Loss of elevator control, Douglas DC-9-14, March 21, 1999

Micro-summary: This Douglas DC-9-14 experienced loss of elevator control while in cruise flight.

Event Date: 1999-03-21 at 1945 CST

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

Investigative Body's Web Site: http://www.ntsb.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).

2. Readers are advised that each report is a glimpse of events at specific points in time. While broad themes permeate the causal events leading up to crashes, and we can learn from those, the specific regulatory and technological environments can and do change. Your company's flight operations manual is the final authority as to the safe operation of your aircraft!

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National Transportation Safety Board	NTS	NTSB ID: CHI99IA115				Aircraft Registration Number: N600ME					
FACTUAL REPORT	Occi	urrence Da	1/1999	м	Most Critical Injury: None						
AVIATION	Occi	urrence Typ	_{be:} Incid	lent	In	nvestigated B	y: NTS	NTSB			
Location/Time											
Nearest City/Place	State	Zip Code Local Time Time Zone									
GRAND RAPIDS	МІ	49501 1945				CST					
Airport Proximity: Unknown	Proximity: Unknown Distance From Landing Facility: Direction From Airport:										
Aircraft Information Summary											
Aircraft Manufacturer Model/Series Type of Aircr							Type of Aircraft				
McDonnell Douglas		DC	2-9-14			Airplane					
Sightseeing Flight: No		Air Me	edical T	ransport Flight	it: No						
Narrative											
 Bed marative statement of mass, conditions and circumstances periment in the accidentification. On March 21, 1999, at 1945 central standard time (cst), a McDonnell Douglas DC-9-14, N600ME, operated by Midwest Express Airlines (MMEA), Inc., experienced a loss of elevator control while in cruise flight over Grand Rapids, Michigan. The 14 CFR Part 121 flight departed Newark International Airport (EWE), Newark, New Jersey, en route to General Mitchell International Airport (EWE), Newark, New Jersey, en route to General Mitchell International Airport (EWE), Milwaukee, Wisconsin. The flight crew piloted the aircraft using the elevator trim system until regaining elevator control after descent. The airplane landed at General Mitchell International Airport without further incident. There were no reported injuries to the four-person crew or to the 60 passengers. Weather at the departure airport, approximately 19 minutes prior to departure, was reported as heavy rain showers and mist, and a temperature of 46 degrees (P). Open arrival, at MKE, MWEA maintenance personnel inspected the aircraft and found ice accretions in the elevator control bay of the vertical stabilizer. Debris was also found covering the drainage holes within this bay. No other anomalies were detected with respect to the incident aircraft. No ice was found in any area that would have prevented movement of the elevator. On April 9, 1999, approximately 0745 cst, the same airplane, N600ME, experienced a similar occurrence while in cruise flight. The aircraft had departed MKE en route to EWR. The weather, at MKE, at the departure time, was reported as rain showers and mist, and a temperature of 39 degrees (F). After leveling off at 29,000 cet altitude, the pilots determined that the elevator control would not respond to control inputs. The captain stated, in a written report, that he "applied more and more elevator backpressure until I hel finally felt [the] elevator control 'bump' free and control was restored." The flig											
	FACT	UAL REF	ORT - A	AVIATION				Page 1			

National Transportation Safety Board	NTS	B ID: C	CH1991	IA115								
FACTUAL REPORT	Оссі	urrence	03/21/1999									
AVIATION				Incident		$\neg \neg$						
Landing Facility/Approach Information			17-71									
Airport Name	Airport	ID:	: Airport Elevation Runway Used Runway Len						h Ri	unway Width		
				MSL	0			-				
Runway Surface Type:	Runway Surface Type:											
Runway Surface Condition:												
Type Instrument Approach:												
VFR Approach/Landing:												
Aircraft Information												
Aircraft Manufacturer McDonnell Douglas			Vodel/S DC-9-						Serial I 4572	ll Number 25		
Airworthiness Certificate(s): Transport												
Landing Gear Type: Retractable - Tricycle												
	of Seats: 65			d Max Gross W	't.		91500	LBS	Numbe	r of Engir		
Engine Type: Turbo Fan	Engin P&W		nufacturer:			Model/Se JT8D-7E			Rated Power: 14000 LBS			
- Aircraft Inspection Information												
Type of Last Inspection			Date of Last Inspection Time Since Last Inspection						Airframe	Total Time		
Continuous Airworthiness	02/19	999		216 Hours						6931 Hours		
- Emergency Locator Transmitter (ELT) Inform				T								
	T Operated?	ELT Aided in Locating Accident Site?										
Owner/Operator Information												
Registered Aircraft Owner		Str	reet A	ddress 6744 SO	UTH F	HOWE	LL AVENUE	E				
MIDWEST EXPRESS AIRLINES		Cit	City MILWAUKEE							State WI	Zip Code 53154	
		Str	reet Ac							VVI	00104	
Operator of Aircraft				Same as	Reg'd	I Aircra	aft Owner					
Same as Reg'd Aircraft Owner		City	ty		State Zip Cod						Zip Code	
Operator Does Business As:						Op	perator Design	nator Co	de: MV	VEA		
- Type of U.S. Certificate(s) Held:	· / ·											
Air Carrier Operating Certificate(s): Flag Car	rier/Domestic											
Operating Certificate: Operator Certificate:												
Regulation Flight Conducted Under: Part 121	1: Air Carrier											
Type of Flight Operation Conducted: Schedu	uled; Domestic	; Passe	enger	Only								
	FACT	UAL R	REPOI	RT - AVIATI	ON						Page 2	

National Transportation Safety Board				NTSB ID:	NTSB ID: CHI99IA115							
	ACTUAL RI	Y	-	Occurren	Occurrence Date: 03/21/1999							
	AVIATI	> >			Occurrence Type: Incident							
<u> </u>		A		Occurrent	ce rype. Ind	Sident						
L	ot Information					01				<u>.</u>		
Name	City				State	Date of Birth	Age					
On File						On File				On File	On File	43
Sex: U	Seat Occupied	: Left	Pri	ncipal Profes	sion: Civilia	n Pilot			Cert	ificate Nun	nber: On File	
Certificate	Certificate(s): Airline Transport											
Airplane F	Rating(s): Mult	i-engine Lar	nd; Single-e	engine Land								
Rotorcraft	/Glider/LTA: None	e										
Instrumen	t Rating(s): Airpl	ane										
Instructor												
Type Ratir	ng/Endorsement fo	or Accident/Ir	ncident Aircra	^{aft?} Yes			Current I	Biennial F	light Re	eview?		
Medical C	ert.: Class 1	Medica	al Cert. Statu	s: Valid Me	dicalw/ wa	aivers/lim.		Dat	e of Las	st Medical	Exam: 01/1999)
- Flight Ti	me Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Mult-Engine	Night	Night Ins Actual		Simulated	Rotorcraft	Glider	Lighter Than Air
Total Time	e	18297	6747	2712	15585	2503	3	895	93	3		
Pilot In Co	ommand(PIC)	10686	980	2583	8103	1750)	565	3	3		-
Instructor										_		_
Last 90 D		244	244		244	48	_	20		_		
Last 30 D	-	96	96		96	18	5	7				
Last 24 H	Jsed? Yes	6	6	•					2 1 1 -		Econd Pilot? Y	
Seatbelt	Jsed? res	Shou	lider Harness	s Used? Yes		TOXI	cology P	enormea	? INO			es
	an/Itinerary											
	ight Plan Filed: IF	R										I
Departure	Point					Sta	e	Airport Io	dentifier	Dep	arture Time	Time Zone
NEWAR	K					NJ		EWR		201	0	EST
Destinatio	n					Sta	e	Airport le	dentifier			
MILWAU	MILWAUKEE WI MKE											
Type of C	learance: IFR											
Type of A	irspace: Class	A										
Weathe	r Information											
Source of	-	any; Flight S	Service Stat	ion								
Method of	f Briefing:											
				FACTUAI	L REPORT	- AVIATIO	DN					Page 3

National Transportation Safety Board NTSB ID: CHI99IA115												
	FACTUAL REPORT Occurrence Date: 03/21/1999							1				
AVIATION Occurrence Type: Incident							1					
Weather	Information			,								
WOF ID Observation Time Time Zone WOF Elevation WOF Distance From Accident Site Direction From Accident											m Accident Sit	e
					_							-
EWR	1951	EST	18	Ft. MSL				0 NM			0 Deg	. Mag.
Sky/Lowes	t Cloud Condition: Unk	nown			0 Ft. AGL Condition of Ligh						ĸ	
Lowest Ce	iling: Broken		800 F	Ft. AGL	Visib	ility:	3	SM	Alti	meter:	30.00	"Hg
Temperatu	ire: 5 °C	Dew Point:	7 °C	Wind	Direction:	140			Density Altitude: Ft.			
Wind Spee	ed: 19	Gusts: 2	5	Weat	her Condt	ions at Accid	dent S	^{ite:} Instrum	ent C	Conditions		
Visibility (F	RVR): 0 Ft	. Visibility	(RVV) 0	SM	Intensit	y of Precipita	ation:	Heavy				
Restriction	s to Visibility: None	I										
	2											
Type of Pre	ecipitation: Rain											
Accident	Information											
	mage: None		Aircraft I	- ire: None	;			Aircraft Exp	olosio	n None		
Classificati	on: U.S. Registered/L	J.S. Soil	I				I					
	mmary Matrix	Fatal	Serious M	inor	None	TOTAL						
First Pi	-				1	1						
Second	d Pilot				1	1						
Studen	t Pilot											
Flight li	nstructor											
Check	Pilot											
Flight E	Engineer											
Cabin A	Attendants				2	2						
Other C	Crew						1					
Passer	ngers				60	60						
- TOTAL A	ABOARD -				64	64						
Other C	Ground	0	0	0		0						
- GRANE	D TOTAL -	0	0	0	64	64						
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National Transportation Safety Board	NTSB ID: CHI99IA115	
FACTUAL REPORT	Occurrence Date: 03/21/1999	
AVIATION	Occurrence Type: Incident	
Administrative Information	•	
Investigator-In-Charge (IIC)		
JOHN M. BRANNEN		
Additional Persons Participating in This Accident	/Incident Investigation:	
TIM DERNER FAA, 4915 SOUTH HOWELL AVE. MILWAUKEE, WI 53207		
CRAIG RICHESIN BOEING, 3855 LAKEWOOD BLVD LONG BEACH, CA 90846		
EILEEN BRUESEWITZ MWEA, 555 AIR CARGO WAY MILWAUKEE, WI 53207		