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## Tail pipe fire and evacuation, Douglas DC-9-41, January 24, 2002

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**Micro-summary:** This Douglas DC-9-41 experienced a tail pipe fire, resulting in an emergency evacuation.

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**Event Date:** 2002-01-24 at 1400 EST


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

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

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		NTSB ID: CHI02LA069		Aircraft Registration Number: N754NW	
		Occurrence Date: 01/24/2002		Most Critical Injury: Serious	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place Indianapolis		State IN	Zip Code 46241	Local Time 1400	Time Zone EST
Airport Proximity: On Airport		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer McDonnell Douglas		Model/Series DC-9-41		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 January 24, 2002, at 1400 eastern standard time, a McDonnell Douglas DC-9-41, N754NW, operated by Northwest Airlines as flight 1118, experienced a number 2 (right) engine tail pipe fire during engine start while on the ramp near the end of runway 32 at the Indianapolis International Airport, Indianapolis, Indiana. An emergency evacuation was performed during which one passenger received a broken arm. The 2 cockpit crewmembers, 3 flight attendants, and 69 other passengers were not injured. The scheduled domestic flight was operating under 14 CFR Part 121. Visual meteorological conditions prevailed and an IFR flight plan was filed. The scheduled destination for the flight was Detroit, Michigan.</p> <p>According to the captain, the airplane was pushed back from the gate when they attempted to start the engines. He reported they attempted to start the right engine and they were unable to get it to start. The captain reported they performed the "clearing procedure" then went on to start the left engine, which started successfully. The crew then attempted to start the right engine again, and this time it started successfully. They then proceeded to taxi to runway 32 where they were informed of a 20-minute air traffic control (ATC) delay. The flightcrew shut down the engines during the delay.</p> <p>After approximately 15 minutes, NW1118 was informed by ground control that they should start their engines, as they would probably be released for takeoff soon.</p> <p>The captain reported they attempted to start the right engine and again could not get it started. They performed the "clearing procedure" and then went on to start the left engine with no problem. They then attempted to start the right engine again. The captain reported "Ground reported smoke then a few seconds later fire on right engine. We performed the ENGINE FIRE checklist discharging bottle number 2. Soon ground said there was still fire; we discharged number 1 and performed emergency evacuation." The captain reported that they did not receive any fire warning indications in the cockpit.</p> <p>The investigation revealed Airport Rescue and Firefighting (ARFF) personnel were parked near NW 1118. It was ARFF personnel who first reported the smoke and flames coming from the number 2 engine. ARFF personnel began relaying information to the airplane through ATC. Upon seeing the smoke and fire, ARFF requested that the pilot shut down the engine. The flight crew informed ARFF that they performed the engine fire checklist and discharged one of the fire suppressant bottles. ARFF reported that the smoke was continuing to come from the engine. The flightcrew shut down the left (number 1) engine and ARFF informed the flightcrew that there was a tug coming out to tow the airplane back to the hangar. ARFF then reported that flames were still visible in the number 2 engine and they were going to apply fire-fighting agent to the engine. They requested that the flightcrew begin evacuating the airplane. The flightcrew initiated an evacuation. All of the passengers were directed to the front of the airplane and the evacuation took place using the 1L and 1R doors.</p>					
FACTUAL REPORT - AVIATION					

National Transportation Safety Board

## FACTUAL REPORT

AVIATION

NTSB ID: CHI02LA069


Occurrence Date: 01/24/2002


Occurrence Type: Accident

## Narrative (Continued)

One passenger, who exited the 1R door, received a broken wrist during the evacuation. This passenger reported, "A flight attendant motioned to me to leave by the galley door by pointing with his finger. I crouched down as best I could and sat on the slide. The next memory I had was laying face down on the tarmac, in pain, wondering how I got there. My first instinct was to stand up and walk to the other passengers. A firefighter stopped me and said that I fell from a further distance than I thought I did and that I shouldn't move until I got checked out." At witness reported that the passenger stepped out onto the slide during the evacuation. The passenger bounced down the slide and fell over the side when approximately four to five feet off the ground.

The investigation revealed the engine start fuel scheduling for the Fuel Control Unit was high. In addition, the ignition exciter box and igniter plugs were tested. The ignition exciter box was found to operate intermittently on the D.C. circuit which would be used for engine start.

 <b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b>		NTSB ID: CHI02LA069				
		Occurrence Date: 01/24/2002				
		Occurrence Type: Accident				
<b>Landing Facility/Approach Information</b>						
Airport Name Indianapolis International		Airport ID: IND	Airport Elevation 797 Ft. MSL	Runway Used	Runway Length	Runway Width
Runway Surface Type: Unknown						
Runway Surface Condition: Unknown						
Type Instrument Approach: Unknown						
VFR Approach/Landing: Unknown						
<b>Aircraft Information</b>						
Aircraft Manufacturer McDonnell Douglas		Model/Series DC-9-41		Serial Number 47178-323		
Airworthiness Certificate(s): Transport						
Landing Gear Type: Retractable - Tricycle						
Homebuilt Aircraft? No		Number of Seats: 120	Certified Max Gross Wt. 115000 LBS		Number of Engines: 2	
Engine Type: Turbo Jet		Engine Manufacturer: Pratt & Whitney		Model/Series: JT8D-11	Rated Power: 15000 LBS	
- Aircraft Inspection Information						
Type of Last Inspection AAIP		Date of Last Inspection 09/2001	Time Since Last Inspection Hours		Airframe Total Time 76188 Hours	
- Emergency Locator Transmitter (ELT) Information						
ELT Installed? No		ELT Operated? No		ELT Aided in Locating Accident Site? No		
<b>Owner/Operator Information</b>						
Registered Aircraft Owner Northwest Airlines, Inc.		Street Address 5101 Northwest Drive				
		City Saint Paul		State MN	Zip Code 55111	
Operator of Aircraft Same as Reg'd Aircraft Owner		Street Address Same as Reg'd Aircraft Owner				
		City		State	Zip Code	
Operator Does Business As: Northwest Airlines				Operator Designator Code: NWAA		
- 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><b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b></p>	NTSB ID: CHI02LA069
	Occurrence Date: 01/24/2002
	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; Flight Engineer

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: 08/2001
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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	12204	2417								
Pilot In Command(PIC)	3417									
Instructor										
Last 90 Days										
Last 30 Days	52									
Last 24 Hours	3									

Seatbelt Used? Yes	Shoulder Harness Used? No	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 IND	Departure Time	Time Zone EST
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Destination Detroit	State MI	Airport Identifier DTW	
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Type of Clearance: None

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: CHI02LA069
	Occurrence Date: 01/24/2002
	Occurrence Type: Accident

**Weather Information**

WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
IND	1355	EST	797 Ft. MSL	NM	Deg. Mag.
Sky/Lowest Cloud Condition:				Ft. AGL	Condition of Light: Day
Lowest Ceiling: Overcast			1900 Ft. AGL	Visibility: 10 SM	Altimeter: 30.00 "Hg
Temperature: 3 °C	Dew Point: -1 °C	Wind Direction: 210		Density Altitude: Ft.	
Wind Speed: 15	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): Ft.	Visibility (RVV) SM	Intensity of Precipitation:			
Restrictions to Visibility: None					
Type of Precipitation: None					

**Accident Information**

Aircraft Damage: None	Aircraft Fire: Ground	Aircraft Explosion: None
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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		69	70
- TOTAL ABOARD -		1		74	75
Other Ground					
- GRAND TOTAL -		1		74	75

National Transportation Safety Board

**FACTUAL REPORT**

**AVIATION**



NTSB ID: CHI02LA069

Occurrence Date: 01/24/2002

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

Pamela S. Sullivan

Additional Persons Participating in This Accident/Incident Investigation:

Jimmie D Stanley  
FAA Inspector  
FAA  
8303 W. Southern Ave.  
Indianapolis, IN 46241