



National Transportation Safety Board Aviation Accident Factual Report

| | | | |
|--------------------------------|--------------------------------------|-------------------------|------------|
| Location: | MANZANOLA, CO | Accident Number: | FTW97FA002 |
| Date & Time: | 10/02/1996, 1615 MDT | Registration: | N145DB |
| Aircraft: | Bell EAA BIPLANE P | Aircraft Damage: | Destroyed |
| Defining Event: | | Injuries: | 1 Fatal |
| Flight Conducted Under: | Part 91: General Aviation - Personal | | |

HISTORY OF FLIGHT

On October 2, 1996, approximately 1615 mountain daylight time, a Darol EAA Biplane P, N145DB, was destroyed when it impacted terrain while maneuvering two miles west of Manzanola, Colorado. The commercial pilot was fatally injured. Visual meteorological conditions prevailed, and no flight plan was filed for the personal flight conducted under Title 14 CFR Part 91. The flight originated at Manzanola, Colorado, approximately 15 minutes before the accident.

There were three known witnesses to the accident. Witness no. 1 said the airplane flew east over his airstrip at an estimated altitude of 300 to 400 feet agl (above ground level). He said the pilot started "what appeared to be an aileron roll, but stopped halfway and peeled off to the left in a shallow dive but didn't have enough altitude to pull out." Witness no. 2 said the pilot "began rolling the aircraft right wing down about 3/4 of a roll, then the front of the plane dropped and...the aircraft (dove) belly side facing me (and) disappear behind a slope to our west." Witness no. 3 could not add substantively to the other witness' accounts.

PERSONNEL INFORMATION

According to the pilot's logbook, 725.0 hours of his 739.1 total flight hours were in single engine airplanes, and 494.8 hours were in conventional landing gear airplanes. He had 384.6 total aerial application hours. He was employed by C&L Flying Service, and aerial applicator, of Rocky Ford, Colorado, on March 28, 1996. According to a C&L spokesman, this was the pilot's first spraying season, having recently graduated from Sam Riggs Aerial Applicator School in Claremore, Oklahoma.

Further examination of his logbook disclosed the pilot first flew N145DB on July 6, 1996, at Raton, New Mexico. Flight time was 30 minutes. The airplane had been recently purchased, and he was to ferry it from Raton to its new owner in Manzanola. He made the following entry: "Went to ferry small biplane. Very squirrely. Engine ran rough. Late start, will go back." According to the pilot's father, his son later told him he did not want to fly a strange airplane

into a strange airport as darkness approached.

The second flight occurred on July 20, when the pilot delivered the airplane at Manzanola via Trinidad, Colorado. He made the following entry: "Finally retrieved the plane, not enough power to be flying over mountain passes. Big pucker factor. I'm not impressed with its handling. Very tired, work, landed at Frank's. Told him to sell his new airplane." Total flight time was 2.0 hours.

The third flight was on October 1 at Manzanola. The pilot made the following entry: "Test flight. Went very well (more power than first try)." Total flight time was 36 minutes. His fourth flight in the airplane was on the following afternoon and resulted in the accident (see attachments).

AIRCRAFT INFORMATION

Examination of the airplane maintenance records disclosed the airplane was built by James D. Bell of Benton, Arkansas, and construction was completed on September 30, 1966. The two most recent conditional inspections of the airplane were performed on July 28, 1994, and May 1, 1996. On those dates, the airplane had accrued 33.95 and 34.32 hours time in service, respectively, or 0.37 hours in two years. Between May 1, 1996, the date of the last conditional inspection, and October 2, 1996, the day of the accident, the airplane had accumulated 7.21 hours time in service.

WRECKAGE AND IMPACT INFORMATION

The wreckage was located approximately 350 feet south of the runway, and about 2,200 feet west of the threshold of runway 27. A ground scar, approximately 150 feet in length and aligned on a magnetic heading of 280 degrees, terminated at the airplane. There were three prominent ground depressions along the scar. The first depression was at the beginning of the scar and was 17 feet long and 13 feet wide. Leading into this depression were two distinct marks 67 inches apart. According to the airplane blueprints, the main landing gear has a span of 67.5 inches. Just beyond these two marks, and still within the depression, were two slashes in the earth, roughly perpendicular to the ground scar. They measured 17 inches apart.

The second depression was 95 feet, 4 inches past the first depression, and was 10 feet long and 5 feet, 3 inches wide. The third depression was 52 feet, 4 inches beyond the second depression. The airplane was next to this third depression.

The engine was separated from the airframe, and the carburetor and propeller were separated from the engine. These components were found in the second ground depression. The propeller spinner was crashed aft and to one side, exposing four crankshaft attachment bolts. One propeller blade was embedded in the earth. The other blade had an S-curl and the tip was bent aft. The cambered surface bore 75 degree scratch marks.

Both wings remained attached to the upright airframe that rested atop the inverted empennage. Flight control continuity was established throughout.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy (Report #96A-331) was performed by Dr. David L. Bowerman of the El Paso County Coroner's Office at the request of the Otero County Coroner. Toxicological tests were negative for alcohol and drugs of abuse.

Toxicological protocol performed by FAA's Civil Aeromedical Institute in Oklahoma City, Oklahoma, similarly found no evidence of drugs or alcohol.

ADDITIONAL INFORMATION

The wreckage was released to the owner on October 3, 1996. The Federal Aviation Administration was the only party to the investigation.

Pilot Information

| | | | |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|----------------------------|
| Certificate: | Commercial | Age: | 29, Male |
| Airplane Rating(s): | Single-engine Land | Seat Occupied: | Front |
| Other Aircraft Rating(s): | None | Restraint Used: | Seatbelt, Shoulder harness |
| Instrument Rating(s): | None | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | Yes |
| Medical Certification: | Class 2 Valid Medical--no waivers/lim. | Last FAA Medical Exam: | 12/15/1995 |
| Occupational Pilot: | | Last Flight Review or Equivalent: | |
| Flight Time: | 739 hours (Total, all aircraft), 3 hours (Total, this make and model), 663 hours (Pilot In Command, all aircraft), 215 hours (Last 90 days, all aircraft), 24 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

| | | | |
|-------------------------------|--------------------------|--------------------------------|-----------------|
| Aircraft Make: | Bell | Registration: | N145DB |
| Model/Series: | EAA BIPLANE P EAA BIPLAN | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | Yes |
| Airworthiness Certificate: | Experimental | Serial Number: | DB-1 |
| Landing Gear Type: | Tailwheel | Seats: | 1 |
| Date/Type of Last Inspection: | 05/01/1996, Annual | Certified Max Gross Wt.: | 1161 lbs |
| Time Since Last Inspection: | 7 Hours | Engines: | 1 Reciprocating |
| Airframe Total Time: | 42 Hours | Engine Manufacturer: | Lycoming |
| ELT: | Not installed | Engine Model/Series: | O-290-11 |
| Registered Owner: | FRANK GHILARDUCCI | Rated Power: | 125 hp |
| Operator: | FRANK GHILARDUCCI | Operating Certificate(s) Held: | None |

Meteorological Information and Flight Plan

| | | | |
|----------------------------------|-------------------|--------------------------------------|-------------------|
| Conditions at Accident Site: | Visual Conditions | Condition of Light: | Day |
| Observation Facility, Elevation: | LHX, 4238 ft msl | Distance from Accident Site: | 24 Nautical Miles |
| Observation Time: | 1553 MDT | Direction from Accident Site: | 94° |
| Lowest Cloud Condition: | Clear / 0 ft agl | Visibility | 10 Miles |
| Lowest Ceiling: | None / 0 ft agl | Visibility (RVR): | 0 ft |
| Wind Speed/Gusts: | 7 knots / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 120° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 30 inches Hg | Temperature/Dew Point: | 16° C / 4° C |
| Precipitation and Obscuration: | | | |
| Departure Point: | (NONE) | Type of Flight Plan Filed: | None |
| Destination: | | Type of Clearance: | None |
| Departure Time: | 1600 MDT | Type of Airspace: | Class G |

Airport Information

| | | | |
|----------------------|-------------------------|---------------------------|------|
| Airport: | GHILARDUCCI FARM (NONE) | Runway Surface Type: | Dirt |
| Airport Elevation: | 4300 ft | Runway Surface Condition: | Dry |
| Runway Used: | 27 | IFR Approach: | None |
| Runway Length/Width: | 3300 ft / 50 ft | VFR Approach/Landing: | None |

Wreckage and Impact Information

| | | | |
|----------------------------|---------|-----------------------------|-----------|
| Crew Injuries: | 1 Fatal | Aircraft Damage: | Destroyed |
| Passenger Injuries: | N/A | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 Fatal | Latitude, Longitude: | |

Administrative Information

| | |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Investigator In Charge (IIC): | ARNOLD W SCOTT |
| Additional Participating Persons: | JOHN B MIDDLETON; DENVER, CO |
| 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 pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ . |