



Examination Summary

NTSB ACCIDENT NUMBER: CEN21LA316

AIRCRAFT REGISTRATION/AIRCRAFT TYPE: N5340R, Cessna 172

ACCIDENT LOCATION: Eagle Butte, SD

Date of Exam: 11/16/2021

Post-Accident Engine Examination Summary

The engine of N5340R was examined on 11/16/2021 at Beegles Aircraft Service, Greeley, Colorado. Present for the exam was the NTSB investigator-in-charge and a mechanic's helper provided by Beegles. The following findings are from the exam:

- The engine presented with a hole in the top of the engine case adjacent to the number 6 cylinder.

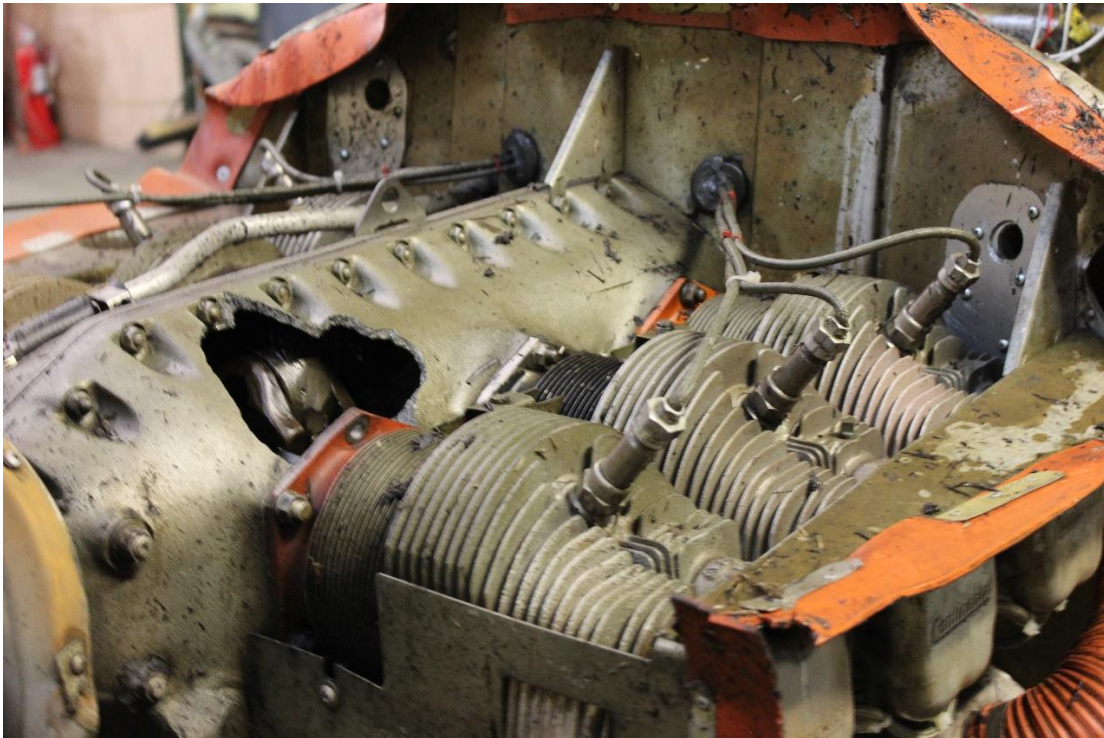


Photo 1: Aircraft Engine

CEN21LA316/Cessna 172/N5340R

- The spark plugs and leads were checked for tightness prior to removal. All leads were tight except the top spark plug lead from the No. 5 cylinder which was about 1/3 turn loose. All spark plugs were confirmed tight and then removed for closer inspection.
- The top spark plugs and bottom spark plugs were different types but consistent. All tops were consistent with massive type plugs and the bottom plugs were all consistent with fine wire plugs.



Photo 2: Top Spark Plugs



Photo 3: Bottom Spark Plugs

- All plugs appeared unremarkable
- The cylinders were removed for an internal inspection of the engine.
- All cylinders except for the No. 5 cylinder were easily removed.
- The No. 5 cylinder was difficult due to mechanical impact damage, so the engine case was separated with the cylinder still attached.
- Upon inspection, it was discovered that the connecting rod for the No. 6 piston had fractured at the end cap with the separated pieces found in the oil sump.
- The cylinder was later removed with the piston still inside and sent to the NTSB Materials Laboratory for further inspection. See the Materials Laboratory factual report for more information concerning the failure of the connecting rod.

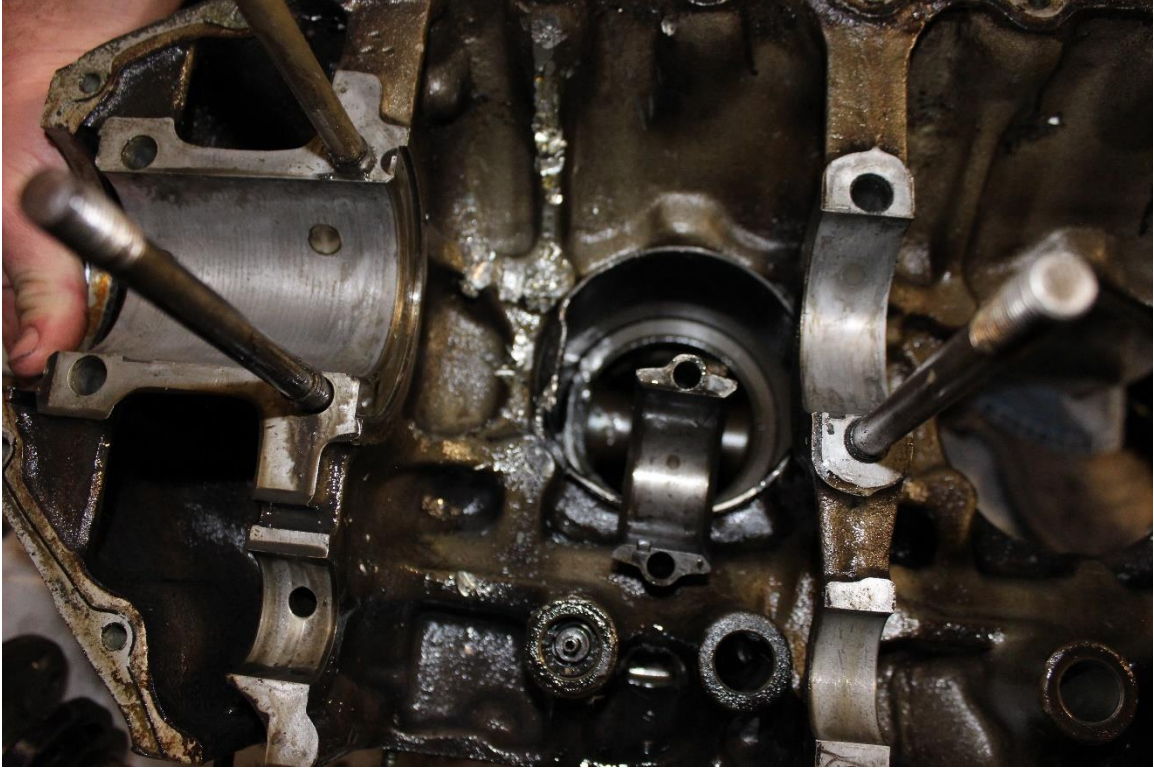


Photo 4: Photo of the Cylinder and Connecting Rod