



National Transportation Safety Board Aviation Accident Factual Report

Location:	Hammonton, NJ	Accident Number:	NYC07LA001
Date & Time:	10/03/2006, 1230 EDT	Registration:	N5097P
Aircraft:	Piper PA-24-250	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None

Flight Conducted Under: Part 91: General Aviation - Personal

On October 3, 2006, about 1230 eastern daylight time, a Piper PA-24-250, N5097P, was substantially damaged when it impacted terrain while approaching Hammonton Municipal Airport (N81), Hammonton, New Jersey. The certificated private pilot was not injured. Visual meteorological conditions prevailed. No flight plan was filed for the flight, from Cross Keys Airport (17N), Cross Keys, New Jersey, to Hammonton. The personal flight was conducted under 14 Code of Federal Regulations Part 91.

According to the pilot, the airplane was on a base leg to the airport when he turned on the auxiliary fuel pump, and the engine lost power. The pilot then performed a forced landing to a swampy area short of runway 21.

A subsequent examination of the Lycoming O-540-A engine revealed that within the accessory section, the idler gear assembly, which normally transferred power from the crankshaft to the left magneto and the camshaft, had been displaced. The mounting shaft had also been displaced, the shaft hole was elongated, and the upper portions of both shaft mounting plate retaining screws were missing. The lower screw appeared to be sheared, while the remains of the upper screw exhibited mechanical damage. The crankcase surface around the upper screw hole exhibited fretting, and the idler gear had missing and damaged gear teeth. Remnants of the retaining screws and screw lockplate were found in the bottom of the crankcase. The failure sequence could not be determined.

The pilot reported 1,393 hours of engine operation since overhaul. The engine logbook revealed that the engine was last overhauled on February 1, 1975.

Lycoming Service Instruction 1009AS, "Recommended Time Between Overhaul Periods," recommended 2,000 hours of operation between overhaul. In addition, "All engines that do not accumulate the hourly period of time between overhauls specified in this publication are recommended to be overhauled in the twelfth year." However, there was no evidence that the calendar time since the previous overhaul contributed to the displacement of the idler gear assembly.

Pilot Information

Certificate:	Private	Age:	73, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Instrument Airplane	Toxicology Performed:	No
Medical Certification:	Class 3 With Waivers/Limitations	Last FAA Medical Exam:	08/01/2006
Occupational Pilot:		Last Flight Review or Equivalent:	10/01/2005
Flight Time:	1050 hours (Total, all aircraft), 230 hours (Total, this make and model), 3 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N5097P
Model/Series:	PA-24-250	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	24-107
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	12/01/2005, Annual	Certified Max Gross Wt.:	2900 lbs
Time Since Last Inspection:	38 Hours	Engines:	1 Reciprocating
Airframe Total Time:	3671 Hours as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-540A1A
Registered Owner:	Frank L. Greiner	Rated Power:	250 hp
Operator:	Frank L. Greiner	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ACY, 75 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	1254 EDT	Direction from Accident Site:	120°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.2 inches Hg	Temperature/Dew Point:	27° C / 12° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Cross Keys, NJ (17N)	Type of Flight Plan Filed:	None
Destination:	Hammonton, NJ (N81)	Type of Clearance:	None
Departure Time:	EDT	Type of Airspace:	

Airport Information

Airport:	Hammonton Muni (N81)	Runway Surface Type:	Asphalt
Airport Elevation:	70 ft	Runway Surface Condition:	Dry
Runway Used:	23	IFR Approach:	None
Runway Length/Width:	3600 ft / 75 ft	VFR Approach/Landing:	Full Stop; Traffic Pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	39.671667, -74.755000

Administrative Information

Investigator In Charge (IIC):	Paul R Cox
Additional Participating Persons:	Robert Drapala; FAA/FSDO; Philadelphia, PA Michael Childers; Lycoming Engines; Williamsport, PA
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 pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .