



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

November 6, 2019

AIRFRAME AND ENGINE EXAMINATION SUMMARY

WPR20LA014

This document contains 0 embedded photos.

A. ACCIDENT

Location:	Spanaway, WA
Date:	October 23, 2019
Aircraft:	Thompson JR RV-6, N615RJ
NTSB Investigator-in-Charge:	Maja Smith

B. SUMMARY

Examination of the recovered airframe and engine was conducted at the pilot/owner's hangar in Spanaway, WA on November 6, 2019

C. DETAILS OF THE INVESTIGATION

Engine Examination

The engine remained attached to the airframe. All engine accessories remained attached to the engine via their respective mounts. All cylinders remained attached to the crankcase. Throttle, mixture, propeller, and carburetor heat control continuity was established from the controls to the engine. The top spark plugs and cylinder rocker box covers were removed. The crankshaft was rotated by hand using the propeller. Rotational continuity was established throughout the engine and valve train. Thumb compression and suction was obtained on all six cylinders. Equal movement was observed on all of the intake and exhaust valve rocker arms.

Magneto to engine timing was verified at 22 degrees for both magnetos. The magnetos were not equipped with impulse coupling; the left magneto sparked on all four ignition leads when the propeller was rotated by hand. The right magneto was removed and the drive shaft was rotated by hand and spark was observed on all four posts.

The top spark plugs were intact and exhibited normal operational signatures when compared to Champion Aviation Service Manual AV6-R.

The intake and exhaust system remained intact. No evidence of foreign object ingestion was observed.

The engine driven fuel pump was intact. The fuel pump was removed and functionally tested by hand. The compression test was obtained by moving the lever and verifying that the pressure was obtained on both inlet and outlet ports. The fuel pump was disassembled and all internal components were intact and undamaged.

The Ellison Fluid System throttle body injector remained attached to the engine. The throttle arm moved freely from stop to stop. The inlet fuel screen was removed and found to be free of debris. The throttle body injector was removed and retained for further examination

Airframe Examination
Examination of the airframe revealed that both the left and right wings remained attached to the fuselage. Both left and right wing fuel tank caps remained secure and both fuel tanks contained an unmeasured amount of fuel. Both the left and right wing fuel tank fuel vents were obstructed by

wooden golf tees. The pilot reported that first responders plugged the vents.

A liquid consistent with 100-low lead fuel was obtained from left and right fuel tank drain sumps. Additionally, fuel samples were removed from the airframe fuel filter (gascolator). No visible contaminants were observed. A water finding paste test did not indicate any water contamination,

The fuel inlet line to the engine was removed and the airframe electric fuel boost pump was turned on. Fuel was observed expelling from the inlet fuel line with the fuel selector valve in the left and right fuel tank positions.

The air filter and air filter housing was free of debris.