



# National Transportation Safety Board Aviation Accident Final Report

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|--------------------------------|---|-------------------------|------------|
| <b>Location:</b>               | La Belle, MO                            | <b>Accident Number:</b> | CHI08LA031 |
| <b>Date &amp; Time:</b>        | 11/01/2007, 1635 CDT                    | <b>Registration:</b>    | N634WB     |
| <b>Aircraft:</b>               | WRB Associates, LLC. Zodiac 601<br>XL   | <b>Aircraft Damage:</b> | Destroyed  |
| <b>Defining Event:</b>         |   | <b>Injuries:</b>        | 1 Fatal    |
| <b>Flight Conducted Under:</b> | Part 91: General Aviation - Flight Test |                         |            |

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## Analysis

The airplane was certified as an Experimental Light Sport Aircraft (E-LSA) four days before the accident. The accident occurred during the airplane's first flight since manufacture. Several witnesses reported seeing the airplane depart and then commence a series of left turns about two miles southeast of the airport. While the airplane was established in a left turn it rolled to the left and entered a near vertical descent. The airplane exploded upon impact and a ground fire ensued. The wreckage was found in a vacant field with no obstructions in the general area of the accident site. The absence of any discernible lateral ground markings was consistent with a near vertical impact. Examination of the recovered wreckage revealed no evidence of a pre-impact mechanical malfunction. The pilot did not have any flight experience in a model 601 XL airplane before the accident flight. The pilot's most current flight review was completed more than 16 years before the accident. According to the pilot's wife, it had been nearly 10 years since he last piloted an aircraft.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain aircraft control while maneuvering. Contributing to the accident was the pilot's lack of recent flight experience and his total lack of experience in the accident airplane model.

## Findings

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Occurrence #1: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: MANEUVERING

### Findings

1. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
2. (F) LACK OF RECENT EXPERIENCE - PILOT IN COMMAND
3. (F) LACK OF TOTAL EXPERIENCE IN KIND OF AIRCRAFT - PILOT IN COMMAND

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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

### Findings

4. TERRAIN CONDITION - GROUND

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Occurrence #3: FIRE/EXPLOSION  
Phase of Operation: OTHER

## Factual Information

### HISTORY OF FLIGHT

On November 1, 2007, at 1635 central daylight time, a WRB Associates Zodiac 601 XL airplane, N634WB, was destroyed during an in-flight collision with terrain and subsequent fire/explosion near La Belle, Missouri. Visual meteorological conditions prevailed at the time of the accident. The flight was operating under the provisions of 14 Code of Federal Regulations (CFR) Part 91 without a flight plan. The pilot, the sole occupant, was fatally injured. The local flight departed Sharpe Farms Airport (MO09) near Lewistown, Missouri, at 1630.

Several witnesses reported seeing the airplane depart and then commence a series of left turns about two miles southeast of the airport. While the airplane was established in a left turn it rolled to the left and entered a near vertical descent. The airplane exploded upon impact and a ground fire ensued.

### PERSONNEL INFORMATION

According to Federal Aviation Administration (FAA) records, the pilot of N634WB, age 71, held a private pilot certificate with an airplane single-engine land rating. He was not instrument rated. The pilot's last aviation medical examination was completed on August 4, 1994, when he was issued a third-class medical certificate with no limitations or restrictions.

The pilot's flight logbook indicated that he had accumulated 119.2 hours total flight time, of which 80.7 hours were as pilot-in-command. He had accumulated 3.5 hours at night and 3.6 hours in simulated instrument conditions. The pilot did not have any flight experience in a model 601 XL airplane before the accident flight. The pilot's most current flight review, as required by 14 CFR Part 61.56, was completed on September 1, 1991. The last documented flight was completed on September 1, 1998, for a conventional landing gear orientation flight with a flight instructor. According to the pilot's wife, it had been nearly 10 years since he last piloted an aircraft.

### AIRCRAFT INFORMATION

The accident airplane was an amateur-built WRB Associates Zodiac 601 XL, serial number 6-6358. The all-metal airplane incorporated a low-wing design with a fixed tricycle landing gear. The airplane had a maximum gross weight of 1,320 pounds and could accommodate two occupants. A Jabiru model 3300A reciprocating engine, serial number 33A1283, powered the airplane. The 120-horsepower engine provided power through a Sensenich W64ZK-49, fixed-pitch, two-blade, wood propeller.

Four days prior to the accident, the airplane was issued a Special Airworthiness Certificate under the provisions of 14 CFR Part 21.191(i) as an Experimental Light Sport Aircraft (E-LSA). The accident occurred during the airplane's first flight since manufacture.

A review of the airframe, engine and propeller records found no history of unresolved airworthiness issues.

### METEOROLOGICAL INFORMATION

The closest weather station to the accident site was at Quincy Regional Airport (KUIN), Quincy, Illinois, located about 32 nautical miles east of the accident site. The airport was

equipped with an automated surface observing system (ASOS).

At 1654, the KUIN ASOS reported the following weather conditions: Wind 150 degrees true at 5 knots; visibility 10 miles; sky clear; temperature 13 degrees Celsius; dew point -6 degrees Celsius; altimeter setting 30.24 inches of mercury.

#### WRECKAGE AND IMPACT INFORMATION

The wreckage was found in a vacant field with no obstructions in the general area of the accident site. The absence of any discernible lateral ground markings was consistent with a near vertical impact. The main wreckage consisted of the entire airframe. The fuselage and main cabin were destroyed by fire. The only discernible cabin components were of steel construction. The instrument panel and its associated components exhibited fire and impact damage. Both wings were damaged by impact and fire. All flight control surfaces were accounted for at the accident site. The ailerons and flaps were located in their appropriate positions. The flaps were in a fully retracted position. The aileron and elevator control cables were continuous from their respective control surfaces to the cockpit control columns. The rudder control cables were continuous from the control surface horn to the forward cockpit area. The main landing gear assembly was separated from the fuselage. The nose landing gear was impacted into the engine compartment. The engine remained partially attached to the airframe. The entire engine assembly exhibited thermal damage. Both propeller blades were highly fragmented and portions were found as far as 30 feet from the main wreckage.

Examination of the recovered wreckage revealed no evidence of a pre-impact mechanical malfunction.

#### MEDICAL AND PATHOLOGICAL INFORMATION

On November 3, 2007, an autopsy was performed on the pilot at the Boone/Callaway County Medical Examiner's Office, Columbia, Missouri. The cause of death was listed as multiple blunt force injuries due to aircraft accident.

The FAA's Civil Aeromedical Institute (CAMI) in Oklahoma City, Oklahoma, performed toxicology tests on the pilot. According to CAMI's report, the specimens were received in a state of putrefaction. No ethanol was detected in liver and muscle samples. Metoprolol and Amlodipine were present in liver and kidney samples. Quinine was detected in liver samples. The pilot had been prescribed Metoprolol and Amlodipine for the treatment of hypertension. Quinine is found in tonic water and in over-the-counter nutritional supplements.

## Pilot Information

|                                  |  |  |                            |
|----------------------------------|--|--|----------------------------|
| <b>Certificate:</b>              | Private  | <b>Age:</b>                              | 71, Male                   |
| <b>Airplane Rating(s):</b>       | Single-engine Land   | <b>Seat Occupied:</b>                    | Left                       |
| <b>Other Aircraft Rating(s):</b> | None   | <b>Restraint Used:</b>                   | Seatbelt, Shoulder harness |
| <b>Instrument Rating(s):</b>     | None   | <b>Second Pilot Present:</b>             | No                         |
| <b>Instructor Rating(s):</b>     | None   | <b>Toxicology Performed:</b>             | Yes                        |
| <b>Medical Certification:</b>    | Sport Pilot None   | <b>Last FAA Medical Exam:</b>            | 08/04/1994                 |
| <b>Occupational Pilot:</b>       | No   | <b>Last Flight Review or Equivalent:</b> | 09/01/1991                 |
| <b>Flight Time:</b>              | 119 hours (Total, all aircraft), 81 hours (Pilot In Command, all aircraft) |  |                            |

## Aircraft and Owner/Operator Information

|                                      |                          |                                       |                 |
|--------------------------------------|--------------------------|---------------------------------------|-----------------|
| <b>Aircraft Make:</b>                | WRB Associates, LLC.     | <b>Registration:</b>                  | N634WB          |
| <b>Model/Series:</b>                 | Zodiac 601 XL            | <b>Aircraft Category:</b>             | Airplane        |
| <b>Year of Manufacture:</b>          |                          | <b>Amateur Built:</b>                 | No              |
| <b>Airworthiness Certificate:</b>    | Experimental Light Sport | <b>Serial Number:</b>                 | 6-6358          |
| <b>Landing Gear Type:</b>            | Tricycle                 | <b>Seats:</b>                         | 2               |
| <b>Date/Type of Last Inspection:</b> | 10/28/2007, Condition    | <b>Certified Max Gross Wt.:</b>       | 1320 lbs        |
| <b>Time Since Last Inspection:</b>   |                          | <b>Engines:</b>                       | 1 Reciprocating |
| <b>Airframe Total Time:</b>          | as of last inspection    | <b>Engine Manufacturer:</b>           | Jabiru          |
| <b>ELT:</b>                          | Installed                | <b>Engine Model/Series:</b>           | 3300A           |
| <b>Registered Owner:</b>             | WRB Associates, LLC.     | <b>Rated Power:</b>                   | 120 hp          |
| <b>Operator:</b>                     | Stevens Lee Walker       | <b>Operating Certificate(s) Held:</b> | None            |

## Meteorological Information and Flight Plan

|                                  |                                  |   |                   |
|----------------------------------|----------------------------------|---|-------------------|
| Conditions at Accident Site:     | Visual Conditions                | Condition of Light:                     | Day               |
| Observation Facility, Elevation: | KUIN, 768 ft msl                 | Distance from Accident Site:            | 32 Nautical Miles |
| Observation Time:                | 1654 CDT                         | Direction from Accident Site:           | 100°              |
| Lowest Cloud Condition:          | Clear                            | Visibility                              | 10 Miles          |
| Lowest Ceiling:                  | None                             | Visibility (RVR):                       |                   |
| Wind Speed/Gusts:                | 5 knots /                        | Turbulence Type<br>Forecast/Actual:     | /                 |
| Wind Direction:                  | 150°                             | Turbulence Severity<br>Forecast/Actual: | /                 |
| Altimeter Setting:               | 30.24 inches Hg                  | Temperature/Dew Point:                  | 13° C / -6° C     |
| Precipitation and Obscuration:   | No Obscuration; No Precipitation |   |                   |
| Departure Point:                 | Lewistown, MO (MO09)             | Type of Flight Plan Filed:              | None              |
| Destination:                     | Lewistown, MO (MO09)             | Type of Clearance:                      | None              |
| Departure Time:                  | 1630 CDT                         | Type of Airspace:                       | Class G           |

## Wreckage and Impact Information

|                     |         |                      |                       |
|---------------------|---------|----------------------|-----------------------|
| Crew Injuries:      | 1 Fatal | Aircraft Damage:     | Destroyed             |
| Passenger Injuries: | N/A     | Aircraft Fire:       | On-Ground             |
| Ground Injuries:    | N/A     | Aircraft Explosion:  | On-Ground             |
| Total Injuries:     | 1 Fatal | Latitude, Longitude: | 40.023611, -91.873889 |

## Administrative Information

|                                   |  |              |            |
|-----------------------------------|--|--------------|------------|
| Investigator In Charge (IIC):     | Andrew T Fox   | Report Date: | 12/28/2008 |
| Additional Participating Persons: | Raymond J Callahan; Federal Aviation Administration - St. Louis FSDO; St. Louis, MO  |              |            |
| Publish Date:                     | 12/28/2008   |              |            |
| Investigation Docket:             | NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> . |              |            |

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).