



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety

Central Region

November 16, 2021

AIRFRAME AND ENGINE EXAMINATION

CEN20LA123

A. EXAMINATION PARTICIPANTS:

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B. SUMMARY

Examination of the recovered airframe and engine was conducted on November 16, 2021, at the facilities of Southern Aircraft Recovery, Baton Rouge, Louisiana. The No. 1 intake valve was found fractured and there was significant damage inside the cylinder. No other evidence of preimpact mechanical malfunction was noted during the examination of the recovered airframe and engine.

C. DETAILS OF THE INVESTIGATION

1.0 Airframe Examination

Cessna 182P s/n 18261254

All flight controls remained attached to the aircraft. The flight control cables were connected in the cockpit and at the control surface. Fuel valve position confirmed by blowing air through the lines to fuel strainer. After market fuel shut off pull knob installed. The 3/4 bench seat had been replaced by a pivoting observer seat. In paperwork filled out by the pilot, he stated the occupant in the second row was seated in the "center." Dual shoulder harness, single attach point for seats 1 and 2.

2.0 Engine Examination

Continental Motors IO-520-D (116) s/n 832532-R

Examination of the engine revealed that the inside of each cylinder contained a significant amount of corrosion and scraping on the cylinder walls. The top spark plugs were removed and appeared rusty with loose corrosion debris all over. The electrode insulators were dark in color similar to a rich engine condition. Thumb suction and compression was obtained but most cylinders did not produce adequate suction or compression (6 good, 4 low, 2 very low, 1 very low, 3 very low, 5 good.) The No. 1 intake valve was partially broken

On the No. 2 cylinder, the screws that keep the valve rocker shafts in place were not screwed in completely. They were back out about ½ inch and there were associated contact marks on the inside of the rocker cover.

The oil filter element contained a very small amount of tiny metallic debris in some of the pleats.