



National Transportation Safety Board Aviation Accident Data Summary

Location:	Chester, IL	Accident Number:	CHI07LA018
Date & Time:	11/03/2006, 0720 CST	Registration:	N460TM
Aircraft:	Piper PA-46-310P	Injuries:	1 None
Flight Conducted Under:	Part 91: General Aviation - Business		

Analysis

The pilot reported that after reaching a cruising altitude of 9,000 feet the engine "missed" and the oil pressure, oil temperature, and manifold pressure began to drop. The pilot attempted to fly to the nearest airport maintaining a 500 to 800 foot per minute descent. Unable to make it to the airport, he chose a field in which to land. He stated he cleared the trees, which surrounded the field, and applied flaps to slow the airplane. The field was muddy so the pilot used the emergency gear extension to lower the landing gear so the airplane would not slide into the trees. The airplane touched down and slid approximately 25 feet prior to coming to rest. The airplane sustained substantial damage to the left wing and fuselage. An engine teardown revealed holes in the crankcase near the number four cylinder and that the engine had sustained both thermal and mechanical damage as a result of oil starvation. A hole was noted in the turbine wheel shroud on the hot section of the right turbocharger. There was no data plate, serial number, or model number present on the turbocharger. The turbocharger contained the part number 466304-0003. The oil inlet and outlet fittings were intact and showed no signs of oil leakage. This turbocharger was torn down and inspected. The inspection revealed the turbine wheel shroud had fragmented as a result of a fatigue failure. The back surface of the shaft and wheel assembly contained contact signatures from the shroud. A review of maintenance records showed that both the left and right turbochargers were installed on June 21, 1988. The data plate on the left turbocharger matched the information in the maintenance records. Without a serial number on the right turbocharger, it could not be verified that this was the same one that was installed on June 21, 1998. However, the maintenance logs provided did not contain a record of the turbocharger having been replaced after that date.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The fatigue failure of the turbocharger shroud which resulted in oil starvation to the engine. A factor was the muddy field.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: CRUISE

Findings

1. (C) EXHAUST SYSTEM, TURBOCHARGER - FAILURE, PARTIAL
2. (C) EXHAUST SYSTEM, TURBOCHARGER - FATIGUE
3. (C) FLUID, OIL - STARVATION

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

4. (F) TERRAIN CONDITION - MUDDY

Pilot Information

Certificate:	Private	Age:	45
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	749 hours (Total, all aircraft), 63 hours (Total, this make and model), 547 hours (Pilot In Command, all aircraft), 31 hours (Last 90 days, all aircraft), 21 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N460TM
Model/Series:	PA-46-310P	Engines:	1 Reciprocating
Operator:	Robert W. Rollins	Engine Manufacturer:	Continental
Operating Certificate(s) Held:	None	Engine Model/Series:	TSIO-520-BE
Flight Conducted Under:	Part 91: General Aviation - Business		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	SAR, 538 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None	Wind Speed/Gusts, Direction:	/ ,
Temperature:	0° C	Visibility	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Cape Girardeau, MO (CGI)	Destination:	West Chicago, IL (DPA)

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
Latitude, Longitude:	37.920000, -89.734722		

Administrative Information

Investigator In Charge (IIC): Pamela S Sullivan

Adopted Date: 02/28/2008

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/>.

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