



# Aviation Investigation Final Report

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<b>Location:</b>	White City, Oregon	<b>Accident Number:</b>	WPR21FA233
<b>Date &amp; Time:</b>	June 20, 2021, 14:40 Local	<b>Registration:</b>	N2618A
<b>Aircraft:</b>	Piper PA-22-135	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

The pilot was repositioning his airplane to the accident airport for an annual inspection. He had planned to have a friend meet him at the destination airport to drive him home. The friend waiting to pick the pilot up at the destination airport stated that the pilot initiated a go-around when the airplane was not aligned with the runway on the first landing attempt. The friend stated that the pilot attempted another landing and once again the airplane was not aligned with the runway, so the pilot initiated another go-around. The pilot made two landing attempts, and during the last attempt, the airplane contacted trees off the left side of the departure end of the runway. The airplane then impacted terrain and a postimpact fire ensued. At the time of the accident, the density altitude at the airport was over 4,000 ft.

A witness located at a residential airpark about 5 nautical miles from the pilot's intended destination, where the accident subsequently occurred, reported that the accident airplane had landed at their private airpark just before the accident. They were worried because the airplane's approach was erratic, and fast, and touched down about midfield and bounced before it went out of their view. The witness went to find the airplane and found it parked in his front yard. The pilot seemed lethargic, confused, and slow to answer questions. The pilot asked multiple times if he was at his destination airport, and the witnesses replied that he was not. Witnesses reported that about 20 minutes later the pilot departed from their airport. The witness reported that, although the airplane's engine was running and sounded normal, it also sounded like the pilot had only applied partial power on takeoff. The witness noted that the airplane did not appear to be under control during the takeoff.

Postaccident examination of the airframe and engine revealed no mechanical anomalies that would have precluded normal operation. According to the pilot's wife, the pilot had heart issues that included two previous heart attacks, one of which was 3 weeks before the

accident. The pilot's wife also stated that her husband was easily confused, irritable, and was in poor health. His two visits to the emergency room about 10 days before the accident suggest that the pilot's condition was not well-controlled.

The pilot's toxicology testing detected gabapentin, doxylamine, dextromethorphan, torsemide and carvedilol in his system. In addition, the pilot's autopsy identified severe cardiovascular disease, chronic kidney disease, and previous atrial fibrillation. Based on the operational evidence, the pilot had actively attempted several landings when the accident occurred; therefore, it is unlikely that the pilot experienced sudden incapacitation. However, operational evidence and witness reports indicate that the pilot was behaving in a confused manner. The pilot was taking a diuretic medication and other medications that decrease sweating and body cooling. He was also taking gabapentin, which is associated with dizziness and sleepiness. Even without a heat stressor, people with chronic heart failure can experience mental confusion and impaired thinking. The pilot also had moderate chronic kidney failure that would decrease his heat tolerance. Additionally, heat stress can further impact kidney function. Decline in kidney function with subsequent buildup of body wastes in the blood can lead to confusion. Given the high outside temperatures, the pilot's medical conditions, as well as the prescribed medication detected in his system, it is likely that the pilot experienced mental confusion and impaired thinking/judgement, which resulted in his inability to safely operate the airplane.

## **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 control of the airplane during a go-around, which resulted in a collision with trees. Contributing to the accident was the pilot's impairment due to his medical conditions and the effects of his medications.

## Findings

<b>Personnel issues</b>	Decision making/judgment - Pilot
<b>Aircraft</b>	Descent/approach/glide path - Not attained/maintained
<b>Personnel issues</b>	Aircraft control - Pilot
<b>Personnel issues</b>	Prescription medication - Pilot
<b>Personnel issues</b>	Use of medication/drugs - Pilot
<b>Environmental issues</b>	Tree(s) - Effect on equipment

## Factual Information

### History of Flight

Approach-VFR go-around	Loss of control in flight (Defining event)
Approach-VFR go-around	Collision with terr/obj (non-CFIT)

#### HISTORY OF FLIGHT

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, with the intention of relocating the airplane to Beagle Sky Ranch Airport (OR96), White City, Oregon, for its annual inspection. The friend was waiting at OR96 for the pilot to arrive so that he could drive the pilot back to his home. The friend reported that he saw the airplane fly over OR96 and assumed that the pilot was going to enter the traffic pattern for landing, but the airplane flew out of sight. About 30 minutes later, he received a telephone call from the pilot who had landed at another nearby airport (Shady Cove). He stated he could hear someone in the background giving the pilot directions on how to get to OR96. The friend reported that, a while later, he observed the airplane enter the pattern on a left downwind for runway 33; however, the pilot initiated a go-around when the airplane was not aligned with the runway. The airplane made multiple attempts to land and on the last attempt the airplane was east of the runway, maneuvering back toward the airport when it contacted trees. The friend subsequently heard the crash but did not witness the accident. The outside air temperature near the accident airport around the time of the accident was about 95°F and the density altitude was over 4,000 ft.

Another witness located the Shady Cove Airpark, about 5 nautical miles northeast of the accident site, stated that he was outside in a neighbor's yard when they saw the airplane enter the traffic pattern and land. They were concerned because the airplane appeared erratic on downwind, and when the airplane turned onto the base leg, the turn was wide, and the pilot had to overcorrect back to final. The witness stated that the airplane touched down midfield, bounced, and went out of his field of view. They were concerned he had crashed but saw that the airplane had parked in his front yard and was shut down.

The witness stated that spoke to the pilot and the pilot seemed lethargic and confused and was slow to respond to their questions. The pilot asked multiple times if he was at Beagle airport, and they answered him numerous times that he was not. The witness stated that they offered the pilot water and asked him if he wanted to get out of the airplane. They stated the

pilot had on long pants and fuzzy socks and seemed to be overdressed for the weather conditions. The pilot declined their offer of assistance and did not get out of his airplane.

The witnesses watched him take off about 20 minutes later. They noted that it sounded like he only had partial power on takeoff, the engine was running normally and sounded normal. The witness further reported that the airplane did not look like it was under control when it took off.

Another witness located about 5 miles southwest of the accident site reported seeing an older tricycle gear Piper tri-pacer with the flaps fully extended and in a nose-high attitude that appeared to be having trouble gaining altitude and was on a verge of a stall.

## PILOT INFORMATION

The 80-year-old private pilot's last Federal Aviation Administration (FAA) medical certificate was issued on January 19, 1979. The pilot reported 550 total hours of flight experience, with 12 flight hours accrued with in the last six months of the exam date.

The pilot's personal logbook was found in the wreckage and had sustained thermal damage in the post-crash fire. The edges of the logbook had burned, and the last readable and totaled time of 623.1 was in 1979; however, the date was unreadable. His private pilot certificate was issued on September 22, 1974.

## MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy of the pilot was performed by the Oregon State Medical Examiner, Clackamas, Oregon. The cause of death was blunt and thermal trauma due to an aircraft crash and manner of death was accident. The medical examiner reported that the pilot had severe atherosclerosis of his coronary arteries and aorta, stents in his coronary arteries, evidence of prior myocardial infarction, and evidence of congestive heart failure. In addition, the medical examiner reported that the pilot had a significant medical history that included atrial fibrillation and stage III chronic kidney disease. The medical examiner also reported that the pilot had evaluations on June 9, and June 11, 2021, at a local hospital for shortness of breath, epigastric pain, and lower extremity edema. The pilot refused hospital admission on both dates.

Toxicology testing performed at the FAA Forensic Sciences Laboratory found 2991 ng/mL, ng/g gabapentin detected in blood (cardiac), 106985 ng/mL, ng/g gabapentin detected in urine, doxylamine inconclusive in blood (cardiac), 303 ng/mL, ng/g doxylamine detected in urine, torsemide detected in blood (cardiac) and urine, carvedilol inconclusive in blood (cardiac) and detected in urine, and dextromethorphan detected in urine.

The toxicology testing found gabapentin, doxylamine, torsemide, and carvedilol in blood and urine. Gabapentin is a prescription antiseizure medication commonly marketed as Neurontin. Doxylamine is a sedating antihistamine often used to treat allergy symptoms. FAA provides guidance on wait times before flying after using this medication. Torsemide is a prescription fluid retention medication, commonly marketed as Demadex, for congestive heart failure,

kidney disease, or liver disease. It can also treat high blood pressure. Carvedilol is a prescription beta blocker medication used to treat high blood pressure and heart failure.

According to the pilot's wife, he had a heart attack 5 years previous and was taking nitroglycerin. She further reported that he had a mild heart attack 3 weeks before the accident. The wife also stated that her husband was easily confused, irritable, and was in poor health.

#### WRECKAGE AND IMPACT INFORMATION

Examination of the accident site revealed that the first identified point of impact 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-like trajectory, where it travelled across a street, about 1 mile to the northeast, impacted a chimney and trees, before it came to rest in the side yard of a residence, where a post-crash fire ensued. The entire airplane came to rest on its left side against a barbed-wire fence oriented on a magnetic heading of 021°.

Flight control continuity was established from the cockpit, through the tee-bar, to each wing and to the empennage.

The engine examination established engine drivetrain continuity. The cylinders were borescoped with no anomalies identified. Manual rotation of the crankshaft produced thumb compression in all cylinders.

The propeller had separated from the crankshaft flange and was partially embedded in the ground about 10 ft from the main wreckage. One propeller blade was bent aft with S-bending, and the tip had separated. The other propeller blade was bent aft. Propeller blade strikes were identified to several tree limbs.

There was no evidence of a preimpact mechanical anomaly or malfunction observed with the airframe or engine.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	80, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Unknown
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Unknown
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 3 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	January 19, 1979
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	(Estimated) 623 hours (Total, all aircraft), 0 hours (Total, this make and model)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N2618A
<b>Model/Series:</b>	PA-22-135	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	18-2186
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	March 19, 2020 Annual	<b>Certified Max Gross Wt.:</b>	
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>		<b>Engine Model/Series:</b>	O-290-D2
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	140 Horsepower
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KMFR,1313 ft msl	<b>Distance from Accident Site:</b>	10 Nautical Miles
<b>Observation Time:</b>	02:53 Local	<b>Direction from Accident Site:</b>	173°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	29.9 inches Hg	<b>Temperature/Dew Point:</b>	19°C / 11°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Meford, OR (MFR)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	White City, OR	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	BEAGLE SKY RANCH OR96	<b>Runway Surface Type:</b>	Dirt
<b>Airport Elevation:</b>	1436 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	15/33	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3000 ft / 130 ft	<b>VFR Approach/Landing:</b>	Go around

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal	<b>Latitude, Longitude:</b>	42.53817,-122.89871



## Administrative Information

<b>Investigator In Charge (IIC):</b>	Cornejo, Tealeye
<b>Additional Participating Persons:</b>	William "Shawn" Tu; Federal Aviation Administration; Portland, OR Kathryn Whitaker; Piper Aircraft Inc.; Vero Beach, FL Troy Helgeson; Lycoming Engines, an Operating Division of AVCO Corp; Williamsport, PA
<b>Original Publish Date:</b>	September 27, 2023
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 3</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=103294">https://data.nts.gov/Docket?ProjectID=103294</a>

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