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## Tailpipe fire, McDonnell Douglas MD-88, December 26, 1998

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**Micro-summary: A tailpipe fire inspired an evacuation of this McDonnell Douglas MD-88.**

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**Event Date: 1998-12-26 at 1940 CST**

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


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

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		NTSB ID: FTW99LA054		Aircraft Registration Number: N907DE	
		Occurrence Date: 12/26/1998		Most Critical Injury: Serious	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place DFW AIRPORT		State TX	Zip Code 75261	Local Time 1940	Time Zone CST
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer McDonnell Douglas		Model/Series MD-88		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 December 26, 1998, at 1940 central standard time, a McDonnell Douglas MD-88 turbojet transport airplane, N907DE, operating as Delta Airlines flight 1922, was undamaged during an emergency evacuation following a fire on the right (#2) engine while holding for departure at the Dallas/Fort Worth International Airport (DFW), Texas. The airplane was registered to and operated by Delta Airlines, Inc., of Atlanta, Georgia, under 14 Code of Federal Regulations Part 121. One passenger was seriously injured during the emergency evacuation. The airline transport rated captain, first officer, 3 flight attendants and the 44 other passengers were uninjured. Visual meteorological conditions prevailed for the scheduled domestic passenger flight for which an IFR flight plan was filed. The aircraft was holding for departure on Runway 17R at the time of the accident. The flight's destination was the Cincinnati/Northern Kentucky International Airport (CVG), near Covington, Kentucky.</p> <p>According to the operator, the flight crew elected to delay starting the #2 engine and taxi to the runway on the left (#1) engine after pushing back from the gate. The FAA inspector, who traveled to the accident site, stated that when the flight crew initially attempted to start the #2 engine, they "inadvertently neglected to turn the ignition switch on, forcing them to abort the start." During the second attempt to start the engine, "an overtemp occurred and a tailpipe fire ensued."</p> <p>The flight crew reported to the operator that the engine temperature rose rapidly, and suspecting a "hot start," the flight crew shut off the fuel supply to the engine, as they continued to motor the engine with the starter.</p> <p>Personnel at the East Control Tower observed flames coming out of the exhaust stack and alerted the flight crew. The flight crew reported that they had experienced a "hot start," but according to their indications in the cockpit, the fire was out. An ATR-42 operated by American Eagle as flight number 541 was in sequence behind the Delta jet. The flight crew from flight 541, who were monitoring the radio calls between the tower and the Delta jet, reported that the fire lingered in the exhaust. Personnel at the East Control Tower confirmed that the engine was still on fire and initiated an Alert II Response, which dispatched Airport Rescue and Fire Fighting (ARFF) equipment to assist.</p> <p>The captain commanded an evacuation from the two cabin doors located on the left side of the airplane. The emergency slides on the left side of the airplane functioned normally. Due to the light passenger load and the higher risk of injuries, the over wing exits were not used during the evacuation. During the emergency evacuation, the three flight attendants were assisted by four "commuting" flight attendants and two "commuting" pilots, resulting in a "calm and controlled" emergency evacuation to the taxiway. According to airport personnel, all passengers were off the aircraft within 20 seconds after the slides were deployed.</p> <p>A female "non-revenue" passenger, who exited the airplane through the aft door slide, slid past the</p>					
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National Transportation Safety Board

## FACTUAL REPORT

AVIATION

NTSB ID: FTW99LA054

Occurrence Date: 12/26/1998


Occurrence Type: Accident


## Narrative (Continued)

awaiting crew members, twisting her right ankle. The emergency slide from the aft door deploys at a steeper angle than the one for the forward door. Both slides are the same length; however, the aft door is higher above the ground than the forward door. The passenger was treated by medical personnel and transported to a local hospital. Subsequent medical reports and X-rays revealed that the passenger sustained a hairline fracture of a bone in her right ankle.

The remaining passengers and crew members were bused to the terminal without further incident. Airport Operations personnel reported that operations on runway 17R were suspended for a total of 15 minutes. The operator reported that the airplane had 30,600 pounds of fuel on board at the time of the accident. There was no reported fuel spill and airport property was undamaged. No delays were reported as traffic was diverted to land on 17L and depart from 17C.

The airplane and the right engine were inspected for fire damage. No damage was found. The ignition and fuel systems for the #2 engine were inspected and checked. No defects were found and the airplane was returned to service.

		NTSB ID: FTW99LA054			
		Occurrence Date: 12/26/1998			
		Occurrence Type: Accident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation	Runway Used	Runway Length	Runway Width
DFW INTERNATIONAL AIRPORT	DFW	603 Ft. MSL	0		
Runway Surface Type:					
Runway Surface Condition:					
Type Instrument Approach:					
VFR Approach/Landing:					
Aircraft Information					
Aircraft Manufacturer		Model/Series		Serial Number	
McDonnell Douglas		MD-88		53416	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 149	Certified Max Gross Wt.	149500 LBS	Number of Engines: 2	
Engine Type:	Engine Manufacturer:	Model/Series:	Rated Power:		
Turbo Jet	P&W	JT-8D-219	19000 LBS		
- Aircraft Inspection Information					
Type of Last Inspection	Date of Last Inspection	Time Since Last Inspection	Airframe Total Time		
Continuous Airworthiness	11/1998	38 Hours	17695 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? No	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner		Street Address			
DELTA AIR LINES, INC.		HARTSFIELD INTERNATIONAL			
		City	State	Zip Code	
		ATLANTA	GA	30320	
Operator of Aircraft		Street Address			
Same as Reg'd Aircraft Owner		Same as Reg'd Aircraft Owner			
		City	State	Zip Code	
Operator Does Business As: DELTA AIRLINES			Operator Designator Code: DALA		
- 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					
FACTUAL REPORT - AVIATION					

 <p><b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b></p>	NTSB ID: FTW99LA054
	Occurrence Date: 12/26/1998
	Occurrence Type: Accident

**First Pilot Information**

Name On File	City On File	State On File	Date of Birth On File	Age 44
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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): 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: 11/1998
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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	7990	2893								
Pilot In Command(PIC)										
Instructor										
Last 90 Days	175	175								
Last 30 Days										
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 Same as Accident/Incident Location	State	Airport Identifier DFW	Departure Time 0000	Time Zone
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Destination CINCINNATI	State OH	Airport Identifier CVG	
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Type of Clearance: IFR

Type of Airspace: Class B

**Weather Information**

Source of Briefing:  
Company

Method of Briefing:

 <p><b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b></p>	NTSB ID: FTW99LA054
	Occurrence Date: 12/26/1998
	Occurrence Type: Accident

<b>Weather Information</b>					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
DFW	1953	CST	603 Ft. MSL	0 NM	0 Deg. Mag.
Sky/Lowest Cloud Condition: Clear			0 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: None		0 Ft. AGL		Visibility: 10 SM	Altimeter: 30.00 "Hg
Temperature: 4 °C	Dew Point: 1 °C	Wind Direction: 160		Density Altitude: Ft.	
Wind Speed: 7	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					

<b>Accident Information</b>		
Aircraft Damage: None	Aircraft Fire: Ground	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		1		44	45
- TOTAL ABOARD -		1		49	50
Other Ground	0	0	0		0
- GRAND TOTAL -	0	1	0	49	50

National Transportation Safety Board

**FACTUAL REPORT**

**AVIATION**



NTSB ID: FTW99LA054

Occurrence Date: 12/26/1998

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

HECTOR R. CASANOVA

Additional Persons Participating in This Accident/Incident Investigation:

PAUL E COTTI

FAA FSDO

DFW AIRPORT, TX 75261