



National Transportation Safety Board Aviation Accident Final Report

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|--------------------------------|---|-------------------------|------------|
| Location: | GOLDEN, CO | Accident Number: | DEN93FA017 |
| Date & Time: | 12/22/1992, 2022 MST | Registration: | N81TR |
| Aircraft: | Rockwell 690C | Aircraft Damage: | Destroyed |
| Defining Event: | | Injuries: | 1 Fatal |
| Flight Conducted Under: | Part 135: Air Taxi & Commuter - Non-scheduled | | |

Analysis

WHILE IN A DESCENT FOR ARRIVAL AT THE DESTINATION AIRPORT, THE AIRCRAFT SUSTAINED STRUCTURAL FAILURE WITH THE RIGHT OUTER WING, HORIZONTAL STABILIZER, AND VERTICAL STABILIZER SEPARATING FROM THE AIRCRAFT. THE AIRCRAFT IMPACTED APPROXIMATELY 10 MILES FROM THE PLANNED DESTINATION. ACCORDING TO RADAR DATA AND OTHER RESEARCH, THE DESCENT WAS CONDUCTED AT VNE AND KNOWN SEVERE TURBULENCE WAS PRESENT IN THE AREA AT THE TIME OF THE ACCIDENT.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT FLYING THE AIRCRAFT BEYOND THE DESIGN MANEUVERING SPEED AND EXCEEDING THE DESIGN STRESS LIMITS. A FACTOR WAS: CLEAR AIR TURBULENCE.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: DESCENT - NORMAL

Findings

1. (F) WEATHER CONDITION - TURBULENCE,CLEAR AIR

Occurrence #2: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: DESCENT - NORMAL

Findings

2. WING - FAILURE,TOTAL
3. HORIZONTAL STABILIZER ATTACHMENT - FAILURE,TOTAL
4. VERTICAL STABILIZER ATTACHMENT - FAILURE,TOTAL
5. (C) AIRSPEED(VA) - EXCEEDED - PILOT IN COMMAND
6. (C) DESIGN STRESS LIMITS OF AIRCRAFT - EXCEEDED - PILOT IN COMMAND

Factual Information

Pilot Information

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|----------------------------------|---|--|----------------------------|
| Certificate: | Airline Transport; Flight Instructor; Commercial | Age: | 30, Male |
| Airplane Rating(s): | Multi-engine Land; Single-engine Land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | Seatbelt, Shoulder harness |
| Instrument Rating(s): | Airplane | Second Pilot Present: | No |
| Instructor Rating(s): | Airplane Multi-engine; Airplane Single-engine; Instrument Airplane | Toxicology Performed: | Yes |
| Medical Certification: | Class 1 Valid Medical--no waivers/lim. | Last FAA Medical Exam: | 01/29/1992 |
| Occupational Pilot: | | Last Flight Review or Equivalent: | |
| Flight Time: | 5400 hours (Total, all aircraft), 910 hours (Total, this make and model), 5280 hours (Pilot In Command, all aircraft), 183 hours (Last 90 days, all aircraft), 55 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|--|---------------------------------------|--------------------------|
| Aircraft Make: | Rockwell | Registration: | N81TR |
| Model/Series: | 690C 690C | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | No |
| Airworthiness Certificate: | Normal | Serial Number: | 11690 |
| Landing Gear Type: | Retractable - Tricycle | Seats: | 2 |
| Date/Type of Last Inspection: | 11/25/1992, Continuous Airworthiness | Certified Max Gross Wt.: | 10325 lbs |
| Time Since Last Inspection: | 32 Hours | Engines: | 2 Turbo Prop |
| Airframe Total Time: | 7768 Hours | Engine Manufacturer: | GARRETT |
| ELT: | Installed, activated, did not aid in locating accident | Engine Model/Series: | TPE-33-1254 |
| Registered Owner: | CASPER AIR SERVICE | Rated Power: | 715 hp |
| Operator: | CASPER AIR SERVICE | Operating Certificate(s) Held: | On-demand Air Taxi (135) |
| Operator Does Business As: | | Operator Designator Code: | CBCA |

Meteorological Information and Flight Plan

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|----------------------------------|---------------------|---|-------------------|
| Conditions at Accident Site: | Visual Conditions | Condition of Light: | Night/Bright |
| Observation Facility, Elevation: | BJC, 5657 ft msl | Distance from Accident Site: | 10 Nautical Miles |
| Observation Time: | 1945 MST | Direction from Accident Site: | 55° |
| Lowest Cloud Condition: | Clear / 0 ft agl | Visibility | 15 Miles |
| Lowest Ceiling: | None / 0 ft agl | Visibility (RVR): | 0 ft |
| Wind Speed/Gusts: | 30 knots / 45 knots | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 260° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 29 inches Hg | Temperature/Dew Point: | 2° C / -14° C |
| Precipitation and Obscuration: | | | |
| Departure Point: | RIFLE, CO (RIL) | Type of Flight Plan Filed: | VFR |
| Destination: | DENVER, CO (DEN) | Type of Clearance: | |
| Departure Time: | 1930 MST | Type of Airspace: | Class G |

Wreckage and Impact Information

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|---------------------|---------|----------------------|-----------|
| 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

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|-----------------------------------|--|--------------|------------|
| Investigator In Charge (IIC): | NORMAN F WIEMEYER | Report Date: | 09/28/1993 |
| Additional Participating Persons: | JOE WILLIAMS; DENVER, CO ROMAN GABRYS; 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/ . | | |

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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](#).