



Aviation Investigation Final Report

Location:	LEWISBERG, Pennsylvania	Accident Number:	IAD01LA001
Date & Time:	October 1, 2000, 15:11 Local	Registration:	N9697D
Aircraft:	Piper PA-22-160	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Upon entering the downwind leg of the traffic pattern, the airplane's engine started to misfire. The pilot applied carburetor heat and increased engine power to 1,500 RPM, but the engine continued to misfire. The pilot continued to increase engine power, but the engine's performance did not improve. On the base leg, the pilot turned off the carburetor heat, and reduced engine power to idle in preparation to land. At this point, the engine stopped producing power. The pilot made a shallow right turn and lined up with a field for an emergency landing. The pilot was aware of the row of power lines that preceded the field, and flew under them. However, the right main landing gear was sheared off after contacting a small tree. The airplane landed in the field and ground-looped. The airplane had a sufficient amount of fuel onboard, which was absent of debris and contamination. The engine was run on the airframe utilizing the airplane's own fuel system. The engine started immediately and ran normal. Examination of the airplane and engine revealed there were no mechanical malfunctions.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of engine power for undetermined reasons.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: APPROACH - VFR PATTERN - BASE LEG/BASE TO FINAL

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: EMERGENCY LANDING

Findings

2. OBJECT - TREE(S)

Occurrence #3: FORCED LANDING

Phase of Operation: EMERGENCY LANDING

Findings

3. GROUND LOOP/SWERVE - INADVERTENT - PILOT IN COMMAND

Factual Information

On October 1, 2000, at 1511 Eastern Daylight Time, a Piper PA-22-160, N9697D, was substantially damaged during a forced landing to a field in Lewisberg, Pennsylvania. The certificated private pilot and passenger were not injured. Visual meteorological conditions prevailed and no flight plan was filed for the personal flight conducted under 14 CFR Part 91.

The pilot was returning to his private airstrip, Fox Hollow Airport (3PA6), Lewisburg, Pennsylvania, after attending a fly-in at Grimes Airport (8N1), Bethel, Pennsylvania.

In a written statement, the pilot said:

"Departed 8N1 at 2:38 PM climbed to 3,000 MSL, headed for 3PA6, approx. 25 minute flight over Sunbury, PA. Started slow descent, upon entering downwind for 3PA6, engine started to misfire, pulled carb heat and throttled engine to 1,500 RPM. Misfire continued, raised RPM, no change in engine performance. Turned base, still misfiring. Took carb off, still no change. Pulled engine to idle for landing, engine quit, made slight right turn, flew under phone wires for emergency landing in field. Small tree took off right landing gear at front attach point, aircraft settled to ground and did ground loop to the right."

Federal Aviation Administration (FAA) inspectors interviewed the pilot and performed an on-scene examination. According to the inspector's written report:

"[The pilot] stated he was returning from a fly-in to his private airstrip at his home in Lewisburg, PA. Descending from 3,500 [feet] the engine began to run rough. He applied carburetor heat, but it made no difference so he turned it off. When he retarded the throttle to idle the engine quit. He chose to make a turn onto a farmer's field next to his house for a dead stick landing. He was aware of telephone wires at the edge of the field and realized he could not get over them and elected to fly under the wires. The right gear struck a heavy shrub tree and tore the gear loose. The aircraft skidded to a stop facing 180 degrees from his approach path.

"When FAA inspectors arrived at the site, the aircraft was sitting on the left gear, the right wing tip, and the tail wheel. The propeller was damaged from the ground strike, the right gear was torn loose from the forward mount fitting, the tail tubular structure was twisted, and several holes in the fabric by the gear and tail section. We checked both fuel tanks for quantity and contamination. Both tanks were near full. Sump checks from the tanks and fuel bowl had no signs of contamination. The fuel was 100 LL avgas. I then removed the top spark plugs and noted three were black and one white, the oil dipstick showed the correct amount of clean oil with no contaminants.'

"We then jacked the right side of the aircraft and inspected the exhaust muffler, rotated the

prop and had good compression on all four cylinders, then started the engine. The engine started immediately, ran normal, and the magneto check was normal, as was the idle for the fuel mixture check. The engine had no external leakage of either fuel or oil. The aircraft had an annual inspection performed on 5/15/2000 at 2,288 hours. The tach now indicates 2,316 total hours and the engine has 156 TSOH."

The pilot reported a total of 538 hours, of which 58 hours were in make and model.

Pilot Information

Certificate:	Private	Age:	54, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	August 2, 2000
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	538 hours (Total, all aircraft), 58 hours (Total, this make and model), 509 hours (Pilot In Command, all aircraft), 26 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N9697D
Model/Series:	PA-22-160 PA-22-160	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	22-6607
Landing Gear Type:	Tailwheel	Seats:	4
Date/Type of Last Inspection:	May 15, 2000 Annual	Certified Max Gross Wt.:	2000 lbs
Time Since Last Inspection:	28 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2316 Hrs	Engine Manufacturer:	Lycoming
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-320-B2A
Registered Owner:	MELVIN E. REED	Rated Power:	160 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	SEG ,450 ft msl	Distance from Accident Site:	9 Nautical Miles
Observation Time:	14:53 Local	Direction from Accident Site:	160°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	190°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	22°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	BETHAL , PA (8N1)	Type of Flight Plan Filed:	None
Destination:	(3PA6)	Type of Clearance:	None
Departure Time:	14:38 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	Grass/turf
Airport Elevation:		Runway Surface Condition:	Dry
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	40.960002,-76.88961 (est)

Administrative Information

Investigator In Charge (IIC):	Yeager, Leah
Additional Participating Persons:	JOSEPH E GREEN; HARRISBURG , PA
Original Publish Date:	November 28, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=50383

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).