
Turbulence injuries, Boeing 737-200, April 28, 1997

Micro-summary: This Boeing 737-200 encountered turbulence during climb, injuring several people.


Event Date: 1997-04-28 at 1330 EDT

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

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

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		NTSB ID: ATL97LA064		Aircraft Registration Number: N14245	
		Occurrence Date: 04/28/1997		Most Critical Injury: Serious	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place ATLANTA	State GA	Zip Code 30320	Local Time 1330	Time Zone EDT	
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Boeing		Model/Series 737-200		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:					
<p>On April 28, 1997, about 1330 eastern daylight time, a Boeing 737-200, N14245, encountered turbulence during the climb following takeoff from The William B. Hartsfield International Airport, Atlanta, Georgia. The airplane was operated as flight 1181, by Continental Airlines, Inc., under Title 14 CFR Part 121, and instrument flight rules. An instrument flight plan was filed for the scheduled, domestic, passenger flight. Instrument meteorological conditions prevailed at the time of the accident. There were serious injuries to one flight attendant, minor injuries to seven passengers, and no injuries to 70 passengers, two additional flight attendants, and the two airline transport pilots. The airplane was not damaged. The flight departed Atlanta, Georgia, about 1247, on the same day.</p> <p>According to the flight crew, the flight was deviating around what the captain described as a benign looking rain shower. While passing 24,000 feet at 280 knots, the airplane encountered three jolts of moderate to severe turbulence, for a total duration of 10 seconds. The seat belt sign was illuminated. A flight attendant, who was serving passengers, received a broken ankle during the turbulence. Two passengers, who were seated at the time, complained of head and neck injuries. The flight crew declared a medical emergency, and they were given priority throughout the remainder of the flight.</p> <p>The "A" flight attendant stated he and the "C" flight attendant were setting up the bar cart in the rear galley of the airplane. When they encountered severe turbulence, the "A" flight attendant stated he was wedged between the bar cart and the wall, while the "C" flight attendant was not braced. The "C" flight attendant broke his ankle during the encounter.</p> <p>According to the "B" flight attendant, they were thirty or forty minutes out of Atlanta when they encountered unexpected turbulence. She was in the forward galley, and was able to quickly secure herself in the forward jumpseat. The seat belt sign was illuminated.</p> <p>According to the Inflight Manual supplied by Continental Airlines, the Captain should warn flight attendants of potential weather problems before departure. Once inflight, flight attendants should initiate periodic updates from the Captain regarding weather conditions. In the event of unexpected turbulence, a flight attendant should take the nearest seat, and wait for the Captain to advise when it is safe to resume cabin duties. In the event of an expected encounter with turbulence, the Captain should make the seat belt sign announcement and instruct the cabin attendants to secure the cabin and galleys. Flight attendants should then take their seats and fasten their seatbelts.</p> <p>Neither the cabin attendants or the flight crew indicated the flight crew made an announcement for the cabin crew to secure the cabin and take their seats.</p> <p>According to a weather report given to the crew members before departure, light to moderate</p>					
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National Transportation Safety Board

FACTUAL REPORT

AVIATION




NTSB ID: ATL97LA064


Occurrence Date: 04/28/1997

Occurrence Type: Accident

Narrative (Continued)

turbulence below 24,000 feet was forecast in the area. There was also a line of severe thunderstorms moving through Georgia and Florida at the time of the encounter. It contained winds gusting to 50 knots, hail with a 1 inch diameter, and cloud tops above 45,000 feet. The intensity and coverage of the thunderstorms was forecast to increase throughout the afternoon.

		NTSB ID: ATL97LA064			
		Occurrence Date: 04/28/1997			
		Occurrence Type: Accident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used 0	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Type Instrument Approach:					
VFR Approach/Landing:					
Aircraft Information					
Aircraft Manufacturer Boeing		Model/Series 737-200		Serial Number 20074	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 105	Certified Max Gross Wt.	109000 LBS	Number of Engines: 2	
Engine Type: Turbo Fan	Engine Manufacturer: P&W	Model/Series: JT8D-9	Rated Power: 14500 LBS		
- Aircraft Inspection Information					
Type of Last Inspection Continuous Airworthiness	Date of Last Inspection 04/1997	Time Since Last Inspection 65 Hours	Airframe Total Time 8294 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner CONTINENTAL AIRLINES, INC		Street Address 15333 JFK BLVD SUITE 420			
		City HOUSTON	State TX	Zip Code 77032	
Operator of Aircraft Same as Reg'd Aircraft Owner		Street Address Same as Reg'd Aircraft Owner			
		City	State	Zip Code	
Operator Does Business As:			Operator Designator Code: CALA		
- 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/Cargo					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: ATL97LA064
	Occurrence Date: 04/28/1997
	Occurrence Type: Accident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 56
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Sex: M	Seat Occupied: Left	Principal Profession: Civilian Pilot	Certificate Number: On File
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Certificate(s): Airline Transport; Commercial

Airplane Rating(s): Multi-engine Land; Single-engine Land

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s): None

Type Rating/Endorsement for Accident/Incident Aircraft? Yes	Current Biennial Flight Review?
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Medical Cert.: Class 1	Medical Cert. Status: Valid Medical--w/ waivers/lim.	Date of Last Medical Exam: 02/1997
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- 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	15000	9000	1717	4300						
Pilot In Command(PIC)	6000									
Instructor	2000									
Last 90 Days	200	200								
Last 30 Days	60	60								
Last 24 Hours	3	3								

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? No	Second Pilot? Yes
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Flight Plan/Itinerary

Type of Flight Plan Filed: IFR

Departure Point Same as Accident/Incident Location	State	Airport Identifier ATL	Departure Time 1247	Time Zone EDT
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Destination HOUSTON	State TX	Airport Identifier IAH	
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Type of Clearance: IFR

Type of Airspace: Class A

Weather Information

Source of Briefing: Company

Method of Briefing:

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Weather Information

WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
ATL	1156	EDT	1026 Ft. MSL	100 NM	270 Deg. Mag.

Sky/Lowest Cloud Condition: Unknown	0 Ft. AGL	Condition of Light: Day
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Lowest Ceiling: Overcast	100 Ft. AGL	Visibility: 0.25 SM	Altimeter: 29.00 "Hg
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Temperature: 16 °C	Dew Point: 16 °C	Wind Direction: Variable	Density Altitude: 1700 Ft.
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Wind Speed: 4	Gusts:	Weather Conditions at Accident Site: Instrument Conditions
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Visibility (RVR): 0 Ft.	Visibility (RVV) 1 SM	Intensity of Precipitation: Unknown
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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		1		2	3
Other Crew					
Passengers			7	70	77
- TOTAL ABOARD -		1	7	74	82
Other Ground	0	0	0		0
- GRAND TOTAL -	0	1	7	74	82

National Transportation Safety Board

FACTUAL REPORT

AVIATION



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Occurrence Date: 04/28/1997

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

PRESTON E. HICKS

Additional Persons Participating in This Accident/Incident Investigation:

HARRY TABER
GEORGIA FSDO

REGAN H CAMPBELL
NTSB-ATLANTA OFFICE