



# Aviation Investigation Final Report

<b>Location:</b>	HAZARD, Kentucky	<b>Accident Number:</b>	IAD96LA046
<b>Date &amp; Time:</b>	February 23, 1996, 13:15 Local	<b>Registration:</b>	N90AD
<b>Aircraft:</b>	Cessna P210N	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation		

## Analysis

The pilot reported that the airplane was level at 6000 feet MSL, when the engine lost power. He stated that his attempts to restart the engine included switching fuel tanks and using the boost pumps, but all were unsuccessful. A forced landing was made in a strip mine, where the airplane came to rest with substantial damage. An FAA Inspector stated that an engine teardown revealed that the crankshaft had failed in the vicinity of the two rear cylinders. Records indicated the engine had been operated 913 hours since major overhaul.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: failure of the engine crankshaft, which resulted in loss of engine power, a forced landing, and subsequent damage to the airplane. A factor relating to the accident was: lack of suitable terrain for a forced landing.

### Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF  
Phase of Operation: CRUISE

#### Findings

1. (C) ENGINE ASSEMBLY, CRANKSHAFT - FAILURE

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Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

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Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: EMERGENCY LANDING

Findings

2. (F) TERRAIN CONDITION - NONE SUITABLE
3. (F) TERRAIN CONDITION - ROUGH/UNEVEN

## Factual Information

On February 23, 1996, at 1315 eastern standard time (EST), a Cessna P210N, N90AD, lost engine power during descent, and made a forced landing near Hazard, Kentucky. The airplane sustained substantial damage during the forced landing. The certificated private pilot/registered owner, the sole occupant, received minor injuries. Visual meteorological conditions prevailed for the flight, and an IFR flight plan was filed. The business flight operated under 14 CFR Part 91. The flight originated from Reading, Pennsylvania, at 1130 EST. The intended destination was London, Kentucky.

The pilot stated that the airplane was in cruise flight at 12,000 feet Mean Sea Level (MSL), when Air Traffic Control (ATC) issued a clearance to descend to 6,000 feet MSL. The pilot reported that approximately 2 minutes after he leveled the airplane at 6,000 feet MSL, he noticed that the fuel flow indicator started to fluctuate. He stated that about 30 seconds later "...the engine just quit, did not [sputter] or backfire, just quit." The pilot stated that he attempted to restart the engine, but was unsuccessful. The pilot made a forced landing in a strip mine.

The aircraft was examined after the accident by a Federal Aviation Administration (FAA) Inspector. The Inspector stated that there was about 40 gallons of aviation fuel on board the airplane. The airplane was removed from the accident site, and an engine teardown was conducted. The FAA Inspector stated that the engine teardown revealed that the crankshaft had failed in the vicinity of the two rear cylinders. The pilot reported that the engine had operated 913 hours since major overhaul. The most recent maintenance inspection was an Annual Inspection, dated October 23, 1995.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	40, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<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 3 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	August 20, 1994
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1467 hours (Total, all aircraft), 697 hours (Total, this make and model), 1361 hours (Pilot In Command, all aircraft), 20 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N90AD
<b>Model/Series:</b>	P210N P210N	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	P210-00156
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	October 23, 1995 Annual	<b>Certified Max Gross Wt.:</b>	4000 lbs
<b>Time Since Last Inspection:</b>	20 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	4376 Hrs	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	TSIO-520-P
<b>Registered Owner:</b>	KLINE PROCESS SYSTEMS, INC.	<b>Rated Power:</b>	310 Horsepower
<b>Operator:</b>	ROBERT H. KLINE	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	JKL ,1382 ft msl	<b>Distance from Accident Site:</b>	25 Nautical Miles
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	330°
<b>Lowest Cloud Condition:</b>	Unknown	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Broken / 7000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	15 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	180°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	24°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	READING , PA (RDG )	<b>Type of Flight Plan Filed:</b>	IFR
<b>Destination:</b>	LONDON , KY (LOZ )	<b>Type of Clearance:</b>	IFR
<b>Departure Time:</b>	11:30 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Minor	<b>Latitude, Longitude:</b>	37.249263,-83.190406(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Drake-nurse, Beverley
<b>Additional Participating Persons:</b>	JOE KEATING; LOUISVILLE , KY
<b>Original Publish Date:</b>	December 15, 1997
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=28025">https://data.nts.gov/Docket?ProjectID=28025</a>

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