Aviation Investigation Final Report

Location:	Paso Robles, California	**Accident Number:**	WPR14FA234
Date & Time:	June 7, 2014, 10:05 Local	**Registration:**	N24918
Aircraft:	Piper J3C	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Witnesses observed the airplane lift off and, about midfield, start a right turn. The bank angle continued to steepen until the wings were vertical to the ground. The airplane appeared to be moving very slowly; the nose then lowered directly toward the ground. It is likely that during this steep turn, the airplane exceeded its critical angle-of-attack and stalled. The airplane came to rest about 500 feet abeam the midpoint of the runway, and sustained substantial damage to the wings and fuselage. A caretaker at the pilot's ranch reported that he had observed numerous takeoffs and had never seen the pilot make a midfield turn. The pilot normally turned left or right at the departure end of the runway.

A postaccident examination of the airframe and engine revealed no evidence of mechanical malfunctions or failures that would have precluded normal operation.

Probable Cause and Findings

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

The pilot's steep right turn shortly after takeoff, which led to the airplane exceeding its critical angle-of-attack and experiencing an aerodynamic stall.

Findings

Aircraft	Angle of attack - Not attained/maintained
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

Initial climb	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On June 7, 2014, about 1005 Pacific daylight time, a Piper J3C-65, N24918, collided with terrain during the takeoff initial climb from Oak Country Ranch Airport near Paso Robles, California. The owner was operating the airplane under the provisions of 14 Code of Federal Regulations (CFR) Part 91. The commercial pilot and the private pilot-rated passenger sustained fatal injuries. The airplane sustained substantial damage during the accident sequence. The cross-country personal flight was departing with a planned destination of Paso Robles Municipal Airport. Visual (VMC) meteorological conditions prevailed, and no flight plan had been filed.

The private pilot-rated passenger owned the airplane and the private airport. Several acquaintances met the pilot at the airplane as he was going to allow them to cut firewood close to the runway. The acquaintances went to the wood cutting site, which was a couple of hundred yards west of the departure end of the runway, and at a slight higher elevation than the runway. They observed the airplane lift off, and bank to the right as it was climbing. The bank angle continued to steepen until the wings were vertical to the ground, and the airplane appeared to be very slow; it then went nose low directly toward the ground. Terrain prevented them from seeing ground impact.

The airplane came to rest about 500 feet west of the midpoint of the runway. Some of the acquaintances had medical training, and immediately responded to the crash site.

A caretaker at the ranch had observed numerous takeoffs, and stated that he had seen not seen a departure at the midpoint of the runway. Most were to the left at the end of the takeoff runway; the few that were to the right were also at the end of the runway.

Pilot Information

Certificate:	Commercial	**Age:**	66,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Rear
Other Aircraft Rating(s):	Balloon	**Restraint Used:**	Lap only
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	September 11, 2013
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	4300 hours (Total, all aircraft)		

Pilot Information

Certificate:	Private	**Age:**	82,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	**Seat Occupied:**	Front
Other Aircraft Rating(s):	Glider	**Restraint Used:**	Lap only
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	January 26, 2012
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	7500 hours (Total, all aircraft)		

First Pilot

A review of Federal Aviation Administration (FAA) airman records revealed that the 66-year-old pilot held a commercial pilot certificate with ratings for airplane single-engine land, multiengine land, instrument airplane, and lighter-than-air balloon. The pilot held a flight instructor (FI) certificate with ratings for airplane single-engine and multiengine land.

The pilot held a second-class medical certificate issued on September 11, 2013. It had the limitations that the pilot must wear corrective lenses for distant vision, and have glasses for near vision.

No personal flight records were located for the pilot. The National Transportation Safety Board (NTSB) investigator-in-charge (IIC) obtained the aeronautical experience listed in this report from a review of the FAA airmen medical records on file in the Airman and Medical Records Center located in Oklahoma City, Oklahoma. The pilot reported on his last medical application that he had a total time of 4,300 hours with 80 hours logged in the previous 6 months.

Second Pilot

A review of FAA airman records revealed that the 82-year-old second pilot held a private pilot certificate with ratings for airplane single-engine land, single-engine sea, glider, and instrument airplane.

The pilot was issued a limited third-class medical certificate on January 26, 2012. It had the limitations that the pilot must wear corrective lenses for near and distant vision. The pilot's medical certificate was no longer valid after January 31, 2014. This pilot's most recent valid medical certificate had expired, but he was flying a Light-Sport Aircraft. He was medically eligible to fly as a light sport pilot as long as he had a valid driver's license, and was in compliance with 14 CFR 61.53 "Prohibition on operations during medical deficiency."

An examination of a logbook for the second pilot contained four entries between April 8 and May 17, 2014, for a total flight time of 6.1 hours. Additional aeronautical experience was obtained from the FAA airmen medical records on file in the Airman and Medical Records Center located in Oklahoma City. The pilot reported on his medical application that he had a total time of 7,500 hours with 30 hours logged in the previous 6 months.

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N24918
Model/Series:	J3C 65	**Aircraft Category:**	Airplane
Year of Manufacture:	1939	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	3535
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	June 6, 2014 Annual	**Certified Max Gross Wt.:**	
Time Since Last Inspection:	9 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1763 Hrs as of last inspection	**Engine Manufacturer:**	CONTINENTAL MOTORS INC
ELT:	C91 installed, activated, did not aid in locating accident	**Engine Model/Series:**	A65-8
Registered Owner:	BERG ROBERT O	**Rated Power:**	65 Horsepower
Operator:	BERG ROBERT O	**Operating Certificate(s) Held:**	None

The airplane was a high-wing, single-engine Piper J3C-65, serial number 3535, with fixed, conventional (tail-wheel equipped) landing gear; it was manufactured in 1939. A review of the airplane's logbooks revealed that the airplane had a total airframe time of 1,763 hours at the most recent annual inspection dated June 6, 2014. The tachometer read 163.69 at the most recent inspection; it read 172.98 at the accident site. The airframe was reassembled with numerous new components in March 2013.

The engine was a Continental Motors, Inc. (CMI), A65-8, serial number 4678168. Total time recorded on the engine at the most recent annual inspection was 1,016.35 hours, and time since major overhaul in March 2013 was 49.45 hours.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KPRB,840 ft msl	**Distance from Accident Site:**	10 Nautical Miles
Observation Time:	10:05 Local	**Direction from Accident Site:**	40°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:		**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	/ None
Wind Direction:	320°	**Turbulence Severity Forecast/Actual:**	/ N/A
Altimeter Setting:	29.85 inches Hg	**Temperature/Dew Point:**	18°C / 9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Paso Robles, CA (33CL)	**Type of Flight Plan Filed:**	None
Destination:	Paso Robles, CA (PRB)	**Type of Clearance:**	None
Departure Time:	10:04 Local	**Type of Airspace:**	

Airport Information

Airport:	Oak Country Ranch 33CL	**Runway Surface Type:**	Asphalt
Airport Elevation:	1200 ft msl	**Runway Surface Condition:**	Vegetation
Runway Used:	17	**IFR Approach:**	None
Runway Length/Width:	2200 ft / 50 ft	**VFR Approach/Landing:**	None

The Oak Country Ranch Airport runway 17 was 2,200 feet long by 50 feet wide, and the runway surface was asphalt. The elevation was 1,200 feet msl.

Wreckage and Impact Information

Crew Injuries:	2 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	35.559722,-120.792221

The NTSB IIC and inspectors from the FAA examined the wreckage on scene. A full report of the airframe and engine examination is contained within the public docket for this accident.

The first identified point of contact (FIPC) was a ground scar underneath the engine. There was no

debris path; all of the wreckage was contained at the site of impact. The orientation of the fuselage was 272 degrees.

The airplane came to rest on its left side in an open grassy field adjacent to the runway. The left wing sustained substantially more damage than the right wing. The left wing was crumpled its entire length with substantial buckling at the wing root. The left aileron was buckled in several places. The left main landing gear was crushed under the fuselage; the right main landing gear was intact.

Investigators left the engine in place, and manually rotated the crankshaft with the propeller blade remnants; the crankshaft rotated freely. A borescope inspection revealed no mechanical deformation on the valves, cylinder walls, or internal cylinder head. They obtained thumb compression on all cylinders in firing order. The ignition harness had sustained damage. Investigators removed the magnetos, and then the back covers. They manually rotated the magnetos, and both magnetos produced spark at all posts.

Medical and Pathological Information

The San Luis Obispo County Medical Examiner completed an autopsy on both pilots. The cause of death of both pilots was reported as the effect of blunt force injuries.

Toxicological tests on specimens recovered from both pilots were performed by the FAA Civil Aerospace Medical Institute.

Analysis of the specimens for the first pilot contained no findings for carbon monoxide, volatiles, and tested drugs. They did not perform tests for cyanide.

Analysis of the specimens for the second pilot contained no findings for volatiles. They did not perform tests for cyanide. The report contained the following findings for tested drugs: amlodopine detected in blood and liver, and benazepril detected in blood. Both of the detected drugs are used to treat high blood pressure.

Additional Information

Stalls

The FAA Airplane Flying Handbook (FAA-H-8083-3A), discussed stalls in Chapter 4. It pointed out that a stall occurred when the smooth airflow over the airplane's wing was disrupted, and the lift degenerated rapidly. This was caused when the wing exceeded its critical angle of attack. It noted that this could occur at any airspeed, in any attitude, and with any power setting.

Administrative Information

Investigator In Charge (IIC):	Plagens, Howard
Additional Participating Persons:	Paul King; FAA; San Jose, CA
Original Publish Date:	February 29, 2016
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=89381

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