
Fumes in cockpit, Boeing 727-100, January 21, 1997

Micro-summary: This Boeing 727-100 experienced noxious fumes in the cockpit, resulting in a diversion.


Event Date: 1997-01-21 at 2245 CST

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

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

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		NTSB ID: FTW97IA084		Aircraft Registration Number: N198FE	
		Occurrence Date: 01/21/1997		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place OKLAHOMA CITY		State OK	Zip Code 73108	Local Time 2245	Time Zone CST
Airport Proximity: On Airport		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Boeing		Model/Series 727-100		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 January 21, 1997, at 2245 central standard time, a Boeing 727-100, N198FE, registered to and operated by Federal Express Corporation as Flight 1272 on a Title 14 CFR Part 121 domestic cargo flight, experienced the activation of the fire warning light in the cockpit during the departure climb to cruise from the Will Rogers World Airport, Oklahoma City, Oklahoma. The flight was on an IFR flight plan with a final destination of Memphis, Tennessee. Visual meteorological conditions prevailed. The airplane was not damaged and the 3 flightcrew members and a company pilot on the cockpit jumpseat were not injured. The flight returned to Oklahoma City and landed without further incident.</p> <p>During personal interviews, conducted by the investigator-in-charge (IIC), and on the enclosed statements, the flight crew reported that during the initial climb, between 4,000 feet and 4,500 feet MSL, the crew received an aural warning and the number 2 smoke detector sensor (located for detection in cargo bins 4 and 5) light illuminated in the cockpit. The captain of Flight 1272 requested that the company pilot on the jumpseat open the cockpit door and check for smoke in the cargo areas. Upon opening the door, the crew members noted a "strong smell like lacquer and varnish." The captain declared an emergency and subsequently requested and received an ATC clearance for a visual approach and landing at the airport. The flight landed on runway 17L, exited at taxiway Echo, and stopped on the taxiway. The crew deployed the emergency slide and everyone exited the airplane. At the local hospital, all flight personnel were checked for fume inhalation and released.</p> <p>Local authorities, FAA inspectors and company personnel examined the aircraft cargo and reported to the IIC that no evidence of an in flight fire or hazardous cargo spill was found in the hazardous cargo container at position 1 or the other cargo containers. The cargo container at position 5 is located between station 695.45 and 784.45 on the Boeing 727-100.</p> <p>The cargo container at position 5 contained 3 boxes of furniture panels that emitted fumes. Two of the boxes were 4 feet by 2 feet by 6 inches and one box was 2 feet by 1 foot by 3 inches.</p> <p>During telephone interviews, conducted by the investigator-in-charge, personnel of Winslow and Associates at Oklahoma City, Oklahoma, a furniture company, reported that a store in Tampa, Florida, was being finished for a grand opening and called Winslow and Associates for additional furniture panels. Winslow and Associates has an agreement for shipping the panels via Federal Express. The panels were painted during the day with a base coat (Kem-Flash E61A45) and a topcoat (Production Lacquer L61XX Lead-Free Custom) and dried for approximately 7 hours. At approximately 1830, the 3/4 inch thick wood panels, dried to touch, were crated. Subsequently, at 1930, they were taken to the Federal Express ramp at the airport. The Federal Express ramp agent, who loaded the boxes into the cargo container at approximately 2130, did not notice any smell or fumes when the container was loaded into cargo bin number 5. Ramp personnel further stated that the temperature was about 40 degrees Fahrenheit.</p>					
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National Transportation Safety Board

FACTUAL REPORT

AVIATION

NTSB ID: FTW97IA084

Occurrence Date: 01/21/1997

Occurrence Type: Incident


Narrative (Continued)


Personnel of the furniture company (Winslow and Associates) stated that the panels cure for several hours after they have been painted and the painted panels may emit a paint like odor during the curing process; however, the fumes are nonflammable. The paint shop environment tested at 5 parts per million (toluene and/or other hydrocarbons) with the specification limit at 100 ppm. The paint mixing room containing 5,000 gallons of paint/lacquer does not reach the 100 ppm limitation.

Following the incident, the furniture boxes were off loaded. Maintenance personnel replaced a cargo net and the crew emergency slide. The aircraft was returned to service and the crew taxied for the departure flight. During the takeoff roll, the #2 sensor illuminated and the crew aborted the takeoff. Maintenance personnel replaced the #2 sensor and the airplane was dispatched for flight the following morning.

The FAA Southwest Regional Hazardous Material Coordinator stated that once the paint had been used on the panels, it was not considered a hazardous material, even though the paint was still in a curing stage. The fumes responsible for the paint odor are considered non flammable.

The smoke detector, Part No. 7740-01, Serial No. 2024, operates based on the percentage of light transmitted (particle density). The unit was tested within the manufacturer's specifications by Whittaker Safety Systems at Simi Valley, California.

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: FTW97IA084			
		Occurrence Date: 01/21/1997			
		Occurrence Type: Incident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation	Runway Used	Runway Length	Runway Width
WILL ROGERS WORLD	OKC	1295 Ft. MSL	17	9802	200
Runway Surface Type: Concrete					
Runway Surface Condition: Dry					
Type Instrument Approach:					
VFR Approach/Landing: Precautionary Landing					
Aircraft Information					
Aircraft Manufacturer		Model/Series		Serial Number	
Boeing		727-100		19154	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 5	Certified Max Gross Wt.	160500 LBS	Number of Engines: 3	
Engine Type:	Engine Manufacturer:	Model/Series:	Rated Power:		
Turbo Fan	P&W	JT8D-7B	14000 LBS		
- Aircraft Inspection Information					
Type of Last Inspection	Date of Last Inspection	Time Since Last Inspection	Airframe Total Time		
Continuous Airworthiness	01/1997	18 Hours	58469 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? Yes	ELT Operated? No	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner		Street Address			
FEDERAL EXPRESS CORPORATION		3101 TCHULAHOMA			
		City	State	Zip Code	
		MEMPHIS	TN	38118	
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: FEDERAL EXPRESS			Operator Designator Code: FDEA		
- Type of U.S. Certificate(s) Held:					
Air Carrier Operating Certificate(s): Cargo					
Operating Certificate: Large Aircraft Operator			Operator Certificate:		
Regulation Flight Conducted Under: Part 121: Air Carrier					
Type of Flight Operation Conducted: Scheduled; Domestic; Cargo					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: FTW971A084
	Occurrence Date: 01/21/1997
	Occurrence Type: Incident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 39
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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: 09/1996
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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	2749	505								
Pilot In Command(PIC)		505								
Instructor										
Last 90 Days		142								
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 OKC	Departure Time 2235	Time Zone CST
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Destination MEMPHIS	State TN	Airport Identifier MEM	
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Type of Clearance: IFR

Type of Airspace: Class C

Weather Information

Source of Briefing:
Company

Method of Briefing:

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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: Clear			0 Ft. AGL	Condition of Light: Night/Bright	
Lowest Ceiling: Unknown		0 Ft. AGL	Visibility: 10 SM	Altimeter: 29.00	"Hg
Temperature: 12 °C	Dew Point: 7 °C	Wind Direction: 190		Density Altitude: Ft.	
Wind Speed: 9	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: 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				1	1
Cabin Attendants					
Other Crew				1	1
Passengers					
- TOTAL ABOARD -				4	4
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	0	4	4

National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: FTW971A084

Occurrence Date: 01/21/1997

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

JOYCE M. SMITH

Additional Persons Participating in This Accident/Incident Investigation:

NANCY AADLAND

FAA FSDO

OKLAHOMA CITY, OK 73108