



## National Transportation Safety Board Aviation Accident Factual Report

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<b>Location:</b>	GT. BARRINGTON, MA	<b>Accident Number:</b>	NYC98LA001
<b>Date &amp; Time:</b>	10/01/1997, 1225 EDT	<b>Registration:</b>	N29134
<b>Aircraft:</b>	Cessna T210L	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 Serious
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Business		

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On October 1, 1997, about 1225 eastern daylight time, a Cessna T210L, N29134, was substantially damaged during a forced landing near Great Barrington, Massachusetts. The certificated commercial pilot and passenger were seriously injured. Visual meteorological conditions prevailed for the business flight which departed from New Philadelphia, Ohio, about 1000. The flight was operated on an Instrument Flight Rules (IFR) flight plan under 14 CFR Part 91.

The flight was in radio contact with Bradley Approach Control. The pilot had been cleared from 11,000 feet to 9,000 feet, and then to 5,000 feet. In the NTSB Pilot/Operator Aircraft Accident Report, the pilot stated:

"...Descended through 7,000 [feet] at cruise settings. Thump and vibration in engine, oil pressure dropped from usual setting to zero immediately. Secured throttle, prop & mixture. Informed appr. control, asked for nearest field, received Barrington, and confirmed with LORAN. It was 14 miles behind us. Turn to west and glide clean at 100 - 110 kts [knots]. No clearing seen on ground. Airport seen about 5,000 [feet] alt[itude]. At 4,000 [feet] determined A/C would not clear hill between airport. Turned right (northerly) to follow valley. Lost approach control who was notifying people on ground of situation. Sighted road, paved, narrow, winding power poles and traffic both directions. Followed valley, sighted meadow, secured mags, alt[ernator], batt, unlocked doors, gear and flaps left up. Slight left bank to line up (200 - 300 FT), alt[itude]. Speed still at glide. Entered weeds reported to be 5 FT tall. Started flare, hit unseen far side of brook with violent jolt. Plane came to rest. Both [occupants] were conscious and bleeding. Rolled out side doors, crawled 10-20 FT, People arrived, taken to hospital."

An inspector from the Federal Aviation Administration (FAA) reported that the airplane stopped after it passed over a creek. The high weeds in the creek obscured its presence. Examination of the airplane revealed that the engine was partially twisted away from the firewall, and there was torn skin on the belly of the airplane. Initial examination of the engine revealed that when the propeller was rotated, the pistons in cylinders 1 and 2 did not move.

The engine was taken to Mattituck Air Base, Mattituck, New York, for further examination. The FAA inspector reported:

"...The engine was found to have a broken crankshaft near the rear section between cylinders 1 and 2 [rear of engine] and cylinders 3 and 4 [middle of engine]. The number 2 main bearing was out of place and shifted toward the rear of the engine. The bearing had made contact with the short cheek of the crankshaft and friction heat initiated the crankshaft failure...."

"...The reason for the bearing failure is indeterminable at this time. The cylinder heads were replaced 367.4 hours before the failure and if they were not torqued properly, could have been a contributing factor, although all torque checks are inconclusive."

The investigation revealed that on January 10, 1995, the number 4 cylinder was replaced, at an engine total time of 777.1 hours. On May 18, 1995, the numbers 1, 2, 3, 5, and 6 cylinders were replaced, at an engine total time of 872.9 hours. The engine total time at the time of the accident was 1240.3 hours.

The investigation further revealed that the main bearings were held in place by each side of the engine case. The case was held together with case bolts, and cylinder through bolts. A check of the torque values on the engine case bolts and cylinder through bolts prior to engine disassembly, revealed low torque values on a nose case bolt, and some cylinder through bolts on the front and middle banks of cylinders of the engine.

A check with Teledyne Continental revealed that they did not have a procedure in place to require periodic checks of torque values.

## Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	67, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	08/21/1997
<b>Occupational Pilot:</b>	<b>Last Flight Review or Equivalent:</b>		
<b>Flight Time:</b>	7500 hours (Total, all aircraft), 3000 hours (Total, this make and model), 7500 hours (Pilot In Command, all aircraft), 60 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N29134
Model/Series:	T210L T210L	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	21059813
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	08/25/1997, Annual	Certified Max Gross Wt.:	3800 lbs
Time Since Last Inspection:	19 Hours	Engines:	1 Reciprocating
Airframe Total Time:	5913 Hours	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	TSIO-520-H4B
Registered Owner:	J P SHEAHAN ASSOCIATE INC	Rated Power:	285 hp
Operator:	JAMES P. SHEAHAN	Operating Certificate(s) Held:	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	BAF, 271 ft msl	Distance from Accident Site:	28 Nautical Miles
Observation Time:	1245 EDT	Direction from Accident Site:	107°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	25 Miles
Lowest Ceiling:	Overcast / 6000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	10 knots / 18 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	320°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	14° C / 1° C
Precipitation and Obscuration:			
Departure Point:	PHILADELPHIA, OH (PHD)	Type of Flight Plan Filed:	IFR
Destination:	NORTHAMPTON, MA (7B2)	Type of Clearance:	IFR
Departure Time:	1000 EDT	Type of Airspace:	Class E

## Airport Information

Airport:	GREAT BARRINGTON (GBR)	Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	Dry
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced Landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Serious	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Serious	<b>Latitude, Longitude:</b>	

## Administrative Information

<b>Investigator In Charge (IIC):</b>	ROBERT L HANCOCK
<b>Additional Participating Persons:</b>	JOHN FELICIANO; WINDSOR LOCKS, CT GEORGE HOLLINGSWORTH; MOBIL, AL LEAH RIDDLE; WICHITA, KS
<b>Investigation Docket:</b>	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 <a href="mailto:pubinquiry@ntsb.gov">pubinquiry@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .