
In-flight cabin fire, Boeing 757-225, December 11, 1996

Micro-summary: This Boeing 757-225 experienced an electrical fire in its audio entertainment system.


Event Date: 1996-12-11 at 1338 CST

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

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

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		NTSB ID: CHI97IA041		Aircraft Registration Number: N603AU	
		Occurrence Date: 12/11/1996		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place TERRE HAUTE		State IN	Zip Code 47803	Local Time 1338	Time Zone CST
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Boeing		Model/Series 757-225		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 11, 1996, at 1338 central standard time (cst), a Boeing 757-225, N603AU, operated as USAir Flight number 158, experienced an inflight cabin fire while at cruise altitude. The fire was extinguished by cabin attendants. The flight diverted to Hulman Field, Terre Haute, Indiana, and landed without further incident. The 14 CFR Part 121 passenger flight was operating on an IFR flight plan. The seven person flight crew and 177 passengers reported no injuries. The flight departed Phoenix, Arizona, at 1050 cst.</p>					
<p>Written statements from Flight 158's flight attendants said that they had noticed an electrical smell in the aft cabin while N603AU was parked at its passenger gate in Phoenix, Arizona. One flight attendant said there was a "...strong electrical smell..." in the rear of the airplane. She said she informed the first officer about the odor. The first officer came to the area where the odor was, according to the flight attendant. She said, "By the time he came back the smell had weakened somewhat." The flight attendant said the first officer thought the smell "...may have had something to do with starting the APU." According to the flight attendant, the first officer called a mechanic. She said the mechanic inspected the area in question and said there was nothing wrong.</p>					
<p>According to the captain of Flight 158, the flight was "...cruising at FL 370 when a flight attendant advised the cockpit that there was an unusual odor in the aft cabin." The captain said he suggested that the flight attendant pull the rear galley's circuit breakers to get rid of the odor. The odor had decreased, according to the captain. He said the flight attendant reported the odor's return a short time later. The captain said he looked into the situation and found an odor present in the aft cabin. He returned to the cockpit and lowered the aft cabin temperature.</p>					
<p>The captain said the flight attendant reported the odor was increasing and that smoke and fire were coming from the floor. He said an emergency was declared and the airplane made an emergency decent and landing at Hulman Field. Before landing, the flight attendant reported the fire had been extinguished.</p>					
<p>An on-scene investigation was conducted by a Federal Aviation Administration (FAA) Principal Maintenance Inspector (PMI). According to the PMI, "Just aft of seat 25ABC, there were 3 burned areas on the sidewall covering at points where corners of the vent panel touch the sidewall." Wiring in these areas was also found burnt. The wiring was associated with an audio entertainment system. The PMI said the system's circuit breaker had popped out. The airplane was ferried to Pittsburgh, Pennsylvania, for inspection and repair. The audio entertainment system was installed under a supplemental type certificate (STC) number SA5537NM. The STC had been granted to Hughes-Avicom International, Incorporated of Pomona, California, on March 5, 1992, by the FAA's Los Angeles, California, Systems and Equipment Branch.</p>					
<p>A representative from the FAA's Pittsburgh, Pennsylvania, Flight Standards District Office (FSDO)</p>					

National Transportation Safety Board

FACTUAL REPORT

AVIATION

NTSB ID: CHI97IA041

Occurrence Date: 12/11/1996

Occurrence Type: Incident


Narrative (Continued)


participated in the inspection. He reported the following: 1) N603AU had electrical cables mis-installed at 6 different seat rows. 2) About half these cables exited the riser panel next to the floor and were incorrectly attached to the seat connection. 3) These cables exited jagged holes and had enough slack in them so that a passenger's foot could become entangled in them. 4) Other cables were jammed between the sidewall and riser panels. 5) Three cables had covering that was frayed with exposed wire. 6) Most of the cable exiting the riser panels had been routed to the seat while under the cabin carpeting. Three other Boeing 757-225's were examined by the Pittsburgh-based FAA PMI. He reported that each airplane had similar installation discrepancies. He said these discrepancies were counter to accepted maintenance practices and information contained in the STC.

N603AU's audio entertainment system was installed by Sabre-Tech, Incorporated, Phoenix, Arizona. During conversations with a company representative it was said that the company's employees followed the STC's instructions during the system's installation. The STC holder was contacted regarding installation procedures stated on the STC's instructions and drawings. A representative from that company said that specific instructions on how to install the system's cable was not provided with the STC. He said they assumed that standard maintenance practices for wiring and cable installation would be followed.

The STC stated, "Actual cable routing to be determined on aircraft." The STC did show that the cables were to be routed under the seat track cover next to the carpeting. This was not done on N603AU.

Because of the incident on Flight 158, USAir decommissioned all the Boeing 757-225 audio entertainment systems until they are properly repaired. USAir developed a Campaign Directive (CD) that was accepted by the Pittsburgh-FAA/FSDO. The CD incorporates modifications to the entertainment system's installation. Each Boeing 757-225 equipped with the STC'd system will be modified according to the CD.

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: CHI97IA041			
		Occurrence Date: 12/11/1996			
		Occurrence Type: Incident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used 0	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Type Instrument Approach:					
VFR Approach/Landing: Forced Landing					
Aircraft Information					
Aircraft Manufacturer Boeing		Model/Series 757-225		Serial Number 22198	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 178	Certified Max Gross Wt.	231000 LBS	Number of Engines: 2	
Engine Type: Turbo Fan	Engine Manufacturer: Rolls-Royce	Model/Series: RB211-535	Rated Power: 45000 LBS		
- Aircraft Inspection Information					
Type of Last Inspection Continuous Airworthiness	Date of Last Inspection	Time Since Last Inspection Hours	Airframe Total Time Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? No	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner STATE STREET BANK & TRUST		Street Address 750 MAIN ST. SUITE 1114			
		City HARTFORD	State CT	Zip Code 06103	
Operator of Aircraft USAIR		Street Address P.O. BOX 12346			
		City PITTSBURGH	State PA	Zip Code 15231	
Operator Does Business As:			Operator Designator Code: USAA		
- 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>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: CHI97IA041
	Occurrence Date: 12/11/1996
	Occurrence Type: Incident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 47
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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: 06/1996
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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	21416	419								
Pilot In Command(PIC)										
Instructor										
Last 90 Days		51								
Last 30 Days		21								
Last 24 Hours		8								

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 PHOENIX	State AZ	Airport Identifier PHX	Departure Time 1050	Time Zone CST
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Destination Same as Accident/Incident Location	State	Airport Identifier	
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Type of Clearance: IFR

Type of Airspace: Class D

Weather Information

Source of Briefing:

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: Unknown	0 Ft. AGL	Condition of Light: Day
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Lowest Ceiling: Unknown	0 Ft. AGL	Visibility: 0 SM	Altimeter: "Hg
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Temperature: °C	Dew Point: °C	Wind Direction:	Density Altitude: Ft.
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Wind Speed:	Gusts:	Weather Conditions at Accident Site: Visual Conditions
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Visibility (RVR): 0 Ft.	Visibility (RVV) 0 SM	Intensity of Precipitation: Unknown
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Restrictions to Visibility: None

Type of Precipitation: None

Accident Information

Aircraft Damage: Minor	Aircraft Fire: In-flight	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				5	5
Other Crew					
Passengers				177	177
- TOTAL ABOARD -				184	184
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	0	184	184

National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: CHI97IA041

Occurrence Date: 12/11/1996

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

FRANK S. GATTOLIN

Additional Persons Participating in This Accident/Incident Investigation:

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