



Aviation Investigation Final Report

Location:	CHICAGO, Illinois	Incident Number:	CHI89IA018
Date & Time:	October 24, 1988, 16:10 Local	Registration:	N277US
Aircraft:	BOEING B-727-200A	Aircraft Damage:	Minor
Defining Event:		Injuries:	80 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

ON DEPARTURE FROM CHICAGO, ILLINOIS, O'HARE AIRPORT THE AIRCRAFT EXPERIENCED A LOSS OF THE INBOARD LEFT MAIN WHEEL. THE AIRCRAFT DIVERTED TO DETROIT, MICHIGAN, WHERE IT WAS LANDED WITH NO DAMAGE TO THE AIRCRAFT AND NO INJURIES TO THE CREW OR PASSENGERS. SUBSEQUENT EXAMINATION OF THE BROKEN INBOARD AXLE ASSEMBLY BY THE NTSB METALLURGICAL LAB, REVEALED FATIGUE CRACKING OF THE AXLE.

Probable Cause and Findings

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

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. (C) LANDING GEAR,AXLE - FATIGUE
2. (C) MATERIAL DEFECT - MANUFACTURER
3. LANDING GEAR,AXLE - FAILURE,TOTAL

Factual Information

Pilot Information

Certificate:	Airline transport	Age:	52, Male
Airplane Rating(s):	Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
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 FAA Medical Exam:	August 12, 1988
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	13234 hours (Total, all aircraft), 6774 hours (Total, this make and model), 160 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BOEING	Registration:	N277US
Model/Series:	B-727-200A B-727-200A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	21156
Landing Gear Type:	Retractable - Tricycle	Seats:	155
Date/Type of Last Inspection:	Continuous airworthiness	Certified Max Gross Wt.:	177500 lbs
Time Since Last Inspection:	808 Hrs	Engines:	3 Turbo fan
Airframe Total Time:	31131 Hrs	Engine Manufacturer:	P&W
ELT:	Not installed	Engine Model/Series:	JT8D-15
Registered Owner:	NORTHWEST AIRLINES, INC	Rated Power:	15000 Lbs thrust
Operator:	NORTHWEST AIRLINES, INC.	Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:		Operator Designator Code:	NWAA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	ORD ,667 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	15:45 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Unknown	Visibility	10 miles
Lowest Ceiling:	Overcast / 2300 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	12 knots / 20 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	290°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	3°C / -2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	CHICAGO , IL (ORD)	Type of Flight Plan Filed:	IFR
Destination:	BOSTON , MA (BOS)	Type of Clearance:	IFR
Departure Time:	16:10 Local	Type of Airspace:	Class B;Class D;Class E

Airport Information

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

Wreckage and Impact Information

Crew Injuries:	6 None	Aircraft Damage:	Minor
Passenger Injuries:	74 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	80 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC): Wilson, Stephen

Additional Participating Persons: ; CHICAGO , IL

Original Publish Date: June 11, 1990

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=14278>

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](#).