
Turbulence injury, Boeing 777-223, August 22, 2000

Micro-summary: This Boeing 777-223 encountered turbulence during descent, breaking a bone in a flight attendant's foot.


Event Date: 2000-08-22 at 1410 CDT


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.
-

		NTSB ID: CHI00LA268		Aircraft Registration Number: N785AN	
		Occurrence Date: 08/22/2000		Most Critical Injury: Serious	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place BARABOO		State WI	Zip Code 53913	Local Time 1410	Time Zone CDT
Airport Proximity: Unknown		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Boeing		Model/Series 777-223		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 August 22, 2000, at approximately 1410 central daylight time, N785AN, a Boeing 777-223 operated by American Airlines as flight 154, encountered unexpected turbulence, while descending from FL260 to FL190 near the DELLS (DLL) VORTAC in Baraboo, Wisconsin. One flight attendant was seriously injured. The 4 cockpit crewmembers, 11 additional flight attendants, and 235 passengers were not injured. The airplane was not damaged. The 14 CFR Part 121 flight was operating in instrument meteorological conditions at the time of the encounter and the flight was on an IFR flight plan. The flight originated from the Narita Airport, Tokyo, Japan, and continued on to its intended destination of Chicago, Illinois, where it landed without incident.</p> <p>The captain reported the seatbelt sign was on when they encountered unexpected moderate to severe turbulence. He reported they were in instrument meteorological conditions and the radar was indicating cells to the west of their course, but not along their flight path. He reported there was a downdraft followed by an updraft and that the bank angles did not exceed 30 degrees.</p> <p>The first officer reported they were about 20 miles northwest of the DLL VORTAC between FL260 and FL240 when the turbulence was encountered. He reported, "Both the Captain and I had our radar on. My radar indicated nothing other than light precipitation between our position and the VOR. We first encountered what I would term as moderate turbulence. It quickly got worse. I notified ATC of the turbulence as the Captain continued to fly the airplane. A flight attendant opened the cockpit door to inform us that one flight attendant had been injured."</p> <p>Both relief first officers were in the back of the airplane when the turbulence was encountered. They both reported that they were thrown to the floor at the time. One of the relief first officers reported, "The seat belt sign was on and all passengers were seated. The flight attendants were preparing the cabin for landing. The #11 flight attendant apparently injured her foot. I and another flight attendant secured the #11 flight attendant to a jump seat and put an ice pack on her foot. I instructed all other flight attendants to remain in their seats. I returned to the cockpit, and the Captain made the prepare for landing P.A. and reminded everybody to remain seated."</p> <p>The flight attendant who was injured sustained a fractured cuneiform bone in her foot.</p>					
FACTUAL REPORT - AVIATION					

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: CHI00LA268			
		Occurrence Date: 08/22/2000			
		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 777-223		Serial Number 30005	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats:	Certified Max Gross Wt. 0 LBS	Number of Engines: 2		
Engine Type: Turbo Jet	Engine Manufacturer: Rolls-Royce	Model/Series: TRENT 892	Rated Power:		
- Aircraft Inspection Information					
Type of Last Inspection Continuous Airworthiness	Date of Last Inspection 08/2000	Time Since Last Inspection 47 Hours	Airframe Total Time 1655 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? No	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner AMERICAN AIRLINES, INC.		Street Address P.O. BOX 619616			
		City DFW AIRPORT	State TX	Zip Code 75261	
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: AMERICAN AIRLINES			Operator Designator Code: AALA		
- 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; International; Passenger Only					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: CHI00LA268
	Occurrence Date: 08/22/2000
	Occurrence Type: Accident

First Pilot Information				
Name On File	City On File	State On File	Date of Birth	Age 58

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

Certificate(s): Airline Transport; Flight Engineer

Airplane Rating(s): Multi-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?
---	---------------------------------

Medical Cert.: Class 1	Medical Cert. Status: Valid Medical--w/ waivers/lim.	Date of Last Medical Exam: 01/2000
------------------------	--	------------------------------------

- 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										
Pilot In Command(PIC)										
Instructor										
Last 90 Days		97								
Last 30 Days		65								
Last 24 Hours		12								

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

Flight Plan/Itinerary

Type of Flight Plan Filed: IFR	
--------------------------------	--

Departure Point TOKYO	State OF	Airport Identifier NRT	Departure Time 0000	Time Zone
--------------------------	-------------	---------------------------	------------------------	-----------

Destination CHICAGO	State IL	Airport Identifier ORD	
------------------------	-------------	---------------------------	--


Type of Clearance: IFR

Type of Airspace: Class A

Weather Information

Source of Briefing: Company

Method of Briefing:

 National Transportation Safety Board FACTUAL REPORT AVIATION	NTSB ID: CHI00LA268
	Occurrence Date: 08/22/2000
	Occurrence Type: Accident

Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
MSN	1420	CDT	862 Ft. MSL	30 NM	140 Deg. Mag.
Sky/Lowest Cloud Condition: Unknown			0 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: Broken		1900 Ft. AGL		Visibility: 2.5 SM	Altimeter: 30.00 "Hg
Temperature: 73 °C	Dew Point: 72 °C	Wind Direction: 230		Density Altitude: Ft.	
Wind Speed: 5	Gusts:	Weather Conditions at Accident Site: Instrument Conditions			
Visibility (RVR): 0 Ft.	Visibility (RVV) 0 SM	Intensity of Precipitation: Unknown			
Restrictions to Visibility:					
Type of Precipitation: Rain					

Accident Information		
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				3	3
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants		1		11	12
Other Crew					
Passengers				235	235
- TOTAL ABOARD -		1		250	251
Other Ground	0	0	0		0
- GRAND TOTAL -	0	1	0	250	251

--	--

National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: CHI00LA268

Occurrence Date: 08/22/2000

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

PAMELA S. SULLIVAN

Additional Persons Participating in This Accident/Incident Investigation:

RUSS RAUPP
FAA, 9950 W. LAWRENCE, ST 400
SCHILLER PARK, IL 60176

JOHN DARBO
P.O. BOX 619616
DFW, TX 75261