



# National Transportation Safety Board Aviation Incident Final Report

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<b>Location:</b>	DENVER, CO	<b>Incident Number:</b>	DEN92IA025
<b>Date &amp; Time:</b>	01/03/1992, 1355 MST	<b>Registration:</b>	N343UA
<b>Aircraft:</b>	BOEING 737-300	<b>Aircraft Damage:</b>	Minor
<b>Defining Event:</b>		<b>Injuries:</b>	127 None
<b>Flight Conducted Under:</b>	Part 121: Air Carrier - Scheduled		

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## Analysis

DURING CLIMB, THE CREW NOTED AN ELECTRICAL ARCING SOUND AND SLIGHT ELECTRICAL-TYPE BURNING ODOR WHILE PASSING THROUGH FLIGHT LEVEL 180. EMERGENCY PROCEDURES WERE COMPLIED WITH AND THE PROBLEM APPEARED TO BE SOLVED. THE CLIMB WAS CONTINUED, AND WHILE PASSING THROUGH FLIGHT LEVEL 330 A LOUD ARCING SOUND WAS AGAIN HEARD ACCOMPANIED BY FLAMES FROM THE FLIGHT DECK AFT OVERHEAD PANEL. THE FLIGHT ATTENDANTS EXTINGUISHED THE FIRE, AND THE FLIGHT RETURNED TO DENVER AND LANDED WITHOUT FURTHER INCIDENT. EXAMINATION DISCLOSED A SHORT IN A WIRE BUNDLE. THE BUNDLE WAS NOT SHIELDED OR ANCHORED AS THE OTHER MAJOR BUNDLE IN THE COMPARTMENT. THE SHORT WAS DUE TO THE BUNDLE CHAFING ON THE FLIGHT DECK ENTRY DOOR FRAME. IN ADDITION, TESTING REVEALED THAT THE WIRE GAUGE USED IN PART OF THIS APPLICATION WAS INSUFFICIENT FOR THE ELECTRICAL LOAD.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: AN ELECTRICAL SHORT CIRCUIT IN A MAIN WIRE BUNDLE DUE TO CHAFING OF THE BUNDLE ON AIRFRAME STRUCTURAL MEMBERS.

## Findings

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Occurrence #1: FIRE

Phase of Operation: CLIMB - TO CRUISE

### Findings

1. (C) ELECTRICAL SYSTEM, ELECTRIC WIRING - CHAFED
2. (C) ELECTRICAL SYSTEM, ELECTRIC WIRING - SHORTED
3. (C) ELECTRICAL SYSTEM, ELECTRIC WIRING - FIRE

## Factual Information

### Pilot Information

<b>Certificate:</b>	Airline Transport	<b>Age:</b>	48, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Multi-engine Sea; Single-engine Land; Single-engine Sea	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	12/01/1991
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	6673 hours (Total, all aircraft), 1399 hours (Total, this make and model)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BOEING	<b>Registration:</b>	N343UA
<b>Model/Series:</b>	737-300 737-300	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Transport	<b>Serial Number:</b>	24247
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	136
<b>Date/Type of Last Inspection:</b>	03/05/1991, Continuous Airworthiness	<b>Certified Max Gross Wt.:</b>	130000 lbs
<b>Time Since Last Inspection:</b>	2731 Hours	<b>Engines:</b>	2 Turbo Fan
<b>Airframe Total Time:</b>	6974 Hours	<b>Engine Manufacturer:</b>	GE
<b>ELT:</b>		<b>Engine Model/Series:</b>	CFM 56
<b>Registered Owner:</b>	UNITED AIRLINES	<b>Rated Power:</b>	20000 lbs
<b>Operator:</b>	UNITED AIRLINES	<b>Operating Certificate(s) Held:</b>	Flag carrier (121)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	UALA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0000	Direction from Accident Site:	0°
Lowest Cloud Condition:	Scattered / 8000 ft agl	Visibility	99 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	190°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	9° C / -4° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	IFR
Destination:	LAS VEGAS, NV (LAS)	Type of Clearance:	IFR
Departure Time:	1350 MST	Type of Airspace:	Class E

## Wreckage and Impact Information

Crew Injuries:	6 None	Aircraft Damage:	Minor
Passenger Injuries:	121 None	Aircraft Fire:	In-Flight
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	127 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	NORMAN F WIEMEYER	Report Date:	12/16/1993
Additional Participating Persons:	TOM SCIACCA; 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 <a href="mailto:pubinquiry@ntsb.gov">pubinquiry@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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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](#).