Aviation Investigation Final Report

Location:	Osage Beach, Missouri	**Accident Number:**	CHI01FA146
Date & Time:	May 28, 2001, 17:57 Local	**Registration:**	N7331P
Aircraft:	Piper PA-24-250	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	3 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

During a forced landing the airplane stalled and impacted trees and terrain. Witnesses to the accident reported that the engine was running rough and intermittently prior to the accident. A global positioning system (GPS) receiver was recovered at the accident site and its track data was downloaded. The recovered GPS data showed the airplane's ground speed was between 73.7 - 79.8 mph during the last 10 seconds of data. The stall speed for the accident airplane with flaps retracted is 70 mph. Post-accident fuel samples taken from the fuel strainer and both electric fuel pumps were contaminated with water and particulate. Both electric fuel pumps contained rust, water, and particulate. The carburetor float bowl and accelerator pump-well were contaminated with fine particulate resembling silicon sand. The same fine particulate was observed in the carburetor idle tube passage and nozzle well. Fuel samples taken from the right main fuel cell and fuel selector were clear of debris and water. A fuel sample obtained from the departure airport was clear of debris and water. The accident airplane had been operated approximately 164 hours in the last 35 years, 47 hours in the last 15 years, 35 hours in the last 5 years, and 35 hours in the last year. According to Federal Aviation Regulations (FAR), the pilot-in-command is required to complete an aircraft preflight inspection in order to determine if the aircraft is in an airworthy condition. According to FAA AC 20-43C, "Fuel having a 'cloudy' appearance or definitely 'offcolor' should be suspected of contamination or deterioration and should not be used." According to Airplane Flying Handbook, "Significant and/or consistent water or sediment contamination are grounds for further investigation by qualified maintenance personnel. Each fuel tank sump should be drained during preflight and after refueling."

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Aircraft control not being maintained by the pilot during the forced landing and inadequate preflight inspection performed by the pilot. Contributing factors to the accident were the fuel system contamination that resulted in the loss of engine power, the encountered stall, and trees.

Findings

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

Findings
1. (C) AIRCRAFT PREFLIGHT - INADEQUATE - PILOT IN COMMAND
2. (F) FUEL SYSTEM - CONTAMINATION,WATER
3. (F) FUEL SYSTEM - CONTAMINATION,OTHER THAN WATER

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
4. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
5. (F) STALL - ENCOUNTERED - PILOT IN COMMAND

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

Findings
6. (F) OBJECT - TREE(S)

Factual Information

HISTORY OF FLIGHT

On May 28, 2001, at 1757 central daylight time (cdt), a Piper PA-24-250, N7331P, piloted by a private pilot, sustained substantial damage during an in-flight collision with trees and terrain following a loss of control while maneuvering over Lake of the Ozarks State Park, Osage Beach, Missouri. Visual meteorological conditions prevailed at the time of the accident. The personal flight was operating under the provisions of 14 CFR Part 91 without a flight plan. The pilot and his two passengers were fatally injured. The flight departed the Lee C. Fine Memorial Airport (AIZ), Kaiser, Missouri, at 1743, and had the intended destination of Schaumburg Regional Airport (06C), Schaumburg, Illinois.

A witness to the accident reported, "I heard a chugging sound approaching from the east overhead upon looking up I saw a single engine plane in obvious distress. The propeller was turning in a jerking motion. The plane appeared to be about 30 feet above tree top level. I observed it for about 10 seconds before it disappeared into the tree line."

Another witness to the accident reported, "I looked up and saw a small single engine plane traveling parallel with [highway] 54. The engine continued to sputter, quit, restart and sputter for the entire time I observed it in flight, which was 15-20 seconds. The plane was on a very level flight path at an altitude I would estimate at 200 [feet] to 250 [feet] off the water and at a distance of approximately 1/4 mile away."

Another witness to the accident reported seeing an airplane flying in a southwest direction at an altitude of 150-200 feet above the treetops. The witness stated, "This plane startled me at first because there wasn't any engine noise at first, then the engine fired for approximately 1-2 seconds at a low rpm (say 20%) followed by no engine noise for 1-2 seconds followed by another engine starting for 1-2 seconds at low rpm followed by no engine noise as the plane went out of sight."

The written witness statements are appended to this factual report.

The airplane impacted trees and terrain 0.848 nautical miles (nm) south-southwest from the Grand Glaize - Osage Beach Airport (K15).

PERSONNEL INFORMATION

The pilot held a private pilot certificate with a rating for single engine land airplanes. The pilot's last medical examination was conducted on January 11, 2000, and he was issued a First Class medical certificate with no limitations or restrictions.

The pilot was issued a private pilot certificate on August 27, 2000, after logging 65.7 hours of dual instruction and 27.0 hours of solo. The pilot's first flight in the accident airplane was listed in his flight logbook as March 31, 2001. The pilot received an endorsement for high performance and complex airplanes on April 1, 2001, after receiving 4.0 hours of dual instruction in the Piper PA-24-250. On April 2, 2001, there was logbook entry for instruction covering Piper PA-24-250 emergency procedures and fuel system.

According to the pilot's flight logbooks, the pilot had a total flight time of 185.3 hours, all of which were in single engine airplanes. The pilot logged 31.8 hours in the Piper PA-24-250, of which 20.8 were as pilot-in-command (PIC) and 11.0 hours were as dual instruction. The pilot had flown 43.2 hours in the last 90 days, 34.8 hours in the last 60 days, and 5.3 hours in the last 30 days. There were no flight logbook entries within 24 hours of the accident. The last flight logbook entry was on May 3, 2001.

AIRCRAFT INFORMATION

The aircraft was a Piper PA-24-250, serial number 24-2510. The Piper PA-24-250 is a single-engine all-metal airplane of semimonocoque design and is equipped with a retractable landing gear, flaps and a constant speed propeller. The PA-24-250 can accommodate a pilot and three passengers.

The airplane was issued a standard airworthiness certificate on January 25, 1961, and was certified for normal category operations. At the time of the accident the airframe had accumulated a total flight time of 886.08 hours. According to a purchase receipt, the pilot bought the airplane on March 30, 2001. A copy of the purchase receipt is appended to this factual report.

The last annual inspection was performed on May 5, 2000, at 850.31 hours total time and the airplane had accumulated 35.77 hours since the inspection. According to the airframe logbook, all applicable airframe airworthiness directives (AD) were complied with at the last annual inspection. A copy of the logbook entry for the last airframe annual inspection is appended to this factual report.

During the last annual inspection the following tasks were accomplished:

Main and auxiliary fuel cells were replaced.
All flexible fuel lines were replaced along with new fittings.
Both electric fuel pumps were drained and inspected.
Two fuel caps, one main and one auxiliary, were replaced.
Bird nests were removed from wings.

The accumulated airframe flight time over the life of the airplane was as follows:

Time Interval	Accumulated Hours
05/05/2000 - 05/28/2001	35.77
10/21/1994 - 05/05/2000	3.31
09/23/1990 - 10/21/1994	4.97
08/13/1986 - 09/23/1990	3.44
01/02/1982 - 08/13/1986	6.83
03/24/1976 - 01/02/1982	40.29
06/20/1971 - 03/24/1976	33.47
10/1966 - 06/20/1971	36.00
01/25/1961 - 10/1966	722.00

The engine was a 250 horsepower Lycoming O-540-A1D5, serial number L-3760-40. The engine had accumulated 886.08 hours since new. The engine had accumulated 35.77 hours since the last annual inspection, which was completed on May 5, 2000. According to the engine logbook, all applicable engine airworthiness directives (AD) were complied with at the last annual inspection. A copy of the logbook entry for the last engine annual inspection is appended to this factual report.

The propeller was a Hartzell HC-A2VK-1, serial number J1097. According to the airframe logbook, the propeller was last overhauled on July 14, 1999.

According to the Piper PA-24-250 Pilot Operating Handbook (POH), the stall speed with flaps retracted is 70 mph and 65 mph with flaps extended.

METEOROLOGICAL INFORMATION

A weather observation station, located at AIZ, about 6 nautical miles (nm) from the accident site on a 103.4 degree magnetic heading, recorded the weather approximately 2 minutes prior to the accident as:

Observation Time: 1755 cdt
Wind: 050 degrees magnetic at 6 knots
Visibility: 10 statute miles
Sky Condition: Sky Clear
Temperature: 26 degrees Celsius
Dew Point: 14 degrees Celsius
Pressure: 29.90 inches of mercury

According to Federal Aviation Administration (FAA) records, a pilot representing the accident airplane contacted the St. Louis Automated Flight Service Station (AFSS) and requested a weather briefing for a flight from AIZ to 06C.

WRECKAGE AND IMPACT INFORMATION

The wreckage was located at the base of a wooded ravine in the Lake of the Ozarks State Park. A GPS receiver recorded the position of the main wreckage as 38-degrees 07-minutes 21.8-seconds north latitude, 92-degrees 40-minutes 17.9-seconds west longitude. All major airframe components were located at the accident site.

The fuselage and wings were supported between two trees and the terrain. One of the trees had several slash marks penetrating into the tree trunk and there was a 10-foot section of tree-bark missing. The engine, firewall, and instrument panel were bent to the right approximately 30 degrees and were lying on their left side. The remainder of the fuselage was positioned vertically with the angle between the fuselage bottom and the terrain measured to be approximately 10 degrees past vertical. The fuselage aft of the rear baggage-area bulkhead, including the entire empennage, was separated from the airplane. Local authorities reported the aft fuselage and empennage was slung over the main cabin and was removed to gain access to cabin. The horizontal stabilator and vertical stabilizer remained attached to the aft fuselage structure. The rudder remained attached to the vertical stabilizer. The elevator and rudder control cables were cut. Elevator and rudder control cable continuity was established from the cut cable ends to the individual control surfaces and to the main cabin area.

The right wing was separated from all fuselage attachment points. A fractured three-foot section of main wing spar remained attached to the fuselage. The outboard 3 1/2 feet of wing was separated from the remainder of the wing. The right aileron was partially separated from the wing and was hanging off the inboard hinge. The right aileron bellcrank remained attached to wing structure. Aileron control cable continuity was established from the bellcrank to the main cabin area. The right flap remained attached to all attachment points and was in the fully retracted position. The right main landing gear was free moving and was hanging out of the wheel well. Both main and auxiliary fuel cells were ruptured. A fuel sample was taken from the remaining portion of the main fuel cell. The fuel sample was clear of debris, clear of water, and was transparent blue in color. Both fuel tank caps were in place and intact. The main fuel tank finger screen was contaminated with trace amounts of dirt and stone material. The auxiliary fuel cell finger screen was clear of debris and was not obstructed.

The left wing remained attached to the fuselage. The left wing tip was separated from the remainder of the wing. The left aileron remained attached to the two inboard attachment points. Aileron control cable continuity was established from the aileron bellcrank to the main cabin area. The left flap remained attached to all attachment points and was in the fully retracted position. The left main landing gear was in the fully retracted position. Both main and auxiliary fuel cells were ruptured. Both fuel tank caps were in place and intact. Both fuel tank finger screens were clear of debris and were not obstructed.

The fuel selector was in a left main fuel tank position. A fuel sample was taken from the fuel selector and photographed. The fuel sample was clear of debris, clear of water, and was transparent blue in color. The fuel selector was removed for examination. The fuel selector was operational in all selector positions. The interior of the fuel selector was corroded.

The fuel system strainer was removed for examination. The fuel contained in the fuel strainer bowl and filter was contaminated with water and particulate. A sample was collected from the fuel strainer bowl and photographed. The lower 3/4 of the sample was completely opaque with visible water and particulate suspended in the solution. The remaining 1/4 of the sample remained separated from the lower 3/4. The upper 1/4 of the sample was slightly opaque, medium tan in color, with no visible particulate. The inside surface of the fuel strainer bowl was partially covered with a fine particulate resembling silicon sand. The bottom of the fuel strainer bowl was pitted and corroded.

Both electric fuel pumps were opened, drained, and inspected.

The aft electric fuel pump was contaminated with water, rust, and particulate. A fuel sample was collected from the fuel pump and photographed. The fuel sample was homogenous, transparent and light green/gray in color. The fuel sample had trace amounts of particulate contamination. The fuel pump screen was not rusted. The fuel pump cap was corroded.

The forward electric fuel pump was contaminated with water, rust, and particulate. A fuel sample was collected from the fuel pump and photographed. The lower 1/2 of the sample was completely opaque and was orange in color with water and particulate contamination. The upper 1/2 of the sample remained separated from the lower 1/2. The upper 1/2 was slightly opaque and was green/tan in color with no visible water or particulate contamination. The fuel pump screen was rusted and the cap was corroded.

The engine remained partially attached to the airframe and was bent approximately 30 degrees to the right. The engine was resting on the left rocker box covers. The carburetor was broken off the engine. The carburetor was retained for inspection and teardown. Engine crankshaft and valve train continuity was established by rotating the crankshaft through the accessory gear section. There was thumb compression on all cylinders. Both magnetos produced spark on all leads when the engine crankshaft was rotated. Engine timing matched magneto timing. The magnetos were removed for bench testing and inspection. The engine-driven fuel pump was removed and functioned when rotated by hand. The upper and lower spark plugs were removed and the electrodes were light tan in color.

A differential compression test was performed and the following results were obtained:

	Before Staking Valves (psi)	After Staking Valves (psi)
#1 cylinder	45/80	60/80
#2 cylinder	48/80	64/80
#3 cylinder	60/80	60/80
#4 cylinder	42/80	52/80
#5 cylinder	30/80	51/80
#6 cylinder	10/80	50/80

Note: Differential compression test was done with cylinders cold and without a mechanical

stop to hold pistons at top dead center.

The carburetor was examined at the manufacturer's facility. The float bowl and accelerator pump-well was contaminated with fine particulate resembling silicon sand. The same fine particulate was observed in the idle tube passage and nozzle well.

Both magnetos were examined and bench tested at an overhaul facility. The left magneto initially did not provide spark and the points were inspected. The points were noticeably corroded. The leads were cleaned with a fine file and the magneto was remounted on the bench test fixture. The magneto produced spark on all leads when rotated in the test fixture. The left magneto was heated in a 160-degree Fahrenheit oven for 20 minutes and then remounted in the bench test fixture. The heated left magneto produced spark on all leads when rotated in the test fixture. The right magneto produced spark on all leads when rotated in the test fixture. The right magneto was heated in a 160-degree Fahrenheit oven for 20 minutes and then remounted in the bench test fixture. The heated right magneto produced spark on all leads when rotated in the test fixture.

The propeller remained attached to the engine with spinner in place. One propeller blade was missing approximately four inches of blade tip. The blade tip fracture surface was consistent with overload failure. The outboard portion of the remaining propeller blade was twisted towards low pitch, more than 90 degrees. The propeller blade was bent and curled. There was chordwise scratching of the propeller face and back. The other propeller blade was bent slightly aft and there was chordwise scratching of the propeller face and back.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot at the Boone/Callaway County Medical Examiner's Office, Columbia, Missouri, on May 29, 2001.

A Forensic Toxicology Fatal Accident Report was prepared by the FAA Civil Aeromedical Institute, Oklahoma City, Oklahoma.

The toxicology results for the pilot were:

* No Carbon Monoxide detected in Blood
* No Ethanol detected in Vitreous
* 0.004 (ug/ml, ug/g) Tetrahydrocannabinol Carboxylic Acid (Marijuana) detected in Blood
* 0.0056 (ug/ml, ug/g) Tetrahydrocannabinol Carboxylic Acid detected in Lung
* 0.0888 (ug/ml, ug/g) Tetrahydrocannabinol Carboxylic Acid detected in Urine
* 0.014 (ug/ml, ug/g) Tetrahydrocannabinol (Marijuana) detected in Lung

TESTS AND RESEARCH

A global positioning system (GPS) receiver was located in the airplane wreckage. The GPS

receiver was sent to the manufacturer for a data download. The recovered data from the GPS receiver was plotted using commercial computer software. The plots are appended to this factual report along with a copy of the source data.

According to the plotted GPS track data, at 1743 the accident airplane took-off on runway 03 at AIZ and then departed the traffic pattern on the left downwind leg. The plotted data shows the airplane flying circuits over Lake of the Ozarks, north of the Grand Glaize Bridge, for a period of approximately eight minutes. The plotted data then shows the accident airplane flying over the city of Osage Beach, along Missouri Highway 54. The last recorded GPS position was at 38-degrees 07-minutes 22.50-seconds north latitude, 92-degrees 40-minutes 18.00-seconds west longitude. The last recorded GPS position was 67 feet from where the main wreckage was located, which was 0.848 nautical miles (nm) south-southwest from the Grand Glaize - Osage Beach Airport (K15).

The last 42 seconds of speed and course data was recorded as:

Time (hhmm:ss)	Ground Speed (mph)	Course (degrees magnetic)
1756:19	76.6	210
1756:31	90.0	286
1756:37	85.8	262
1756:48	83.9	244
1756:51	79.8	224
1756:55	76.2	210
1756:58	73.7	195
1757:01	75.2	188

The accident airplane was fueled with 20 gallons of 100-low lead aviation fuel prior to departing on the accident flight.

Subsequent to the accident, a 5-gallon sample of the airport's 100-low lead aviation fuel was collected. The fuel sample was clear of debris, clear of water, and was transparent blue in color.

According to 14 CFR Part 91.7, "Civil aircraft airworthiness":

(a) No person may operate a civil aircraft unless it is in an airworthy condition.

(b) The pilot in command of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight. The pilot in command shall discontinue the flight when unairworthy mechanical, electrical, or structural conditions occur.

The Federal Aviation Administration Advisory Circular 20-43C, Aircraft Fuel Control, stated the following concerning fuel contamination and airplane preflight:

"Fuel having a 'cloudy' appearance or definitely 'offcolor' should be suspected of contamination or deterioration and should not be used."

"Drain a generous sample of fuel - considerably more than just a trickle - into a transparent container from each of the fuel sumps and from the main fuel strainer or gascolator. (Remember that it was necessary to drain ten ounces in the field tests.) On certain aircraft having fuel tanks located in each wing, positioning of the fuel tank selector valve to the 'BOTH ON' position may not adequately drain the system. This is due to the fuel taking the path of least resistance. In this case, the fuel selector valve should be positioned at each tank in turn."

"Examine the fuel samples for water and dirt contamination. If present, it will collect at the bottom of the container and should be easily detected. Continue to drain fuel from the contaminated sump until certain the system is clear of all water and dirt."

"The use of quick drain valves in the sumps and gascolator makes it practical to keep tanks free of significant quantities of water and other contaminants."

"In addition to the preflight and postflight actions, certain precautionary or routine maintenance should be performed on the aircraft at periodic intervals. These precautions include the inspection and cleaning of pertinent fuel tank outlet finger strainers and carburetor screens (filters), and flushing of the carburetor bowl."

The FAA Handbook, Airplane Flying Handbook, stated the following concerning airplane preflight and fuel contamination:

"Checking for water and other sediment contamination is a key preflight element. Water tends to accumulate in fuel tanks from condensation, particularly in partially filled tanks. Because water is heavier than fuel, it tends to collect in the low points of the fuel system. Water can also be introduced into the fuel system from deteriorated gas cap seals exposed to rain, or from the supplier's storage tanks and delivery vehicles. Sediment contamination can arise from dust and dirt entering the tanks during refueling, or from deteriorating rubber fuel tanks or tank sealant. The best preventive measure is to minimize the opportunity for water to condense in the tanks. If possible, the fuel tanks should be completely filled with the proper grade of fuel after each flight, or at least filled after the last flight of the day. The more fuel there is in the tanks, the less opportunity for condensation to occur. Keeping fuel tanks filled is also the best way to slow the aging of rubber fuel tanks and tank sealant."

"Sufficient fuel should be drained from the fuel strainer quick drain and from each fuel tank sump to check for fuel grade/color, water, dirt, and smell. If water is present, it will usually be in bead-like droplets, different in color (usually clear, sometimes muddy), in the bottom of the sample. In extreme cases, do not overlook the possibility that the entire sample, particularly a small sample, is water. If water is found in the first fuel sample, further samples should be taken until no water appears. Significant and/or consistent water or sediment contamination are grounds for further investigation by qualified maintenance personnel. Each fuel tank sump

should be drained during preflight and after refueling."

The FAA Advisory Circular 20-43C, Water In Aviation Fuels, stated the following concerning fuel contamination and PIC preflight responsibilities:

"Water can enter an aircraft fuel system through leaks in the vents, seals, or poorly fitting fuel caps on filler openings during rain or snow storms or when the aircraft is washed, from refueling system equipment, by condensation and precipitation (especially when an aircraft has partially filled tanks), and when refueling during rain or snow storms."

"Aircraft engines will tolerate a small amount of free water (30 ppm. is usually considered to be the maximum) if it is in a fine, uniformly dispersed state. The best way to minimize the amount of water entering a system is through inspection and maintenance of equipment and by making certain that only clean and dry fuel is received into storage and delivered into an aircraft."

"The pilot in command has the final responsibility to determine that the aircraft is properly serviced. An important part of the preflight inspection is to drain aircraft fuel tank sumps, reservoirs, gascolators, filters, and other fuel system drains to assure that the fuel supply is free of water. A review of National Transportation Safety Board Briefs of Aircraft Accidents involving 114 accidents due to fuel contamination with water occurring between January 7, 1980, and September 11, 1981, showed that the probable cause in 85 of those accidents was "Pilot in Command - Inadequate Preflight Preparation and/or Planning." Since water in fuel accounts for a major share of fuel quality accidents, pilots should make it a practice to include this check beginning with the next preflight inspection."

ADDITIONAL INFORMATION

Parties to the investigation included the FAA, The New Piper Aircraft, and Textron Lycoming.

The main wreckage was released to a representative of the Lake of the Ozarks State Park on May 31, 2001. The GPS receiver was returned to a representative of the owner on August 28, 2001. The remainder of the wreckage was returned to a representative of the pilot's family on May 28, 2002.

Pilot Information

Certificate:	Private	**Age:**	32,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:**	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	January 11, 2000
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	August 27, 2000
Flight Time:	185 hours (Total, all aircraft), 32 hours (Total, this make and model), 105 hours (Pilot In Command, all aircraft), 43 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N7331P
Model/Series:	PA-24-250	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	24-2510
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	May 5, 2000 Annual	**Certified Max Gross Wt.:**	2900 lbs
Time Since Last Inspection:	35.77 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	886.08 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, aided in locating accident	**Engine Model/Series:**	O-540-A1D5
Registered Owner:	Kent J. Arendt	**Rated Power:**	250 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	AIZ,869 ft msl	**Distance from Accident Site:**	6 Nautical Miles
Observation Time:	17:55 Local	**Direction from Accident Site:**	103°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	50°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.89 inches Hg	**Temperature/Dew Point:**	26°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Kaiser, MO (AIZ)	**Type of Flight Plan Filed:**	None
Destination:	Schaumburg, IL (06C)	**Type of Clearance:**	None
Departure Time:	17:43 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	2 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	3 Fatal	**Latitude, Longitude:**	38.129142,-92.650199(est)

Administrative Information

Investigator In Charge (IIC):	Fox, Andrew
Additional Participating Persons:	Marvin Trease; Federal Aviation Administration - Kansas City FSDO; Kansas City, MO Robert Martellotti; The New Piper Aircraft, Inc.; Vero Beach, FL Gregory Erikson; Textron Lycoming; Wayne, IL
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Investigation Class:	Class
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