

---

## Turbulence injury, Boeing 757-232, September 15, 1993

---

**Micro-summary:** This Boeing 757-232 encountered turbulence during climb, injuring a flight attendant.

---

**Event Date:** 1993-09-15 at 2145 EDT


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


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


---

### **Cautions:**

1. Accident reports can be and sometimes are revised. Be sure to consult the investigative agency for the latest version before basing anything significant on content (e.g., thesis, research, etc).
  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!***
  3. Reports may or may not represent reality. Many many non-scientific factors go into an investigation, including the magnitude of the event, the experience of the investigator, the political climate, relationship with the regulatory authority, technological and recovery capabilities, etc. It is recommended that the reader review all reports analytically. Even a "bad" report can be a very useful launching point for learning.
  4. Contact us before reproducing or redistributing a report from this anthology. Individual countries have very differing views on copyright! We can advise you on the steps to follow.
-

 National Transportation Safety Board <b>FACTUAL REPORT</b> AVIATION		NTSB ID: ATL93LA159		Aircraft Registration Number: N627DL	
		Occurrence Date: 09/15/1993		Most Critical Injury: Serious	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place ATLANTA		State GA	Zip Code 30320	Local Time 2145	Time Zone EDT
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility: 90		Direction From Airport: 10	
Aircraft Information Summary					
Aircraft Manufacturer BOEING		Model/Series 757-232		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 September 15, 1993, at 2145 eastern daylight time, a Boeing 757-232, N627DL, operating as Delta Flight 250, encountered moderate turbulence climbing through 14,000 feet, approximately ten miles east of Atlanta, Georgia. A flight attendant stationed in the rear of the airplane was injured. The scheduled, domestic, passenger flight operated under 14 CFR Part 121 with a valid instrument clearance. Visual weather conditions prevailed at the time of the accident. The airplane was not damaged and one of the 188 persons on board the airplane was injured. The flight departed Atlanta at 2140 hours.</p> <p>According to the captain, air traffic control cleared the flight to 14,000 feet, and the seat belt sign was turned off as the airplane climbed through 10,000 feet. The flight attendants reported that the flight was normal as they started their normal inflight passenger service. As the flight climbed, the pilots observed a thin layer of clouds along their route of flight. They continued the climb through the layer of clouds; they also observed, on the airborne weather radar system, isolated cumulonimbus (CBs) type clouds about 5 miles northeast of the flight path. At 13,000 feet, the flight encountered what the captain described as moderate turbulence; the seat belt sign was immediately turned on (see attached flight attendant statements with NTSB Form 6120.1/2). The flight broke out of the cloud layer at 14,500 feet; the pilot deviated south of the CBs and continued the flight into Columbia, South Carolina.</p> <p>After the encounter with turbulence, the captain was informed of the injury sustained by the flight attendant. The flight landed without further incident. Additionally, the flight crew reported that turbulent conditions were encountered during their previous flight, into Atlanta, about two hours before Flight 240's departure.</p>					
FACTUAL REPORT - AVIATION					
Page 1					

 <b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b>		NTSB ID: ATL93LA159			
		Occurrence Date: 09/15/1993			
		Occurrence Type: Accident			
<b>Landing Facility/Approach Information</b>					
Airport Name	Airport ID:	Airport Elevation 1026 Ft. MSL	Runway Used 0	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Type Instrument Approach: NONE					
VFR Approach/Landing: None					
<b>Aircraft Information</b>					
Aircraft Manufacturer BOEING		Model/Series 757-232		Serial Number 22917	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 190	Certified Max Gross Wt. 230000 LBS	Number of Engines: 2		
Engine Type: Turbo Fan	Engine Manufacturer: P&W	Model/Series: 2037	Rated Power: 39073 LBS		
- Aircraft Inspection Information					
Type of Last Inspection Continuous Airworthiness	Date of Last Inspection 09/1993	Time Since Last Inspection Hours	Airframe Total Time Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? No	ELT Operated?	ELT Aided in Locating Accident Site?			
<b>Owner/Operator Information</b>					
Registered Aircraft Owner DELTA AIR LINES		Street Address 1010 DELTA BLVD			
		City ATLANTA	State GA	Zip Code 30320	
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: DALA		
- 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					

 <p><b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b></p>	NTSB ID: ATL93LA159
	Occurrence Date: 09/15/1993
	Occurrence Type: Accident

**First Pilot Information**

Name On File	City On File	State On File	Date of Birth On File	Age 55
-----------------	-----------------	------------------	--------------------------	-----------

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

Certificate(s): Airline Transport; Commercial

Airplane Rating(s): Multi-engine Land

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s): Airplane Single-engine; None

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

Medical Cert.: Class 1	Medical Cert. Status: Valid Medical--w/ waivers/lim.	Date of Last Medical Exam: 06/1993
------------------------	--	------------------------------------

- 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	17000	1800								
Pilot In Command(PIC)										
Instructor										
Last 90 Days	200	200								
Last 30 Days										
Last 24 Hours	8	8								

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 ATL	Departure Time 2047	Time Zone EDT
---	-------	---------------------------	------------------------	------------------

Destination COLUMBIA	State SC	Airport Identifier CAE	
-------------------------	-------------	---------------------------	--


Type of Clearance: IFR

Type of Airspace: Class B

**Weather Information**

Source of Briefing: Commercial Weather Service

Method of Briefing:

 <p><b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b></p>	NTSB ID: ATL93LA159
	Occurrence Date: 09/15/1993
	Occurrence Type: Accident

<b>Weather Information</b>					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
ATL	2050	EST	1026 Ft. MSL	10 NM	90 Deg. Mag.
Sky/Lowest Cloud Condition: Scattered			5000 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: None		0 Ft. AGL	Visibility: 15	SM	Altimeter: 30.00 "Hg
Temperature: 26 °C	Dew Point: 21 °C	Wind Direction: 350		Density Altitude: 1000 Ft.	
Wind Speed: 6	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): 0 Ft.	Visibility (RVV) 0	SM	Intensity of Precipitation: Unknown		
Restrictions to Visibility: None					
Type of Precipitation: None					

<b>Accident Information</b>		
Aircraft Damage: None	Aircraft Fire: None	Aircraft Explosion: None

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		5	6
Other Crew					
Passengers				180	180
- TOTAL ABOARD -		1		187	188
Other Ground	0	0	0		0
- GRAND TOTAL -	0	1	0	187	188

National Transportation Safety Board

**FACTUAL REPORT**  
**AVIATION**



NTSB ID: ATL93LA159

Occurrence Date: 09/15/1993

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

PHILLIP POWELL,

Additional Persons Participating in This Accident/Incident Investigation:

PETE MCGUE  
1680 PHOENIX PARKWAY  
COLLEGE PARK, GA 30349