Aviation Investigation Final Report

Location:	Livermore, California	**Accident Number:**	WPR15FA174
Date & Time:	June 1, 2015, 20:58 Local	**Registration:**	N1348C
Aircraft:	Piper PA 22-135	**Aircraft Damage:**	Destroyed
Defining Event:	Loss of control in flight	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airline transport pilot departed on a local night flight. Shortly after takeoff, he reported a control difficulty to air traffic control tower personnel; he stated that he was going to make a circle, and troubleshoot the issue. There were no further transmissions from the pilot. A witness about 1/2 mile away from the airport said that the airplane caught his attention when he heard the engine cut out. He looked up, but couldn't see the airplane as it was dusk. He finally saw two outboard lights, one on each wing, and realized that the airplane was in a nose dive. According to the witness, it was not spinning, and the engine sounded like it was at full throttle. Radar data indicated that the airplane departed about on runway heading, and about 2 minutes into the flight it began a 180° turn. The airplane lost about 1,100 ft of altitude in 18 seconds during the turn. The radar track continued in a straight line until ground impact. Postaccident examination revealed no anomalies that would have precluded normal operation of the airframe or engine or would have caused a control difficulty.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of control for reasons that could not be determined, because examination of the airframe and engine revealed no anomalies that would have precluded normal operation.

Findings

Not determined	(general) - Unknown/Not determined

Factual Information

History of Flight

Maneuvering	Loss of control in flight (Defining event)
Uncontrolled descent	Unknown or undetermined

On June 1, 2015, about 2058 Pacific daylight time, a Piper PA22-135, N1348C, collided with terrain while maneuvering near Livermore Municipal Airport, Livermore, California. The airline transport pilot sustained fatal injuries, and the airplane was destroyed. The pilot/owner was operating the airplane under the provisions of 14 Code of Federal Regulations (CFR) Part 91. The local personal flight departed Livermore at 2052. Night visual meteorological conditions prevailed, and no flight plan had been filed.

Shortly after takeoff, the pilot reported a control difficulty to air traffic control tower personnel; he stated that he was going to make a circle, and troubleshoot the issue. There were no further transmissions from the pilot.

A witness about 1/2 mile away from the airport said that the airplane caught his attention when he heard the engine "cut out." He looked up, but couldn't see the airplane as it was dusk. He then heard the engine "revving to a higher rpm like a crop duster swooping down." He heard the engine sputter twice, and then increase rpm again. He finally saw two outboard lights, one on each wing, and realized that the airplane was in a nose dive. According to the witness, it was not spinning, and the engine sounded like it was at full throttle.

A plot of recorded radar data indicated that the airplane climbed about on the runway heading to a maximum mode C reported altitude of 3,100 ft mean sea level. About 2 minutes into the flight, the airplane made a 180° left turn, and lost 1,100 ft of altitude in 18 seconds. The radar track continued in a straight line until it ended; the total duration of the flight was 2 minutes 48 seconds.

Pilot Information

Certificate:	Airline transport; Commercial; Flight engineer	**Age:**	75,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Unknown
Other Aircraft Rating(s):	None	**Restraint Used:**	Unknown
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	November 6, 2013
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	26501 hours (Total, all aircraft)		

The last flight recorded in the pilot's notebook was on February 6, 2015. The pages from the previous 2 years totaled over 49 hours with none listed in the accident make and model.

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N1348C
Model/Series:	PA 22-135	**Aircraft Category:**	Airplane
Year of Manufacture:	1953	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	22-1141
Landing Gear Type:	Tailwheel	**Seats:**	
Date/Type of Last Inspection:	June 1, 2014 Annual	**Certified Max Gross Wt.:**	2000 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	3612 Hrs as of last inspection	**Engine Manufacturer:**	LYCOMING
ELT:		**Engine Model/Series:**	O-290-D2
Registered Owner:	On file	**Rated Power:**	135 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Dawn
Observation Facility, Elevation:	KLVK,400 ft msl	**Distance from Accident Site:**	3 Nautical Miles
Observation Time:	20:53 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Few / 2200 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	11 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	280°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.03 inches Hg	**Temperature/Dew Point:**	17°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Livermore, CA (LVK)	**Type of Flight Plan Filed:**	None
Destination:	Livermore, CA (LVK)	**Type of Clearance:**	None
Departure Time:	20:52 Local	**Type of Airspace:**	

Airport Information

Airport:	Livermore LVK	**Runway Surface Type:**	
Airport Elevation:	400 ft msl	**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	On-ground
Total Injuries:	1 Fatal	**Latitude, Longitude:**	37.720832,-121.760002

A National Transportation Safety Board (NTSB) investigator and a Federal Aviation Administration (FAA) inspector examined the wreckage on site on June 2, 2015.

The first identified point of ground contact was a series of ground scars consistent with the left and right main landing gear, gear legs, engine, cowling, left and right wing lift struts, and wings. A propeller blade had separated about 6 inches from the hub along an angular plane. The rest of the propeller was in

the principal impact crater; it was not charred. The main wreckage was burned, and was in the middle of a charred area. All of the airplane's fabric covering was consumed by fire.

The debris path was about 108 ft long, and oriented on a 318° magnetic heading. All major structural components of the airplane were located at the accident site.

Further examination of an aileron cable distortion by the NTSB Office of Research and Engineering Materials Laboratory determined that the cable distortion was a result of overload conditions. The postaccident examination of the airplane did not reveal any mechanical anomalies that would have precluded normal operation.

Medical and Pathological Information

The Alameda County Coroner completed an autopsy on the pilot, and determined that the cause of death was blunt force trauma. The FAA Bioaeronautical Sciences Research Laboratory performed toxicological testing of specimens of the pilot, which were negative for volatiles and tested drugs. The laboratory did not perform tests for carbon monoxide or cyanide.

Administrative Information

Investigator In Charge (IIC):	Plagens, Howard
Additional Participating Persons:	David Jensen; Oakland ; Oakland, CA Charles Little; Piper Aircraft Inc; Vero Beach, FL Mark Platt; Lycoming Engines; Williamsport, PA
Original Publish Date:	July 20, 2017
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=91284