
Flight control system oddities, McDonnell Douglas MD-82, April 11, 1998

Micro-summary: This McDonnell Douglas MD-82 experienced a series of unusual flight control system behaviors.


Event Date: 1998-04-11 at 645 EST


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


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

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1. Accident reports can be and sometimes are revised. Be sure to consult the investigative agency for the latest version before basing anything significant on content (e.g., thesis, research, etc).
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 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: CHI98IA167		Aircraft Registration Number: N951U	
		Occurrence Date: 04/11/1998		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place WASHINGTON		State DC	Zip Code 20010	Local Time 0645	Time Zone EST
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer McDonnell Douglas		Model/Series MD82		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>On April 11, 1998, at 0645 est, N951U, a McDonnell Douglas MD82, being operated as Trans World Airlines flight number 235, from Washington National Airport to Saint Louis, Missouri, experienced a flight control malfunction after takeoff and diverted to Dulles International Airport. There was no damage to the aircraft and there were no injuries to the crew of 5 or 79 passengers. The flight was on an IFR flight plan and visual meteorological conditions prevailed.</p> <p>The crew reported that they lost the autopilot, there were inflight kicks on the rudder and the rudder tab was moving uncommanded on the ground. The aircraft was an MD-82, S/N 49245. The Yaw Damper Actuator, Digital Flight Guidance Computer, and Dual Axis Accelerometer were removed for further testing. The Yaw Damper Actuator and the Digital Flight Guidance Computer passed testing.</p> <p>The Dual Axis Accelerometer from the aircraft, PN 4034239-901, SN 8303033, was taken to the Honeywell Support Center in Dallas, Texas for further investigation. The part was bench tested using test manual #22-19-01, Rev 1 at the avionics test center. The unit failed an original test and failed a second test after a metal sliver imbedded in the pins was removed. See attached test report of the inspection conducted July 8, 1998.</p>					
FACTUAL REPORT - AVIATION					
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 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: CHI981A167			
		Occurrence Date: 04/11/1998			
		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: NONE					
VFR Approach/Landing: None					
Aircraft Information					
Aircraft Manufacturer McDonnell Douglas		Model/Series MD82		Serial Number 49245	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats:	Certified Max Gross Wt. LBS		Number of Engines:	
Engine Type: Unknown	Engine Manufacturer:		Model/Series:	Rated Power:	
- Aircraft Inspection Information					
Type of Last Inspection Unknown	Date of Last Inspection	Time Since Last Inspection Hours		Airframe Total Time Hours	
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? No	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner TRANS WORLD AIRLINES		Street Address 11495 NATURAL BRIDGE ROAD			
		City SAINT LOUIS	State MO	Zip Code 63044	
Operator of Aircraft Same as Reg'd Aircraft Owner		Street Address Same as Reg'd Aircraft Owner			
		City SAINT LOUIS	State MO	Zip Code 63044	
Operator Does Business As: TWA			Operator Designator Code: TWAA		
- 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					
FACTUAL REPORT - AVIATION					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: CHI98IA167	
	Occurrence Date: 04/11/1998	
	Occurrence Type: Incident	

First Pilot Information

Name On File	City	State	Date of Birth	Age
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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**

Airplane Rating(s):

Rotorcraft/Glider/LTA:

Instrument Rating(s):

Instructor Rating(s):

Type Rating/Endorsement for Accident/Incident Aircraft?	Current Biennial Flight Review?
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Medical Cert.: Unknown	Medical Cert. Status: Unknown	Date of Last Medical Exam:
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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										
Pilot In Command(PIC)										
Instructor										
Last 90 Days										
Last 30 Days										
Last 24 Hours										

Seatbelt Used?	Shoulder Harness Used?	Toxicology Performed?	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	Departure Time 0000	Time Zone
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Destination SAINT LOUIS	State MO	Airport Identifier STL	
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Type of Clearance: **IFR**

Type of Airspace: **Class A**

Weather Information

Source of Briefing:
Company

Method of Briefing:

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: CHI98IA167
	Occurrence Date: 04/11/1998
	Occurrence Type: Incident

Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
	0000		0 Ft. MSL	0 NM	0 Deg. Mag.
Sky/Lowest Cloud Condition: Unknown			0 Ft. AGL	Condition of Light: Not Reported	
Lowest Ceiling: Unknown		0 Ft. AGL	Visibility: 0 SM	Altimeter: "Hg	
Temperature: °C	Dew Point: °C	Wind Direction:		Density Altitude: Ft.	
Wind Speed:	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): 0 Ft.	Visibility (RVV) 0 SM	Intensity of Precipitation: Unknown			
Restrictions to Visibility:					
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				3	3
Other Crew					
Passengers				79	79
- TOTAL ABOARD -				84	84
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	0	84	84

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National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: CHI98IA167

Occurrence Date: 04/11/1998

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

CARL E. DINWIDDIE

Additional Persons Participating in This Accident/Incident Investigation:

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