



# **Aviation Investigation Factual Report**

Location: PEKIN, Illinois Accident Number: CHI94LA294

Date & Time: August 23, 1994, 10:40 Local Registration: N121CW

Aircraft: WATSON KR-2 Aircraft Damage: Destroyed

**Defining Event:** 1 Fatal

Flight Conducted Under: Part 91: General aviation

#### **Factual Information**

On August 23, 1994, at 1040 central daylight time (cdt), a Watson KR-2, N121CW, registered to Charles Watson of East Peoria, Illinois, and piloted by a private pilot, was destroyed during a collision with the ground following a witness reported steep diving turn. The 14 CFR Part 91 flight was not operating on a flight plan. Visual meteorological conditions prevailed at the time of the accident. The pilot was fatally injured. The flight departed Pekin, Illinois, at 1040 cdt.

Two witnesses, the airplane's owner and a local resident, reported the airplane took off on runway 27 (5,000' X 75' dry asphalt) at the Pekin Municipal Airport, Pekin, Illinois. They said the airplane was about 400 feet above the departure end of the runway when it pitched up and descended vertically until it collided with the ground. The airplane owner said the airplane appeared to do a hammerhead stall maneuver to the right. The second witness said the airplane appeared to do a one turn, tight, right spiral before colliding with the ground.

N121CW was constructed from wood, foam, and composite materials. The on-scene investigation was conducted by a Federal Aviation Administration Principal Maintenance Inspector (PMI). He said he could identify N121CW's rear fuselage section, empennage, midspan section of the right wing, and instrument panel, and the cockpit landing gear retraction mechanism. According to the PMI, the remainder of the airplane comprised various sized pieces of wood, fiberglass sheeting, and solid foam.

The PMI said metal components and control cables associated with the rudder and elevator systems were found. He stated he established elevator and rudder control continuity. The aileron control system had been destroyed by collision forces. The throttle was found positioned full forward.

N121CW's control stick assembly was mounted to the wing's main spar. The landing gear retraction handle was directly in front of the control stick. The handle is vertically mounted and on the opposite side of the main spar. To retract the landing gear, a trigger on the main handle must be pulled aft. Once this has been accomplished, the handle is pushed forward so that it parallels the cockpit floor. The control stick and retraction handle are manipulated by the pilot's left and right hands during the retraction of the landing gear. The landing gear retraction mechanism found in N121CW's remains did not resemble the one that had been provided by the designer/kit manufacturer.

During a conversation with a representative of the kit manufacturer it was decided that the retracting mechanism installed in N121CW was an after-market product. Illustrations of both mechanisms are appended to this report.

A review of the pilot's logbook revealed he had flown the accident airplane 7.1 hours. The

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logbook showed 1.4 hours of time in the airplane with "0" in the logbook's "number of landings" column. The pilot's first flight during 1994 was in the accident airplane during July 9, 1994. Before that flight, the pilot flew 1.4 hours on January 23, 1993. This flight was a biennial flight review (BFR) conducted at night in a Cessna 152. According to the logbook, the BFR was the only flight the pilot made during 1993. Most of the pilot's flight time had been in single-engine Cessna and Piper airplanes. His logbook showed he had logged 4.3 hours in a CGS Hawk homebuilt airplane during July, 1984.

The Tazewell County Coroner's Office stated the cause of death for the pilot was the airplane crash. A toxicological report from the Methodist Medical Center of Illinois, Forensic Toxicology Laboratory said that there were no drugs or ethanol found in the specimens examined.

#### **Pilot Information**

| Certificate:              | Airline transport; Foreign; Private;<br>Student   | Age:                              | 46,Male         |
|---------------------------|---|-----------------------------------|-----------------|
| Airplane Rating(s):       | Single-engine land; Single-engine sea; Multi-engine land; None  | Seat Occupied:                    | Left            |
| Other Aircraft Rating(s): | Airship; None   | Restraint Used:                   |                 |
| Instrument Rating(s):     | Airplane  | Second Pilot Present:             | No              |
| Instructor Rating(s):     | Helicopter; None  | Toxicology Performed:             | Yes             |
| Medical Certification:    | Class 3 Valid Medicalno waivers/lim.  | Last FAA Medical Exam:            | August 10, 1993 |
| Occupational Pilot:       | No  | Last Flight Review or Equivalent: |                 |
| Flight Time:              | 777 hours (Total, all aircraft), 7 hours (Total, this make and model), 674 hours (Pilot In Command, all aircraft), 4 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft) |                                   |                 |

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### **Aircraft and Owner/Operator Information**

| Aircraft Make:                | WATSON                                 | Registration:                     | N121CW          |
|-------------------------------|--|-----------------------------------|-----------------|
| Model/Series:                 | KR-2 KR-2                              | Aircraft Category:                | Airplane        |
| Year of Manufacture:          |  | Amateur Built:                    | Yes             |
| Airworthiness Certificate:    | Experimental (Special)                 | Serial Number:                    | 001             |
| Landing Gear Type:            | Retractable - Tailwheel                | Seats:                            | 2               |
| Date/Type of Last Inspection: | June 10, 1994 Continuous airworthiness | Certified Max Gross Wt.:          | 900 lbs         |
| Time Since Last Inspection:   | 1 Hrs                                  | Engines:                          | 1 Reciprocating |
| Airframe Total Time:          | 14 Hrs                                 | Engine Manufacturer:              | Нарі            |
| ELT:                          | Not installed                          | Engine Model/Series:              | 60-2DM          |
| Registered Owner:             | CHARLES K. WATSON                      | Rated Power:                      | 60 Horsepower   |
| Operator:                     |  | Operating Certificate(s)<br>Held: | None            |
| Operator Does Business As:    |  | Operator Designator Code:         |                 |

## Meteorological Information and Flight Plan

| Conditions at Accident Site:     | Visual (VMC)                 | Condition of Light:                  | Day           |
|----------------------------------|------------------------------|--------------------------------------|---------------|
| Observation Facility, Elevation: | C15 ,527 ft msl              | Distance from Accident Site:         |               |
| Observation Time:                | 10:40 Local                  | Direction from Accident Site:        |               |
| <b>Lowest Cloud Condition:</b>   | Clear                        | Visibility                           | 25 miles      |
| Lowest Ceiling:                  | None                         | Visibility (RVR):                    |               |
| Wind Speed/Gusts:                | /                            | Turbulence Type<br>Forecast/Actual:  | /             |
| Wind Direction:                  | 0°                           | Turbulence Severity Forecast/Actual: | /             |
| Altimeter Setting:               |                              | Temperature/Dew Point:               |               |
| Precipitation and Obscuration:   | No Obscuration; No Precipita | ation                                |               |
| Departure Point:                 | (C15)                        | Type of Flight Plan Filed:           | None          |
| Destination:                     | (C15)                        | Type of Clearance:                   | IFR;None;VFLF |
| Departure Time:                  | 10:40 Local                  | Type of Airspace:                    | Class G       |

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### **Airport Information**

| Airport:             | PEKIN MUNICIPAL AIRPORT C15 | Runway Surface Type:             | Asphalt       |
|----------------------|-----------------------------|----------------------------------|---------------|
| Airport Elevation:   | 530 ft msl                  | <b>Runway Surface Condition:</b> | Dry           |
| Runway Used:         | 27                          | IFR Approach:                    | Practice;None |
| Runway Length/Width: | 5000 ft / 75 ft             | VFR Approach/Landing:            |               |

### Wreckage and Impact Information

| Crew Injuries:         | 1 Fatal | Aircraft Damage:        | Destroyed                |
|------------------------|---------|-------------------------|--------------------------|
| Passenger<br>Injuries: |         | Aircraft Fire:          | None                     |
| Ground Injuries:       | N/A     | Aircraft Explosion:     | None                     |
| Total Injuries:        | 1 Fatal | Latitude,<br>Longitude: | 40.56039,-89.620002(est) |

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#### **Administrative Information**

Investigator In Charge (IIC): Gattolin, Frank

Additional Participating Persons:

Report Date: March 30, 1995

Last Revision Date:
Investigation Class: Class

Note:
Investigation Docket: https://data.ntsb.gov/Docket?ProjectID=9650

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, "accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person" (Title 49 Code of Federal Regulations section 831.4). Assignment of fault or legal liability is not relevant to the NTSB's statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 United States Code section 1154(b)). A factual report that may be admissible under 49 United States Code section 1154(b) is available here.

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