Aviation Investigation Final Report

Location:	Canyonville, Oregon	**Accident Number:**	WPR09FA428
Date & Time:	August 30, 2009, 09:27 Local	**Registration:**	N2967P
Aircraft:	Piper PA-22-150	**Aircraft Damage:**	Substantial
Defining Event:	VFR encounter with IMC	**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The non-instrument-rated and non-certificated pilot was flying along a 49-mile route, which paralleled a major interstate highway. Mountainous terrain was located within a few miles of the highway, and, in the accident site area, mountains rose to 3,300 feet mean sea level (msl). While flying about 0.7 miles west of the highway, the pilot collided with a mountain at 2,400 feet msl. Near the departure airport, about 23 miles northwest of the accident site, the base of the overcast ceiling was between 2,000 and 2,200 feet msl. Witnesses located about 1 mile north of the crash site reported that the mountaintop south of their position was not visible at the time of the accident due to the cloud coverage. The wreckage and ground scar signatures were consistent with a level-flight impact into the terrain. Thus, it is likely that the pilot, while attempting to fly just below the clouds, encountered instrument meteorological conditions and lost visual reference to the mountainous terrain.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The non-instrument-rated and non-certificated pilot's decision to continue visual flight into instrument meteorological conditions in mountainous terrain, which resulted in controlled flight into terrain.

Findings

Environmental issues	Low ceiling - Contributed to outcome
Environmental issues	Below VFR minima - Contributed to outcome
Environmental issues	Mountainous/hilly terrain - Contributed to outcome
Personnel issues	Decision making/judgment - Pilot

Factual Information

History of Flight

Enroute-cruise	VFR encounter with IMC (Defining event)
Enroute-cruise	Controlled flight into terr/obj (CFIT)

HISTORY OF FLIGHT

On August 30, 2009, about 0927 Pacific daylight time, a Piper PA-22-150 (Tri-Pacer), N2967P, cruised into a mountainside about 1.2 miles south of Canyonville, Oregon. The airplane sustained substantial damage to the structure, which was fragmented and consumed by postimpact ground fire. The pilot and passenger co-owned and operated the airplane, and they were killed. According to the Federal Aviation Administration (FAA), neither of the occupants in the airplane held a pilot certificate. Instrument meteorological conditions existed in the vicinity of the accident site, and no flight plan had been filed. The personal flight was performed under the provisions of 14 Code of Federal Regulations Part 91, and it originated about 0902 from the George Felt Airport, a privately-owned field located about 3.1 miles west-southwest of Roseburg, Oregon.

The Felt Airport manager reported to the National Transportation Safety Board investigator that the pilot based his airplane in a hangar at the airport. The manager and members of the pilot's family indicated that the pilot periodically flew his airplane and occasionally took passengers flying. At 0902, the passenger reportedly telephoned her sister, indicated that she was airborne, and stated she was en route to the Grants Pass Airport, Grants Pass, Oregon. (Grants Pass is located about 49 miles south of the Felt Airport.) The passenger’s sister planned to meet the airplane upon its landing between 0925 and 0930.

The FAA coordinator reported that neither radio communications nor services were provided to the airplane’s pilot. A review of radar data did not reveal any southbound aircraft track originating in the vicinity of Roseburg and terminating in the vicinity of the accident site area between 0850 and 0930. The FAA coordinator indicated that aircraft flying below 2,500 feet mean sea level (msl) may not be recorded on radar along this flight route because this altitude was below the minimum coverage altitude for radar.

Between 0927 and 0955, about 1/2-dozen witnesses telephoned 911 and reported what they deemed to be an event consistent with an airplane crash. One of the witnesses was located about 1,000 feet msl and was located about 1 mile northwest of the accident site. In pertinent part, this witness reported observing an airplane flying in an easterly direction above the clouds (toward Interstate Highway 5 (I-5)). Due to the presence of the clouds, the airplane was only visible for a few seconds. The witness reported that the mountain’s top, located southeast of his location, was not visible because it was obscured by clouds. (The mountain’s peak

elevation is about 3,400 feet msl.) The witness additionally indicated that he heard the sound of the airplane's engine, and it revved up just before he heard the sound of an impact.

Other witnesses located about 1.2 miles northwest of the accident site reported hearing but not seeing the airplane. The witnesses stated that, although their horizontal visibility was not restricted, clouds obscured the mountain located south of their respective locations. All of the witnesses stated that they heard a sound consistent with an impact. Several witnesses reported hearing a sputtering engine, while others reported hearing the engine rev up or down, or noted silence just seconds before they heard the boom noise of an impact. Witnesses reported that within a few hours after the accident, when the base elevation of the clouds increased, they observed a fire on the mountainside southeast of their location.

PERSONNEL INFORMATION

Neither the 70-year-old pilot nor passenger (the pilot's wife) held a FAA pilot or aviation medical certificate. No pilot logbook was provided to the Safety Board investigator, and no flight time information was documented.

The passenger's sister reported to the Safety Board investigator that her sister did not know how to fly. The pilot had been flying airplanes since he attended high school, and he was familiar with the route of flight between Roseburg and Grants Pass, having flown over the area for years. The pilot was "handy with tools," and he performed maintenance on his airplane.

AIRCRAFT INFORMATION

The airplane was manufactured in 1955, and the FAA issued it a standard airworthiness certificate in the normal category. FAA records indicate that in June 2006, the pilot and passenger registered the airplane in their names as co-owners.

The airplane was equipped with a Lycoming 150-horsepower engine, model O-320. No maintenance records were provided to the Safety Board investigator for examination.

METEOROLOGICAL INFORMATION

The Roseburg Regional Airport, elevation 529 feet msl, is located about 23 miles northwest of the crash site. At 0853 and 0953, Roseburg reported the base of its overcast ceiling was 1,500 and 1,700 feet above ground level, respectively (2,029 and 2,229 feet msl).

WRECKAGE AND IMPACT INFORMATION

Based upon the on-scene examination of the accident site and the southerly distribution of airplane wreckage, the airplane was found to have cruised into estimated 2,400-foot msl upsloping mountainous terrain. The first observed evidence of impact was felled tree branches and the severed trunk of a tree, estimated about 80 feet above ground level. The main

wreckage was found on estimated 20- to 30-degree upsloping terrain on the northern face of a 3,300-foot msl mountain, about 900 feet below its peak. Fragmented components of the airplane were observed scattered over an estimated 50-foot-wide by 120-foot-long path. The crash site is located at the following global positioning system coordinates: 42 degrees 54.62 minutes north latitude by 123 degrees 16.86 minutes west longitude.

The entire engine compartment, cockpit, instrument panel, fuselage, empennage and wings were consumed by fire, which also burned an estimated 1/2-acre of the forest around the crash site. The engine's case and carburetor were fractured. All cylinders remained at least partially attached to the engine. No evidence of preimpact catastrophic engine malfunction was noted. No instrument settings were readable.

No impact damage was noted to the horizontal stabilizer or the attached elevator assembly. The ailerons remained hinged to portions of their respective cable pulley system. The integrity of all the flight control cables was confirmed at their respective connections to the flight control surfaces. Several cables were found broken midspan in areas where broomstraw-like witness marks were present. Fragments from the four corners of the airplane were located at the crash site.

The spinner and propeller were found separated from the engine. These components were located about 50 feet upslope from the main wreckage and demarked the southern-most area of wreckage distribution. The spinner was crushed in an aft direction and exhibited deformation signatures consistent with torsional twisting during engine crankshaft rotation. The propeller was bent into an "s" shape, and the blades were torsionally twisted. The tip of one blade was missing, and the second blade had a 1-inch-long gouge in its leading edge.

MEDICAL AND PATHOLOGICAL INFORMATION

On September 1, 2009, an autopsy was performed on the pilot by the Office of the State Medical Examiner, Roseburg. The autopsy findings indicated that the pilot died from severe blunt trauma and post-crash fire. Forensic toxicology was not performed on the pilot.

ADDITIONAL INFORMATION

The pilot's departure airport is located about 2.5 miles west of I-5, and his destination airport is located about 1.3 miles west of I-5. Between the departure and destination airports, I-5 is principally oriented along a north-to-south course. However, in the vicinity of the accident site, I-5 changes direction and becomes easterly for several miles as it winds through a mountainous area.

Pilot Information

Certificate:	None	**Age:**	70,Male
Airplane Rating(s):	None	**Seat Occupied:**	Unknown
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	None None	**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N2967P
Model/Series:	PA-22-150	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	22-3241
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	1950 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	LYCOMING
ELT:	Installed, not activated	**Engine Model/Series:**	O-320 SERIES
Registered Owner:	On file	**Rated Power:**	150 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	RBG,529 ft msl	**Distance from Accident Site:**	20 Nautical Miles
Observation Time:	08:53 Local	**Direction from Accident Site:**	334°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Overcast / 1700 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	360°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.96 inches Hg	**Temperature/Dew Point:**	17°C / 13°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Roseburg, OR (5S1)	**Type of Flight Plan Filed:**	None
Destination:	Grants Pass, OR (3S8)	**Type of Clearance:**	None
Departure Time:	09:02 Local	**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	42.910278,-123.278053

Administrative Information

Investigator In Charge (IIC):	Pollack, Wayne
Additional Participating Persons:	Jarvis L Cochran; Federal Aviatioin Administration; Hillsboro, OR
Original Publish Date:	March 8, 2012
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=74626

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