



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	La Center, Washington	Accident Number:	WPR18FA104
Date & Time:	March 11, 2018, 12:57 Local	Registration:	N4511Y
Aircraft:	Piper PA 18-150	Aircraft Damage:	Destroyed
Defining Event:	Controlled flight into terr/obj (CFIT)	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The private pilot departed on a personal flight in day visual meteorological conditions to conduct touch-and-go takeoffs and landings at a nearby airport. Onboard data indicated that the pilot flew a left traffic pattern at the destination, then overflow the runway. A witness near the accident site saw the airplane climbing about 150 ft above the runway. The airplane turned left and remained in the traffic pattern; the witness stated that the airplane appeared to level off about 250 ft then disappeared from his view. Moments later, he heard a series of three loud bangs, followed by a full-power engine sound, another loud bang, and "an abrupt stoppage of all sounds." Review of recorder data revealed that right before the impact, the airplane's speed was 11 knots groundspeed, with the pitch angle of 8° and the left bank angle of 105° at the GPS altitude of 130 ft. Survey of the accident site indicated that the airplane impacted a 140-ft tall tree while in a left turn and came to rest on the ground about 150 ft south-east from the initial tree strike. Therefore, it is likely that the pilot did not maintain a sufficient altitude necessary to avoid collision with the trees.

Postaccident examination of the airframe and engine revealed no evidence of any preexisting mechanical malfunctions that would have precluded normal operation, and autopsy and toxicology of the pilot did not reveal any evidence of physiological impairment or incapacitation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's failure to maintain clearance from trees while maneuvering at a low altitude.

Findings

Aircraft	Altitude - Not attained/maintained
Personnel issues	Lack of action - Pilot

Factual Information

History of Flight

Maneuvering	Controlled flight into terr/obj (CFIT) (Defining event)
Maneuvering-low-alt flying	Loss of control in flight
Maneuvering-low-alt flying	Collision with terr/obj (non-CFIT)

On March 11, 2018, about 1257 Pacific daylight time, a Piper PA-18-150, N4511Y, was destroyed when it impacted terrain while maneuvering near Daybreak Airport (WA46), La Center, Washington. The pilot was fatally injured. The airplane was registered to and operated by the pilot as a Title 14 *Code of Federal Regulations* Part 91 personal flight. Visual meteorological conditions prevailed in the area, and no flight plan was filed for the flight, which originated from Flying M Airport (OR05), Yamhill, Oregon, at 1030.

Earlier that morning, the accident pilot met with another pilot and they decided to fly around the local area as a flight of two. After departing OR05, they proceeded north and landed at Woodland State Airport (W27), Woodland, Washington. On the way to their respective home airports, they decided to fly to WA46 to conduct touch-and-go takeoffs and landings. The other pilot stated that the accident pilot departed W27 first, but when the other pilot arrived at WA46, he did not see the accident airplane in the traffic pattern. He then circled above WA46 and saw the wreckage in a wooded area near the approach end of runway 31.

A witness at WA46 stated that he saw the accident airplane climbing about 150 ft above runway 31. Near the north end of the airport, the airplane started a "low" left turn to the south. The witness estimated that the airplane leveled off about 250 ft and continued out of sight. Moments later, he heard a series of three loud bangs, followed by the sound of a full-power engine, then another loud bang followed by "an abrupt stoppage of all sound."

Review of recorded data obtained from an Appareo Stratus PRX V2 onboard the airplane revealed that the airplane departed W27 about 1250 and flew southeast while climbing to about 450 ft GPS altitude. About 1255:30, the airplane had descended to about 200 ft and entered the left downwind leg of the WA46 traffic pattern. The airplane overflew the grass runway from south to north then turned onto a left downwind leg for the runway. The airplane started to slow from 50 kts at 1256:39 and banked up to 25° right before entering the dramatic left bank. The last recorded data point was at 1256:47 and showed the airplane at a GPS altitude of 130 ft, a groundspeed of 11 knots, a pitch angle of 8°, and a left bank angle of 105°.

Pilot Information

Certificate:	Private	Age:	65,Female
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
Instrument Rating(s):	Airplane	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	February 9, 2017
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 1053 hours (Total, all aircraft)		

The pilot held a private pilot certificate with airplane single-engine land and instrument airplane ratings. The pilot was issued a Federal Aviation Administration (FAA) third-class airman medical certificate on February 9, 2017, with the limitation, "must have available glasses for near vision." On the application for that medical certificate, the pilot reported 1,503 total hours of flight experience, 51 hours of which were in the previous 6 months.

Review of the pilot's logbook revealed that, as of the last entry dated July 31, 2017, the pilot had accumulated a total of 1,024.7 hours of flight experience.

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N4511Y
Model/Series:	PA 18-150 150	Aircraft Category:	Airplane
Year of Manufacture:	1971	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	18-8932
Landing Gear Type:	Tailwheel	Seats:	
Date/Type of Last Inspection:	June 21, 2017 Annual	Certified Max Gross Wt.:	1750 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1150.49 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	Installed	Engine Model/Series:	O-320 SERIES
Registered Owner:		Rated Power:	150 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

The two-seat Piper PA-18-150, serial number (s/n) 18-8983, was manufactured in 1971 and equipped with a Lycoming O-320-A2B engine, s/n L-29519-27A, which drove a fixed-pitch, two bladed McCauley propeller.

According to the airplane maintenance records, the most recent annual inspection was completed on

June 21, 2017, at an engine and airframe total time of 1,150.49 hours.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KSPB, 30 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	12:53 Local	Direction from Accident Site:	250°
Lowest Cloud Condition:		Visibility	
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Yamhill, OR (OR05)	Type of Flight Plan Filed:	None
Destination:	Yamhill, OR (OR05)	Type of Clearance:	None
Departure Time:	10:30 Local	Type of Airspace:	Class G

An automated observation recorded about 2 minutes before the accident at Scappoose Industrial Airpark (SPB), Scappoose, Oregon, located about 10 nautical miles west of the accident site, included calm wind; temperature 16°C; dew point 1°C; no clouds and no restrictions on vertical visibility; and altimeter 30.16 inches of mercury.

Airport Information

Airport:	Daybreak WA46	Runway Surface Type:	Dirt
Airport Elevation:	25 ft msl	Runway Surface Condition:	Dry
Runway Used:	31	IFR Approach:	None
Runway Length/Width:	2200 ft / 60 ft	VFR Approach/Landing:	Touch and go

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	45.830276,-122.637496(est)

The wreckage was located about 530 ft from the approach end of runway 31 on a 228° bearing from the runway. The first identified point of contact (FIPC) consisted of several broken limbs at the top of a 140-ft-tall tree. A piece of the left wing landing light lens was found underneath the tree. A debris path of broken tree limbs continued on a heading about 120° to the main wreckage, which came to rest about 142 ft from the FIPC and was oriented on a heading of 270°.

The airplane impacted terrain in a nose-down attitude. The propeller hub and one blade were imbedded about 2 ft in the ground. Both blades remained attached to the hub. The fuselage came to rest on its right side and exhibited twisting throughout. The empennage remained attached to the fuselage and was bent upward. The vertical stabilizer, horizontal stabilizer, rudder, and elevators remained intact and were undamaged. Both wings and the fixed main landing gear remained attached to the fuselage. The cockpit area with the instrument panel was crushed and displaced forward into the firewall.

The propeller remained attached to the engine. The crankshaft was rotated by hand and thumb compression was obtained on all cylinders. Engine drive train continuity was established throughout. Both magnetos were rotated by hand and spark was observed at all ignition leads. The oil pickup screen was clear of debris. The carburetor was intact and remained attached to the engine. The throttle, mixture, and carburetor heat cables remained attached. The carburetor was disassembled, and no anomalies were noted.

There was no evidence of pre-impact mechanical anomalies or malfunctions of the engine or the airframe.

Medical and Pathological Information

An autopsy of the pilot was performed by the Clark County Medical Examiner, Vancouver, Washington. The autopsy report stated that the pilot's cause of death was "multiple blunt impact injuries."

The FAA's Forensic Sciences Laboratory conducted toxicology tests on specimens from the pilot. The results were negative for all tests performed.

Administrative Information

Investigator In Charge (IIC):	Smith, Maja
Additional Participating Persons:	Erik Ramseyer; FAA-FSDO; Hillsboro, OR Troy Helgeson; Lycoming; Milliken, CO Damian Galbraith; Piper Aircraft; Vero Beach, FL
Original Publish Date:	April 20, 2020
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=96851

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).