



Aviation Investigation Factual Report

Location:	Newbolds Corner, New Jersey	Accident Number:	NYC02LA062
Date & Time:	February 17, 2002, 09:39 Local	Registration:	N56885
Aircraft:	Piper PA-28-140	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Factual Information

On February 17, 2002, at 0939 eastern standard time, a Piper PA-28-140, N56885, was substantially damaged during a forced landing near Newbolds Corner, New Jersey. The certificated private pilot and passenger received minor injuries. Visual meteorological conditions prevailed for the personal flight. No flight plan had been filed for the flight that was conducted under 14 CFR Part 91.

According to the pilot, the airplane had recently received an annual inspection. The work included removing both fuel tanks to replace the fuel transmitters, the fuel lines, both cockpit fuel gauges, and replacement of a cylinder on the engine. In addition, the engine was removed and replaced to work on the engine mount.

The pilot subsequently flew the airplane on February 15, 2002, from Norfolk, Virginia, to Bedford, Massachusetts. At Bedford, the airplane was serviced with 35 gallons of 100 low lead aviation grade gasoline. On February 17, the pilot initiated the return flight. He reported that prior to departure, he had visually checked both fuel tanks, and they were filled to capacity (48 gallons useable). He had planned on an en route stop at Atlantic City (ACY), New Jersey, on the return flight.

The pilot reported the flight was without incident until it was south of John F. Kennedy (JFK), at which time, the engine began to run rough. He changed to the left fuel tank and the engine ran smoothly. He also changed his destination from ACY, to Flying W Airport (N14), Lumberton, New Jersey, an airport he was familiar with. The airplane crossed the New Jersey shore line near Colts Neck.

After about 15 minutes of running on the left fuel tank, the engine lost power, as if it were out of fuel. The pilot selected right fuel tank and the engine resumed power. At that time the left fuel tank read empty, and the right fuel tank read about 1/3. The pilot continued toward N14. The pilot also reported that he thought the low fuel readings was due to inaccuracies in the system, and not an actual low fuel state. He did not trust the gauges based upon previous experience.

About 10-15 minutes later, the engine lost power again, and the pilot was unable to affect a restart. He did not remember looking at the fuel gauges at that time.

The pilot reported there was a strong quartering crosswind from 310 degrees as he approach a field for the forced landing. While low over trees, he encountered a wind shear and the airspeed decreased from 71 mph to 60 mph. The airplane was near a stall, and hit on the right main landing gear and right wing first, followed by the left main landing gear and then the nose wheel. The location of the field was about 2 miles north of N14.

According to archived weather reports from South Jersey Regional Airport (VAY), Medford, New Jersey, which was about 3 miles southwest of the accident site, at 0954, the winds were from 310 degrees at 8 knots with gusts to 15 knots, and at 1054, they were from 310 degrees at 14 knots, with gusts to 18 knots.

According to an inspector from the Federal Aviation Administration (FAA) who examined the airplane, the left main landing gear had been driven through the wing, and collapsed rearward and inboard. The nose landing gear was separated from the airplane, and the firewall was wrinkled. The right wing was wrinkled, and bent up outboard of the wing flap. The fuel system was intact; however, no fuel was visible in the fuel tanks, and there was no evidence of fuel staining around the fuel caps, or under the wings.

Under FAA supervision, fuel was added to both tanks, and the electric boost pump turned on. Fuel was observed leaking from around the B-nut on the exit side of the engine driven fuel pump, and on the fuel line that connected to the carburetor. A fuel stain was found on the firewall behind the leaking B-nut. The B-nut was found to be finger loose and was tightened two full turns. After tightening, the fuel system was again pressurized and no leaks were observed. The engine was started and ran. High power was not demonstrated due to a bent propeller. Fuel flowed from both fuel tanks to the engine with no leaks or problems reported.

In a follow-up telephone interview, the mechanic who conducted the test reported that when electrical power was first turned on, the fuel gauges read empty. After fuel had been added to the fuel tanks, both fuel tank fuel gauges registered a quantity of fuel, when the electrical power was turned on.

According to FAA records, the maintenance facility that performed the work carried a 14 CFR Part 145 Repair Station certificate, with class 3 airframe and limited powerplant ratings. According to the maintenance supervisor from the FAA Flight Standards District Office (FSDO) that supervised the repair station certificate, the work performed was within the scope of the repair station certificate. Although the facility employed both maintenance personnel and inspectors, there was no specific requirement for the work to be viewed by an inspector prior to being returned to service.

According to the chief inspector from the maintenance facility that had performed the work on the airplane, there was no specific requirement for the work to be viewed by an inspector prior to returning the airplane to service. However, the airplane would have received an inspection overview. In addition, the airplane had accumulated about 6 hours between ground runs, and maintenance flight checks, after the engine was replaced. Further, the fuel line was not required to be secured with safety wire, and none had been used. The maintenance facility did not have a procedure in place to mark an inspected fitting with torque seal, or some other type of marking to indicate that it had been inspected.

Pilot Information

Certificate:	Private	Age:	45, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	October 17, 2001
Occupational Pilot:	No	Last Flight Review or Equivalent:	August 1, 2000
Flight Time:	2400 hours (Total, all aircraft), 300 hours (Total, this make and model), 2300 hours (Pilot In Command, all aircraft), 31 hours (Last 90 days, all aircraft), 13 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N56885
Model/Series:	PA-28-140	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	28-7425058
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	February 15, 2002 Annual	Certified Max Gross Wt.:	2150 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	6116.65 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-320
Registered Owner:	On file	Rated Power:	160 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	VAY,53 ft msl	Distance from Accident Site:	3 Nautical Miles
Observation Time:	09:54 Local	Direction from Accident Site:	265°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Broken / 4100 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	8 knots / 15 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	310°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.75 inches Hg	Temperature/Dew Point:	7°C / -1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Bedford, MA (BED)	Type of Flight Plan Filed:	None
Destination:	Atlantic City, NJ (ACY)	Type of Clearance:	None
Departure Time:	08:15 Local	Type of Airspace:	Class E

Airport Information

Airport:	Flying W Airport N14	Runway Surface Type:	
Airport Elevation:	49 ft msl	Runway Surface Condition:	Unknown
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	40.299144,-74.520362(est)

Administrative Information

Investigator In Charge (IIC): Hancock, Robert

Additional Participating Persons: Edward Bower; Federal Aviation Administration; Philadelphia, PA

Report Date: November 21, 2002

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=54217>

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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](#).