
In-flight electrical fire, McDonnell Douglas MD-80, October 1, 2000

Micro-summary: This McDonnell Douglas MD-80 experienced an electrical fire during cruise flight.


Event Date: 2000-10-01 at 1618 CDT

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

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

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		NTSB ID: ATL011A001		Aircraft Registration Number: N69826	
		Occurrence Date: 10/01/2000		Most Critical Injury: Minor	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place BIRMINGHAM		State AL	Zip Code 35212	Local Time 1618	Time Zone CDT
Airport Proximity: On Airport		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer McDonnell Douglas		Model/Series MD-80		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 October 1, 2000, central daylight time, a McDonnell Douglas MD-80, N69826, operated by Continental Airlines as Flight 1579, experienced an electrical fire during cruise flight at flight level 310 near Birmingham, Alabama. Flight 1579 was operated under the provisions of Title 14 CFR Part 121 as a scheduled domestic passenger flight from Atlanta, Georgia, to Houston, Texas. The flight departed Hartsfield International Airport in Atlanta, Georgia, at approximately 1720 eastern daylight time with two air transport pilots, one jump-seat rider, three flight attendants, and 141 passengers on board. The airplane sustained minor damage and the jump-seat rider received minor injuries; there were no other injuries reported. Visual weather conditions prevailed at the time of the incident, and Flight 1579 operated on an instrument flight rules flight plan.</p> <p>According to the pilot, approximately 15 minutes into the flight, the cockpit filled with smoke and he heard a loud popping sound and saw sparks emitting from the jump seat area. The jump seat rider reported that he heard an explosion and leaned forward to avoid heat, which he felt on his left shoulder. When the jump seat rider looked at his left shoulder, he noticed that his shirt was burning. He extinguished the fire on his shirt, and put on his oxygen mask, since the cockpit was filled with smoke. The pilot declared an emergency and initiated a descending right turn. The flight diverted into Birmingham, Alabama, and landed without further incident.</p> <p>According to the Continental Fleet Campaign Directive, (FCD), the registration certificate holder was modified on September 28, 2000. The FCD called for the holder to be modified in order to prevent loss of the certificate or damage of the certificate that would preclude dispatch of the airplane. The FCD required maintenance personnel to drill two small pilot holes just above the top of the certificate, and, in the case of mounting on a metal wall, install two screws into the pilot holes. A note is included on the FDC that allows alternate length screws to be used as required.</p> <p>The examination of the airplane disclosed a 2 by 1 1/2 inch fire-damaged hole in the left jump seat wall. Several heavy gauge electrical wires were welded together on the opposite side of the wall. There were also four 50-ampere circuit breakers popped on the left circuit breaker panel behind the pilot's seat. The hole also included an area of the left edge of the registration certificate holder. The plastic cover of the registration certificate holder was melted in this area and soot damage was evident for several inches around the hole. The registration certificate holder was attached to the wall by 8 screws that extended into the cavity where the electrical fire occurred. The hole appeared to be on the left side, middle position of the certificate holder. This screw was missing; all of the seven other screws were present. The screws immediately above and below this middle position on the left side extended is approximately 0.5 inches into the cavity where the electrical fire occurred. The missing segments of wire were aligned with the center of the hole in the wall, and also with the position of the middle screw. At the point of the missing wire segments, a screw similar to that placed above and below the missing middle screw could have extended into the wiring. There is no mention in the FCD of steps that should be taken to insure that no damage is done to items on the other side of the wall either during the drilling process or</p>					
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National Transportation Safety Board

FACTUAL REPORT

AVIATION

SAFETY BOARD

NTSB ID: ATLO11A001


Occurrence Date: 10/01/2000


Occurrence Type: Incident

Narrative (Continued)

by the screws themselves once they are inserted into the holes.

Corrective actions that Continental Airlines have taken are to remove all certificate holders that are on the EPC wall and to install a new 3-slot certificate holder on the galley wall, which has a honeycomb backing. According to the Engineering Authorization, the best location for the certificate holder approximately 32.5 inches from the floor, 3 inches below the lowest coat hook, and 4.5 inches in from the cockpit door.

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: ATL011A001			
		Occurrence Date: 10/01/2000			
		Occurrence Type: Incident			
Landing Facility/Approach Information					
Airport Name BIRMINGHAM AIRPORT	Airport ID: BHM	Airport Elevation 644 Ft. MSL	Runway Used 0	Runway Length	Runway Width
Runway Surface Type: Asphalt					
Runway Surface Condition: Dry					
Type Instrument Approach: NONE					
VFR Approach/Landing:					
Aircraft Information					
Aircraft Manufacturer McDonnell Douglas		Model/Series MD-80		Serial Number MD-80-82	
Airworthiness Certificate(s): Transport					
Landing Gear Type:					
Homebuilt Aircraft? No	Number of Seats: 172	Certified Max Gross Wt. 149500 LBS	Number of Engines: 2		
Engine Type: Turbo Jet	Engine Manufacturer: P&W	Model/Series: JT8D	Rated Power: 7700 HP		
- Aircraft Inspection Information					
Type of Last Inspection Continuous Airworthiness	Date of Last Inspection 09/2000	Time Since Last Inspection Hours	Airframe Total Time 39417 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner FIRST SECURITY BANK NA TRUSTEE		Street Address 79 S. MAIN STREET			
		City SALT LAKE CITY	State UT	Zip Code 84111	
Operator of Aircraft CONTINENTAL AIRLINES		Street Address 1600 SMITH ST.			
		City HOUSTON	State TX	Zip Code 77032	
Operator Does Business As:			Operator Designator Code: CO		
- 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: ATL01IA001
	Occurrence Date: 10/01/2000
	Occurrence Type: Incident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 52
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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): Multi-engine Land

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s):

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: 05/2000
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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										
Pilot In Command(PIC)										
Instructor										
Last 90 Days										
Last 30 Days										
Last 24 Hours										

Seatbelt Used?	Shoulder Harness Used?	Toxicology Performed?	Second Pilot?
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Flight Plan/Itinerary

Type of Flight Plan Filed: IFR

Departure Point ATLANTA	State GA	Airport Identifier ATL	Departure Time 0000	Time Zone
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Destination HOUSTON	State TX	Airport Identifier IAH	
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Type of Clearance:

Type of Airspace: Class C

Weather Information

Source of Briefing:

Method of Briefing:

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: ATL01IA001
	Occurrence Date: 10/01/2000
	Occurrence Type: Incident

Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
BHM	1453	CDT	644 Ft. MSL	0 NM	0 Deg. Mag.
Sky/Lowest Cloud Condition: Scattered			8000 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: Broken		20000 Ft. AGL		Visibility: 10 SM	Altimeter: 30.00 "Hg
Temperature: 29 °C	Dew Point: 11 °C	Wind Direction: Variable		Density Altitude: 2381 Ft.	
Wind Speed: 5	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: Minor	Aircraft Fire: In-flight	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			1		1
Passengers				141	141
- TOTAL ABOARD -			1	146	147
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	1	146	147

National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: ATL01IA001

Occurrence Date: 10/01/2000

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

PHILLIP POWELL

Additional Persons Participating in This Accident/Incident Investigation:

RONALD P BLITZ
BIRMINGHAM FSDO-09

SCOTT WARREN
NTSB-AEROSPACE ENGINEER
WASHINGTON, DC,