



# National Transportation Safety Board Aviation Accident Data Summary

<b>Location:</b>	Coldwater, MI	<b>Accident Number:</b>	CEN10LA037
<b>Date &amp; Time:</b>	11/02/2009, 1403 EST	<b>Registration:</b>	N8364W
<b>Aircraft:</b>	PIPER PA-28-180	<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

## Analysis

The pilot reported that he was in cruise flight at 2,500 feet above mean sea level when the engine oil temperatures started to rise. He started to divert to a nearby airport, but the engine seized and he executed a forced landing to a field. The inspection of the engine revealed a hole in the crankcase at the #4 cylinder position. The #4 piston connecting rod was found disconnected from the crankshaft, and it was deformed and bent into a “U” shape. The #4 connecting rod cap was separated from the #4 connecting rod. One of the connecting rod bolts was found sheared in half with the nut still attached to one end of the bolt. The other connecting rod bolt was not located in the connecting rod or in the rod cap. A connecting rod bolt was found in the bottom of the engine. The bolt threads exhibited some impact damage, but otherwise, the connecting rod bolt was intact and was not bent. The nut for the connecting rod bolt was not located in the engine. The engine logbook indicated that four new pistons were installed on May 31, 2003. The logbook entry did not indicate that the connecting rods had been replaced. On May 1, 2007, the #4 cylinder was replaced, but there was no indication in the logbook entry that the #4 piston or connecting rod had been repaired or replaced.

## Flight Events

Enroute-cruise - Loss of engine power (total)  
Emergency descent - Collision with terr/obj (non-CFIT)

## Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be:  
A loss of engine power due to the separation of the No. 4 piston connecting rod as a result of inadequate torque of the connecting rod bolt.

## Findings

Aircraft-Aircraft power plant-Engine (reciprocating)-Recip engine power section-Failure - C  
Aircraft-Aircraft power plant-Engine (reciprocating)-Recip engine power section-Incorrect service/maintenance - C

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	53
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Instrument Rating(s):</b>	None
<b>Other Aircraft Rating(s):</b>	None	<b>Instructor Rating(s):</b>	None
<b>Flight Time:</b>	464 hours (Total, all aircraft), 464 hours (Total, this make and model)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	PIPER	<b>Registration:</b>	N8364W
<b>Model/Series:</b>	PA-28-180	<b>Engines:</b>	1 Reciprocating
<b>Operator:</b>	Nicholas George Pathenos	<b>Engine Manufacturer:</b>	Lycoming
<b>Air Carrier Operating Certificate:</b>	None	<b>Engine Model/Series:</b>	O-360-A3A
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

## Meteorological Information and Flight Plan

<b>Observation Facility, Elevation:</b>	BTL, 952 ft msl	<b>Weather Information Source:</b>	Weather Observation Facility
<b>Conditions at Accident Site:</b>	Visual Conditions	<b>Lowest Ceiling:</b>	None
<b>Condition of Light:</b>	Day	<b>Wind Speed/Gusts, Direction:</b>	14 knots, 230°
<b>Temperature:</b>	11°C / 5°C	<b>Visibility</b>	10 Miles
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Pontiac, MI (PTK)	<b>Destination:</b>	Champagne, IL (CMI)

## Airport Information

<b>Airport:</b>	Branch County Memorial Airport (EOB)	<b>Runway Surface Type:</b>	
<b>Runway Used:</b>	N/A	<b>Runway Surface Condition:</b>	
<b>Runway Length/Width:</b>			

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None

## Administrative Information

<b>Investigator In Charge (IIC):</b>	James P Silliman	<b>Adopted Date:</b>	07/22/2010
<b>Investigation Docket:</b>	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=74998">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=74998</a>		

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