



National Transportation Safety Board Aviation Accident Final Report

Location:	CHICAGO, IL	Accident Number:	CHI97LA078
Date & Time:	03/02/1997, 0555 CST	Registration:	N755AT
Aircraft:	Boeing 757-2Q8	Aircraft Damage:	None
Defining Event:		Injuries:	4 Serious, 18 Minor, 180 None
Flight Conducted Under:	Part 129: Foreign		

Analysis

The flight crew had checked weather for the intended flight from Durango, Mexico, to Chicago, Illinois, including a briefing from an arriving pilot who warned of light to moderate turbulence. The airplane encountered clear air turbulence while descending from 26,000 feet to 20,000 feet which was described as severe. When the turbulence was encountered the flight crew and a flight attendant made an announcement for the passengers to return to their seats and shortly after that, the 'Fasten Seatbelt' sign was turned on. Two of the passengers sustaining serious injuries were occupying the lavatory at the time of the turbulence encounter.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Clear air turbulence.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: DESCENT

Findings

1. (C) WEATHER CONDITION - TURBULENCE,CLEAR AIR

Factual Information

On March 2, 1997, at 0555 central standard time, a Boeing 757-2Q8, N755AT, operating as Mexicana Airlines Flight 199, experienced turbulence approximately 120 miles south of Chicago, Illinois. The international 14 CFR Part 129 flight was descending through 26,000 feet. The flight departed Durango, Mexico, at 0335 with the intended destination of Chicago, Illinois. The airplane sustained no damage; however, of the 202 persons aboard, 18 suffered minor injuries and 4 sustained serious injuries. Visual meteorological conditions prevailed at the destination at the time of the accident.

The Captain stated in his written statement that the turbulence began when the airplane descended through 26,000 feet and continued until 20,000 feet. He said that when passing through 26,000 he made an announcement to the passengers to take their seats. He said that during the turbulence he told passengers to fasten their seatbelts. He said that after the turbulence encounter the "Fasten Seatbelt" sign remained on.

The First Officer, who was at the controls at the time of the turbulence encounter, said in his written report that descending through 28,000 feet he felt a little turbulence and discussed reducing penetration speed with the Captain, who agreed. He said that from 26,000 to 20,000 feet the airplane encountered severe turbulence with rate of climb reaching a 5,000 foot per minute descent and climb respectively. He said the auto pilot was turned off, and the turbulence lasted about two minutes. He said that while this was happening he told the Captain to turn on the "Fasten Seatbelt" light. He indicated that after the turbulence encounter the Captain took control of the airplane.

A flight attendant described the turbulence encounter in her written statement stating that when it started she made an announcement for passengers to return to their seats and fasten their seatbelts. This announcement was given in English and Spanish. She indicated that the two most seriously injured passengers were in the lavatory when the turbulence encounter occurred.

The company debriefed the crew. The company stated that the encounter was in clear air and they characterized it as "clear air turbulence." The company reported that the pilots received no previous warning of turbulence while in-flight. They did say that the Captain obtained meteorological information in Durango and talked with an arriving Captain who briefed him on the route conditions stating that he had encountered light to moderate occasional turbulence.

The accident occurred on Sunday (March 2nd). Notification was received by the NTSB at 1008 on March 3rd. Prior to receiving notification, the airplane had been inspected by company maintenance personnel while in Chicago on the date of the incident and no external damage was found. The airplane was then returned to service and had made a return trip to Mexico the afternoon of the same day. There was no attempt to isolate the cockpit voice recorder or the digital flight data recorder prior to further operation of the airplane.

Pilot Information

Certificate:	Airline Transport; Flight Instructor	Age:	56, Male
Airplane Rating(s):	Multi-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	06/17/1996
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	19500 hours (Total, all aircraft), 200 hours (Total, this make and model), 13500 hours (Pilot In Command, all aircraft), 150 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Boeing	Registration:	N755AT
Model/Series:	757-2Q8 757-2Q8	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	24965
Landing Gear Type:	Retractable - Tricycle	Seats:	220
Date/Type of Last Inspection:	AAIP	Certified Max Gross Wt.:	256000 lbs
Time Since Last Inspection:	806 Hours	Engines:	2 Turbo Fan
Airframe Total Time:		Engine Manufacturer:	P&W
ELT:	Not installed	Engine Model/Series:	PW 2040
Registered Owner:	MEXICANA AIRLINES	Rated Power:	41300 lbs
Operator:	MEXICANA AIRLINES	Operating Certificate(s) Held:	None
Operator Does Business As:	MEXICANA AIRLINES	Operator Designator Code:	CMDF

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Night/Dark
Observation Facility, Elevation:	ORD, 666 ft msl	Distance from Accident Site:	120 Nautical Miles
Observation Time:	0556 CST	Direction from Accident Site:	360°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	Overcast / 2500 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	300°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	-1° C / -4° C
Precipitation and Obscuration:			
Departure Point:	DURANGO, MX (DGO)	Type of Flight Plan Filed:	IFR
Destination:	, IL (ORD)	Type of Clearance:	IFR
Departure Time:	0335 CST	Type of Airspace:	Class A

Airport Information

Airport:	Runway Surface Type:
Airport Elevation:	Runway Surface Condition:
Runway Used: 0	IFR Approach:
Runway Length/Width:	VFR Approach/Landing:

Wreckage and Impact Information

Crew Injuries:	4 Minor, 4 None	Aircraft Damage:	None
Passenger Injuries:	4 Serious, 14 Minor, 176 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 Serious, 18 Minor, 180 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	STEPHEN A WILSON	Report Date:	12/08/1999
Additional Participating Persons:	ROBERT D WOOD; SCHILLER PARK, IL		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).