

A. DETAILS OF THE INVESTIGATION

Examination – 25Feb2021. Examination was done at Air Transport, Phoenix, by a certified mechanic with the NTSB IIC Zoom video oversight.

The engine was detached from the airframe. Engine accessories were attached, partially attached, or detached. The left magneto was attached and the right magneto mount was partially damaged. The starter was detached. The carburetor was severely damaged. All cylinders remained attached to the crankcase.

The airframe was severely damaged. Engine control continuity were not established due to engine detachment.

The top spark plugs and cylinder rocker box covers were removed. Note, the #2 and #5 cylinder bottom spark plugs were previously removed by the FAA and provided to the NTSB. The top spark plugs (Champion part number RHM38E) were intact and exhibited normal operational signatures. The electrode gaps were consistent with service specifications.

The crankshaft was rotated by hand using a prybar and bolts. Rotational continuity was established throughout the engine and valve train. Equal movement was observed on all of the intake and exhaust valve rocker arms. Thumb compression and suction was obtained on all six cylinders.

The magnetos were actuated by rotating the crankshaft. Spark was observed at all six cylinders.

The intake system was severely damaged although it remained intact at the cylinder heads. The air filter and filter housing were severely damaged. The exhaust system was severely damaged although it remained intact at the cylinder heads.

The engine cylinders were examined internally using a borescope. The piston tops and cylinder sidewalls appeared normal. No evidence of foreign object ingestion was observed.

The fuel injection control valve and the throttle body was severely damaged.

Examination of the airframe revealed that both the left and right wings were severely damaged. The severely damaged empennage and tail section were detached from the airframe.

Continuity of the flight control system could not be established due to the severe damage.