



National Transportation Safety Board Aviation Accident Data Summary

Location:	Winamac, IN	Accident Number:	CHI03LA187
Date & Time:	07/02/2003, 1008 CDT	Registration:	N6315P
Aircraft:	Piper PA-24	Injuries:	5 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The airplane was damaged during a forced landing in a rough plowed field following a loss of engine power during cruise flight. Examination of the engine revealed that the crankshaft gear retaining bolt was missing and the gear's anti-rotation pin was sheared. The oil pan of the engine was examined and no bolt was found. The crankshaft gear retaining bolt was not found within the engine. A review of the maintenance records revealed that the engine was last overhauled on April 6, 1986, and had accumulated 522 hours time in service since the overhaul. No subsequent logbook entries were noted that indicated removal of the crankshaft gear or retaining bolt.

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 improper installation of the crankshaft gear due to the omission of the retaining bolt and subsequent shear failure of the anti-rotation pin. The unsuitable terrain encountered, and the rough field were factors.

Findings

Occurrence #1: LOSS OF ENGINE POWER

Phase of Operation: CRUISE

Findings

1. (C) ENGINE ASSEMBLY, TIMING GEAR - NOT SECURED
2. (C) MAINTENANCE, INSTALLATION - IMPROPER - OTHER MAINTENANCE PERSONNEL
3. (C) ENGINE ASSEMBLY, OTHER - SHEARED

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: EMERGENCY LANDING

Findings

4. (F) TERRAIN CONDITION - ROUGH/UNEVEN
5. (C) UNSUITABLE TERRAIN OR TAKEOFF/LANDING/TAXI AREA - ENCOUNTERED

Pilot Information

Certificate:	Airline Transport; Flight Instructor	Age:	30
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine
Flight Time:	2895 hours (Total, all aircraft), 56 hours (Total, this make and model), 2492 hours (Pilot In Command, all aircraft), 152 hours (Last 90 days, all aircraft), 67 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N6315P
Model/Series:	PA-24	Engines:	1 Reciprocating
Operator:	On file	Engine Manufacturer:	Lycoming
Operating Certificate(s) Held:	None	Engine Model/Series:	O-360
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	VPZ, 771 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None	Wind Speed/Gusts, Direction:	3 knots / , 20°
Temperature:	27° C	Visibility	10 Miles
Precipitation and Obscuration:			
Departure Point:	PLYMOUTH, MI (1D2)	Destination:	Perryville, MO (K02)

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	4 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	41.093333, -86.655556		

Administrative Information

Investigator In Charge (IIC):	John Brannen	Adopted Date:	03/02/2004
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 pubin@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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