



National Transportation Safety Board Aviation Accident Final Report

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|-------------------------|----------------------|-------------------------|-------------|
| Location: | BOULDER, CO | Accident Number: | DEN99LA111 |
| Date & Time: | 07/01/1999, 1515 MDT | Registration: | N4785F |
| Aircraft: | Piper PA-18-150 | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 1 None |

Flight Conducted Under: Part 91: General Aviation -

Analysis

The pilot departed the airport with a glider in tow. After the glider was released, she returned for landing. She made a 'smooth wheel landing with no bounces,' and the aircraft rolled 'straight and smoothly' on the two main wheels. She felt the tail of the airplane begin to rise, and she pulled back on the stick, but stated that she was unable to get a response from the elevator. The aircraft continued to roll forward until the spinner impacted the pavement. The airplane then nosed over onto its back. The wind was calm during landing. In a telephone interview with the pilot shortly after the accident, she stated that the aircraft's wheels touched down twice on the runway prior to the third actual touchdown. Following the accident, a functional test of the elevator control system was performed. The elevator operated effectively, and no abnormalities or discrepancies were observed.

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 control of the aircraft during landing roll.

Findings

Occurrence #1: NOSE OVER
Phase of Operation: LANDING - ROLL

Findings

1. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

On July 1, 1999, approximately 1515 mountain daylight time, a Piper PA-18-150, N4785F, owned and operated by the Soaring Society of Boulder, was substantially damaged when the aircraft nosed over during landing roll at Boulder Municipal Airport, Boulder, Colorado. The private pilot, the sole occupant aboard, was not injured. The local glider tow flight was being conducted under Title 14 CFR Part 91, and no flight plan had been filed. The flight originated approximately 15 minutes prior to the accident, and visual meteorological conditions prevailed.

According to the pilot, she departed the airport with a glider in tow. After the glider was released, she returned to the airport for landing. The pilot stated that the wind was calm during landing. She made a "smooth wheel landing with no bounces," and the aircraft rolled "straight and smoothly" on the two main wheels (in a telephone interview with the pilot shortly after the accident, she stated that the aircraft's wheels touched down twice on the runway prior to the third actual touchdown.) She felt the tail of the airplane begin to rise, and she pulled back on the stick. She stated that there was no response from the elevator, and the aircraft continued to roll forward slowly until the spinner impacted the pavement. The airplane then nosed over onto its back. The aircraft sustained damage to the propeller, firewall, vertical stabilizer, and both wing spars.

At the NTSB's request, a functional test of the elevator control system was performed by a mechanic with Jensen Aircraft, Salida, Colorado. The elevator operated effectively, and no abnormalities or discrepancies were found.

Pilot Information

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|----------------------------------|---|-------------------------------|----------------------------|
| Certificate: | Private | Age: | 41, Female |
| 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: | No |
| Medical Certification: | Class 3 Valid Medical--no waivers/lim. | Last FAA Medical Exam: | 10/22/1997 |
| Occupational Pilot: | Last Flight Review or Equivalent: | | |
| Flight Time: | 546 hours (Total, all aircraft), 43 hours (Total, this make and model), 430 hours (Pilot In Command, all aircraft), 16 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|--|---------------------------------------|-----------------|
| Aircraft Make: | Piper | Registration: | N4785F |
| Model/Series: | PA-18-150 PA-18-150 | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | No |
| Airworthiness Certificate: | Normal | Serial Number: | 18-7906 |
| Landing Gear Type: | Tailwheel | Seats: | 2 |
| Date/Type of Last Inspection: | 03/16/1999, Annual | Certified Max Gross Wt.: | 1625 lbs |
| Time Since Last Inspection: | 158 Hours | Engines: | 1 Reciprocating |
| Airframe Total Time: | 12125 Hours | Engine Manufacturer: | Lycoming |
| ELT: | Installed, activated, did not aid in locating accident | Engine Model/Series: | O-360-A3A |
| Registered Owner: | SOARING SOCIETY OF BOULDER | Rated Power: | 180 hp |
| Operator: | SOARING SOCIETY OF BOULDER | Operating Certificate(s) Held: | None |

Meteorological Information and Flight Plan

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|---|--------------------|---|------------------|
| Conditions at Accident Site: | Visual Conditions | Condition of Light: | Day |
| Observation Facility, Elevation: | BJC, 5670 ft msl | Distance from Accident Site: | 9 Nautical Miles |
| Observation Time: | 1545 MDT | Direction from Accident Site: | 148° |
| Lowest Cloud Condition: | Unknown / 0 ft agl | Visibility | 15 Miles |
| Lowest Ceiling: | None / 0 ft agl | Visibility (RVR): | 0 ft |
| Wind Speed/Gusts: | 4 knots / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | Variable | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 29 inches Hg | Temperature/Dew Point: | 31 °C / 13 °C |
| Precipitation and Obscuration: | | | |
| Departure Point: | (1V5) | Type of Flight Plan Filed: | None |
| Destination: | | Type of Clearance: | None |
| Departure Time: | 1500 MDT | Type of Airspace: | Class G |

Airport Information

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|-----------------------------|---------------------------------|----------------------------------|-----------|
| Airport: | BOULDER MUNICIPAL AIRPORT (1V5) | Runway Surface Type: | Asphalt |
| Airport Elevation: | 5288 ft | Runway Surface Condition: | Dry |
| Runway Used: | 8 | IFR Approach: | None |
| Runway Length/Width: | 4100 ft / 75 ft | VFR Approach/Landing: | Full Stop |

Wreckage and Impact Information

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

Administrative Information

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|-----------------------------------|--|--------------|------------|
| Investigator In Charge (IIC): | B. BEACH SCOTT | Report Date: | 10/13/2000 |
| Additional Participating Persons: | WALTER R WISE; DENVER, CO | | |
| Publish Date: | | | |
| 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/ . | | |

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](#).