Exhaust Valve and Guide Condition) Required every 1000 hours of operation if the new improved Hi-Chrome exhaust valve guides are installed. Indicated by letter "C" stamped inside a circle on the boss for the drain back fitting. (Service Instruction 1485A.)
- This engine has 1642.6 hours since being rebuilt by Lycoming Engines on 2/1/2022.