

N1557S Sonex with Revmaster R2300 engine examination 11/16/2022

Overall engine appears to be in good condition.

Right upper engine mount broken loose from firewall.

Composite propeller is broken with no signs of engine rotation.

Engine was full on the dipstick and clean.

Engine oil cooler was bent and cracked from the impact.

Verified movement of throttle and mixture levers.

Unable to move levers full travel due to impact damage on carburetor.

Verified flight control continuity to all flight controls.

EGT probes on cylinders 3 and 4 slightly loose with signs of slight exhaust leak.

Visual inspection of ignition system, no discrepancies noted.

Removed and inspected spark plugs, all show signs of normal combustion.

All spark plugs were found to be slightly more than finger tight, not properly torqued.

Crankshaft rotates freely, thumb compression on all cylinders.

Checked operation of ignition switch. Ignition switch did not ground out ignition system. Further inspection found 4 switches mounted under instrument panel in line with ignition switch. All 4 switches were found in the off position which opens the electrical circuit between the ignition switch and ignition coils. After switching the 4 switches to the on position ignition switch functioned normally providing grounds to the coils when left and right are turned off.

Engine is equipped with electronic ignition. Performed static ignition system inspection per manufacturer's instruction.

Generating coils, pulsar coils and ignition coils found to be within manufacturer's limits.

Ignition timing set to manufacturer's specification.

All ignition system components found to be in good condition.

Removed rocker box covers and found normal movement of rocker arms and valves.

Fuel line to carburetor finger tight, not properly torqued.

No sign of fuel noted when fuel line removed from carburetor.

Fuel supply line to fuel strainer bent from contact with engine mount, no sign of leak.

No sign of fuel from fuel supply line to fuel strainer.

Removed fuel bowl from strainer, no fuel found in strainer.

Fuel drain from fuel strainer broken off from impact.

MVP50P Engine monitor S/N 182241 had been removed from aircraft and secured during storage.

Engine monitor shipped to NTSB lab for data recovery.