



National Transportation Safety Board

Office of Aviation Safety
Central Region

Wreckage Examination Summary

NTSB Accident No:	CEN19FA008
Accident Date:	Tuesday, October 16, 2018
Accident Time:	1622 MDT
Accident Location:	Canoncito, New Mexico 35°04'16.21"N 107°02'06.94"W 5,633 ft mean sea level
Aircraft Make/Model:	Cessna 182P
Aircraft Registration:	N9326G
Aircraft Serial No:	18260866
Aircraft Airworthiness Date:	December 3, 1971
Engine Make/Model:	Continental O-550-F/TS (modified by STC SE09131SC)
Engine Serial No:	284691-R
Propeller Make/Model:	Hartzell PHC-G3YF-1RF/F8068
Propeller Serial No:	HP657B
Examination Dates:	October 17-18, 2018
Examination Location:	Accident Site
Participants:	Andrew T. Fox – National Transportation Safety Board Andrew Hall – Textron Aviation Chris Lang – Continental Motors

The accident site was in a sparsely populated area consisting of rolling desert terrain. The initial point-of-impact was where the right wingtip collided with the terrain. The right wingtip navigation lens cover was found near the initial impact. A shallow crater was located about 30 ft south of the initial impact point. The main wreckage was located about 110 ft south of the initial point-of-impact. The main wreckage consisted on the entire fuselage, both wings, empennage, engine, and propeller. The airplane came to rest on a north heading. There was no evidence of an inflight or postimpact fire. The left wing remained attached to the fuselage and the outboard half of the wing exhibited an upward bend with leading-edge damage. The left wing support strut remained attached to the wing and fuselage. The left aileron and flap remained attached to the wing. The left flap moved freely due to impact related damage. The right wing remained attached to the fuselage and the outboard half of the wing exhibited impact related damage. The right flap remained

attached to the wing and was in the fully retracted position. The inboard half of the right aileron remained attached to the wing, and the remaining portion of the aileron was found along the wreckage debris field. The aft fuselage was fractured and twisted. The empennage components remained attached to the aft fuselage. Flight control cable continuity was established from each flight control surface to its respective cockpit control. The nose landing gear and right main landing gear separated from the fuselage during impact. The left main landing gear remained attached to the fuselage.

The electronic recording tachometer indicated 201.23 hours when battery power was applied to the device. The throttle was found full forward, the mixture control was extended about 2 inches, the carburetor heat control was extended about 2 inches, and the primer control was stowed and locked. The cowl flap handle was in an intermediate position. The flap handle was found at 15°; however, a measurement of the flap actuator indicated the wing flaps were fully retracted at impact. The ignition key switch was positioned on the left magneto. The altimeter's Kollsman setting indicated 29.97 inches-of-mercury. The autopilot controller was turned off. The transponder was set to altitude-encoding and the squawk code was 1525. The cabin heat control was extended about 1/2 inch. The pitot tube heat switch was ON. The alternate static source control was extended about 1/2 inch.

The fuel selector valve handle was observed between the BOTH and the LEFT position; however, a functional test determined that the selector valve was in the BOTH position at impact. Additional testing did not reveal any anomalies with the fuel selector valve. About 10 gallons of fuel was drained from the right wing fuel tank. No fuel was recovered from the left wing fuel tank; however, the left fuel line from the forward tank outlet to the selector valve had fractured during impact. The left fuel line from the rear tank outlet to the fuel selector valve remained intact. The airplane came to rest with the left wing high. About 4 ounces of fuel was drained from the fuel strainer, and no contamination was observed when the fuel strainer was disassembled. About 2 ounces of fuel was drained from the supply line to the carburetor. About 4 ounces of fuel was drained from the carburetor bowl. An unmeasured amount of fuel was observed to drain from the left fuel supply line to fuel selector valve. All fuel samples were blue in color and had an odor consistent with 100 low-lead aviation fuel. No water or particulate contamination was observed in the fuel samples. The vented fuel tank caps were installed and secured on both fuel tanks. The left wing exhibited fluid streaking on the top wing surface aft of the fuel tank cap and on the lower wing surface behind the left wing strut attachment and fuel system vent. The observed fluid streaks were a light tan color, consistent with the color of the sandy soil at the accident site. There were no fluid streaks observed on the right wing.

The airplane was equipped with portable oxygen system. The oxygen bottle was observed with the regulator valve in the ON position and the tank gauge indicated between the green arc and empty. The oxygen bottle remained connected to a distribution controller which had two outputs. Both controller outputs had a flexible clear plastic line attached. One oxygen line still had a canular attached, the second oxygen line was torn and its canular was not located. The sound of air flow was heard when the feed line to the distribution controller was cut. The distribution controller was battery powered, and the removal and reinstallation of the batteries resulted in a brief self-test cycle.

An examination of the bracket induction air filter dirt revealed sandy dirt impacted into the filter element. The carburetor heat box was deformed during impact and the carburetor heat valve was observed between the ON and OFF positions. The carburetor heat valve shaft was found fractured. The carburetor heat control cable was fractured about 3.5 inches from the heat valve shaft control arm. The carburetor heat box, heat valve shaft, and fractured portion of the carburetor heat control cable were retained for additional examination.

The exhaust muffler remained attached to the engine exhaust. The muffler was removed from the exhaust and examined for evidence of leaks. A visual examination of the exhaust muffler revealed no evidence of leaks. The muffler flame tube exhibited signs of erosion; however, no loose material was observed in the muffler.

The engine remained partially attached to the firewall. Engine control continuity was confirmed from

the cockpit controls to the throttle arm and mixture control. The propeller remained attached to the propeller flange. All three propeller blades remained attached to the propeller hub. The first propeller blade exhibited a spanwise S-shape bend, the second propeller blade was relatively straight, and the third propeller blade was bent aft. Minor erosion was observed on the leading edges of the propeller blades near the blade tips; however, there was no evidence of leading edge gouges. Internal engine and valve train continuity were confirmed as the engine crankshaft was rotated. Compression and suction were noted on all cylinders in conjunction with crankshaft rotation. Both magnetos remained attached to their respective installation points and provided spark on all posts while the crankshaft was rotated. The upper spark plugs were removed and exhibited features consistent with normal engine operation. A borescope inspection of each cylinder did not reveal any anomalies with the cylinders, pistons, valves, valve seats, or lower spark plugs. The carburetor exhibited minor impact damage to the lower bowl assembly. About 4 ounces of uncontaminated fuel was drained from the carburetor bowl. Functional testing of the carburetor accelerator pump produced a normal fuel discharge. A visual examination of the carburetor fuel inlet screen revealed no evidence of debris. A partial disassembly of the oil pump revealed oil in the housing and on the gears. There was no evidence of hard particle passage to the gears or oil pump cavity. Examination of the propeller governor gasket screen revealed no evidence of debris. The propeller governor drive turned freely by hand and discharged oil as designed. The postaccident examination did not reveal any anomalies that would have precluded normal engine operation during the flight. The engine was retained for additional examination and a possible operational test run at the manufacturer.