
Abrupt level-off injury, Boeing 757-232, July 11, 2001

Micro-summary: An abrupt level-off of this Boeing 757-232 at FL330 caused a passenger to be injured.


Event Date: 2001-07-11 at 1830 PDT

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

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

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		NTSB ID: LAX01LA307		Aircraft Registration Number: N644DL	
		Occurrence Date: 07/11/2001		Most Critical Injury: Serious	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place San Francisco		State CA	Zip Code 94128	Local Time 1830	Time Zone PDT
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility: 140		Direction From Airport: 70	
Aircraft Information Summary					
Aircraft Manufacturer Boeing		Model/Series 757-232		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 July 11, 2001, approximately 1830 Pacific daylight time, a Boeing 757-232 transport category airplane, N644DL, operated by Delta Airlines as Flight 1669, experienced an abrupt maneuver during descent over eastern California en route to San Francisco, California. Delta Airlines, Inc., was operating the airplane as a scheduled domestic passenger flight under the provisions of 14 CFR Part 121. The airline transport pilot licensed captain, first officer, 4 flight attendants, and 92 passengers were not injured; however, 1 flight attendant sustained minor injuries, and 1 passenger sustained serious injuries. The airplane was not damaged. The nonstop flight originated from Cincinnati, Ohio, at an undetermined time. Day visual meteorological conditions prevailed, and an instrument flight rules flight plan had been filed. The National Transportation Safety Board was notified of the accident on June 5, 2002.</p>					
Captain's Statement					
<p>The captain was the pilot flying (PF), while the first officer was acting as the pilot not flying (PNF). The captain reported that the flight was normal until reaching the airspace above the Sierra Nevada Mountains. The captain illuminated the fasten seat belt light in the cabin. He made a passenger announcement directing passengers to return to their seats, and to check the security of their seatbelts "because of turbulence." Later, while still flying in turbulence, a flight attendant notified the captain that a passenger had fallen and injured her ankle.</p>					
First Officer's Statement					
<p>The first officer indicated that they were given an initial descent clearance from flight level (FL) 390 (39,000 feet) to FL330. The captain entered the assigned altitude into the autopilot system and began the descent. The PNF began programming the flight management system (FMS) for the approach into San Francisco. The PNF looked up from the FMS to see that they were descending through FL330, and queried the captain. The captain "immediately pulled the aircraft out of the descent and leveled the aircraft off at FL330." According to the first officer, the maximum deviation was 200 feet below the assigned altitude. He described the maneuver as "abrupt," and the flight crew immediately received a call from the flight attendants in the rear of the airplane inquiring what had happened. The captain reported they had hit turbulence.</p>					
The first officer reported that the fasten seatbelt sign was illuminated prior to the occurrence.					
Flight Attendants' Statements					
<p>According to the on-board leader (OBL), during the cruise portions of the flight, she recalled no discussion of turbulence with the flight crew, and reported it was "pretty smooth during cruise." She had just left the cockpit and was in the forward galley when the flight crew turned on the fasten seat belt light. She assumed the flight crew was signaling the initial approach. It was</p>					
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National Transportation Safety Board

FACTUAL REPORT

AVIATION

NTSB ID: LAX01LA307

Occurrence Date: 07/11/2001

Occurrence Type: Accident

Narrative (Continued)

then that she felt the "ground came up" and she "buckled down," but she caught herself before falling. She was then informed that a passenger was injured and briefed the captain, who explained the event as "unexpected rough air or an air pocket."

The remaining flight attendants reported a smooth flight prior to the event. The fasten seat belt sign illuminated a few minutes prior to the event; however, they could not remember an accompanying announcement from the flight crew. All of the attendants reported being pushed downward, and one hit her knee. A few of the attendants assisted the injured passenger, and stated that the captain reported that the event was "turbulence" related.

Passenger Statement


The passenger reported hearing an announcement from the pilot indicating they were 30 minutes from San Francisco, and it was a good time to get up before the flight began its descent. The passenger when into the lavatory, and was washing her hands when she was "thrown into the sink," and "held hard and flat against it by gravity." She remembered something hitting her left foot but "blacked out." When she came to, she noticed her foot "dangling and misshaped." The flight attendants assisted the passenger to a seat and arranged for paramedics to meet the flight upon landing. Medical examination of the passenger's ankle revealed it was fractured.


Captain's Follow-up Statement

The captain provided a supplement statement, in which he reported making a few heading changes to afford a view of Yosemite National Park. The flight encountered "some light turbulence," and he directed that the fasten seat belt sign be turned on and made an announcement to the passengers. Air traffic control directed the flight to descend from FL350 to FL310. Since the first officer was busy programming the FMS, the captain initiated the descent utilizing the vertical speed feature of the autopilot (1,000 feet per minute). Just after leveling off at FL310, the flight experienced a "ripple" of turbulence. The first officer, whose head was down, looked up and exclaimed that the flight was supposed to be at FL350. The flight then experienced a second "turbulence bump," and both flight crewmembers grabbed the control yokes. The first officer asked the captain what he was doing. The captain assumed that the first officer was concerned with the altitude. The captain asked the first officer to confirm the altitude clearance with air traffic control, which he did.

While on the ground, the captain and first officer discussed the matter in the cockpit. The first officer believed that the captain caused the "bump" by moving the control yoke. The captain added that the autopilot never kicked off, and there was no altitude warning alert.

As reported previously, the Safety Board was not informed of the event until almost 1 year after the event. Flight data recordings, weather briefings, air traffic control information, and cockpit voice recordings pertaining to the accident flight no longer existed.

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: LAX01LA307				
		Occurrence Date: 07/11/2001				
		Occurrence Type: Accident				
Landing Facility/Approach Information						
Airport Name San Francisco International		Airport ID: SFO	Airport Elevation 13 Ft. MSL	Runway Used NA	Runway Length	Runway Width
Runway Surface Type: Unknown						
Runway Surface Condition: Unknown						
Type Instrument Approach: Unknown						
VFR Approach/Landing: Unknown						
Aircraft Information						
Aircraft Manufacturer Boeing		Model/Series 757-232		Serial Number 23998		
Airworthiness Certificate(s): Transport						
Landing Gear Type: Retractable - Tricycle						
Homebuilt Aircraft? No		Number of Seats: 189	Certified Max Gross Wt. 232000 LBS		Number of Engines: 2	
Engine Type: Turbo Fan		Engine Manufacturer: Pratt & Whitney		Model/Series: PW2037	Rated Power: 37000 LBS	
- Aircraft Inspection Information						
Type of Last Inspection Continuous Airworthiness		Date of Last Inspection 06/2001	Time Since Last Inspection Hours		Airframe Total Time 43432 Hours	
- Emergency Locator Transmitter (ELT) Information						
ELT Installed? Yes		ELT Operated? No		ELT Aided in Locating Accident Site? No		
Owner/Operator Information						
Registered Aircraft Owner DELTA AIRLINES, INC.		Street Address HARTSFIELD ATLANTA AIRPORT				
		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						
FACTUAL REPORT - AVIATION						

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: LAX01LA307
	Occurrence Date: 07/11/2001
	Occurrence Type: Accident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 48
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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

Airplane Rating(s): Multi-engine Land

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s):

Type Rating/Endorsement for Accident/Incident Aircraft? Yes	Current Biennial Flight Review? 04/2001
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Medical Cert.: Class 1	Medical Cert. Status: Without Waivers/Limitations	Date of Last Medical Exam: 04/2001
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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	7375	2800								
Pilot In Command(PIC)										
Instructor										
Last 90 Days	242	242								
Last 30 Days										
Last 24 Hours	4	4								

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 CINCINNATI	State OH	Airport Identifier CVG	Departure Time	Time Zone
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Destination Same as Accident/Incident Location	State	Airport Identifier SFO	
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Type of Clearance: IFR

Type of Airspace: Class A

Weather Information

Source of Briefing: Company

Method of Briefing: Unknown

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Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
SFO	1756	PDT	13 Ft. MSL	140 NM	250 Deg. Mag.
Sky/Lowest Cloud Condition: Thin Broken			2200 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: Broken		2200 Ft. AGL		Visibility: 10 SM	Altimeter: 30.02 "Hg
Temperature: 17 °C	Dew Point: 11 °C	Wind Direction: 230		Density Altitude: Ft.	
Wind Speed: 18	Gusts: 23	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): Ft.	Visibility (RVV) SM	Intensity of Precipitation:			
Restrictions to Visibility: None					
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	4	5
Other Crew					
Passengers		1		92	93
- TOTAL ABOARD -		1	1	98	100
Other Ground					
- GRAND TOTAL -		1	1	98	100

National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: LAX01LA307

Occurrence Date: 07/11/2001

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

Howard D. Plagens

Additional Persons Participating in This Accident/Incident Investigation:

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