Aviation Investigation Final Report

Location:	CAMERON PARK, California	**Accident Number:**	LAX01LA244
Date & Time:	July 14, 2001, 07:45 Local	**Registration:**	N104BD
Aircraft:	LEVITSKY BD-5T	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

During a low altitude erratic flight, the airplane dropped rapidly until it hit the shoulder of a freeway and burst into flames. The pilot had been flying the airplane for several months since he completed building it. He had taken off and was several miles from his home airport. Witnesses observed the airplane about 125 feet above ground level, and the whole airplane weaved up and down as well as left and right. The engine was loud and high-pitched, but the witnesses didn't think that the airplane was going very fast. They did not observe any smoke, flames, or pieces falling from the airplane. As the airplane flew over a highway, it banked hard to the right and lost altitude. The airplane turned parallel to the freeway, and the erratic movement increased. The terrain sloped down at this point, and the airplane continued downhill parallel to the slope. The airplane cleared power lines, but then dropped rapidly until it hit the shoulder of the freeway. The engine sounded like it was running until the airplane cleared the power lines, and then the engine sound died. The kit manufacturer reported that the pilot had been in contact with them while he constructed the airplane. He told them that his initial flights occurred in early May 2001. The flights went well, and he was happy with the airplane's performance. He did slow flight and landings on the first 2-hour flight. He moved the airplane to Cameron Park, but damaged the tailskid, landing gear, and prop when the control stick grip came off during the landing flare. The pilot repaired the airplane, and the manufacturer disassembled and inspected the propeller hub. The manufacturer replaced the actuating cam guide pins as a precaution. Investigators were unable to detect any anomalies during examination of the wreckage that could account for the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: an in-flight collision with terrain for undetermined reasons.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: MANEUVERING

Findings
1. (C) REASON FOR OCCURRENCE UNDETERMINED

Factual Information

On July 14, 2001, about 0745 Pacific daylight time, an experimental Levitsky BD-5T, N104BD, collided with terrain near Cameron Park, California. The owner/builder was operating the airplane under the provisions of 14 CFR Part 91. The commercial pilot sustained fatal injuries; a post crash fire destroyed the airplane. The local personal flight departed Cameron Airpark about 0740. Visual meteorological conditions prevailed, and no flight plan had been filed.

A witness in a car eastbound on Highway 50 said that the airplane was crossing his path from right to left and in a climb. It entered a right turn and began descending. After the turn, the airplane angled toward him on a 45-degree angle. It appeared to be moving really fast for its size. As the airplane headed toward him, he noticed that the whole airplane weaved up and down as well as left and right. He is an active private pilot, and thought that the airplane was moving faster than a glide speed. He did not observe any smoke, flames, or pieces falling from the airplane. The airplane landed about 50 yards in front of his car and immediately exploded. The nose appeared to be down slightly, and the airplane appeared to be in a slight left turn.

A witness standing beside Highway 50 said that the sound of the engine caught his attention. It was loud and high-pitched; he thought that the pilot was trying to get all available power from it. He didn't think that it was going very fast. It was traveling perpendicular to the freeway, but only 125 feet above the ground. The nose moved left and right (squirming), which he thought was odd. As the airplane flew over the highway, it banked hard to the right and lost altitude. The airplane turned parallel to the freeway, and the erratic movement increased. The terrain sloped down at this point, and the airplane continued downhill parallel to the slope. The airplane cleared power lines, but then dropped rapidly until it hit the shoulder of the freeway. The engine sounded like it was running until the airplane cleared the power lines, and then he thought that the engine died.

The kit manufacturer reported that the pilot had been in contact with them while he constructed the airplane. He told them that his initial flights occurred at Mather AFB in early May 2001. The flights went well, and he was happy with the airplane's performance. He did slow flight and landings on the first 2-hour flight. He moved the airplane to Cameron Park, but damaged the tailskid, landing gear, and prop when the control stick grip came off during the landing flare. The pilot repaired the airplane, and the manufacturer disassembled and inspected the propeller hub. The manufacturer replaced the actuating cam guide pins as a precaution.

The pilot told the manufacturer that he modified the propeller quadrant, and had broken the propeller position sensor. The pilot did not like the modification, and went back to the original quadrant. He did lengthen the prop pitch control lever, and felt that this improved prop control

sensitivity.

The pilot substituted the manufacturer's electric trim for the cable actuated trim system. The only deviations from the plans that the manufacturer was aware of were the trim and the changed pitch control lever.

The manufacturer provided data that indicated that the airplane fell within acceptable weight limits and center of gravity ranges.

The Safety Board investigator-in-charge (IIC) and the Federal Aviation Administration (FAA) accident coordinator examined the wreckage at Plain Parts, Pleasant Grove, California.

The airplane sustained severe thermal and mechanical damage. Cables operated the elevator and rudder; torque tubes operated the ailerons. All flight controls remained connected at the control surfaces; however, investigators were unable to establish control continuity due to the damage.

One propeller blade was in the feather position, and separated at the attach point. The other two prop blades were at 45-degree angles. The IIC had the manufacturer examine the propeller hub under the supervision of the FAA. They disassembled the hub and noted that all three drive pins sheared, which allowed the blades to rotate in any direction. Other than the mechanical damage, they found no improper hardware, and the blades had been installed correctly.

Investigators discovered no anomalies with the airframe or engine.

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	42,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	July 12, 2001
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	LEVITSKY	**Registration:**	N104BD
Model/Series:	BD-5T	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	RL-0001
Landing Gear Type:	Retractable - Tricycle	**Seats:**	2
Date/Type of Last Inspection:		**Certified Max Gross Wt.:**	910 lbs
Time Since Last Inspection:		**Engines:**	1 Turbo prop
Airframe Total Time:		**Engine Manufacturer:**	Quantum
ELT:	Installed, not activated	**Engine Model/Series:**	H-95
Registered Owner:	Richard B. Levitsky	**Rated Power:**	95 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	MHR,96 ft msl	**Distance from Accident Site:**	16 Nautical Miles
Observation Time:	07:53 Local	**Direction from Accident Site:**	230°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	200°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.89 inches Hg	**Temperature/Dew Point:**	15°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	CAMERON PARK, CA (061)	**Type of Flight Plan Filed:**	None
Destination:	CAMERON PARK, CA (061)	**Type of Clearance:**	None
Departure Time:	07:40 Local	**Type of Airspace:**	Class G

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:**	38.150001,-121

Administrative Information

Investigator In Charge (IIC):	Plagens, Howard
Additional Participating Persons:	Ken Meyer; Federal Aviation Administration; Sacramento, CA
Original Publish Date:	September 29, 2004
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=52695