



National Transportation Safety Board Aviation Accident Final Report

Location:	Flippin, AR	Accident Number:	CEN11LA441
Date & Time:	07/01/2011, 1100 CDT	Registration:	N56417
Aircraft:	PIPER PA-28-180	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

While in cruise flight the pilot noted a decrease in engine rpm. He began to troubleshoot the problem and reversed course to head toward more favorable terrain for a forced landing. After completing the turn, the engine seized, and the pilot performed a forced landing to a pasture. During the landing roll, the right wing impacted a bale of hay, resulting in substantial damage. An examination of the engine revealed that the loss of engine power and resultant seizure was due to a loss of engine oil. Further examination revealed that the bolts on the vacuum pump were loose and the engine oil was exiting at that location. An examination of the airframe and remaining systems revealed no anomalies.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of engine power due to improper maintenance and resultant oil starvation.

Findings

Aircraft	Oil - Related operating info (Cause) Recip eng rear section - Incorrect service/maintenance (Cause) Vacuum system - Incorrect service/maintenance (Cause)
Environmental issues	Object/animal/substance - Contributed to outcome

Factual Information

On July 1, 2011, approximately 1100 central daylight time, a Piper PA-28-180, N56417, was substantially damaged when it impacted a bale of hay during a forced landing near Flippin, Arkansas. The pilot was seriously injured. The airplane was registered to Mid-South Specialty Construction LLC., and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed for the cross-country flight which operated without a flight plan. The flight originated from Mountain Home, Arkansas, and was en route to Marshall, Arkansas.

According to the pilot, he was in cruise flight when he noted a decrease in engine rpm. The pilot began to troubleshoot the decrease and reversed course to head towards more favorable terrain for a forced landing. After completing the turn, the engine seized. The pilot performed a forced landing to a pasture. During the landing roll, the right wing impacted a bale of hay, separating the right wing from the fuselage.

A Federal Aviation Administration inspector reported that the airplane had just undergone maintenance. An examination of the engine revealed that the loss of engine power and resultant seizure was due to a loss of engine oil. Further examination revealed that the bolts on the vacuum pump were loose and the engine oil was exiting at this location. An examination of the airframe and remaining systems revealed no anomalies.

History of Flight

Enroute-cruise	Loss of engine power (total) (Defining event)
Landing-landing roll	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Private	Age:	60, 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):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With Waivers/Limitations	Last Medical Exam:	05/11/2011
Occupational Pilot:	No	Last Flight Review or Equivalent:	08/16/2009
Flight Time:	820 hours (Total, all aircraft), 317 hours (Total, this make and model), 51 hours (Last 90 days, all aircraft), 18 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	PIPER	Registration:	N56417
Model/Series:	PA-28-180	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	287305589
Landing Gear Type:		Seats:	4
Date/Type of Last Inspection:	06/03/2011, Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	2415 Hours	Engine Manufacturer:	LYCOMING
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O&VO-360 SER
Registered Owner:	MID-SOUTH SPECIALTY CONSTRUCTION LLC	Rated Power:	180 hp
Operator:	On file	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	KBPK, 928 ft msl	Observation Time:	1053 CDT
Distance from Accident Site:	20 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	360°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	30° C / 22° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	6 knots, 200°	Visibility (RVR):	
Altimeter Setting:	30.04 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Mountain Home, AR (KBPK)	Type of Flight Plan Filed:	None
Destination:	Marshall, AR (K4A5)	Type of Clearance:	None
Departure Time:	1045 CDT	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious		

Administrative Information

Investigator In Charge (IIC): Jennifer Rodi **Adopted Date:** 11/22/2011

Additional Participating Persons: Bill Kelley; FAA FSDO; Little Rock, AR

Publish Date: 11/22/2011

Investigation Docket: <http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=80965>

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