

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



WPR22L316

AIRFRAME AND ENGINE EXAMINATION

9/20/2022

A. ACCIDENT

Location: Vacaville, California
Date: August 24, 2022
Time: 1118 Pacific daylight time
Airplane: Cessna 150, N22507

B. ACCIDENT SITE, AIRFRAME AND ENGINE EXAMINATION

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C. SUMMARY

Examination of the wreckage was conducted at the facilities of Plain Parts, Pleasant Grove, California. The examination of the airframe and engine revealed evidence of a stuck exhaust valve on the No. 2 cylinder. No additional evidence of preexisting mechanical malfunction that would have precluded normal operation was found.

D. DETAILS OF THE INVESTIGATION

1.0 Engine and Airframe Examination

The engine was partially attached to the engine mount. The carburetor was separated from the intake spider. The vacuum pump was separated. All induction tubes and clamps were secure. The exhaust was impact damaged. The upper spark plugs and rocker box covers were removed. The propeller was rotated by hand. Rotational continuity was established throughout the engine. Thumb compression was obtained on cylinder 1, 3, and 4. Cylinder 2 had no compression. The cylinder was removed for further examination.

Left and right magnetos were removed. The magneto drive shafts were rotated by hand and spark was produced on all posts.

Cylinder no. 2 was intact and undamaged. The exhaust and intake valve springs were intact and oil coated. The intake and exhaust valve rocker arms were intact oil coated. The valve springs and keepers were removed. The intake valve slid out of the valve guide freely. The exhaust valve slid out of the valve guide with a significant amount of force.

The exhaust valve stem exhibited some amount of carbon build up along with the valve neck. Some white deposits were observed around the rim of the valve.

The valve seat exhibited some carbon build up.

The intake valve stem exhibited carbon deposits on the neck of the valve and stem. The valve seat contact area was free of carbon. A slight amount of carbon build up was observed on the valve rim.

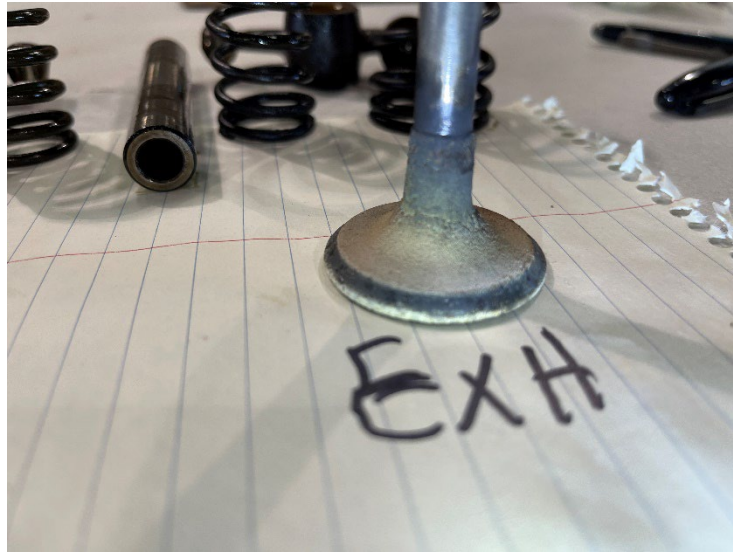


Figure 1: No. 2 Cylinder Exhaust Valve - Removed.

All throttle, mixture, and carburetor heat controls remained attached to their respective engine control arms.

Submitted by:

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