

NATIONAL TRANSPORTATIONS SAFETY BOARD
Office of Aviation Safety
Washington, DC 20594

SUMMARY OF ENGINE EXAMINATION

-- CEN21LA092 --

A. ACCIDENT

Aircraft: Sonex N935EX

B. PARTICIPANTS

Craig Hatch
Aerospace Engineer
National Transportation Safety Board
Denver, Colorado

C. ACCIDENT SUMMARY

See factual report

D. DETAILS OF ENGINE EXAMINATION

A post-recovery engine examination was conducted at Air Salvage of Dallas, Lancaster, Texas, on March 4, 2021.

E. SUMMARY OF ENGINE EXAMINATION

Airframe – E-AB Sonex

Engine – AeroVee

Propeller – Prince 2 Blade, Fixed pitch

- The airplane had heavy damage to the top of the airframe/cabin.
- A light film of oil was noted on the belly of the airframe
- An attempt to rotate the engine was made, by turning the propeller, found the engine/prop would not turn.
- A visual inspection of the engine did not identify any pre-impact abnormalities.
- A volume of oil was observed on the oil dipstick.
- The engine was equipped with a firewall (remote) mounted oil filter
 - Oil filter remained attached to its mount and was removed; the filter contained a small amount of engine oil.
 - The filter was cut open – metal flakes were visible on the filter element and in the filter can itself.

Summary of Engine Examination

- The oil filler cap was removed, a small piece of metal was observed.
- Oil lines from the filter adapter ran to one side of the engine (oil pump), another line on the other side of the pump ran back to the other side of the adapter (a loop type circuit).
- The engine was equipped with a top mounted oil cooler
- An oil line ran from the top of the engine to an air/oil separator, then an oil line ran from the bottom of the air/oil separator to the bottom of the engine.
- Controls to the carburetor were intact.
- There was no other preimpact anomalies noted during the engine examination.
- The airplane was equipped with Dynon EFIS and EMS displays. The EMS was removed and download. A review of the downloaded data found no information for the accident flight. Additionally, the previous engine parameters reviewed from the download were considered erratic and not legitimate values.

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