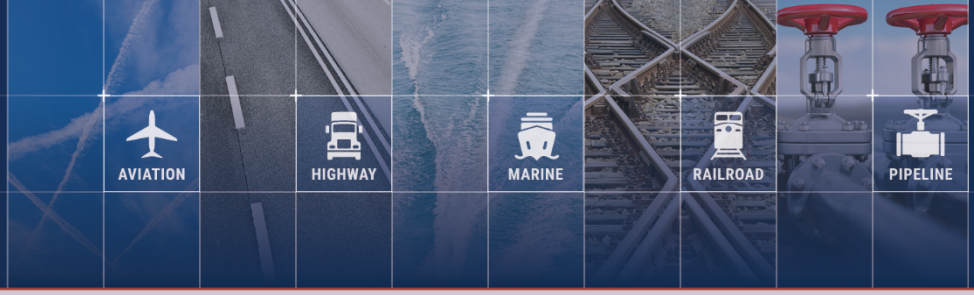

Aviation Investigation Final Report

Location:	Linden, New Jersey	**Accident Number:**	ERA09FA100
Date & Time:	December 21, 2008, 16:49 Local	**Registration:**	N2109W
Aircraft:	Beech C23	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (partial)	**Injuries:**	2 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated that on climbout, at approximately 300 feet above ground level, he noticed that the engine was producing only 1,700 to 1,800 rpm. At that point, he repositioned the fuel selector from the left to right tank, and then and looked for a place to land. The airplane subsequently entered an aerodynamic stall and crashed into a tree. A postcrash fire consumed a significant portion of the wreckage. Examination of the engine and airframe revealed no preimpact mechanical anomalies. In addition, the pilot had purchased fuel just prior to the accident takeoff.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A partial loss of engine power for undetermined reasons.

Findings

Not determined	(general) - Unknown/Not determined

Factual Information

History of Flight

Initial climb	Loss of engine power (partial) (Defining event)
Emergency descent	Aerodynamic stall/spin
Emergency descent	Collision with terr/obj (non-CFIT)
Post-impact	Fire/smoke (post-impact)

HISTORY OF FLIGHT

On December 21, 2008, about 1649 eastern standard time, a Beech C23, N2109W, lost engine power and collided with a tree near Linden Airport (LDJ), Linden, New Jersey. The airplane was owned and operated by a private individual as a personal flight. The airplane was substantially damaged and the pilot and passenger were seriously injured. The airplane was being operated under 14 Code of Federal Regulations (CFR) Part 91. Visual meteorological conditions prevailed and a visual flight rules flight plan was filed for the planned flight to Williamsburg, Virginia.

The pilot stated that he arrived at the airport in the afternoon, removed the covers from the airplane, and taxied to the fixed base operator for fuel. After removing a small patch of ice from the wing, he went inside to check the weather and complete a weight and balance check before departing. He said that on climbout, at approximately 300 feet above ground level, he noticed that the engine was producing only 1,700 to 1,800 rpm. At that point, he repositioned the fuel selector from the left to right tank, and then looked for a place to land. Shortly thereafter, he heard the stall warning horn, and attempted to lower the nose to prevent the airplane from stalling. The airplane subsequently stalled and crashed into a tree. He then exited the airplane, extricated his passenger from the airplane, and called 911.

PERSONNEL INFORMATION

The pilot, age 33, held a commercial pilot certificate with ratings for airplane single-engine land, airplane multiengine land, and instrument airplane. His certificate was issued on April 21, 2008. He also held a second-class medical certificate, issued on February 27, 2008.

AIRCRAFT INFORMATION

The airplane was manufactured in 1972 as a four-seat, low-wing airplane with fixed tricycle landing gear, and powered by a Lycoming O-360-A4G, 180-horsepower engine. The aircraft logbooks were not recovered and presumed consumed in the postcrash fire. The pilot reported on the National Transportation Safety Board Form 6120.1 that the last annual was completed on June 1, 2008.

METEOROLOGICAL INFORMATION

The LDJ 1725 weather observation reported: winds 270 degrees at 8 knots, visibility 10 statute miles, temperature 1 degrees Celsius (C), dew point -4 degrees C, and altimeter setting of 29.55 inches of mercury.

WRECKAGE AND IMPACT INFORMATION

Examination of the airplane revealed that it came to rest 800 feet off of the departure end of runway 27. The airplane was facing a heading of 090 degrees magnetic. The cockpit section, instrument panel, and instruments were totally consumed by postcrash fire. Examination of the wings revealed that all flight control surfaces necessary for flight were located at the accident site. Flight control cable continuity was established to all flight controls. The propeller flange was impact damaged and separated from the crankshaft. The propeller was still connected to the flange and the propeller blades displayed chord wise bending. One blade exhibited S bending, and was bent aft.

Examination of the engine by a Safety Board investigator, Federal Aviation Administration inspector, and a Lycoming representative revealed that it exhibited extreme external heat damage to all of its components. The engine was rotated by turning the crankshaft flange, and continuity of the crankshaft to the rear gears and to the valve train was confirmed. Suction and compression were observed from all four cylinders. Inspection of the cylinders with a lighted borescope revealed no anomalies. After examination of the engine, no indication of preimpact damage to, or failure, of the engine was observed.

Pilot Information

Certificate:	Commercial	**Age:**	33,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 1 Without waivers/limitations	**Last FAA Medical Exam:**	February 27, 2008
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	October 27, 2008
Flight Time:	1840 hours (Total, all aircraft), 30 hours (Total, this make and model), 1391 hours (Pilot In Command, all aircraft), 26 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N2109W
Model/Series:	C23	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	M-1432
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	June 1, 2008 Annual	**Certified Max Gross Wt.:**	2400 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	3100 Hrs as of last inspection	**Engine Manufacturer:**	LYCOMING
ELT:	Installed, not activated	**Engine Model/Series:**	O-360-A4G
Registered Owner:	On file	**Rated Power:**	180 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Dusk
Observation Facility, Elevation:	LDJ,23 ft msl	**Distance from Accident Site:**	
Observation Time:	17:28 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	8 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	270°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.54 inches Hg	**Temperature/Dew Point:**	1°C / -4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Linden Airport, NJ (LDJ)	**Type of Flight Plan Filed:**	VFR
Destination:	Williamsburg, VA (JGG)	**Type of Clearance:**	VFR
Departure Time:	16:49 Local	**Type of Airspace:**	

Airport Information

Airport:	Linden Airport LDJ	**Runway Surface Type:**	
Airport Elevation:	23 ft msl	**Runway Surface Condition:**	Unknown
Runway Used:	27	**IFR Approach:**	None
Runway Length/Width:	4137 ft / 100 ft	**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Serious	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Serious	**Latitude, Longitude:**	40.616943,-74.239997(est)

Administrative Information

Investigator In Charge (IIC):	Alleyne, Eric
Additional Participating Persons:	Harrington Bishop; FAA/FSDO; Teterboro, NJ Mike J Childers; Lycoming; Williamsport, PA
Original Publish Date:	June 11, 2009
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=69604