



National Transportation Safety Board Aviation Accident Final Report

Location:	DENVER, CO	Accident Number:	DCA84AA025
Date & Time:	05/31/1984, 1334 MDT	Registration:	N7640U
Aircraft:	BOEING 727-222	Aircraft Damage:	Substantial
Defining Event:		Injuries:	105 None

Flight Conducted Under: Part 121: Air Carrier - Scheduled

Analysis

BEFORE TAKEOFF, THE CREW OF N7647U (UA FLT 663) NOTED CUMULUS CLOUDS & VIRGA IN THE AREA. AT 1327, A DEHAVILLAND DASH 7 CREW RPRTD A 25 KT LOSS OF AIRSPEED, BUT SVRL OTHER ACFT THEN TOOK OFF WITHOUT RPRTG A PROBLEM. DUE TO RADIO CONJESTION,THE CAPTAIN DID NOT QUERY OTHER AIRCREWS, BUT DECIDED TO CLIMB OUT AT V₂ PLUS 20. WHEN THE CONTROLLER CLEARED FLT 663 FOR TAKEOFF, HE ADVISED THE CREW OF NUMEROUS WIND SHEARS IN 3 QUADRANTS, BUT USED INCORRECT TERMINOLOGY IN ISSUING THE WIND SHEAR ALERT. DURING TAKEOFF, THE ACFT STRUCK AN ILS LOCALIZER ANTENNA, 1074 FT FROM THE DEPT END OF THE RWY, & DAMAGED THE LOWER FUSELAGE. WHEN UNABLE TO PRESSURIZE THE ACFT, THE CREW RETURNED TO THE ARPT & LANDED. AN INVESTIGATIONREVEALED THE ACFT ENCOUNTERED WIND SHEAR FROM MICROBURST ACTIVITY WHICH REACHED ITS GREATEST ACTIVITY AS FLT 663 WAS TAKING OFF. THE WIND SHEARED FROM AN 8 KT HEADWIND TO 40 TO 56 KTS OVER A 44 SEC PERIOD. THE CREW NOTED A HESITATION WHILE ACCELERATING THRU 120 KTS, THEN AT OR BEYOND VR SPEED OF APRX 141 KTS, THE ACFT MOMENTARILY LOST 20 KTS.

Probable Cause and Findings

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

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (F) WEATHER CONDITION - RAIN
2. (F) WEATHER CONDITION - HIGH WIND
3. (F) WEATHER CONDITION - GUSTS
4. (F) WEATHER CONDITION - UNFAVORABLE WIND
5. SAFETY ADVISORY - ISSUED - PILOT OF OTHER AIRCRAFT
6. (F) RADIO COMMUNICATIONS - EXCESSIVE
7. (F) AIRPORT/FACILITIES - INADEQUATE
8. (F) WEATHER EVALUATION - INACCURATE - PILOT IN COMMAND
9. (F) INFORMATION UNCLEAR - ATC PERSONNEL(LCL/GND/CLNC)
10. (C) WEATHER CONDITION - WINDSHEAR

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

11. (F) OBJECT - APPROACH LIGHT/NAVAID

Factual Information

Pilot Information

Certificate:	Airline Transport; Commercial	Age:	46, Male
Airplane Rating(s):	Multi-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):		Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	None Valid Medical--no waivers/lim.	Last Medical Exam:	03/06/1984
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	12400 hours (Total, all aircraft), 8000 hours (Total, this make and model), 69 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	BOEING	Registration:	N7640U
Model/Series:	727-222 727-222	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	19913
Landing Gear Type:	Retractable - Tricycle	Seats:	144
Date/Type of Last Inspection:	Continuous Airworthiness	Certified Max Gross Wt.:	172000 lbs
Time Since Last Inspection:	0 Hours	Engines:	3 Turbo Fan
Airframe Total Time:		Engine Manufacturer:	P&W
ELT:	Not installed	Engine Model/Series:	JT8D-7B
Registered Owner:	UNITED AIRLINES	Rated Power:	14000 lbs
Operator:	UNITED AIRLINES	Air Carrier Operating Certificate:	Flag carrier (121)
Operator Does Business As:		Operator Designator Code:	UALA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	DEN, 0 ft msl	Observation Time:	0000
Distance from Accident Site:	0 Nautical Miles	Direction from Accident Site:	0°
Lowest Cloud Condition:	Unknown / 8000 ft agl	Temperature/Dew Point:	28° C / 4° C
Lowest Ceiling:	Broken / 8000 ft agl	Visibility	20 Miles
Wind Speed/Gusts, Direction:	/ 32 knots, Variable	Visibility (RVR):	0 ft
Altimeter Setting:	29 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	IFR
Destination:	LAS VEGAS, NV (LAS)	Type of Clearance:	IFR
Departure Time:	1333 MDT	Type of Airspace:	Class E

Airport Information

Airport:	STAPLETON (DEN)	Runway Surface Type:	Concrete
Airport Elevation:	5333 ft	Runway Surface Condition:	Dry
Runway Used:	35L	IFR Approach:	
Runway Length/Width:	11500 ft / 150 ft	VFR Approach/Landing:	Precautionary Landing

Wreckage and Impact Information

Crew Injuries:	7 None	Aircraft Damage:	Substantial
Passenger Injuries:	98 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	105 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	STEPHAN J CORRIE	Adopted Date:	08/30/1994
Additional Participating Persons:			
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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