



Aviation Investigation Final Report

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| Location: | EAGLE, Colorado | Accident Number: | DEN01LA117 |
| Date & Time: | June 24, 2001, 12:00 Local | Registration: | N7850H |
| Aircraft: | Piper PA-12 | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 1 None |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

The pilot was practicing off runway landings in the tundra at approximately 11,000 feet. He selected a landing area, made a few passes to inspect the site, and decided to land uphill. On short final, he "realized that my sink rate was higher than I was comfortable with, and my groundspeed was too high." He applied full power, but contacted the ground while the airplane was in a crab. Both main landing gear were broken off, and the wings were bent. The pilot said that after he exited the airplane, he noted that he had landed with a 20 knot quartering tailwind. He also stated that the ambient air temperature at the crash site was 60 degrees Fahrenheit. The calculated density altitude was 13,418 feet.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's inadequate wind evaluation, and his inadequate planning/decision to land with a tailwind, at a density altitude of 13,418 feet. Contributing factors were the tailwind and the high density altitude weather condition.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

1. (C) IN-FLIGHT PLANNING/DECISION - INADEQUATE - PILOT IN COMMAND
2. (C) WEATHER EVALUATION - INADEQUATE - PILOT IN COMMAND
3. (F) WEATHER CONDITION - TAILWIND
4. (F) WEATHER CONDITION - HIGH DENSITY ALTITUDE

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: GO-AROUND (VFR)

Findings

5. TERRAIN CONDITION - RISING
6. TERRAIN CONDITION - TUNDRA

Factual Information

On June 24, 2001, at approximately 1200 mountain daylight time, a Piper PA-12, N7850H, was substantially damaged when it collided with terrain near Eagle, Colorado. The private pilot, the sole occupant in the airplane, was not injured. The pilot was operating the airplane under Title 14 CFR Part 91. Visual meteorological conditions prevailed for the personal flight which originated from Boulder Municipal Airport, Boulder, Colorado, at approximately 1030. The pilot did not file a flight plan.

According to the pilot's written statement, he was planning to fly "more or less" direct to Castle Peak (approximately 9 miles northeast of Eagle County Regional Airport) to look for landing sites on BLM (Bureau of Land Management) land. He identified a potential landing site at approximately 11,000 feet elevation. He decided he would attempt an approach from the west, uphill. On short final, he "realized that my sink rate was higher than I was comfortable with, and my groundspeed was too high," and he tried to go-around. He applied full power, but was unable to clear the terrain. The airplane was in a 30 degree crab, and the pilot attempted to correct it back to the ground track by adding right rudder. The right main landing gear contacted the ground, and the airplane turned approximately 180 degrees and came to rest in about 100 feet. The landing gear separated from the fuselage, both wings were wrinkled on top, and the cowling was bent.

The pilot said that after he exited the airplane, he observed that he had landed with a 20 knot quartering tailwind. He also stated that the ambient air temperature at the crash site was 60 degrees Fahrenheit; the calculated density altitude was 13,418 feet.

Pilot Information

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| Certificate: | Private | Age: | 37, Male |
| Airplane Rating(s): | Single-engine land | Seat Occupied: | Front |
| Other Aircraft Rating(s): | None | Restraint Used: | |
| Instrument Rating(s): | None | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 3 Valid Medical-w/ waivers/lim | Last FAA Medical Exam: | May 12, 2000 |
| Occupational Pilot: | UNK | Last Flight Review or Equivalent: | June 21, 2000 |
| Flight Time: | 377 hours (Total, all aircraft), 222 hours (Total, this make and model), 304 hours (Pilot In Command, all aircraft), 52 hours (Last 90 days, all aircraft), 16 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: | N7850H |
| Model/Series: | PA-12 | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 12-750 |
| Landing Gear Type: | Tailwheel | Seats: | 3 |
| Date/Type of Last Inspection: | June 1, 2001 Annual | Certified Max Gross Wt.: | 1550 lbs |
| Time Since Last Inspection: | 5 Hrs | Engines: | 1 Reciprocating |
| Airframe Total Time: | 3000 Hrs at time of accident | Engine Manufacturer: | Lycoming |
| ELT: | Installed, not activated | Engine Model/Series: | O-320 |
| Registered Owner: | Ralph A. Young | Rated Power: | 150 Horsepower |
| Operator: | | Operating Certificate(s) Held: | None |

Meteorological Information and Flight Plan

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|---|----------------------------------|---|------------------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | KEGE,6535 ft msl | Distance from Accident Site: | 8 Nautical Miles |
| Observation Time: | 11:55 Local | Direction from Accident Site: | 220° |
| Lowest Cloud Condition: | Clear | Visibility | 10 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | 10 knots / 19 knots | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 280° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 30.22 inches Hg | Temperature/Dew Point: | 27°C / 5°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | Boulder, CO (1V5) | Type of Flight Plan Filed: | None |
| Destination: | Boulder, CO (1V5) | Type of Clearance: | None |
| Departure Time: | 10:30 Local | Type of Airspace: | Class G |

Wreckage and Impact Information

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|----------------------------|--------|-----------------------------|---------------------------|
| Crew Injuries: | 1 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 None | Latitude, Longitude: | 39.65073,-106.819351(est) |

Administrative Information

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| Investigator In Charge (IIC): | Struhsaker, James |
| Additional Participating Persons: | James P Clayville; FAA– Flight Standards District Office; Denver, CO |
| Original Publish Date: | July 25, 2002 |
| Last Revision Date: | |
| Investigation Class: | Class |
| Note: | The NTSB traveled to the scene of this accident. |
| Investigation Docket: | https://data.ntsb.gov/Docket?ProjectID=52552 |

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](#).