

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN23LA114

AIRPLANE EXAMINATION

April 26, 2023

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A. ACCIDENT

Location: Venus, Texas
Date: February 18, 2023
Time: 1100 CST

Airplane: Cessna 150L, N6536G

B. AIRPLANE EXAMINATION

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C. SUMMARY

On February 18, 2023, about 1100 central standard time, a Cessna 150L airplane, N6536G, was substantially damaged when it was involved in an accident near Venus, Texas. The flight instructor and student pilot were not injured. The airplane was operated under the provisions of Title 14 *Code of Federal Regulations* Part 91 as an instructional flight.

The flight instructor stated that while practicing power off stall recoveries, the student pilot was performing a recovery, added engine power, and as he was retracting the flaps when the engine began to lose power. The instructor took control of the airplane and scanned the engine instruments. He noted that oil temperature was in the green range and the oil pressure was 0 psi and blinking in the red. The engine lost total power and the flight instructor performed a forced landing to a field. During the landing roll out, the airplane nose over and came to rest inverted. Substantial damage was sustained to the empennage and vertical stabilizer.

The airplane was retained for further examination.

D. DETAILS OF THE EXAMINATION

1.0 Accident Site

The airplane had been moved from the accident site to the owner's hangar at the Grand Prairie Municipal Airport, Grand Prairie, Texas.

2.0 Airframe Examination

The airframe had significant damage that the owner attributed to recovery efforts. The wings had been removed from the airplane for transport. The right flap, which is connected to the flap jack-screw was in the fully extended position. The control cables to the ailerons and flaps had been cut in several locations for transport. The cable ends at the wing root location on the side of the fuselage were confirmed to be working by movement of the yoke in the cockpit. Likewise, the elevator controls were continuous and the elevator could be moved by actuating the yoke fore and aft. The rudder was continuous from the pedals to the rudder with movement noted while actuating the pedals. The airplane was reported to have nosed over during the emergency landing and the damage consistent with this included:

- Damage to the top of the vertical tail and rudder.
- A broken windscreen.
- Broken engine mount.
- Damage to the firewall mounting points for the engine mount.

2.1 Fuel/Fuel System

Fuel system continuity was verified from the wing roots to the gascolator by blowing air through each wing root connection. The gascolator was found to be full of fuel when the bowl was removed.

3.0 Engine Examination

The engine cowl had been removed and spark plug wires disconnected from the spark plugs during a previous examination by FAA personnel. The engine was intact with no outward anomalies noted. The propeller had a slight bend in one blade. The engine mount lower tube to the nose landing gear was broken. The induction air filter was clogged with dirt from impact and was removed. The carb heat valve was observed to be operating when the cockpit control was moved. It was determined that an engine run was possible, but that rpm may have to be limited. A surrogate fuel tank was placed on the top of the cabin and plumbed into the fuel hose connected to the carburetor. The accelerator pump was used to prime the engine and the starter was engaged. The engine started normally and was allowed to idle about 900 rpm for a few minutes. Oil pressure was indicating on the electronic gauge and was in the normal (green) range. Once the engine warmed for about a

minute, the rpm was increased to about 1300 rpm. Higher rpm was not tested due to safety concerns because the engine was vibrating slightly due to the bent propeller and the broken engine mount. Once at 1300 rpm, the carburetor heat control was pulled fully out and a drop in rpm was noted. The throttle was then pulled fully out and the engine idled and continued to run about 500 rpm. The carb heat was turned off and the rpm again increased to 1300 rpm and a magneto check performed. A slight drop in rpm was noted when each magneto was turned off and the engine continued to run normally. The engine rpm was reduced to 1000 rpm and the mixture pulled fully out resulting in the engine stopping as expected. This concluded the operational test of the engine. Pictures and video of the operational test to be provided to the IIC.

Submitted by:

John Brannen
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