

# National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



WPR21FA233

## **ACCIDENT SITE EXAMINATION**

June 20, 2021

## **A. ACCIDENT**

Location: White City, Oregon  
Date: June 20, 2021  
Time: 1440 Pacific daylight time  
Airplane: Piper PA-22-135, N2618A

## **B. ACCIDENT SITE EXAMINATION**

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Pier Aircraft, Inc.  
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## **C. SUMMARY**

On June 20, 2021, at 1440 Pacific daylight time, a Piper PA-22-135, N2618A, was destroyed when it was involved in an accident near White City, Oregon. The pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations Part 91* personal flight.

A friend of the pilot reported that the pilot departed from Bend, Oregon, around 1415, en route to Beagle Sky Ranch Airport (OR96), White City, Oregon, where he was to meet the pilot. The friend reported that he observed the airplane initially enter the pattern on the left downwind for runway 15; however, the pilot initiated a go-around when the airplane was not aligned with the runway. When the friend saw the airplane again, the pilot was setting up to land on runway 15; however, the airplane was again not aligned with the runway and the pilot initiated another go-around. The friend subsequently heard the crash but did not witness the accident.



Photo 1 - View of the Accident Site (Photo Courtesy of Lycoming)

## **D. DETAILS OF THE INVESTIGATION**

### **1.0 Accident Site**

The accident site was in the side yard of a residence. The first identified point of impact (FIPC) were the tops of 75-ft-tall trees about 205 ft east of the approach end of runway 33. The airplane continued in an arc-trajectory, where it travelled across a street, over a house, and impacted the side yard of a residence, where a post-crash fire ensued. The entire airplane came to rest on its left side against a wire fence oriented along a heading of 021°. There were several felled trees adjacent to the wreckage with one of the trees exhibiting a clean cut to its trunk. Piper estimated it to be 8 inches in diameter, consistent with a moving propeller strike.

A glass bottle labeled "nitroglycerin" was found in the cabin.

## Airport Information:

The airport is privately owned and requires prior permission to land. The runway surface is of turf/dirt construction that is 3,000 ft long and 130 ft wide. The airport facility directory states that departures are to the south and approaches are to the north.



Photo 2 - View of Airport and Accident Site (Photo Courtesy Piper)





Photo 3 - Trees at end of Runway (Photo Courtesy of Lycoming)

## 2.0 Airframe Examination

The entire airplane came to rest abut a barb-wire fence on its left side and was relatively intact. The fabric covering of the airplane, interior, windows, and instrument panel had burned away in the postcrash fire and exposed the inner frame of the airplane. There were some cuts to the frame but established that the cuts were made during the recovery of the pilot. There was impact damage to the left lower firewall aft to the cabin door.



Photo 4 - Left Side View of Airplane (Photo Courtesy of Piper)

The instrument panel and instruments were thermally destroyed. The throttle and mixture knobs were positioned full forward, and the primer pump and magneto switch were thermally destroyed. Flight control continuity established from cabin controls via the control cables and associated hardware that remained in their relative normal positions. The T-bar remained in place and the aileron control chain remained routed over the sprockets. The aileron cable and associated hardware was continuous through the cabin. The elevator cables and associated hardware was traced from the fuselage to the aft elevator bellcrank. The rudder control cables, and



hardware remained attached to the outboard ends of the impact damaged rudder pedal bar and the cables were traced from the fuselage to the rudder control arms. Elevator trim was neutral to slightly nose up as measured on the trim screw.



Photo 5 - Instruments (Photo Courtesy of Piper)

Flap cable continuity was continuous. Johnson bar flap mechanism: the locking mechanism was destroyed. Flaps and ailerons were thermally destroyed; a portion of the right aileron was melted onto itself. The flap handle appeared to be in the flaps retracted position.

Both the left and right wing were thermally damaged. The left-wing spar sustained crush damage and was partially melted. The remains of the left wing that remained attached to the fuselage were displaced upward about 90°. The remains of the right wing was attached to the fuselage and was crushed aft. Both wings were unremarkable.

The empennage sustained impact deformation to the tubular frame structure. There was a cluster of batteries thought to be the remains of the ELT in the aft



cabin/empennage area. The left horizontal stabilizer and elevator were crushed inboard at the tip. The right horizontal stabilizer and elevator did not appear to have any impact damage. The vertical stabilizer was thermally damaged, and the rudder had impact damage to the lower trailing edge. The elevator pitch control jackscrew had six threads of extension exposed, which correlated to a slight airplane nose up trim.

Forward gascolator thermally damaged, screen was clean, but the gasket was thermally destroyed and in the bowl.

No mechanical problems identified that would have precluded normal operation.

### **3.0 Engine Examination**

Engine: LYCOMING O-290-D2 s/n 4535-21

Visual inspection of the engine revealed that it remained mounted to the engine mounts, with impact damage to the oil pan area.



Photo 6 - View of Engine from the Left Side (Photo Courtesy of Piper)





Photo 7 - View of Engine from the Right Side (Photo Courtesy of Piper)

The engine was borescoped with no anomalies identified. Mechanical and valve train continuity was established. The engine was manually rotated from the propeller shaft, thumb compression was obtained on all cylinders in firing order. The cam shaft valves moved the same amount.

The carburetor had separated from its mounts. According to the Champion Aviation check-a-plug chart AV-27, the spark plugs exhibited normal operating signatures; Nos 2 and 4 were oil soaked, but the engine was positioned on its left side at the accident site. The magnetos remained secure at their respective mounting pads on the engine. The left magneto was thermally damaged/deformed and would not rotate. The right magneto sustained thermal damage and the capacitor was melted and would not rotate.



Photo 8 - View of Spark Plugs (Photo Courtesy of Lycoming)



The muffler showed evidence of thinning and cracks associated with fire damage. The interior manifold baffles were normal with no blockages. Exhaust marks were observed on the shroud as well as ductile bending on the exhaust.



View of Muffler

#### 4.0 Propeller Examination

The propeller assembly including the propeller blades separated from the crankshaft; the crankshaft bolts were broken. Propeller flange was bent aft. One of the propeller blades had a broken tip that was not located; a search was conducted.



Photo 3 - View of Propeller





View of Propeller (Photo Courtesy of Piper)

## 5.0 **Aircraft Information**

The airplane has been registered to the pilot since 2007. An internet search showed an online for sale poster from June 2021 that cited health reasons for the sale.

Submitted by:

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