

2010 NTSB REPORTS

NTSB Identification: **CEN10CA094**

14 CFR Part 91: General Aviation

Accident occurred Sunday, January 10, 2010 in New London, WI

Probable Cause Approval Date: 05/06/2010

Aircraft: ENGINEERING & RESEARCH ERCOUPE 415-CD, registration: N94670

Injuries: 2 Minor.

NTSB investigators used data provided by various entities, including, but not limited to, the Federal Aviation Administration and/or the operator and did not travel in support of this investigation to prepare this aircraft accident report.

The pilot reported that the accident occurred when the flight was returning to the airport after a local flight. He stated that he checked the windsock and it showed that the winds were favoring runway 18, but he decided to land on runway 36. The grass runway was covered with snow and ice. The pilot stated that he was unable to slow the airplane down during the landing roll and the airplane nosed over after contacting a snowbank at the end of the runway. The pilot stated that only half the length of the runway was plowed. He chose runway 36 so he would not have to turn around and back taxi on the runway to get to the hangar, which was at the north end of the airport. The airplane received substantial damage to the fuselage and wings.

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

The pilot's decision to land with a tailwind on the snow- and ice-covered runway.

CEN10CA094

The pilot reported the accident occurred when returning to the airport after a local flight. He stated he checked the windsock and it showed that the winds were favoring runway 18, but he decided to land on runway 36. The grass runway was covered with snow and ice. The pilot stated that he was unable to slow the airplane down during the landing roll. The airplane nosed over after contacting a snowbank at the end of the runway. The pilot stated they used a cell phone to call for help and the airplane had to be lifted in order for them to get out of it. The pilot stated that only half the length of the runway was plowed. He chose runway 36 so he would not have to turn around and back taxi on the runway to get to the hangar which was at the north end of the airport. The airplane received substantial damage to the fuselage and wings.

NTSB Identification: **WPR10LA111**

14 CFR Part 91: General Aviation

Accident occurred Thursday, January 14, 2010 in Napa, CA

Probable Cause Approval Date: 12/20/2010

Aircraft: ERCOUPE 415-D, registration: N2332H

Injuries: 1 Uninjured.

NTSB investigators may not have traveled in support of this investigation and used data provided by various sources to prepare this aircraft accident report.

Almost immediately after takeoff, at 100 feet above ground level (agl), the engine of the single engine airplane began to lose power, surged two times, then lost all power. The pilot landed in an open field off the end of the runway. During the landing the nose wheel sank into the soft ground, collapsed, and the airplane nosed into the ground. The pilot reported that both wing fuel tanks were full and the engine run up was normal. During the post accident airplane examination fuel was identified in both wing tanks, the fuselage header tank, and the main fuel valve was observed rotated to the 2 o'clock position. The valve was a two position valve; "off" when positioned to 9 o'clock, and "on" when positioned to 12 o'clock. Investigators observed that the valve had no positive stops and

could be rotated past the 9 o'clock or 12 o'clock positions. The valve was located on the far left bottom side of the instrument panel, about knee level, which was not the standard location for the valve. During the post accident examination of the engine, investigators were able to run the engine up to 2,500 rpm, and noted that if the operator in the left seat moved his left knee to the left, it would push on the fuel valve, rotating it to the 2 o'clock position. With the fuel valve at the 2 o'clock position, fuel flow to the carburetor was reduced to a "trickle," and the engine slowly lost power.

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

A loss of engine power due to fuel starvation as a result of the unintentional movement of the fuel selector valve beyond its stops during takeoff initial climb resulting in restricted fuel flow.

WPR10LA111

HISTORY OF THE FLIGHT

On January 14, 2010, at 1441 Pacific standard time, a Ercoupe 415-D, N2332H, experienced a loss of engine power after takeoff and landed in a field off the end of runway 36R at Napa County Airport, Napa, California. The commercial pilot operated the airplane under the provisions of Title 14 Code of Federal Regulations, Part 91. The pilot was uninjured and the airplane was substantially damaged. Visual meteorological conditions prevailed, and a flight plan had not been filed.

The pilot reported to the Safety Board investigator that both wing fuel tanks were full and the engine run up was normal. Almost immediately after takeoff, at 100 feet above ground level (agl), the engine began to lose power, surged two times, and then lost all power. The pilot landed in an open field off the end of the runway. During the landing the nose wheel sank into the soft ground and collapsed.

PERSONNEL INFORMATION

The pilot, age 23, held a commercial pilot certificate with ratings for airplane single engine land, airplane multi-engine land, and instrument airplane, issued April 30, 2008. He held a third-class medical certificate issued on May 16, 2008, with no limitations or waivers. The pilot reported that he had 410 hours of total time, and 13 hours in the Ercoupe. His most recent flight review was dated April 30, 2008.

AIRCRAFT INFORMATION

The two seat, low wing, fixed-gear airplane, serial number (S/N) 2957, was manufactured in 1946. It was powered by a Teledyne Continental Motors (TCM) O-200, 100-hp engine, and equipped with a McCauley fixed pitch propeller. Examination of the aircraft maintenance logbooks showed that the total airframe time was 1,608 hours, and that an overhauled O-200 TCM engine had been installed on August 1, 2009, per Supplemental Type Certificate (STC) SA2628WE requirements, with zero time on the engine. The STC specifies an electric fuel pump be installed, however, the airplane had retained the standard engine driven mechanical fuel pump installation. A new tachometer was installed with zero time indicated, and the hobbs meter indicated 1,608.83. The fuel selector valve was located on the bottom far left side of the instrument panel, about 2 inches from the left side of the interior of the cockpit fuselage. The airplane owner stated that he purchased the airplane with the fuel valve located in its current position. The Ercoupe Approved Airplane Flight Manual states that the main fuel valve should be located halfway between the brake handle (just below the throttle handle) and the left yoke control wheel directly behind the instrument panel.

The fuel system consists of a nine gallon tank in each wing and a six gallon fuselage tank. The engine driven fuel pump moves gasoline from the wing tanks to the six gallon fuselage tank. Excess fuel drains from the fuselage tank overflow back to the wing tanks. Fuel is gravity fed from the fuselage tank to the engine, through the main fuel

valve. The main fuel valve is a two position valve, on and off.

WRECKAGE AND IMPACT INFORMATION

The airplane was located about a 1/4 mile north of the departure end of runway 36 right, in a grass field, positioned nose down into the ground, with the tail oriented at a 30-degree up angle. The nose wheel had collapsed back into the underside of the airplane. Photographs of the cockpit show the main fuel valve in the 2 o'clock position. The fuel valve plate was labeled "fuel on" at the 12 o'clock position, and "fuel off" at the 9 o'clock position. The airplane was removed and taken to a facility in Pleasant Grove, California, for further examination.

TESTS & RESEARCH

On February 3, 2010, a Safety Board investigator and a technical representative from Teledyne Continental Motors examined the airplane. A visual examination revealed that the fuselage fuel tank (header tank) fuel indicator was at the bottom of the sight gauge. The tank contained about an inch of liquid, and the indicator wiggled when the airplane was shaken. The intake manifold fractured and separated above the carburetor mounting pad. The carburetor had blue staining around the carburetor bowl gasket and the inlet filter. The throttle, mixture, and carburetor heat controls moved freely from stop to stop. The carburetor accelerator pump squirted fluid with movement of the throttle.

Investigators drained a blue fluid that smelled like aviation fuel from the gascolator, right wing sump, and left wing sump; additionally, the carburetor was reattached to the engine with a replacement manifold.

The main fuel valve was located on the bottom left side of the instrument panel, the valve was positioned to the 4 o'clock position. On the first attempt after some cranking, the engine started and ran up to 1,200-1,300 rpm. The engine shut down on its own after about 1 minute. Investigators added 2 gallons of fuel to the header tank. The second attempt to start the engine had the same results.

Investigators removed the fuel line from the shutoff valve to the carburetor. A limited amount of fuel flowed (trickled) through the line. Movement of the shutoff valve to the 12 o'clock position resulted in a steady stream of fuel. Either side of 12 o'clock resulted in restricted fuel flow (at the 9-10 o'clock and the 2-4 o'clock position) down to a dribble. It was noted that the valve had no positive stops in either the 'off' position or the 'on' position.

Investigators performed another engine run with the shutoff valve in the 12 o'clock position. The engine was run up to 1,800 rpm and a magneto check was performed, with corresponding drops of 75 rpm for the left and right magneto. It was then run up to 2,500 rpm without difficulty; the rpm stabilized, and then followed throttle movement as investigators varied the rpm between 1,800-2,500. While the engine was operating at 2,500 rpm, the operator moved his left knee to the left, which moved the fuel shutoff lever to the 2 o'clock position. The engine ran about 1 minute and then the rpm dropped to 1,700-1,800. The engine sputtered and backfired, and stayed at 1,700-1,800 for 15-20 seconds. The operator reduced the throttle to idle, and the engine smoothed out; shut down was unremarkable.

NTSB Identification: **CEN10LA203**

14 CFR Part 91: General Aviation

Accident occurred Monday, April 12, 2010 in Columbiaville, MI

Probable Cause Approval Date: 05/19/2011

Aircraft: Univair Aircraft Corporation 415-C, registration: N93876

Injuries: 1 Uninjured.

NTSB investigators may not have traveled in support of this investigation and used data provided by various sources to prepare this aircraft accident report.

The pilot reported that he landed approximately a third of the way down the runway. He said that as he applied the brakes near the turnabout area at the south end of the runway, he discovered that he couldn't stop. The airplane subsequently went down an embankment, struck terrain, and sustained substantial damage. Postaccident examination of the wreckage revealed that the brake master cylinder piston rod's clevis had separated. An NTSB materials laboratory examination indicated that the separation was consistent with bending forces associated with the accident and no preexisting anomalies were detected.

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

The pilot misjudged his speed and distance while landing, which resulted in an overrun and subsequent collision with terrain.

CEN10LA203

On April 12, 2010, about 1130 eastern daylight time, a Univair Aircraft Corporation 415-C, N93876, piloted by a private pilot, exited runway 18 (1,400 feet by 80 feet, dry grass) while landing at private airstrip near Columbiaville, Michigan. The airplane subsequently sustained substantial damage on impact with terrain. Visual meteorological conditions prevailed at the time of the accident. The 14 CFR Part 91 personal flight was not operating on a flight plan. The pilot was uninjured. The flight originated about 1100 from the Wm 'Tiny' Zehnder Field Airport, near Frankenmuth, Michigan, and was destined for the private airstrip.

The pilot, in his accident report, said he'd set up for a normal approach to runway 18 and landed approximately a third of the way down the runway. He said that as he applied the brakes near the turnabout area at the south end of the runway, he discovered that he couldn't stop. He went off the end of the runway and down an embankment causing considerable damage to the airplane. The pilot said that "later when the FAA [Federal Aviation Administration] inspector arrived, we discovered that the brake pedal had broken ..."

An examination of the brake master cylinder piston rod's clevis was found separated from its piston rod. The separated clevis was retained by the FAA inspector and forwarded to the National Transportation Safety Board (NTSB) for further examination at the materials laboratory.

A Senior Materials Engineer examined the separated clevis and reported that the fracture surface had rough matte gray fracture features consistent with an overstress fracture. Their report stated that overall fracture features including radial marks and contact faces that were consistent with fracture under bending loads with the upper end bending forward and to the right relative to the lower end. No evidence of any preexisting damage such as fatigue was observed.

NTSB Identification: **ERA10LA248**

14 CFR Part 91: General Aviation

Accident occurred Wednesday, April 28, 2010 in LaGrange, GA

Probable Cause Approval Date: 05/26/2011

Aircraft: ENGINEERING & RESEARCH ERCOUPE 415-C, registration: N87172

Injuries: 1 Minor.

NTSB investigators may not have traveled in support of this investigation and used data provided by various sources to prepare this aircraft accident report.

The pilot completed a preflight inspection of the airplane before taking off and flying to an airport 32 nautical miles (nm) away. There, he made a full stop landing, taxied back, and took off for another airport 16 nm away. Again, he made a full stop landing and taxied back, before taking off for his original departure airport. Just after takeoff, while the airplane was in the traffic pattern downwind leg, about 1000 feet, the engine sputtered twice and lost power. He then attempted to land on the runway, but the airplane landed short and the nose landing gear buckled. Subsequent examination of the airplane revealed that no fuel lines were compromised or blocked, that

the fuel lines had little to no fuel in them, and that the gascolator was approximately half full of fuel. In addition, the fuel header tank was empty while the two wing tanks were almost full. The fuel tank shut-off valve, and the main fuel valve were found in the off position, but the pilot stated that he had turned off both upon evacuation of the airplane. He also stated that it was his practice to turn off the fuel tank shut-off valve after every flight. The fuel tank shut-off valve controlled fuel flow from the wing tanks to the header tank. With the lack of fuel found in the header tank, it was likely that the fuel tank shut-off valve had been in the off position for all three flights, which ultimately resulted in fuel starvation to the engine.

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

A loss of engine power due to the pilot's inadequate preflight inspection and his failure to ensure that the fuel tank shut-off valve was open resulting in fuel starvation.

ERA10LA248

On April 28, 2010, at 1155 eastern daylight time, an Engineering and Research Corporation Ercoupe 415-C, N87172, was substantially damaged during a forced landing at LaGrange-Callaway Airport (LGC), LaGrange, Georgia. The certificated private pilot sustained minor injuries. Visual meteorological conditions prevailed. No flight plan had been filed for the local personal flight, which was conducted under the provisions of 14 Code of Federal Regulations Part 91.

According to the pilot, he originally departed Newnan-Coweta Airport (CCO), Atlanta, Georgia. Prior to the departure, he added fuel to the airplane, resulting in a total of 7.5 gallons in the left wing tank and 8.5 gallons in the right wing tank. The subsequent preflight inspection was "normal," with no water or debris found in fuel samples from the wing tank sumps or gascolator.

The pilot took off from CCO, and flew to Roanoke Municipal Airport (7A5), Roanoke, Alabama, at an altitude of 4,500 feet. After a full stop landing, he back-taxied, and took off for LGC, flying at an altitude of 3,000 feet. The pilot made another full stop landing at LGC, then taxied back and took off again to return to CCO.

Just after the pilot took off from LGC, and the airplane was in the traffic pattern downwind leg, about 900 feet, the engine sputtered twice and quit. The pilot then attempted to land on the runway, but the airplane landed short and the nose landing gear buckled.

Straight-line distance from CCO to 7A5 was 32 nautical miles, and from 7A5 to LGC was 16 nautical miles.

According to a Federal Aviation Administration inspector who subsequently examined the airplane, no fuel lines were compromised or blocked, the fuel lines had "little to no fuel" in them, and the gascolator was approximately half full of fuel. In addition, the fuel header tank was empty, while the two wing tanks were "almost full."

The inspector also noted that the "fuel tank shut-off valve," located "in front of the right seat along the floor," and the "main fuel valve" were in the "off" position, but that the pilot advised him that he had turned both off upon evacuation of the airplane. The pilot also stated that it was his practice to turn off the fuel tank shut-off valve after every flight.

The inspector further stated that the fuel tank shut-off valve controlled fuel flow from the wing tanks to the header tank, and that the main fuel valve controlled fuel flow from the header tank to the engine. He also noted that the header tank allowed for about 1 hour of flight, as the airplane would burn 6 to 8 gallons per hour.

NTSB Identification: **WPR10LA411**
14 CFR Part 91: General Aviation
Accident occurred Wednesday, August 18, 2010 in Leavenworth, WA

Probable Cause Approval Date: 10/17/2011
Aircraft: ERCOUBE 415, registration: N2368H
Injuries: 2 Serious.

NTSB investigators may not have traveled in support of this investigation and used data provided by various sources to prepare this aircraft accident report.

The pilot reported that he made a short-field takeoff with an approximate 5 mile-per-hour headwind. Shortly after liftoff, he realized that, even with the best angle of climb speed, the airplane would have difficulty clearing trees at the end of the runway. The pilot continued the climbout and turned the airplane slightly to the right and the airplane collided with the top 10 feet of trees surrounding the airport. The pilot stated that, in retrospect, he might have taken off downwind to the east where there was more room, used a different airport, or maintained a faster airspeed. A witness noted that the turf field appeared to be bumpy and the takeoff roll was longer than he expected. He did not have the impression that the airplane had engine issues or entered into a stall after becoming airborne. The pilot also reported no mechanical failures or malfunctions with the airplane at the time of the accident.

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

The pilot's failure to adequately evaluate the airport and its environment in relation to the aircraft's performance, which resulted in the airplane's failure to attain sufficient altitude to clear trees during the initial climb.

WPR10LA411

On August 18, 2010, about 1015 Pacific daylight time, an Ercoube 415C, N2368H, collided with trees during takeoff from Lake Wenatchee State Airport, Leavenworth, Washington. The pilot/owner was operating the airplane under the provisions of 14 Code of Federal Regulations (CFR) Part 91. The private pilot and one passenger sustained serious injuries. The airplane sustained substantial damage to the wings and fuselage from impact forces. The cross-country personal flight was en route to Auburn, Washington. Visual meteorological conditions prevailed, and no flight plan had been filed.

The pilot reported that he made a short field takeoff to the west with an approximate 5-mile-per-hour (mph) headwind. Shortly after liftoff, he realized that the airplane would have difficulty clearing trees at the end of the runway, and considered aborting the takeoff. However, he decided that not enough runway length remained to do so, and continued the takeoff and climb at what he believed was the best angle of climb speed. The airplane did not stall, but the pilot stated that the speed might have gotten below the best angle of climb speed. He turned the airplane slightly to the right, but the airplane collided with the top 10 feet of trees surrounding the airport.

The pilot stated that he lost consciousness, and his legs were numb when he awoke. The passenger was able to evacuate herself from the airplane, and called for emergency service.

The pilot stated that, in retrospect, he might have taken off downwind to the east where there was more room, used a different airport, or maintained a faster airspeed.

The pilot also reported no mechanical failures or malfunctions with the airplane at the time of the accident.

A witness, who held a pilot certificate, but had not flown for 30 years, stated that he drove the pilot and passenger to the airplane. He observed the pilot taxi the airplane to the end of the runway, and perform a run up. The engine sounded fine and smooth. The airplane taxied into position on runway 27, and the airplane appeared to stay stationary as the pilot added power. The airplane then started forward.

The witness noted that while the airplane taxied to the runway, there was no wind. During the takeoff, he noted a very slight crosswind. The turf field appeared to be bumpy, and the airplane kicked up dirt as it progressed down

the runway. The takeoff roll was longer than he expected. After liftoff, the airplane did not appear to be climbing, and drifted to the right while remaining in a wings level attitude. There were no sudden movements, and it started a shallow climb. He lost sight of the airplane behind trees, and heard a loud sound about 2 seconds later. He did not have the impression that the airplane had engine issues, or stalled after getting airborne.

When the witness arrived at the wreckage, the passenger was standing beside the airplane. He instructed the pilot to turn off the ignition switch.

NTSB Identification: **ERA11LA014**

14 CFR Part 91: General Aviation

Accident occurred Saturday, October 09, 2010 in Lawrenceville, GA

Probable Cause Approval Date: 07/21/2011

Aircraft: ENGINEERING & RESEARCH ERCOUPE 415-D, registration: N89331

Injuries: 1 Fatal.

NTSB investigators may not have traveled in support of this investigation and used data provided by various sources to prepare this aircraft accident report.

Witnesses reported that the pilot had removed the engine cowling prior to the accident flight and was performing maintenance on the engine. They observed the airplane depart from the runway and noted that it sounded as if it was not producing full power. The airplane then oscillated, banked left, and impacted a road with the left wing down. Examination of the engine revealed the nut on the bottom of the gascolator was not safety wired and was loose, allowing air into the fuel system. Additionally, the gascolator bowl, carburetor bowl, and float needle valve were heavily rusted and corroded. The fuel line from the wing fuel tanks to the fuel pump had been blocked off with a rubber hose, making the only fuel available to the engine, the six gallons in the header tank. The pilot's son reported that prior to the accident, the pilot performed maintenance on the airplane due to a fuel problem. The pilot's son believed the problem was resolved and the pilot last flew the airplane about a week prior to the accident in the local area. According to the maintenance logbooks, the most recent inspection was completed on the airplane 10 months prior to the accident. Examination of the pilot's logbook revealed his only flight in the accident airplane was a 30-minute flight 6 days prior to the accident.

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

Inadequate maintenance performed on the airplane, which resulted in a loss of engine power due to fuel starvation. Contributing to the accident was the corrosion within the carburetor.

ERA11LA014

HISTORY OF FLIGHT

On October 9, 2010, at 1407 eastern daylight time, an Engineering and Research Corporation, Ercoupe 415-D, N89331, was substantially damaged when it impacted the ground shortly after takeoff from Gwinnett County Airport-Briscoe Field (LZU), Lawrenceville, Georgia. The certificated private pilot was fatally injured. Visual meteorological conditions prevailed and no flight plan was filed for the personal flight conducted under the provisions of 14 Code of Federal Regulations Part 91.

According to a Federal Aviation Administration (FAA) inspector, witnesses reported that the airplane departed runway 25 at LZU, and sounded like it was "not producing full power." The airplane "oscillated" then banked left and struck a road with the left wing down.

PILOT INFORMATION

The pilot held a private pilot certificate with ratings for single-engine and multiengine land. His most recent third-

class FAA medical certificate was issued on August 20, 2009. At that time, he reported 825 hours of total flight experience.

Examination of the pilot's logbook revealed entries from October 14, 2005 to October 6, 2010. As of the final entry, the pilot had accumulated 839 hours of total flight experience. According to the logbook, he accumulated 10.6 hours of total flight experience in the year prior to the accident, and 9.3 hours in the previous 30 days. Only one flight in the accident airplane was noted, which took place on October 3, 2010 (a 30 minute flight).

AIRCRAFT INFORMATION

The airplane was manufactured in 1946, the pilot purchased the airplane in June 2000, and it received its airworthiness certificate from the FAA in July 2000. It was a low-wing, single-engine airplane powered by a Continental C-85-12, 85-horsepower engine.

Examination of the aircraft and engine logbooks revealed the most recent annual inspection was completed on December 12, 2009, at a total time of 1960.4 hours and a tachometer time of 1828 hours.

According to the pilot's son, the pilot performed maintenance on the airplane due to a fuel problem. The pilot's son believed the problem was resolved and the pilot last flew the airplane about a week prior to the accident in the local area. He believed the last fueling occurred on October 6, 2010.

Witnesses reported to the FAA inspector that the pilot had removed the engine cowling prior to the accident flight and was performing maintenance on the engine.

METEOROLOGICAL INFORMATION

Weather recorded at LZU, at 1406, included wind from 310 degrees at 6 knots, 10 miles visibility, sky clear, temperature 27 degrees C, dew point 9 degrees C, and altimeter setting of 30.05 inches mercury.

WRECKAGE INFORMATION

Examination of the airplane by the FAA inspector revealed the airplane's left wing impacted a road and the airplane skidded about 12 feet into an embankment. It then continued about 60 feet and came to rest under a chain link fence, in a parking lot, resting on its nose.

The left wing was broken from the inboard attachments and bent slightly forward. The leading edge was compressed 36 inches from the tip, and displayed markings consistent with the initial impact with the road. The left aileron was intact and secured to the wing. The left rear spar was separated from the rear wing attachment.

The right wing was twisted upward from the rear, and the right aileron was intact and secured to the wing.

The wing fuel tanks were ruptured and evidence of fuel was present on the ground along the wreckage path. Fuel was also present in the main tank. The wings were placarded for auto fuel.

The tail section was intact and creased from impact forces. The left rudder was bent slightly at the bottom.

The nose section was crushed downward, and the left lower fuselage displayed impact damage forward of the wing spar.

Examination of the cockpit area revealed the mixture control was full rich, the carburetor heat was off, and the throttle control was noted in the approximate mid-range position. The primer was in and locked. The airspeed indicator displayed 45 miles per hour (mph), the magnetic compass indicated 250 degrees, and the vertical speed indicator displayed a 400 foot-per-minute (fpm) climb. The tachometer indicated 1828 hours, which was the same

as recorded on the airplane's most recent annual inspection.

The engine remained attached to the fuselage, and the propeller remained attached to the engine. The propeller spinner displayed aft crushing damage to the propeller hub. The propeller blades were deflected rearward and displayed some chordwise scratching. The engine cowling was popped open at the top and the main fuel cap was missing.

The airplane and engine were transported to a secure salvage facility and further examined by representatives from Continental Engines, under the supervision of an FAA inspector. The examination revealed the nut on the bottom of the gascolator was not safety wired and was loose, allowing air into the fuel system. The gascolator bowl was heavily rusted and corroded. The carburetor bowl was rusted and corroded, and the float and needle valve were so corroded that they could not be removed from the carburetor. The fuel line from the wing fuel tanks to the fuel pump had been blocked off with a rubber hose, making the only fuel available to the engine, the six gallons in the header tank.

MEDICAL AND PATHOLOGICAL INFORMATION

The Gwinnett County Office of the Medical Examiner performed an autopsy on the pilot on October 10, 2010.

The Federal Aviation Administration (FAA) Bioaeronautical Research Laboratory, Oklahoma City, Oklahoma, conducted toxicological testing on the pilot. No drugs or alcohol were detected during the testing.

TESTS AND RESEARCH

A handheld Garmin GPS 396 was retained from the wreckage and sent to the National Transportation Safety Board Vehicle Recorder Laboratory for further examination. Examination of the data confirmed the airplane departed runway 25 and impacted the ground at 1407, about 1/2 mile from the departure end of the runway. No additional flights were captured on the unit.

ADDITIONAL INFORMATION

A query of fixed based operators at LZU revealed no records of the pilot purchasing aviation fuel at the airport.