National Transportation Safety Board
Aviation Accident Final Report

Location:	Carlsbad, CA	**Accident Number:**	LAX07FA200
Date & Time:	07/03/2007, 0606 PDT	**Registration:**	N47LC
Aircraft:	BEECH E90	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The airport is on a plateau, and the surrounding terrain is lower than the runway. After departing runway 24, the airplane collided with the top conductor of a telephone line an estimated 2,500 feet from the departure end of the runway. The airport elevation was 331 feet msl and the estimated elevation of the line was 245 feet. The debris path was along a magnetic bearing of 270 degrees. Both left and right engines displayed contact signatures to their internal components that were characteristic of the engines producing power at the time of impact. Fire consumed the cabin and cockpit precluding a meaningful examination of instruments and systems. An aviation routine weather report (METAR) issued about 13 minutes before the accident stated that the winds were calm, visibility was 1/4 mile in fog; and skies were 100 feet obscured. An examination of the pilot's logbook indicated that the pilot had a total instrument flight time of 268 hours as of June 21, 2007. In the 90 prior days he had flown 11 hours in actual instrument conditions and logged 20 instrument approaches.

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 clearance from wires during an instrument takeoff attempt. Contributing to the accident were fog, reduced visibility, and the low ceiling.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
1. (F) WEATHER CONDITION - FOG
2. (F) WEATHER CONDITION - LOW CEILING
3. VFR FLIGHT INTO IMC - INITIATED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
4. OBJECT - WIRE,TRANSMISSION
5. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On July 3, 2007, about 0606 Pacific daylight time, a Beech E90, N47LC, collided with power lines during takeoff from McClellan/Palomar Airport, Carlsbad, California. Southwest Consulting Group, Inc., was operating the airplane under the provisions of 14 Code of Federal Regulations (CFR) Part 91. The private pilot and the private pilot rated passenger were killed; the airplane was destroyed. The cross-country personal flight was departing Carlsbad with a planned destination of Tucson, Arizona. Instrument meteorological conditions prevailed, and an instrument flight rules (IFR) flight plan had been filed.

Investigators identified no witness at the airport that observed the takeoff or collision with the wires. A groundskeeper at a golf course under construction off the end of the runway heard the airplane, and observed a fireball as it collided with the wires. The airplane scattered debris as it traveled up a fairway, and sprayed the groundskeeper with what he believed was fuel.

PERSONNEL INFORMATION

A review of Federal Aviation Administration (FAA) airman records revealed that the 57-year-old pilot held a private pilot certificate with ratings for airplane single-engine land, multiengine land, and instrument airplane.

The pilot had a third-class medical certificate issued on November 4, 2004. It had no limitations or waivers.

An examination of the pilot's logbook indicated that the pilot had a total flight time of 1,177 hours as of June 21, 2007. He logged 30 hours in the last 90 days, and 3 in the last 30 days. He had an estimated 286 hours in this make and model. He completed a multiengine check ride on October 8, 2005. The logbook indicated that the pilot had a total instrument flight time of 268 hours as of June 21, 2007. In the 90 prior days he had flown 11 hours in actual instrument conditions and logged 20 insturment approaches

AIRCRAFT INFORMATION

The airplane was a Beech E90, serial number LW-64. A review of the airframe logbooks revealed a total airframe time of 9,032.2 hours at the completion of a phase 1 inspection on August 15, 2006.

The engines were on a Condition Monitoring Engine Maintenance Program in accordance with the "Maintenance on Reliable Engines (M.O.R.E) Program for Pratt & Whitney PT6A-28 engines."

The left engine was a Pratt & Whitney Canada PT-6A-28, serial number PCE-50496. Total time recorded on the engine at the last Phase 1 inspection was 8,972.8 hours and 8,973 cycles.

The right engine was a Pratt & Whitney Canada PT-6A-28, serial number PCE-52497. Total time recorded on the engine at the last Phase 1 inspection was 8,972.8 hours and 8,973 cycles.

METEOROLOGICAL CONDITIONS

An aviation routine weather report (METAR) for Palomar (KCRQ) was issued at 0553 PDT. It stated: winds calm; visibility 1/4 mile, fog; skies 100 feet obscured; temperature 17/63 degrees Celsius/Fahrenheit; dew point 17/63 degrees Celsius/Fahrenheit; altimeter 29.93 inches of

mercury. The elevation of the weather observation station was 331 feet msl.

AIRPORT INFORMATION

The Airport/ Facility Directory, Southwest U. S., indicated that Palomar runway 24 was 4,897 feet long and 150 feet wide. The runway surface was asphalt.

WRECKAGE AND IMPACT INFORMATION

The airport was on a plateau, and the surrounding terrain was lower than the runway. After departing runway 24, the airplane collided with the top line of a telephone line. The first identified point of contact (FIPC) was downed power lines an estimated 2,500 feet from the departure end of the runway. The airport elevation was 331 feet; the estimated elevation of the line was 245 feet. The debris path was along a magnetic bearing of 270 degrees.

The airplane traveled another 50 feet before colliding with the bottom two lines on a transmission tower. The tower sustained damage to several support beams and cross members. A piece of the right wing was immediately in front of the tower; the right aileron with a section of aileron and the bellcrank remained impaled on the tower about 30 feet up.

San Diego Gas & Electric reported that the lines were 230,0000 volt lines that were 1 1/4 inch in diameter. The power lines were about 40 feet above ground level (agl).

The airplane came to rest about 300 yards from the transmission tower with the two transmission lines wrapped around the propeller blades of both engines. The wires were continuous to the wreckage. The exhaust stack of the left engine exhibited electrical arching. The orientation of the fuselage was 180 degrees.

The main wreckage consisted of the fuselage, vertical stabilizer and rudder, and the left horizontal stabilizer and left elevator.

Except for the floor, fire consumed the cabin structure from the aft end of the pressure bulkhead to the nose, and the left and right wing sections from the nacelles inboard.

MEDICAL AND PATHOLOGICAL INFORMATION

The San Diego County Coroner completed an autopsy on the pilot. The report noted that there were sharp and blunt force injuries consistent with an occupant of a mishap aircraft, who was facing forward, seated, and restrained. There were also extensive thermal injuries. The Coroner listed the cause of death as multiple sharp and blunt force injuries due to an aircraft mishap, and the manner of death was an accident; a contributing factor was thermal injuries with carbonization. The coroner's toxicology report contained no findings for alcohol and tested drugs; they did not have a suitable specimen to test for carbon monoxide.

TESTS AND RESEARCH

Investigators examined the wreckage at Aircraft Recovery Service, Pearblossom, California, July 12, 2007.

Engines

The engine manufacturer submitted a written report, which is part of the public docket, regarding examination of the engines. The report noted that both left and right engines displayed contact signatures to their internal components that were characteristic of the engines producing power at the time of impact. The engines' housings displayed relatively little

impact deformation, limiting the severity of the contact signatures, and precluded definitive assessment of the power level at the start of the impact sequence. There were no indications of any pre-impact mechanical anomalies or dysfunction to any of the components.

Airframe

Post accident examination revealed that the left outboard flap actuator measured 3 inches, which the airframe manufacturer's investigator said equated to 12 degrees down. None of the other actuators were identifiable. The left elevator trim actuator measured 1-3/16 inches, which equated to neutral. The left aileron actuator measured 1.5 inches, which equated to 12 degrees tab (left wing) up. The rudder trim actuator extended about 9 inches, which equated to 4 degrees tab left. The fuel selector valves were not identifiable.

The rudder, left horizontal stabilizer, and left elevator remained together. Investigators established control continuity for the rudder from the control surface to the front floor area.

Investigators established control continuity for the left elevator from the control surface to the bellcrank. The right horizontal stabilizer and elevator separated at the root. The fracture surfaces were angular and irregular. The left elevator separated from the stabilizer and fuselage into two pieces. The separation point was just outboard of the inboard hinge; it separated along an angular and jagged path. It was inverted on top of the inboard right wing section; it was fused to the wing piece by globs of molten metal that were beneath the position of the lead counterweight, which was not identifiable. Investigators established continuity for the down elevator cable from the bellcrank to the front floor area. The up elevator cable separated at the pulley aft of the pressure bulkhead. The aft end cable necked down at the separation point. Investigators traced the other end of the cable from forward of the pulley to the crushed front floor area.

Investigators established control continuity for the left aileron forward cable to the mid cabin area where the cable separated in a broomstraw pattern. They established continuity for the aft cable to the right side of the fuselage where the cable separated in a broomstraw pattern. A portion of the right aileron, its bellcrank, and wing piece were about 30 feet up in the transmission cable support tower. The aileron was connected to the bellcrank. Both control cables remained connected to the bellcrank. Both cables separated in a broomstraw pattern about 4 feet from the bellcrank. The center cabin area sustained severe thermal damage, and investigators could not identify the center bellcrank and cables that went forward to the pedestal.

The control column central post and left and right branches separated as a unit. The operating chains were around the gears, but all connectors separated at the turnbuckles with molten metal remnants on the turnbuckles.

The pitot tubes were clear. The left pitot tube was in the debris field; the right pitot tube was near the main wreckage.

The fuel selector valves were not identifiable.

The airframe manufacturer's representative measured the left main gear actuator at 22 inches, the right main gear actuator at 9.5 inches, and the nose gear actuator at 3-4 inches.

Pilot Information

Certificate:	Private	**Age:**	57, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Without Waivers/Limitations	**Last FAA Medical Exam:**	11/04/2004
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	10/08/2005
Flight Time:	1177 hours (Total, all aircraft), 284 hours (Total, this make and model), 1121 hours (Pilot In Command, all aircraft), 30 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft)		

Other Flight Crew Information

Certificate:		**Age:**	
Airplane Rating(s):		**Seat Occupied:**	
Other Aircraft Rating(s):		**Restraint Used:**	
Instrument Rating(s):		**Second Pilot Present:**	No
Instructor Rating(s):		**Toxicology Performed:**	
Medical Certification:		**Last FAA Medical Exam:**	
Occupational Pilot:		**Last Flight Review or Equivalent:**	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	BEECH	**Registration:**	N47LC
Model/Series:	E90	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	LW-64
Landing Gear Type:	Retractable - Tricycle	**Seats:**	7
Date/Type of Last Inspection:	08/15/2007, Continuous Airworthiness	**Certified Max Gross Wt.:**	10100 lbs
Time Since Last Inspection:		**Engines:**	2 Turbo Prop
Airframe Total Time:	9032 Hours as of last inspection	**Engine Manufacturer:**	Pratt & Whitney Canada
ELT:	Installed, not activated	**Engine Model/Series:**	PT-6A-28
Registered Owner:	Southwest Consulting Group, Inc.	**Rated Power:**	550 hp
Operator:	Southwest Consulting Group, Inc.	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	**Condition of Light:**	Dawn
Observation Facility, Elevation:	KCRQ, 331 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	0553 PDT	**Direction from Accident Site:**	270°
Lowest Cloud Condition:		**Visibility**	0.25 Miles
Lowest Ceiling:	Indefinite (V V) / 100 ft agl	**Visibility (RVR):**	
Wind Speed/Gusts:	Calm /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.93 inches Hg	**Temperature/Dew Point:**	17°C / 17°C
Precipitation and Obscuration:	Heavy - Fog; No Precipitation		
Departure Point:	Carlsbad, CA (CRQ)	**Type of Flight Plan Filed:**	IFR
Destination:	Tucson, AZ (TUS)	**Type of Clearance:**	IFR
Departure Time:	0606 PDT	**Type of Airspace:**	

Airport Information

Airport:	Carsbad (CRQ)	**Runway Surface Type:**	Asphalt
Airport Elevation:	331 ft	**Runway Surface Condition:**	Dry
Runway Used:	24	**IFR Approach:**	None
Runway Length/Width:	4897 ft / 150 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	On-Ground
Ground Injuries:	N/A	**Aircraft Explosion:**	On-Ground
Total Injuries:	2 Fatal	**Latitude, Longitude:**	33.127222, -117.299444

Administrative Information

Investigator In Charge (IIC):	Howard D Plagens	**Report Date:**	01/29/2009
Additional Participating Persons:	Bill Dickinson; FAA San Diego FSDO; San Diego, CA Michael Gibbons; Hawker Beechcraft; Wichita, KS Tom Berthe; Pratt& Whitney Canada		
Publish Date:	06/17/2019		
Note:	The NTSB traveled to the scene of this accident.		
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at http://dms.ntsb.gov/pubdms/.		