

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

SUMMARY OF ENGINE/AIRFRAME EXAMINATION

-- CEN21LA243 --

A. ACCIDENT

Location: San Angelo, Texas
Aircraft: N274CV, Vans RV8

B. PARTICIPANTS

Craig Hatch
Aerospace Engineer
National Transportation Safety Board
Denver, Colorado

C. DETAILS OF ENGINE EXAMINATION

A post-recovery engine examination was conducted at Air Salvage of Dallas, Lancaster, Texas, on June 22, 2021. The airplane wings had been removed for transport. The fuselage was placed on stands, and the wings set aside for the examination.

D. SUMMARY OF ENGINE EXAMINATION

Engine – Lycoming O-360 series, with carburetor (separated during accident) and Slick magnetos.

Engine/Airframe

- Engine remained attached to the airframe, but engine mounts were broken.



Engine cowling removed for access

- Propeller remained attached to the crankshaft flange. 3 bladed Sensenich fixed pitch.
- One blade remained; the two other blades were broken off/separated during the accident.
- Removed top set of sparkplugs, appeared normal combustion.
- The engine was rotated by rotating the crankshaft/propeller. Rotation thru valve train, accessories, and to the crankshaft was observed.
- Both left and right fuel tanks were breached; root rib separated from skin.
- Both PFD and instrument panel had impact marks, likely from occupant.
- Pilot's 5 point harness appeared functional with no (first responder) cuts.
- The PFD SD card was a blank "space holder".
- Both magnetos were removed, and field tested; spark was observed on each terminal.



Verified engine timing

- Fuel routing appeared correct



Fuel from tank thru gascolator, then to fuel pump

- Fuel pump (pressure side) fitting had two ports, #6 which was capped off and a #4 fitting which ran to the fuel flow transducer ("red cube").
- From the red cube to the inlet side of the carburetor; carburetor was impact separated from the sump.



Pressure side of fuel pump with fittings

----- *end of summary* -----