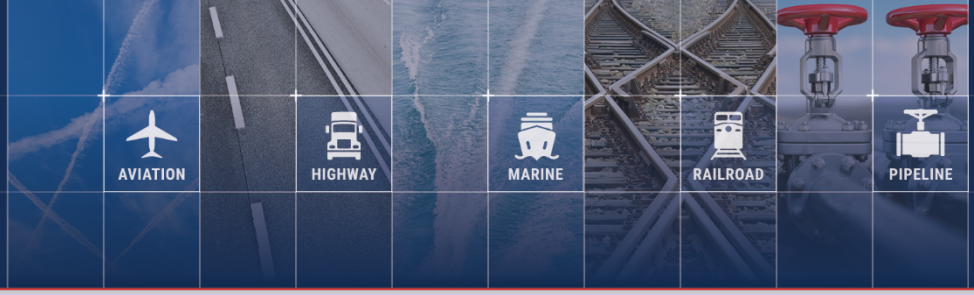

Aviation Investigation Final Report

Location:	Oceanside, California	**Accident Number:**	WPR10FA369
Date & Time:	July 27, 2010, 11:00 Local	**Registration:**	N33CJ
Aircraft:	Beech 95 55	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

One witness reported that, during the airplane's initial climb, the engines seemed out of synchronization, and the airplane was yawing and drifting to the right and wasn't gaining altitude before it rolled to the right in a descent and went out of view. A second witness reported that one engine didn't sound like it was producing full power, like it was sputtering, and another witness observed the low-flying airplane's landing gear retract before it rolled to the right and crashed. The airplane impacted terrain in an open field in a slightly right-wing-low attitude, came to rest upright, and sustained extensive thermal damage to the cabin and cockpit, obliterating any evidence of switch or control lever position or instrument indication. A postaccident examination of the airframe, engines, and propellers revealed no evidence of mechanical failure or malfunction that would have precluded normal operation. Examination of the propellers revealed signatures consistent with the left engine producing low power and the right engine producing no power at ground impact.

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 directional control of the airplane following a loss of power in the right engine. The reason for the loss of power in the right engine could not be determined.

Findings

Aircraft	(general) - Not specified
Aircraft	Directional control - Not attained/maintained
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

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

HISTORY OF FLIGHT

On July 27, 2010, about 1100 Pacific daylight time, N33CJ, a Beech 95-B55 airplane, was substantially damaged following a loss of control and impact with terrain during initial climb near the Oceanside Municipal Airport (OKB), Oceanside, California. The certificated airline transport pilot, the sole occupant, was killed. Visual meteorological conditions prevailed for the local flight, which was being operated in accordance with Title 14 Code of Federal Regulations Part 91, and a flight plan was not filed. The flight had departed OKB about 2 minutes prior to the accident.

In an interview with the National Transportation Safety Board investigator-in-charge (IIC), a witness who is a Federal Aviation Administration (FAA) certificated airline transport pilot and a FAA airframe and power plant mechanic, reported that he was positioned near the east end of runway 06 from which the airplane was departing. The witness reported that after the airplane became airborne it sounded like the engines were "out of sync." The witness added that as the airplane passed by his position he estimated its altitude was about 50 feet above ground level (agl), and that as he continued to observe the airplane he noticed that it was yawing and drifting to the right in a wings-level attitude, but that the airplane was not gaining altitude. The witness further stated that he continued to watch the airplane until it rolled to the right in a descent and went out of view. He added that about two years ago the airplane had some fuel problems, but he didn’t specifically remember what the issue was.

A second witness, who was located in the backyard of a residence about 0.35 miles southwest of the accident site, reported that her attention was drawn by an unusually loud noise of an airplane’s engine. The witness stated that she was surprised to see how low [the] twin engine airplane was and how lucky the [pilot] was not to have clipped the high power lines behind her property. The witness added that the engine did not sound like it had full power, like it was almost sputtering. The witness stated that the airplane's landing gear was fully retracted and that it did not gain altitude as she continued to watch it until it went out of sight.

A third witness, who was also standing in the backyard of the residence with the second witness, reported that she heard an abnormally low flying twin engine airplane. The witness stated that she observed the landing gear retract, and that the airplane was at an elevation of about 300 feet and going down. The witness added a few seconds later she heard the crash.

A fourth witness, whose location to the accident site was not recorded in the witness statement, reported that the airplane was flying low and that it barely missed power lines. The witness stated that the airplane had its landing gear down as if trying to land, and after it missed the power lines [the pilot] picked up his landing gear and continued east, and was still very low. The witness added that the airplane then “flipped” to the right before crashing, followed by an explosion.

PERSONNEL INFORMATION

The pilot, age 83, was retired from a major United States based airline. He possessed an airline transport pilot rating for airplane multiengine land, a commercial pilot certificate for airplane single-engine land, and numerous type ratings for various transport category airplanes. A review of the pilot’s personal logbook revealed that he had successfully completed a flight review on March 11, 2010, which was partially conducted in the accident airplane. The logbook also indicated that the pilot had a total time of 647.9 hours in make and model. The pilot’s most recent third-class FAA medical certificate was issued on May 20, 2010, with no limitations noted. On the application for his airman medical certificate, the pilot listed 33,000 hours total flight time, with 15 hours flight time flown in the past 6 months.

AIRCRAFT INFORMATION

The airplane, manufactured in 1968, was a Beech 95-B55 (T42A), serial number TC-1074. It was a multiengine, low-wing, all-metal airplane of semimonocoque design, powered by two reciprocating engines. The airplane can be configured to carry a maximum of six occupants.

The airplane was issued a Standard Airworthiness Certificate on March 5, 1968, and was certified for normal category operations. The airframe had accumulated a total flight time of 2,196 hours. The last annual inspection was performed on May 13, 2010, with a total airframe time of 2,196 hours and a Hobbs hour meter reading of 1,929 hours.

The left engine was a Teledyne Continental Motors (TCM) IO-520-E, serial number 164269-72E. Total time recorded on the engine at the last annual inspection was 1,929 hours. The engine logbook contained an entry dated May 13, 2010 at a Hobbs time of 1,929 hours, and indicated a time since major overhaul of 448 hours.

The right engine was a Teledyne Continental Motors (TCM) IO-520-E, serial number 164268-72E. Total time recorded on the engine at the last annual inspection was 1,929 hours. The engine logbook contained an entry date May 13, 2010 at a Hobbs time of 1,929 hours, and indicated a time since major overhaul of 296 hours.

The left propeller was a three-bladed Hartzell HC-A3VF-2, hub serial number CC177.

The right propeller was a three-bladed Hartzell HC-A3VF-2, hub serial number CC178.

METEOROLOGICAL INFORMATION

At 1052, the weather reporting facility located at OKB, located about 1 nautical mile (nm) west of the accident site, indicated wind not reported, visibility 7 miles, overcast clouds at 1,500 feet, temperature 19 degrees Celsius, dew point 14 degrees Celsius, and an altimeter setting of 29.95 inches of Mercury.

WRECKAGE AND IMPACT INFORMATION

Examination of the accident site by the NTSB IIC and a Teledyne Continental Motors representative, revealed that the airplane came to rest upright on a measured magnetic heading of about 275 degrees in an open field located between a school and a residential area. The accident site was located at 33 degrees 13.307 minutes North latitude and 117 degrees 19.963 minutes West longitude, at an elevation of 76 feet, and about 1 nm east of the OKB on a measure magnetic heading of 075 degrees.

Further examination of the accident site revealed that the airplane's energy path covered an area of about 180 feet on a measured magnetic heading of about 089 degrees. The first identified point of contact (FIPC) was a ground scar located west of the main wreckage. The ground signatures observed at the FIPC were consistent with the airplane being in a slightly right wing down and slightly nose up pitch attitude. The area contained fragmented pieces of the green lens covering consistent with the airplane's right navigation light. Fragmented pieces of the left navigation light's red lens covering were located about 100 feet east of the FIPC, with the main wreckage located about 80 feet further east along the energy path. The right engine, with the propeller attached, had separated from the airplane during the crash sequence and was located about 155 feet north of the main wreckage.

Examination of the airplane revealed that the cockpit and cabin were consumed by fire, therefore, no instrument readings, gauge readings, or switch positions could be recorded. Flight control continutiy was established from the empennage to the aft cabin area, as well as from the ailerons to the wing roots. All flight control cable separations were observed to be consistent with overload.

Examination of the right wing revealed that it had remained attached to the fuselage at all attach points. The inboard section of the wing, inclusive of the right engine nacelle, had sustained thermal and impact damage. The outboard section of the wing from the outboard side of the nacelle to the wing tip was bent and twisted up about 45 degrees, with the extreme outboard section bent and mangled. The associated flap and aileron remained attached at all attach points. The right flap was observed in the retracted position. The right engine had separated with the propeller and was located about 155 feet north of the main wreckage. The propeller spinner was bent, twisted and crushed aft. The top cowling of the right engine nacelle was located along the same energy path, about 50 feet north or the main wreckage. An outboard piece of the right wing was found about 25 feet north of the nacelle cowling. The

examination further revealed that the right fuel tank had been breached and was destroyed by thermal activity.

Examination of the left wing revealed that it had remained attached to the fuselage at all attach points, with about the inboard one-third having sustained thermal damage. The engine was observed separated from its mounts and laying perpendicular and north to the longitudinal axis of the airplane. The propeller remained attached to the engine with the spinner observed bent, twisted, and crushed aft. The top and right side of the engine cowling sustained thermal damage. The outboard half of the wing was crushed upward and back more than 90 degrees, with aft accordion type signatures noted to its outboard leading edge. The examination further revealed that the fuel tank was breached and destroyed by thermal activity.

Examination of the empennage revealed that the rudder remained attached to the vertical stabilizer at all attach points, and that the rudder trim remained attached to the rudder. Both horizontal stabilizers remained attached to the fuselage and the elevators and elevator trim tabs remained attached at their respective attach points. The left and right elevator trim tab actuators were found extended 1.25 and 1.25 inches respectively, which is equated to a neutral position. The rudder was observed displaced to the full left position. The rudder trim tab actuator was found extended 3.78 inches, which is equal to a neutral position. The tail cone was separated and observed lying on the ground under the bottom of the rudder.

MEDICAL AND PATHOLOGICAL INFORMATION

The San Diego County Office of the Medical Examiner conducted an autopsy on the pilot on July 28, 2010. The medical examiner determined that the cause of the accident was the result of “Blunt force injuries….”

The FAA's Civil Aeromedical Institute (CAMI) in Oklahoma City, Oklahoma, performed toxicology tests on the pilot. According to CAMI's report, carbon monoxide and cyanide were detected in blood, 21 percent and 0.3 ug/ml respectively. Tests were negative for ethanol and drugs.

TESTS AND RESEARCH

Engine Examinations

Under the supervision of the Safety Board IIC, on August 17, 2010 both the left and right engines were examined by a Teledyne Continental Motors representative at the facilities of Aircraft Recovery Services, Pearblossom, California. The examination of the engines revealed no preimpact mechanical anomalies that would have precluded normal operation.

Hartzell Propeller Examinations

Under the supervision of the Safety Board IIC, a technician from Hartzell Propellers examined both propellers at the facilities of Aircraft Recovery Services, Pearblossom, California, on November 10, 2010. The technician reported the following as a result of his examination:

There were no witness marks or other evidence to suggest a blade angle at the time of impact. Additionally, there were no indications to suggest that either propeller was feathered.

Both propellers had remarkably similar damage. The blade damage was relatively mild in both propellers. This suggests low power or no power at the time of impact.

The blades from the left propeller had clear indications of rotation as evidenced by rotational scoring in the paint. The blades from the right propeller, while having multiple scoring indications in the paint, did not have clear indications of rotation.

Usage of a fiber washer was noted between the blade butts and hub arms in both propellers. While usage of these parts is not authorized by Hartzell, their use is not believed to have impeded normal propeller operation.

The left propeller was rotating and not feathered at the time of impact. Blade damage suggests low power or no power.

The right propeller was not feathered at the time of impact and it is uncertain whether it was rotating. Blade damage suggests low power or no power.

The Hartzell technician concluded that there were no discrepancies noted with either propeller that would preclude normal operation. All damage was consistent with impact forces.

Pilot Information

Certificate:	Airline transport	**Age:**	83,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 single-engine; Instrument airplane	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 Without waivers/limitations	**Last FAA Medical Exam:**	May 20, 2010
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	March 11, 2010
Flight Time:	33000 hours (Total, all aircraft), 648 hours (Total, this make and model), 7 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N33CJ
Model/Series:	95 55 NO SERIES	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	TC-1074
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	May 13, 2010 Annual	**Certified Max Gross Wt.:**	4800 lbs
Time Since Last Inspection:	6 Hrs	**Engines:**	2 Reciprocating
Airframe Total Time:	2196 Hrs as of last inspection	**Engine Manufacturer:**	Teledyne-Continental Motors
ELT:	Installed, not activated	**Engine Model/Series:**	IO-520-E
Registered Owner:	Edward C Judd	**Rated Power:**	285 Horsepower
Operator:	Edward C Judd	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	OKB,28 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	10:52 Local	**Direction from Accident Site:**	255°
Lowest Cloud Condition:	Unknown	**Visibility**	7 miles
Lowest Ceiling:	Broken / 1500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.95 inches Hg	**Temperature/Dew Point:**	19°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Oceanside, CA (OKB)	**Type of Flight Plan Filed:**	None
Destination:	Oceanside, CA (OKB)	**Type of Clearance:**	None
Departure Time:	11:00 Local	**Type of Airspace:**	

Airport Information

Airport:	Oceanside Municipal Airport OKB	**Runway Surface Type:**	Asphalt
Airport Elevation:	28 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	06	**IFR Approach:**	None
Runway Length/Width:	2712 ft / 75 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	33.221942,-117.332778

Administrative Information

Investigator In Charge (IIC):	Little, Thomas
Additional Participating Persons:	Wayne H Laner; Federal Aviation Administration; San Diego, CA Andrew Swick; Continental Motors; Mobile, AL Thomas J McCreary; Hartzell Propellers Inc.; Piqua, OH Paul E Yoos; Hawker Beechcraft Corporation; Wichita, KS
Original Publish Date:	January 17, 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=76775