



# National Transportation Safety Board Aviation Accident Factual Report

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|-------------------------|----------------------|-------------------------|------------------|
| <b>Location:</b>        | DENVER, CO           | <b>Accident Number:</b> | FTW95FA004       |
| <b>Date &amp; Time:</b> | 10/01/1994, 1805 MDT | <b>Registration:</b>    | N31YV            |
| <b>Aircraft:</b>        | BEECH 1900D          | <b>Aircraft Damage:</b> | Substantial      |
| <b>Defining Event:</b>  |                      | <b>Injuries:</b>        | 1 Minor, 17 None |

**Flight Conducted Under:** Part 135: Air Taxi & Commuter - Scheduled

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## HISTORY OF FLIGHT

On October 1, 1994, approximately 1805 mountain daylight time, a Beech 1900D, N31YV, was substantially damaged during an inflight encounter with adverse weather near Denver, Colorado. There were no injuries to the captain and 16 passengers, but the first officer sustained minor injuries. Instrument meteorological conditions prevailed.

The following is based on interviews with the captain and first officer, and the pilot/operator report. The airplane, flight 7658, operated by Mesa Airlines, Inc., d/b/a United Express, taxied to runway 35L at 1720, but was placed in the "penalty box" due to weather causing a traffic backlog. It began to rain heavily and several wind shear alerts were issued. When the flight was cleared to taxi onto the runway, the captain declined and decided to wait for better weather conditions. Hail began to fall and the right engine was shut down to conserve fuel. A Boeing 727, later identified as United Air Lines flight 898, took off at 1748 and turned to the left. Shortly thereafter, at 1750, the United pilot advised the control tower that traffic should avoid a westerly departure. The captain said the pilot sounded "thoroughly shaken." When weather conditions improved and the crew noted no precipitation echoes on the weather radar through various tilt angles, flight 7658 took off at 1759.

Because of the previous pilot report, the captain requested a right turn after departure. The flight was assigned a heading of 080 degrees and an altitude of 20,000 feet. The airplane entered the overcast and it began to rain, followed by "light hail." As the airplane was approaching 10,000 feet, the airborne weather radar indicated heavy precipitation ahead, and the crew requested a turn further to the right. The airplane then encountered heavy hail and the right windshield "exploded," sending glass particles into the first officer's eyes and temporarily blinding him. After telling air traffic control what had happened, the flight was cleared to land on any runway. The captain descended into visual meteorological conditions and landed on runway 26R.

## METEOROLOGICAL INFORMATION

The captain said that he personally obtained a weather briefing via computer prior to departure. The reports indicated that visual meteorological conditions prevailed in Denver, Amarillo, and along the route. He said the weather reports were not "real time," but were probably at least one hour or more old. Asked why his dispatcher did not provide him with more timely weather information, the captain replied that his company operated under Federal Aviation Regulations Part 135 and did not have a dispatch office. Obtaining weather reports and filing flight plans was done by the flight crew.

Weather and air traffic control studies were made by the Safety Board's Operational Factors Division. These reports are attached as exhibits.

## FLIGHT RECORDERS

Both cockpit voice and flight data recorders were removed from the airplane and were examined by the Safety Board's Engineering and Computer Services Division. No extraordinary data was retrieved from the flight data recorder. The ATC communications channel on the cockpit voice recorder was found to have been wired incorrectly when it was installed by the airplane manufacturer. No cockpit communications transcript was made.

## Pilot Information

|                                  |  |  |                            |
|----------------------------------|--|--|----------------------------|
| <b>Certificate:</b>              | Airline Transport; Commercial  | <b>Age:</b>                              | 35, Male                   |
| <b>Airplane Rating(s):</b>       | Multi-engine Land; Single-engine Land  | <b>Seat Occupied:</b>                    | Left                       |
| <b>Other Aircraft Rating(s):</b> | None   | <b>Restraint Used:</b>                   | Seatbelt, Shoulder harness |
| <b>Instrument Rating(s):</b>     | Airplane   | <b>Second Pilot Present:</b>             | Yes                        |
| <b>Instructor Rating(s):</b>     | None   | <b>Toxicology Performed:</b>             | No                         |
| <b>Medical Certification:</b>    | Class 1 Valid Medical--no waivers/lim.   | <b>Last FAA Medical Exam:</b>            | 08/24/1994                 |
| <b>Occupational Pilot:</b>       |  | <b>Last Flight Review or Equivalent:</b> |                            |
| <b>Flight Time:</b>              | 6921 hours (Total, all aircraft), 1859 hours (Total, this make and model), 4786 hours (Pilot In Command, all aircraft), 266 hours (Last 90 days, all aircraft), 96 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft) |  |                            |

## Aircraft and Owner/Operator Information

|                               |                                      |                                |                            |
|-------------------------------|--------------------------------------|--------------------------------|----------------------------|
| Aircraft Make:                | BEECH                                | Registration:                  | N31YV                      |
| Model/Series:                 | 1900D 1900D                          | Aircraft Category:             | Airplane                   |
| Year of Manufacture:          |                                      | Amateur Built:                 | No                         |
| Airworthiness Certificate:    | Transport                            | Serial Number:                 | UE-31                      |
| Landing Gear Type:            | Retractable - Tricycle               | Seats:                         | 19                         |
| Date/Type of Last Inspection: | 09/26/1994, Continuous Airworthiness | Certified Max Gross Wt.:       | 14000 lbs                  |
| Time Since Last Inspection:   | 44 Hours                             | Engines:                       | 2 Turbo Prop               |
| Airframe Total Time:          | 4723 Hours                           | Engine Manufacturer:           | P&W                        |
| ELT:                          | Installed, not activated             | Engine Model/Series:           | PT6A-67D                   |
| Registered Owner:             | MESA AIRLINES, INC.                  | Rated Power:                   |                            |
| Operator:                     | MESA AIRLINES, INC.                  | Operating Certificate(s) Held: | Commuter Air Carrier (135) |
| Operator Does Business As:    | UNITED EXPRESS                       | Operator Designator Code:      | MASA                       |

## Meteorological Information and Flight Plan

|                                  |                        |                                      |                  |
|----------------------------------|------------------------|--------------------------------------|------------------|
| Conditions at Accident Site:     | Instrument Conditions  | Condition of Light:                  | Day              |
| Observation Facility, Elevation: | DEN, 5333 ft msl       | Distance from Accident Site:         | 9 Nautical Miles |
| Observation Time:                | 1750 MDT               | Direction from Accident Site:        | 280°             |
| Lowest Cloud Condition:          | Unknown / 0 ft agl     | Visibility                           | 1 Miles          |
| Lowest Ceiling:                  | Overcast / 1300 ft agl | Visibility (RVR):                    | 0 ft             |
| Wind Speed/Gusts:                | 23 knots / 35 knots    | Turbulence Type Forecast/Actual:     | /                |
| Wind Direction:                  | 310°                   | Turbulence Severity Forecast/Actual: | /                |
| Altimeter Setting:               | 29 inches Hg           | Temperature/Dew Point:               | 13° C / 12° C    |
| Precipitation and Obscuration:   |                        |                                      |                  |
| Departure Point:                 | , CO (DEN)             | Type of Flight Plan Filed:           | IFR              |
| Destination:                     | AMARILLO, TX (AMA)     | Type of Clearance:                   | IFR              |
| Departure Time:                  | 1757 MDT               | Type of Airspace:                    | Class E          |

## Wreckage and Impact Information

|                     |                  |                      |             |
|---------------------|------------------|----------------------|-------------|
| Crew Injuries:      | 1 Minor, 1 None  | Aircraft Damage:     | Substantial |
| Passenger Injuries: | 16 None          | Aircraft Fire:       | None        |
| Ground Injuries:    | N/A              | Aircraft Explosion:  | None        |
| Total Injuries:     | 1 Minor, 17 None | Latitude, Longitude: |             |

## Administrative Information

**Investigator In Charge (IIC):** ARNOLD W SCOTT,

**Additional Participating Persons:** ROBERT J LOFLIN; 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](mailto:pubinq@ntsb.gov), or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.