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Subject: CEN22LA303 Examination Summary

On September 07, 2022, the airframe and engine from N270SA was examined with representatives from the Federal Aviation Administration, a representative from Lycoming Engines and a representative from Piper Aircraft present.

The fuselage displayed impact damage and deformation throughout its structure. The cabin area displayed aft crushing and tearing along the right side. The windscreens and left forward cabin window were absent from their frames. The instrument panel was buckled. The throttle knob was found positioned near its forward travel limit. The mixture knob was found positioned to full rich. The magneto switch was damaged and found selected off. The carburetor heat lever was found positioned off. The primer knob was in but unlatched.

Control cable continuity could be established, though impact and recovery separations were observed to the aileron control cables. The control tee bar was impact damaged. The aileron control cables remained attached to the chain and could be routed to recovery separations adjacent to the wing roots. The stabilator and rudder control cables remained attached to their respective cabin controls and could be traced to the rudder and stabilator control clevises. The flap handle was found in the stowed (flaps retracted) position; however, the flap torque tube was found positioned to flaps at 25° of extension.

The #1 (forward left) seat remained mounted to the cabin floor; the frame was impact damaged. The #1 lap belt was separated from the cabin floor, and the shoulder harness inertia reel had pulled away from the cabin roof. The #2 (forward right) seat remained mounted to the cabin floor; the frame was impact damaged. The #2 lap belt displayed a recovery cut, and the shoulder harness inertia reel had pulled away from the cabin roof. Both inertia reels functioned as intended when tested.

The left wing had been removed from the fuselage during recovery. The left fuel tank displayed some impact damage to the outboard leading edge. The fuel vent appeared undamaged, and no blockage was detected when tested with low air pressure. The fuel cap remained within the fuel filler. The fuel line from the tank outlet to the wing root was tested with light air pressure with no blockages noted.

The aileron and flap remained attached to the wing and were impact damaged. The lift detector was impact damaged. The pitot mast appeared undamaged.

The right wing had impact separated from the fuselage and was chordwise near the middle of its span. The right fuel tank was impact damaged. The fuel vent appeared undamaged; however, it was packed with material consistent with spider silk. The fuel cap remained within the fuel filler. The fuel line from the tank outlet to the wing root was found packed with leaf cuttings, consistent with insect activity.

The right aileron was impact damaged but remained mounted to the outboard wing section. The aileron control bellcrank was impact separated from its mounting brackets and displaced inboard to the landing gear. The flap remained mounted to the inboard wing section and displayed crushing damage.

The Gascollator was impact damaged and open when cowling was removed. The fuel screen was about $\frac{1}{4}$ blocked with white paint.

Both magnetos were removed and rotated by hand and spark was observed on all lead wires. They were cut from the harness about 5" outboard of the magneto. The impulse coupler could be heard activating on the left magneto.

The propeller was removed and engine rotated freely by hand. All valves moved similar amounts. The spark plugs were removed and found to be unremarkable.

The carburetor was removed and opened for examination. The accelerator pump functioned when the throttle arm was manipulated by hand and fuel was observed being expended. When the float bowl opened and examined, the floats were found intact and without damage. The fuel screen had one small area of discoloration, but free of contaminants.

The fuel supply line from electric fuel pump to engine driven pump ran into a T fitting. One side of the T was capped and the fitting was only finger tight. The engine driven fuel pump removed and manipulated by hand. Compression and suction was

verified. The T fitting was removed and the O ring was present and unremarkable. No fuel staining was present on the pump that would be indicative of a leak.

The left wing fuel system was free of obstruction. The vent system was clear of debris. Fuel selector found in the OFF detent, most likely during recovery. It was free of obstruction and air tested through all selections. Detents present and pronounced.

Cylinders borescoped with pistons and cylinders found to be unremarkable

No conditions were observed during the course of the engine examination that would have precluded normal engine operation.

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