
Frozen aileron cable, Boeing 767-222, June 7, 2000

Micro-summary: This Boeing 767-222 experienced aileron control difficulties while in cruise flight.


Event Date: 2000-06-07 at 1236 CDT

Investigative Body: National Transportation Safety Board (NTSB), USA

Investigative Body's Web Site: <http://www.nts.gov/>

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		NTSB ID: CHI00IA152		Aircraft Registration Number: N603UA	
		Occurrence Date: 06/07/2000		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place LAFAYETTE	State IN	Zip Code 47901	Local Time 1236	Time Zone CDT	
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Boeing		Model/Series 767-222		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:					
<p>On June 7, 2000, at 1236 central daylight time (cdt), a Boeing 767-222, N603UA, operated by United Airlines, Inc., experienced aileron control difficulties while in cruise flight at flight level (FL) 390. The flight diverted to the O'Hare International Airport, Chicago, Illinois where an uneventful landing was made. There were no injuries reported to the 154 passengers, 9 cabin attendants, or 2 flight crew members. The 14 CFR Part 121 flight was operating on an instrument flight rules flight plan. Visual meteorological conditions prevailed at the O'Hare International Airport at the time of the event. The flight originated from the John F. Kennedy International Airport (JFK), New York, New York at 1030 cdt, and the San Francisco International Airport, San Francisco, California, was the intended destination.</p> <p>The captain reported, in a written statement, that while in cruise flight at FL 390, with the center autopilot engaged with lateral navigation (LNAV), vertical navigation (VNAV) and autothrottles engaged, "...the center autopilot made an uncommanded disconnect." According to the captain, the engine indicating and crew alerting system (EICAS) autopilot disconnect message illuminated and the aircraft master caution was cancelled. The captain said that autopilot disconnect warning light and aural warning activated and were subsequently cancelled. The captain said that he took control of the aircraft and found that the rudder and elevator systems appeared to be functioning normally but "...the control wheel was jammed in the straight and level position." The captain said that approximately 15 pounds of force was applied in order to free the control wheel. The captain said that the autopilot and autothrottles were not engaged for the remainder of the flight, an emergency was declared, and the flight diverted to O'Hare where an uneventful landing was made.</p> <p>A postaccident examination was conducted and several components of the autopilot system were examined. No anomalies were found that could be attributed to the aileron control anomaly. Further examination of the aircraft revealed that the wheel well canted pressure deck drain lines were obstructed by debris. A Boeing service bulletin was found that recommends changes to the drain system. Boeing service bulletin 767-51A0020 states that, "Incorporation of this service bulletin will help ensure that fluid entering the canted pressure deck area will be drained out of the airplane and not leak into the wheel well area where it could freeze on the aileron control cables or the landing gear doors during flight." The service bulletin also states that, "Three operators reported instances of ice accumulating on the aileron cables. In two of the instances, the ice on the aileron cables caused the control wheel not to move when on autopilot. The autopilot was disengaged and the pilot had to operate the aileron system manually. Higher than normal control wheel input force was required to free the cables and restore normal aileron control. The ice-build up on the aileron control cables was attributed to fluid from the sloping pressure deck leaking into the wheel well and freezing." It was determined that the Boeing service bulletin had not been complied with on this aircraft.</p> <p>According to United Airlines records, the aircraft arrived at JFK on June 6, 2000 at 1956 eastern</p>					
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National Transportation Safety Board

FACTUAL REPORT

AVIATION

SAFETY BOARD

NTSB ID: CHI00IA152


Occurrence Date: 06/07/2000


Occurrence Type: Incident

Narrative (Continued)

daylight time. Weather reports for the JFK airport show rain during the night of June 6, 2000 and during the morning of June 7, 2000.

Parties to the investigation were the Federal Aviation Administration, United Airlines, Rockwell Collins, and Boeing.

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: CHI00IA152			
		Occurrence Date: 06/07/2000			
		Occurrence Type: Incident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used 0	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Type Instrument Approach:					
VFR Approach/Landing:					
Aircraft Information					
Aircraft Manufacturer Boeing		Model/Series 767-222		Serial Number 21864	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 177	Certified Max Gross Wt.	320000 LBS	Number of Engines: 2	
Engine Type: Turbo Fan	Engine Manufacturer: P&W	Model/Series: JT9D-7R4D	Rated Power: 46600 LBS		
- Aircraft Inspection Information					
Type of Last Inspection Continuous Airworthiness	Date of Last Inspection 04/2000	Time Since Last Inspection 370 Hours	Airframe Total Time 61647 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner UNITED AIR LINES, INC.		Street Address BOX 66100			
		City CHICAGO	State IL	Zip Code 60666	
Operator of Aircraft Same as Reg'd Aircraft Owner		Street Address Same as Reg'd Aircraft Owner			
		City	State	Zip Code	
Operator Does Business As:			Operator Designator Code: UALA		
- Type of U.S. Certificate(s) Held:					
Air Carrier Operating Certificate(s): Flag Carrier/Domestic					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 121: Air Carrier					
Type of Flight Operation Conducted: Scheduled; Domestic; Passenger Only					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: CHI00IA152
	Occurrence Date: 06/07/2000
	Occurrence Type: Incident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 49
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Sex: M	Seat Occupied: Left	Principal Profession: Civilian Pilot	Certificate Number: On File
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Certificate(s): Airline Transport; Flight Engineer

Airplane Rating(s): Multi-engine Land; Single-engine Land

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s): None

Type Rating/Endorsement for Accident/Incident Aircraft? Yes	Current Biennial Flight Review?
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Medical Cert.: Class 1	Medical Cert. Status: Valid Medical--no waivers/lim.	Date of Last Medical Exam: 03/2000
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- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	7110	3558								
Pilot In Command(PIC)		3558								
Instructor										
Last 90 Days		165								
Last 30 Days		78								
Last 24 Hours										

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? No	Second Pilot? Yes
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Flight Plan/Itinerary

Type of Flight Plan Filed: IFR

Departure Point NEW YORK	State NY	Airport Identifier JFK	Departure Time 1030	Time Zone CDT
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Destination SAN FRANCISCO	State CA	Airport Identifier SFO	
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Type of Clearance: IFR

Type of Airspace: Class A

Weather Information

Source of Briefing:

Method of Briefing:

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Weather Information

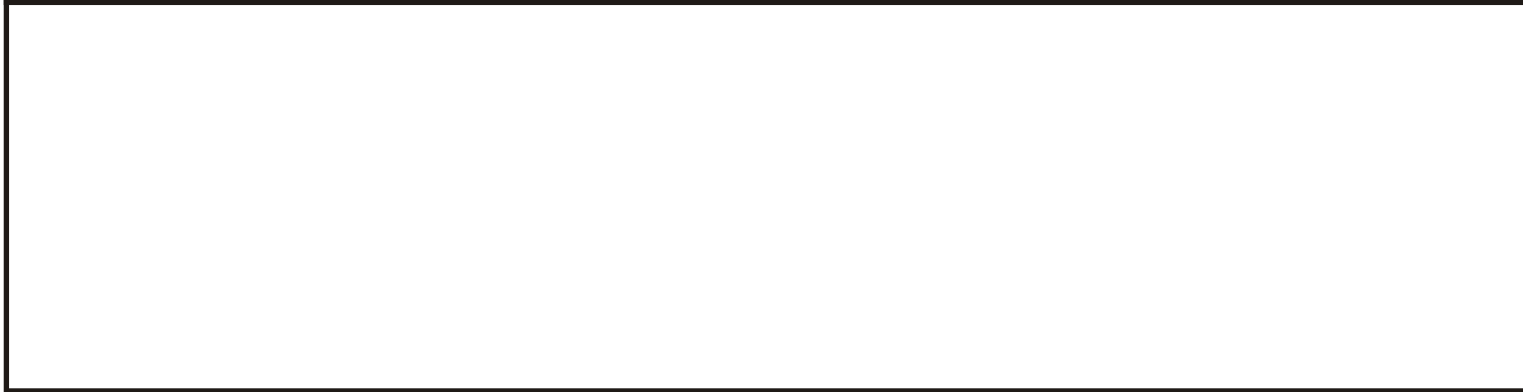
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
ORD	1256	CDT	668 Ft. MSL	0 NM	0 Deg. Mag.
Sky/Lowest Cloud Condition: Scattered			25000 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: None			0 Ft. AGL	Visibility: 10 SM	Altimeter: 30.00 "Hg
Temperature: 75 °C	Dew Point: 50 °C	Wind Direction: 200		Density Altitude: Ft.	
Wind Speed: 10	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): 0 Ft.	Visibility (RVV) 0 SM	Intensity of Precipitation: Unknown			
Restrictions to Visibility: None					
Type of Precipitation: None					


Accident Information

Aircraft Damage: None	Aircraft Fire: None	Aircraft Explosion: None
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Classification: U.S. Registered/U.S. Soil

- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot				1	1
Second Pilot				1	1
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants				9	9
Other Crew					
Passengers				154	154
- TOTAL ABOARD -				165	165
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	0	165	165



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Administrative Information

Investigator-In-Charge (IIC)

JOHN M. BRANNEN

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