Aviation Investigation Final Report

Location:	CONESUS, New York	**Accident Number:**	NYC00LA088
Date & Time:	March 7, 2000, 18:58 Local	**Registration:**	N9040D
Aircraft:	Piper PA-22	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Serious
Flight Conducted Under:	Part 91: General aviation - Positioning		

Analysis

The pilot was repositioning the airplane from his private airstrip, to an airport about 10 nautical miles to the south, at night. The pilot had flown 1.3 daytime hours in the previous 90 days, all on the day before the accident; however, the accident airplane had not been flown in 6 months. The airplane's left wing was refueled with 8-10 gallons of 100LL aviation fuel. The airplane was preflighted, and fuel samples were taken from both tanks, the strainer, and both wings. No water or sediments were observed. The pilot completed an engine run-up, then took off. During the climb, about 400 feet above the ground, the engine quit. The pilot switched the fuel selector from the left tank to the right tank. The engine began to produce power again, but not full power. The pilot opted to land at a nearby unlighted airstrip. During the approach, while on base leg, and with the engine still running, the airplane impacted a tree. The pilot stated: 'I was checking the engine gauges and wasn't watching my altitude closely enough.' Post-flight inspection of the airplane revealed no mechanical malfunctions. However, corrosion and severe pitting were found inside the fuel bowl.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The contamination of the aircraft's fuel. Contributing factors were the pilot's failure to maintain adequate altitude and his diversion of attention during the base turn, dark night conditions, and the tree.

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - NONMECHANICAL
Phase of Operation: CLIMB

Findings
1. (C) FUEL SYSTEM - CONTAMINATION

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: APPROACH - VFR PATTERN - BASE LEG/BASE TO FINAL

Findings
2. (F) LIGHT CONDITION - DARK NIGHT
3. (F) OBJECT - TREE(S)
4. AIRPORT FACILITIES,RUNWAY EDGE LIGHTS - NOT INSTALLED
5. (F) PROPER ALTITUDE - INADEQUATE - PILOT IN COMMAND
6. (F) DIVERTED ATTENTION - PILOT IN COMMAND
7. LACK OF RECENT EXPERIENCE - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

On March 7, 2000, at 1858 Eastern Standard Time, a Piper PA-22, N9040D, was destroyed during a night precautionary landing in Conesus, New York. The certificated private pilot received serious injuries, and visual meteorological conditions prevailed at the time of the accident. No flight plan had been filed for the flight, from the pilot's grass airstrip in Conesus, to Dansville Municipal Airport (DSV), Dansville, New York. The positioning flight was conducted under 14 CFR Part 91.

Dansville was located about 10 nautical miles south of the pilot's airstrip. According to the pilot's son, the airplane had been in storage at the pilot's airstrip during the previous winter, and was to be moved to Dansville during the day of the accident.

According to the pilot, the airplane had been refueled with 8 to 10 gallons of 100LL aviation fuel, which had been purchased at Dansville Airport, and transported to the airplane in 5-gallon jugs. The fuel was added to the airplane's left tank, the airplane was preflighted, and fuel samples were taken from both tanks, the strainer, and both wings. "No water or sediment [were] evident." The pilot completed an engine run-up, then took off towards Dansville. In one statement, the pilot wrote that during the climb, about 400 feet above the ground, he realized that the engine "wasn't running efficiently." In another statement, the pilot wrote that the engine "quit." The fuel selector had been on the left tank, "which was about half-full," so the pilot switched to the right tank. "I didn't know how much was in the right tank...but I knew there was some. The engine began to produce power again, but not full power."

At that point, the pilot decided not to continue to Dansville, because it was still about 10 miles away. He decided to land at a neighbor's unlighted airstrip, about 1 1/2 miles from the pilot's airstrip, "because his strip runs north/south and mine runs east/west...[and] it would be easier to land on his strip as it is longer, with a clearing at the end."

At the time that the pilot made his decision, the airplane was south of the neighbor's airstrip, so the pilot circled back towards the north. During the approach, while on base leg and with the "aircraft engine running," the landing light illuminated trees. "I was too low to the ground before I cleared a hedgerow...I saw a tree and I pulled up so that I would hit the tree with the belly or bottom of the fuselage, instead of hitting the tree with the nose of the plane." The next thing the pilot remembered, he was on the ground, still in the airplane.

In a statement to the Safety Board, the pilot wrote: "The time from takeoff until the accident was about 2 minutes. I was checking the engine gauges and wasn't watching my altitude closely enough." The pilot also noted that the airplane had flown 1 hour since its latest annual inspection, on September 1, 1999. In addition, he reported that, within the previous 90 days, he had flown 1.3 hours of flight time. All of that flight time was in the previous 24 hours, but not

in the make and model of the accident airplane. The pilot did not report any night flight time.

According to the Federal Aviation Administration (FAA) inspector who conducted the on-scene examination, the airplane had sat outside during the winter, with a tarp over its wings. During his visit to the accident site, the inspector noted no damage to the propeller, and could not take fuel samples due to impact damage. After the airplane was removed from the accident site, the inspector made a more thorough examination. At that time, he found no mechanical malfunctions; however, he did find "corrosion and severe pitting inside the fuel bowl."

The inspector also reported that when he asked the pilot why he took off at night instead of waiting until the next day, the pilot didn't really have an answer, only that the flight was delayed from an earlier planned departure.

According to U.S. Naval Observatory calculations, sunset occurred at 1808, and the end of civil twilight occurred at 1836. The new moon set at 1948.

Pilot Information

Certificate:	Private	**Age:**	57,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:**	April 16, 1999
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	609 hours (Total, all aircraft), 13 hours (Total, this make and model), 1 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N9040D
Model/Series:	PA-22 PA-22	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	22-6178
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	September 1, 1999 Annual	**Certified Max Gross Wt.:**	2000 lbs
Time Since Last Inspection:	1 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1782 Hrs	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	O-320
Registered Owner:	TIMOTHY J. EDWARDS	**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:**	Night/dark
Observation Facility, Elevation:	ROC ,560 ft msl	**Distance from Accident Site:**	25 Nautical Miles
Observation Time:	18:54 Local	**Direction from Accident Site:**	10°
Lowest Cloud Condition:	Scattered / 4300 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	12 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	280°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	17°C / 4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(NONE)	**Type of Flight Plan Filed:**	None
Destination:	DANSVILLE , NY (DSV)	**Type of Clearance:**	None
Departure Time:	18:57 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	PRIVATE AIRSTRIP NONE	**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	Vegetation
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Precautionary landing;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious	**Latitude, Longitude:**	42.710498,-77.659706(est)

Administrative Information

Investigator In Charge (IIC):	Cox, Paul
Additional Participating Persons:	SERGIO PEREZ; ROCHESTER, NY
Original Publish Date:	January 18, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=48810