



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	LOS ANGELES, California	<b>Incident Number:</b>	LAX89IA315
<b>Date &amp; Time:</b>	August 10, 1989, 12:00 Local	<b>Registration:</b>	N88709
<b>Aircraft:</b>	BOEING 727-224	<b>Aircraft Damage:</b>	Minor
<b>Defining Event:</b>		<b>Injuries:</b>	148 None
<b>Flight Conducted Under:</b>	Part 121: Air carrier - Scheduled		

## Analysis

THE CREW OF CONTINENTAL FLIGHT 1223, A BOEING 727, NOTED A SEVERE FLOOR VIBRATION BETWEEN PASSENGER ROWS 21 AND 26 WHILE AT FL310 AT A CRUISE SPEED OF 0.8 MACH. THE CREW SLOWED THE AIRCRAFT TO 280 KTS IAS, DESCENDED TO FL240 AND PROCEEDED TO LOS ANGELES WITHOUT FURTHER DIFFICULTY. A 15 1/2 INCH CONTINUOUS CRACK WAS FOUND ALONG A ROW OF RIVETS AT THE FLOOR LINE IN THE RIGHT WHEEL WELL. THE CRACK WAS IN CLOSE PROXIMITY TO TWO PREVIOUS REPAIRS. THE CRACKS APPREARED TO BE FROM FATIGUE. THE REPAIR OF THE PANEL INVOLVED INSTALLATION OF A DOUBLE PLATE OVER THE REGION.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: A FATIGUE CRACK IN THE RIGHT GEAR WHEEL WELL.

## Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation: CRUISE - NORMAL

### Findings

1. (C) FUSELAGE - CRACKED
2. (C) FUSELAGE - FATIGUE



## Factual Information

### Pilot Information

<b>Certificate:</b>	Airline transport	<b>Age:</b>	51,Male
<b>Airplane Rating(s):</b>	Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane multi-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	July 3, 1989
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	19000 hours (Total, all aircraft), 9600 hours (Total, this make and model)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BOEING	<b>Registration:</b>	N88709
<b>Model/Series:</b>	727-224 727-224	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal; Transport	<b>Serial Number:</b>	19800
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	134
<b>Date/Type of Last Inspection:</b>	August 3, 1989 Continuous airworthiness	<b>Certified Max Gross Wt.:</b>	142000 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	3 Turbo fan
<b>Airframe Total Time:</b>	64986 Hrs	<b>Engine Manufacturer:</b>	P&W
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	JT8D
<b>Registered Owner:</b>	CONTINENTAL AIRLINES INC	<b>Rated Power:</b>	15500 Horsepower
<b>Operator:</b>	CONTINENTAL AIRLINES	<b>Operating Certificate(s) Held:</b>	Flag carrier (121)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Unknown	Visibility	
Lowest Ceiling:	Unknown	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	SAN ANTONIO (SAT )	Type of Flight Plan Filed:	IFR
Destination:		Type of Clearance:	IFR
Departure Time:	00:00 Local	Type of Airspace:	Class E

## Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:	0 ft msl	Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:	0 ft / 0 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

Crew Injuries:	7 None	Aircraft Damage:	Minor
Passenger Injuries:	141 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	148 None	Latitude, Longitude:	

## Administrative Information

**Investigator In Charge (IIC):** Mucho, R. gary

**Additional Participating Persons:**

**Original Publish Date:** August 26, 1992

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=26260>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).