
Broken ankle on landing, McDonnell Douglas MD-88, September 3, 1993

Micro-summary: A flight attendant experienced an injured ankle due to standing while the McDonnell Douglas MD-88 was landing.

Event Date: 1993-09-03 at 2214 EDT


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

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

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		NTSB ID: BFO93LA155		Aircraft Registration Number: N913DL	
		Occurrence Date: 09/03/1993		Most Critical Injury: Serious	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place LEXINGTON		State KY	Zip Code 40522	Local Time 2214	Time Zone EDT
Airport Proximity: On Airport		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer DOUGLAS		Model/Series MD-88		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 Friday, September 3, 1993, at 2214 eastern daylight time, a Douglas MD-88, N913DL, operated by Delta Air Lines of Atlanta, Georgia, as flight 978, and piloted by Carroll Kennedy of Roanoke, Texas, made a hard landing on runway 22 at the Blue Grass Airport, Lexington, Kentucky. The flightcrew was not injured. One of the four cabin crewmembers received a serious injury while standing in the aisle during the landing. The one hundred passengers were not injured. The airplane was not damaged. Visual meteorological conditions prevailed at the time of the accident. A company instrument flight rules flight plan had been filed for the regularly scheduled passenger flight which originated from Atlanta, Georgia. The flight was operating under Federal Aviation Regulations Part 121.</p> <p>The airplane's Flight Data Recorder (FDR) and Cockpit Voice Recorder (CVR) were removed from the airplane and their contents were copied onto separate HF60 Sony cassettes. The cassettes were sent to the Safety Board and reviewed. The CVR revealed that after landing and while taxiing to the gate, a flight attendant reported to the Captain that another flight attendant was injured and that there was a paramedic (passenger) tending to the injured flight attendant. The flight attendant stated, "...[a flight attendant]in the back he was running back here when we were landing and right when we landed he fell on the floor and he's hurt his foot...."</p> <p>The passengers and crew exited the airplane via a jetway and the injured flight attendant was taken to Saint Joseph's Hospital Emergency Care Unit in Lexington, Kentucky, for treatment. A nurse at the hospital stated that the flight attendant had a "fractured fibula."</p> <p>The injured flight attendant stated, "We were finishing up our service when the seatbelt sign came on again, indicating we were preparing for landing. We had interrupted the service during the flight due to turbulence. We began preparing the galley and picking up the cabin. I noticed out of 1R porthole we were getting really close to the ground. I told [a flight attendant] to sit down and I headed back to the single aft jumpseat. I was moving quickly and thinking I had time to get there when I heard a loud popping noise and was knocked to the ground right by my jumpseat...."</p> <p>The FDR revealed that the airplane touched down at 124 knots indicated airspeed and the vertical velocity was about 10.7 feet per second. The maximum vertical acceleration recorded at touch down was 2.5 G's. (For further airplane and pilot performance evaluation, see attached Specialist's Report of Investigation).</p> <p>About eight minutes and 37 seconds prior to touch down, the CVR recorded the Captain stating that he was going to "double ding" the cabincrew. About one second later, the CVR recorded four clicking sounds and four chimes.</p> <p>An excerpt from Delta Air Lines MD-88 Operating Manual under Normal Procedures, page 61, dated 9-1-93, states as an item for the approach checklist, "NO SMOKING LIGHT....CYCLED/ON...From the ON</p>					
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National Transportation Safety Board

FACTUAL REPORT

AVIATION

NTSB ID: BFO93LA155


Occurrence Date: 09/03/1993


Occurrence Type: Accident

Narrative (Continued)

position, slowly cycle the NO SMOKING switch OFF to ON twice to produce a total of four chimes no later than 5 minutes prior to landing...No landing imminent PA will be made."

An excerpt from the Delta Air Lines In-Flight Service On-Board Manual , page 17, dated 4-28-93, states, "H. Landing eminent will be signaled by the Captain cycling the NO SMOKING sign twice. Upon the signal, the FAIC [Flight Attendant In Charge] will ensure the appropriate PA announcement is made.... I. Sit in assigned jumpseat for landing with seat belt and shoulder harness fastened...."

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: BFO93LA155			
		Occurrence Date: 09/03/1993			
		Occurrence Type: Accident			
Landing Facility/Approach Information					
Airport Name BLUE GLASS AIRPORT	Airport ID: LEX	Airport Elevation 980 Ft. MSL	Runway Used 22	Runway Length 7002	Runway Width 150
Runway Surface Type: Asphalt					
Runway Surface Condition: Dry					
Type Instrument Approach:					
VFR Approach/Landing:					
Aircraft Information					
Aircraft Manufacturer DOUGLAS		Model/Series MD-88		Serial Number 49544	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 149	Certified Max Gross Wt. 149500 LBS	Number of Engines: 2		
Engine Type: Turbo Fan	Engine Manufacturer: P&W	Model/Series: JT8D219	Rated Power: 21000 LBS		
- Aircraft Inspection Information					
Type of Last Inspection Continuous Airworthiness	Date of Last Inspection 09/1993	Time Since Last Inspection Hours	Airframe Total Time 15686 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner DELTA AIR LINES		Street Address HARTSFIELD ATLANTA INT'L			
		City ATLANTA	State GA	Zip Code 30320	
Operator of Aircraft DELTA AIR LINES		Street Address Same as Reg'd Aircraft Owner			
		City ATLANTA	State GA	Zip Code 30320	
Operator Does Business As:			Operator Designator Code: DAL		
- 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>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: BFO93LA155
	Occurrence Date: 09/03/1993
	Occurrence Type: Accident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 46
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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

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s): Airplane Multi-engine

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: 05/1993
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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	8869	2740								
Pilot In Command(PIC)										
Instructor										
Last 90 Days	184	184								
Last 30 Days										
Last 24 Hours	7	7								

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 ATLANTA	State GA	Airport Identifier ATL	Departure Time 2043	Time Zone EDT
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Destination Same as Accident/Incident Location	State	Airport Identifier	
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Type of Clearance: IFR

Type of Airspace: Class D; Class E

Weather Information

Source of Briefing: Commercial Weather Service

Method of Briefing:

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: BFO93LA155
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Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
LE	2208	EDT	980 Ft. MSL	1 NM	1 Deg. Mag.
Sky/Lowest Cloud Condition: Scattered			3200 Ft. AGL	Condition of Light: Night/Dark	
Lowest Ceiling: Broken		6000 Ft. AGL		Visibility: 5 SM	Altimeter: "Hg
Temperature: 21 °C	Dew Point: 20 °C	Wind Direction: 280		Density Altitude: Ft.	
Wind Speed: 5	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): 0 Ft.	Visibility (RVV) 0 SM	Intensity of Precipitation: Unknown			
Restrictions to Visibility:					
Type of Precipitation: None					

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				1	1
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants		1		3	4
Other Crew					
Passengers				100	100
- TOTAL ABOARD -		1		105	106
Other Ground	0	0	0		0
- GRAND TOTAL -	0	1	0	105	106

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National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: BFO93LA155

Occurrence Date: 09/03/1993

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

MARGARET B. NAPOLITAN

Additional Persons Participating in This Accident/Incident Investigation:

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6100 DUTCHMAN LANE, KADEN BLD
LOUISVILLE, KY 40205