
Rudder control malfunction, Boeing 757-200ER, September 13, 1993

Micro-summary: This Boeing 757-200ER experienced a rudder control malfunction on climb.

Event Date: 1993-09-13 at 0855 EDT


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


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


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 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: BFO93IA175		Aircraft Registration Number: N757NA	
		Occurrence Date: 09/13/1993		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place JAMAICA		State NY	Zip Code 11430	Local Time 0855	Time Zone EDT
Airport Proximity: Unknown		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer BOEING		Model/Series 757-200ER		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 September 13, 1993, about 0855 hours eastern daylight time, N757NA, a Boeing 757-200ER, operating as North American Airlines Flight 5, had a flight control problem during cruise flight. The flight had departed from John F. Kennedy International Airport (JFK), Jamaica, New York, en route to San Francisco, California, but returned to JFK and landed uneventfully. None of the eight crewmembers or 77 passengers were injured. Visual meteorological conditions prevailed and an instrument flight rules flight plan was filed. The flight was conducted under 14 CFR 121.</p> <p>According to a FAA aviation safety inspector, a "rudder ratio" warning message was displayed in the cockpit as the airplane climbed through Flight Level 270 after departure. The crew performed the published company troubleshooting procedures, including resetting the rudder ratio circuit breaker light, and the warning was eliminated. About one hour later during cruise flight at Flight Level 350, the warning was displayed once again followed by gradual uncommanded right rudder movement. The autopilot was engaged at the time and two units of left aileron were inputted by the autopilot. The airplane remained under control and the crew counteracted the rudder movement manually. The captain elected to abort the flight and return to JFK.</p> <p>An examination of the airplane's electrical system revealed that the fault ball on right rudder control module had popped out. The module was reset and successfully passed a functional check. The airplane was placed back into service.</p> <p>The rudder ratio warning message was again displayed on two flights subsequent to this event. The flights terminated uneventfully. According to company maintenance records, maintenance activities to correct the situation during these events involved readjustment of the rigging, functional testing of the fault module, and replacement of the rudder ratio actuator. The airplane was placed back into service after each of these events.</p> <p>On November 19, 1993, the rudder ratio light was displayed for the fourth time in about two months. An examination of the left yaw damper module revealed a malfunction in the left hydraulic pressure switch. The unit was removed and replaced. No further incidents involving a rudder ratio problem were reported.</p>					
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 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: BFO93IA175			
		Occurrence Date: 09/13/1993			
		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 757-200ER		Serial Number 24567	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 233	Certified Max Gross Wt.	250000 LBS	Number of Engines: 2	
Engine Type: Turbo Fan	Engine Manufacturer: Rolls-Royce	Model/Series: RB211-535E4	Rated Power:		
- Aircraft Inspection Information					
Type of Last Inspection Continuous Airworthiness	Date of Last Inspection 08/1993	Time Since Last Inspection 184 Hours	Airframe Total Time 10274 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? Yes	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner ANSETT WORLDWIDE AVIATION, USA		Street Address 3800 HOWARD HUGHES PWY, 7TH FL			
		City LAS VEGAS	State NV	Zip Code 89109	
Operator of Aircraft NORTH AMERICAN AIRLINES		Street Address BLDG. 75, JFK AIRPORT			
		City JAMAICA	State NY	Zip Code 11430	
Operator Does Business As:			Operator Designator Code: NOCA		
- 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/Cargo					
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 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: BFO931A175
	Occurrence Date: 09/13/1993
	Occurrence Type: Incident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 50
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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; Commercial

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: 07/1993
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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	19300	2300								
Pilot In Command(PIC)		2290								
Instructor	3000									
Last 90 Days	150	150								
Last 30 Days	50	50								
Last 24 Hours	4	4								

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 Same as Accident/Incident Location	State	Airport Identifier JFK	Departure Time 0455	Time Zone EDT
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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; Class E

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
JFK	0850	EDT	13 Ft. MSL	0 NM	0 Deg. Mag.
Sky/Lowest Cloud Condition: Scattered			10000 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: Broken		13000 Ft. AGL		Visibility: 15 SM	Altimeter: 30.00 "Hg
Temperature: 22 °C	Dew Point: 14 °C	Wind Direction: 230		Density Altitude: Ft.	
Wind Speed: 11	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

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				6	6
Other Crew					
Passengers				77	77
- TOTAL ABOARD -				85	85
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	0	85	85

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National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: BFO93IA175

Occurrence Date: 09/13/1993

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

JEFFREY B. GUZZETTI,

Additional Persons Participating in This Accident/Incident Investigation:

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VALLEY STREAM, NY 11582