



National Transportation Safety Board Aviation Accident Final Report

Location:	DENVER, CO	Accident Number:	DEN93FA015
Date & Time:	12/09/1992, 0800 MST	Registration:	N810CK
Aircraft:	DOUGLAS DC-8-52	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 None

Flight Conducted Under: Part 121: Air Carrier - Non-scheduled

Analysis

WHILE IN CRUISE FLIGHT AT FLIGHT LEVEL 310, 20 MILES WEST OF DENVER, COLORADO, THE ALL CARGO 14 CFR PART 121 FLIGHT ENCOUNTERED SEVERE CLEAR AIR TURBULENCE WHICH CAUSED MAJOR FLUCTUATIONS IN SPEED AND OSCILLATIONS IN BOTH PITCH AND ROLL. DURING THESE DEPARTURES FROM CONTROLLED FLIGHT, THE NUMBER ONE ENGINE AND 19 FEET OF THE LEADING EDGE OF THE LEFT WING SEPARATED FROM THE AIRCRAFT. IN ADDITION, THE NUMBER FOUR ENGINE PYLON CRACKED AND EXPERIENCED SUBSTANTIAL STRUCTURAL DAMAGE. THE FLIGHT CONDUCTED A PRECAUTIONARY DESCENT AND LANDED AT STAPLETON INTERNATIONAL AIRPORT, DENVER, COLORADO. PRECEDING THE OCCURRENCE, THE FLIGHT WAS ENCOUNTERING LIGHT TO OCCASIONALLY MODERATE CHOP, WITH MODERATE TO SEVERE TURBULENCE FORECAST.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
AN ENCOUNTER WITH SEVERE CLEAR AIR TURBULENCE.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: CRUISE - NORMAL

Findings

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

Occurrence #2: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CRUISE - NORMAL

Findings

2. WING,SKIN - LOSS,PARTIAL
3. WING,WING RIB - LOSS,PARTIAL
4. WING - OVERLOAD

Occurrence #3: ENGINE TEARAWAY
Phase of Operation: CRUISE - NORMAL

Findings

5. NACELLE/PYLON - FAILURE,TOTAL
6. NACELLE/PYLON - FAILURE,PARTIAL
7. NACELLE/PYLON - OVERLOAD

Factual Information

Pilot Information

Certificate:	Airline Transport; Commercial	Age:	45, Male
Airplane Rating(s):	Multi-engine Land; Single-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):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim.	Last Medical Exam:	06/03/1992
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	12497 hours (Total, all aircraft), 4000 hours (Total, this make and model), 10400 hours (Pilot In Command, all aircraft), 161 hours (Last 90 days, all aircraft), 59 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	DOUGLAS	Registration:	N810CK
Model/Series:	DC-8-52 DC-8-52	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	45814
Landing Gear Type:	Retractable - Tricycle	Seats:	5
Date/Type of Last Inspection:	10/24/1992, Continuous Airworthiness	Certified Max Gross Wt.:	305000 lbs
Time Since Last Inspection:	136 Hours	Engines:	4 Turbo Jet
Airframe Total Time:	32283 Hours	Engine Manufacturer:	P&W
ELT:	Installed, not activated	Engine Model/Series:	JT3D-3B
Registered Owner:	AMERICAN INTERNATIONAL AIRWAYS	Rated Power:	18000 lbs
Operator:	CONNIE KALITTA SERVICES	Air Carrier Operating Certificate:	Air Cargo
Operator Does Business As:	AMERICAN INT'L AIRWAYS	Operator Designator Code:	CKSA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	DEN, 5333 ft msl	Observation Time:	0752 MST
Distance from Accident Site:	20 Nautical Miles	Direction from Accident Site:	80°
Lowest Cloud Condition:	Scattered / 16000 ft agl	Temperature/Dew Point:	6° C / -7° C
Lowest Ceiling:	Broken / 22000 ft agl	Visibility	40 Miles
Wind Speed/Gusts, Direction:	4 knots, 20°	Visibility (RVR):	0 ft
Altimeter Setting:	29 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:	DAYTON, OH (DAY)	Type of Flight Plan Filed:	IFR
Destination:	SAN JOSE, CA (SJC)	Type of Clearance:	IFR
Departure Time:	0528 MST	Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	3 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	NORMAN F WIEMEYER	Adopted Date:	08/30/1993
Additional Participating Persons:	CASEY STENGEL; DENVER, CO MARTY SPEISER; WASHINGTON, DC MIKE LEE; LONG BEACH, CA JANNA GOWTHROP; DENVER, CO		
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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