

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



ANC24LA004

ENGINE EXAMINATION

April 2, 2024

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A. ACCIDENT

Location: Anchorage, AK
Date: November 12, 2023
Time: 1615L
Airplane: Piper PA-22 N8095C

B. ENGINE EXAMINATION

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C. SUMMARY

On November 12, 2023, about 16:15 Alaska Standard time, a Piper PA-22 airplane, N8095C sustained substantial damage when it was involved in an accident at Lake Hood Airport, Anchorage, Alaska. The pilot was not injured. The airplane was operated by the pilot as a Title 14 Code of Federal Regulations Part 91 personal flight.

Pilot reported that this was a short flight to run the engine and systems to avoid prolonged sitting of the airplane between flight opportunities. Most of the preflight items were completed earlier in the afternoon when he cleared snow off the airplane. He returned later, unplugged the engine heater, removed the engine blanket and completed a final pre-flight check. A fog layer had just cleared the area and he spent about 15 minutes running the engine and taxiing the airplane for the tower to change the airport weather conditions to allow him to fly a traffic pattern. At about 1610 ADT he departed runway 32 in a closed right hand traffic pattern.

During the base to final turn, everything appeared normal with the airplane and he reduced the throttle to idle momentarily "maybe 1 second" and then increased throttle to add about 200 RPM to reduce the descent rate, but there was no response from the engine. He then significantly increased the throttle with no change in engine rpm. Subsequently the engine then lost all power. He moved the fuel selector to the both position. He realized that the airplane did not have sufficient altitude to make the runway and performed a forced landing short of the runway.

The main landing gear impacted a berm along a roadway that ran across the approach end of runway 32 resulting in substantial damage to the fuselage and left wing strut.

D. DETAILS OF THE EXAMINATION

1.0 Engine Examination

The engine is a Lycoming O-320-B2B, serial number L4649-39 with a total time of 2,620 hours and 357 hours since overhaul. The last engine overhaul was completed on April 25, 2014. The last engine annual/inspection was on October 24, 2023, 26 days prior to the accident.



Figure 1 Right side of engine.



Figure 2 Right side, top view of engine.



Figure 3 Engine filter attached to the accessory case.

Both magnetos were securely fastened to the accessory case. All ignition leads were in good condition and securely attached to the sparkplugs. The top sparkplugs were removed, and all sparkplugs looked in serviceable condition with normal electrodes. Spark was observed at each end of the top ignition lead when rotating the crankshaft.

The engine was turned by the propeller flange. Movement was seen in the alternator attached to the accessory case (figure 4), an audio sound of the impulse coupler could be heard from the magneto and thumb compression was obtain from all cylinders which confirm drivetrain continuity from front of the engine to the rear of the engine. The valve covers were removed and all valve rockers moved with similar amount of movement (figure 5,6)



Figure 4 Right side of the accessory case.

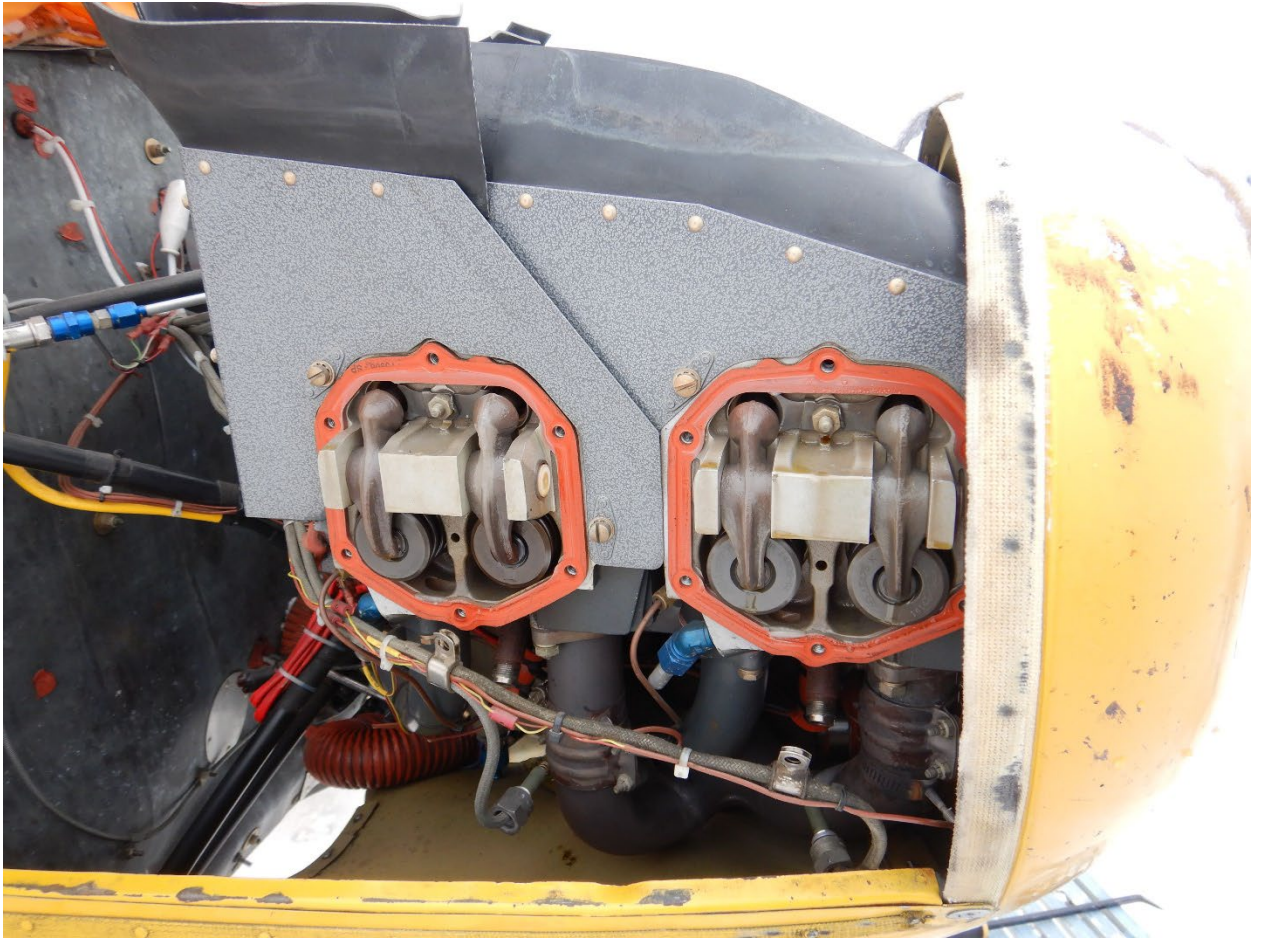


Figure 5 Right side of the engine with valve covers removed.



Figure 6 Left side of the engine with valve covers removed.

Attempted to drain fuel from the wing tank fuel drain valves but no fuel was present at either drain. The gascolator was removed and blue colored fuel found (figure9). Movement of the fuel selector produced no fuel to the gascolator. No water was observed in the fuel from the gascolator. No fuel was observed in the lines to or in the carburetor. The carburetor was impact separated from the induction system just above the throttle valve (figure 7).



Figure 7 Right side view of the engine carburetor.



Figure 8 View inside the gascolator.



Figure 9 Fuel removed from the gascolator.

All engine control cables were securely attached to their respective attachment points. All cable movement was restricted by impact damage.

Exhaust system had minor impact damage to two exhaust collectors, the muffler, and muffler shroud with significant impact damage to the exhaust discharge pipes.

Oil dipstick was removed and clean oil was observed.



Figure 10 Left side view the engine exhaust collectors and air intake.

Intake manifold was undamaged. Air intake screen was impact damaged (figure 11) with no observed obstructions.



Figure 11 View of air intake under engine.

2.0 Propeller Examination

The propeller was removed by the owner and sent to a repair shop before an examination could happen. According to the owner, "Both ends were bent back, but one was more than the other." (Figure 12)



Figure 12 View of propeller damage, photo provided by owner.

Submitted by:

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ASI