



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region
May 2, 2017

AIRFRAME AND ENGINE EXAM REPORT

WPR16LA165

This document contains 5 embedded photos.

A. ACCIDENT

Location: Gunnison, UT
Date: August 12, 2016
Aircraft: Robinson R44, Registration Number: N247DB, Serial #: 10086
NTSB IIC: Howard Plagens

B. EXAMINATION PARTICIPANTS:

Howard Plagens
Senior Air Safety Investigator
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C. SUMMARY

Examination of the recovered airframe and engine was conducted on May 2, 2017, at the operators hangar at Gunnison/Salina Airport.

D. DETAILS OF THE INVESTIGATION

1.0 Airframe Examination

The operator had removed the rotor blades, mast, transmission, fuel tank, engine cowling, and magnetos.

2.0 Engine Examination

Investigators left the engine in place on the airframe. They removed the valve covers and the top spark plugs. They manually rotated the crankshaft with the belt drive. The crankshaft rotated freely, and the valves moved approximately the same amount of lift in firing order. Investigators obtained thumb compression on all cylinders in firing order.



Figure 1 Side View of Helicopter

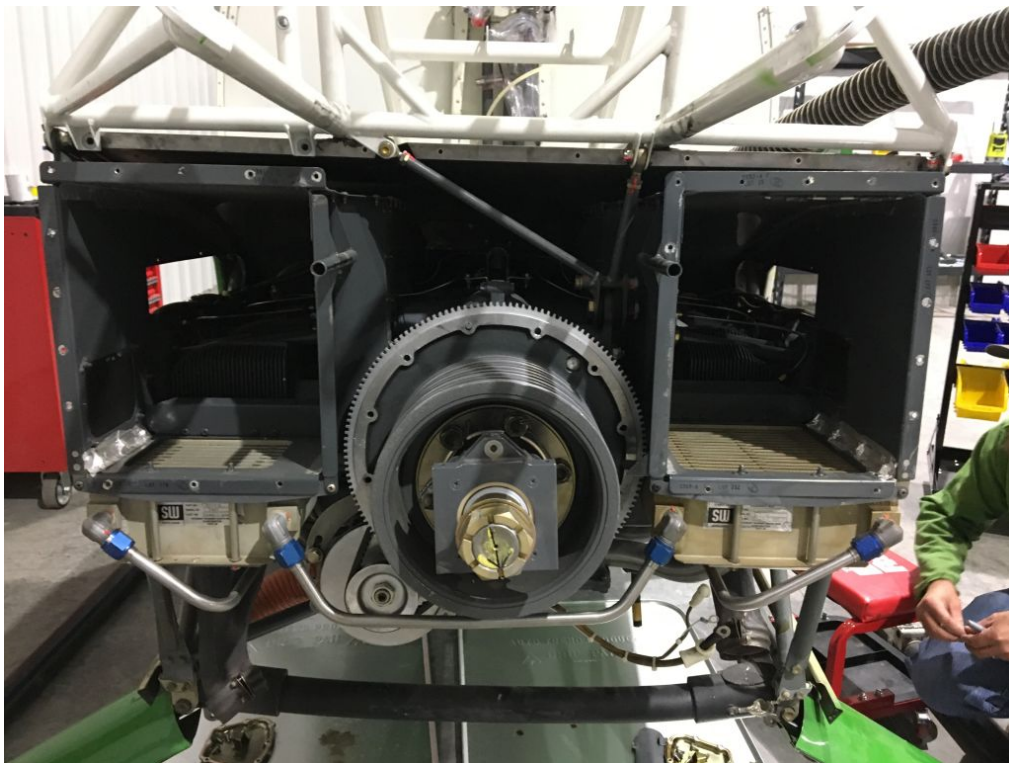


Figure 2 Rear View of Engine

Investigators removed the spark plugs; all center electrodes were circular and clean with no mechanical deformation. The spark plug electrodes were gray, which corresponded to normal operation according to the Champion Aviation Check-A-Plug AV-27 Chart.



Figure 3 Top Spark Plugs



Figure 4 Bottom Spark Plugs

The fuel injector nozzles were clear.

The operator had removed the magnetos, and installed them on another helicopter. He reported no issues with their operation.

The air intake scat hose had a light coating of dark colored dust on it that was greasy to the touch. Investigators disconnected the cylinder number two intake tube, and did not observe or feel any residue.

The exhaust path was light brown in color.



Figure 5 Exhaust