
Frozen elevators, McDonnell Douglas MD-82, February 5, 1999

Micro-summary: This McDonnell Douglas MD-82 airplane encountered a partial flight control malfunction during takeoff.


Event Date: 1999-02-05 at 1110 AST

Investigative Body: National Transportation Safety Board (NTSB), USA

Investigative Body's Web Site: <http://www.nts.gov/>

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 2. Readers are advised that each report is a glimpse of events at specific points in time. While broad themes permeate the causal events leading up to crashes, and we can learn from those, the specific regulatory and technological environments can and do change. ***Your company's flight operations manual is the final authority as to the safe operation of your aircraft!***
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|---|--|---------------------------------|----------------------------------|--------------------------------------|------------------|
|  | | NTSB ID: ANC99IA027 | | Aircraft Registration Number: N934AS | |
| | | Occurrence Date: 02/05/1999 | | Most Critical Injury: None | |
| | | Occurrence Type: Incident | | Investigated By: NTSB | |
| Location/Time | | | | | |
| Nearest City/Place FAIRBANKS | | State AK | Zip Code 99709 | Local Time 1110 | Time Zone AST |
| Airport Proximity: On Airport | | Distance From Landing Facility: | | Direction From Airport: | |
| Aircraft Information Summary | | | | | |
| Aircraft Manufacturer McDonnell Douglas | | Model/Series MD-82 | | Type of Aircraft Airplane | |
| Sightseeing Flight: No | | | Air Medical Transport Flight: No | | |
| Narrative | | | | | |
| <p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>On February 5, 1999, about 1110 Alaska standard time, the crew of a McDonnell Douglas MD-82 airplane, N934AS, reported a partial flight control malfunction during takeoff from the Fairbanks International Airport, Fairbanks, Alaska. The flight was being conducted under Title 14, CFR Part 121, as a scheduled domestic passenger flight, operated by Alaska Airlines, Inc., as Flight 82. There were no injuries to the two pilots, three flight attendants, or the 133 passengers aboard. Instrument meteorological conditions prevailed, and an instrument flight plan had been filed for the flight to Anchorage, Alaska.</p> <p>During an interview with the National Transportation Safety Board (NTSB) investigator-in-charge on February 5, the captain stated that during the takeoff roll, the airplane's nose failed to rise as he applied aft control yoke pressure. He stated that when he applied an excessive amount of aft control yoke pressure, the nose rotated slowly, and the airplane assumed the desired pitch angle for takeoff. He said that after he was assured that a positive rate of climb had been established, he declared an in-flight emergency, and continued on to Anchorage for an emergency landing.</p> <p>The captain said that during the approach and landing in Anchorage, the elevator control felt "sluggish and slow to respond to control inputs." After landing, the airplane was taxied to the gate, and all 138 of the occupants disembarked uneventfully.</p> <p>Fairbanks International Airport weather observation at the time of the incident consisted of: Sky conditions and ceiling, 400 feet broken, 2,000 feet overcast; visibility, 1/2 statute mile; wind, calm; temperature, minus 47 degrees F.</p> <p>During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge on February 6, the director of flight safety for the operator reported that prior to the incident, the incident airplane remained parked at the gate overnight, outside, prior to the incident flight. He added that while the airplane remained in Fairbanks overnight, the outside air temperature went below minus 50 degrees F.</p> <p>The incident airplane remained in Anchorage for two days following the partial flight control malfunction. While in Anchorage, the airplane underwent an extensive inspection and evaluation of the flight control system, and no flight control anomalies were discovered by company maintenance personnel.</p> <p>The airplane's flight data recorder (FDR) was removed and shipped to the NTSB's Washington, D.C., laboratory for analysis. The FDR readout showed that during the initial phase of the incident takeoff roll, both elevators remained in a down position. As the takeoff roll progressed and the airspeed approached 150 knots, both elevators responded to the pilot's control column inputs, and the nose of the airplane rotated. The pilot's control column position was not a recorded parameter of the incident airplanes FDR.</p> | | | | | |
| FACTUAL REPORT - AVIATION | | | | | |
| Page 1 | | | | | |

National Transportation Safety Board

**FACTUAL REPORT
AVIATION**





NTSB ID: ANC99IA027

Occurrence Date: 02/05/1999

Occurrence Type: Incident

Narrative (Continued)

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|  National Transportation Safety Board FACTUAL REPORT AVIATION | | NTSB ID: ANC99IA027 | | | |
| | | Occurrence Date: 02/05/1999 | | | |
| | | Occurrence Type: Incident | | | |
| Landing Facility/Approach Information | | | | | |
| Airport Name | Airport ID: | Airport Elevation | Runway Used | Runway Length | Runway Width |
| Fairbanks International | FAI | 434 Ft. MSL | 19R | 5400 | 60 |
| Runway Surface Type: Asphalt | | | | | |
| Runway Surface Condition: Snow--dry | | | | | |
| Type Instrument Approach: NONE | | | | | |
| VFR Approach/Landing: None | | | | | |
| Aircraft Information | | | | | |
| Aircraft Manufacturer | | Model/Series | | Serial Number | |
| McDonnell Douglas | | MD-82 | | 49235 | |
| Airworthiness Certificate(s): Normal | | | | | |
| Landing Gear Type: Tricycle | | | | | |
| Homebuilt Aircraft? No | Number of Seats: 148 | Certified Max Gross Wt. | 150500 LBS | Number of Engines: 2 | |
| Engine Type: | Engine Manufacturer: | Model/Series: | Rated Power: | | |
| Turbo Fan | P&W | JT8D-217 | 20850 LBS | | |
| - Aircraft Inspection Information | | | | | |
| Type of Last Inspection | Date of Last Inspection | Time Since Last Inspection | Airframe Total Time | | |
| Unknown | | Hours | Hours | | |
| - Emergency Locator Transmitter (ELT) Information | | | | | |
| ELT Installed? No | ELT Operated? No | ELT Aided in Locating Accident Site? No | | | |
| Owner/Operator Information | | | | | |
| Registered Aircraft Owner | | Street Address | | | |
| Willmington Trust Comapny | | Rodney Square North | | | |
| | | City | State | Zip Code | |
| | | Willington | DE | 19890 | |
| Operator of Aircraft | | Street Address | | | |
| ALASKA AIR GROUP, INC | | P.O. BOX 68900 / CODE: SEA0Z | | | |
| | | City | State | Zip Code | |
| | | SEATTLE | WA | 98168 | |
| Operator Does Business As: ALASKA AIRLINES | | | Operator Designator Code: ASAA | | |
| - Type of U.S. Certificate(s) Held: | | | | | |
| Air Carrier Operating Certificate(s): Flag Carrier/Domestic | | | | | |
| Operating Certificate: | | | Operator Certificate: | | |
| Regulation Flight Conducted Under: Part 121: Air Carrier | | | | | |
| Type of Flight Operation Conducted: Scheduled; Domestic; Passenger Only | | | | | |

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|  <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p> | NTSB ID: ANC991A027 |
| | Occurrence Date: 02/05/1999 |
| | Occurrence Type: Incident |

First Pilot Information

| | | | | |
|-----------------|-----------------|------------------|--------------------------|-----------|
| Name On File | City On File | State On File | Date of Birth On File | Age 51 |
|-----------------|-----------------|------------------|--------------------------|-----------|

| | | | |
|--------|---------------------|--------------------------------------|-----------------------------|
| Sex: M | Seat Occupied: Left | Principal Profession: Civilian Pilot | Certificate Number: On File |
|--------|---------------------|--------------------------------------|-----------------------------|

Certificate(s): Airline Transport

Airplane Rating(s): Multi-engine Land

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s): Airplane Multi-engine; Instrument Airplane

| | |
|---|---------------------------------|
| Type Rating/Endorsement for Accident/Incident Aircraft? Yes | Current Biennial Flight Review? |
|---|---------------------------------|

| | | |
|------------------------|--|------------------------------------|
| Medical Cert.: Class 1 | Medical Cert. Status: Valid Medical--no waivers/lim. | Date of Last Medical Exam: 11/1998 |
|------------------------|--|------------------------------------|

| - Flight Time Matrix | All A/C | This Make and Model | Airplane Single Engine | Airplane Multi-Engine | Night | Instrument | | Rotorcraft | Glider | Lighter Than Air |
|-----------------------|---------|---------------------|------------------------|-----------------------|-------|------------|-----------|------------|--------|------------------|
| | | | | | | Actual | Simulated | | | |
| Total Time | 15070 | 8444 | | | | | | | | |
| Pilot In Command(PIC) | | | | | | | | | | |
| Instructor | | | | | | | | | | |
| Last 90 Days | 156 | | | | | | | | | |
| Last 30 Days | | | | | | | | | | |
| Last 24 Hours | | | | | | | | | | |

| | | | |
|--------------------|----------------------------|--------------------------|-------------------|
| Seatbelt Used? Yes | Shoulder Harness Used? Yes | Toxicology Performed? No | Second Pilot? Yes |
|--------------------|----------------------------|--------------------------|-------------------|

Flight Plan/Itinerary

Type of Flight Plan Filed: IFR

| | | | | |
|---|-------|---------------------------|------------------------|-----------|
| Departure Point Same as Accident/Incident Location | State | Airport Identifier FAI | Departure Time 1100 | Time Zone |
|---|-------|---------------------------|------------------------|-----------|

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|--------------------------|-------------|---------------------------|--|
| Destination ANCHORAGE | State AK | Airport Identifier ANC | |
|--------------------------|-------------|---------------------------|--|


Type of Clearance: IFR

Type of Airspace: Class C

Weather Information

Source of Briefing: Company

Method of Briefing: In Person

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|-------------------------------------|-----------------------|--|---------------|---------------------------------|------------------------------|
| Weather Information | | | | | |
| WOF ID | Observation Time | Time Zone | WOF Elevation | WOF Distance From Accident Site | Direction From Accident Site |
| FAI | 1052 | ADT | 0 Ft. MSL | 0 NM | 0 Deg. Mag. |
| Sky/Lowest Cloud Condition: Unknown | | | Ft. AGL | Condition of Light: Day | |
| Lowest Ceiling: Broken | | 400 Ft. AGL | | Visibility: 0.5 SM | Altimeter: 29.00 "Hg |
| Temperature: -44 °C | Dew Point: °C | Wind Direction: | | Density Altitude: Ft. | |
| Wind Speed: | Gusts: | Weather Conditions at Accident Site: Instrument Conditions | | | |
| Visibility (RVR): 0 Ft. | Visibility (RVV) 0 SM | Intensity of Precipitation: | | | |
| Restrictions to Visibility: Fog | | | | | |
| Type of Precipitation: None | | | | | |

| | | |
|-----------------------------|---------------------|--------------------------|
| Accident Information | | |
| Aircraft Damage: None | Aircraft Fire: None | Aircraft Explosion: None |

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|---|-------|---------|-------|------|-------|
| Classification: U.S. Registered/U.S. Soil | | | | | |
| - Injury Summary Matrix | Fatal | Serious | Minor | None | TOTAL |
| First Pilot | | | | 1 | 1 |
| Second Pilot | | | | 1 | 1 |
| Student Pilot | | | | | |
| Flight Instructor | | | | | |
| Check Pilot | | | | | |
| Flight Engineer | | | | | |
| Cabin Attendants | | | | 3 | 3 |
| Other Crew | | | | | |
| Passengers | | | | 133 | 133 |
| - TOTAL ABOARD - | | | | 138 | 138 |
| Other Ground | 0 | 0 | 0 | | 0 |
| - GRAND TOTAL - | 0 | 0 | 0 | 138 | 138 |

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National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: ANC99IA027

Occurrence Date: 02/05/1999

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

CLINTON O. JOHNSON

Additional Persons Participating in This Accident/Incident Investigation:

HARRY C GILSON

Aviation Inspector

Federal Aviation Administration

4510 West International Airport Road

Anchorage, AK 99502