
Contained #2 engine failure, Boeing 727-232, August 14, 1996

Micro-summary: Contained #2 turbine failure on this Boeing 727-232 resulted in a diversion.


Event Date: 1996-08-14 at 1920 EDT


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


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

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 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: NYC96IA168		Aircraft Registration Number: N533DA	
		Occurrence Date: 08/14/1996		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place FLUSHING		State NY	Zip Code 11371	Local Time 1920	Time Zone EDT
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility: 1		Direction From Airport: 130	
Aircraft Information Summary					
Aircraft Manufacturer Boeing		Model/Series 727-232		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 August 14, 1996, about 1920 eastern daylight time, a Boeing 727-232, N533DA, operated by Delta Airlines as flight 801, experienced a turbine failure of the number two engine, during departure from LaGuardia Airport, Flushing, New York. The airplane received minor damage, and the occupants were not injured. Visual meteorological conditions existed and an instrument flight plan was filed. The destination was Tampa, Florida and the flight was operated under the provisions of 14 CFR Part 121.</p> <p>The pilot reported that shortly after takeoff, there was a compressor stall, followed by a loss of engine power, and an abnormal oil pressure reading. The engine was shut down and the flight diverted to John F. Kennedy Airport for a landing. After landing, the flight taxied to the gate where the passengers deplaned normally through the jetway.</p> <p>Debris came to rest in a residential area where a vehicle was struck.</p> <p>Examination of the engine revealed that turbine parts punctured through the turbine exhaust case in several locations but were contained by the fan exit duct. All the 4th stage turbine blades were fractured across the airfoil just above the platform and were retained in the disk. Twelve of the twenty-five 4th stage turbine vane clusters were missing and the remaining clusters showed considerable trailing edge damage. All the 3rd stage turbine blades and vanes exhibited minor secondary damage with no blade or vane damage observed forward of the 3rd stage. The engine had accumulated 235 flight hours and 171 cycles prior to the incident since its last heavy maintenance inspection. The investigation did not reveal the exact origin of the turbine failure.</p>					
FACTUAL REPORT - AVIATION					
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		Occurrence Date: 08/14/1996			
		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:					
Aircraft Information					
Aircraft Manufacturer Boeing		Model/Series 727-232		Serial Number 22046	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Tricycle					
Homebuilt Aircraft? No	Number of Seats: 157	Certified Max Gross Wt.	190500 LBS	Number of Engines: 3	
Engine Type: Turbo Fan	Engine Manufacturer: P&W	Model/Series: JT8D-15A	Rated Power: 15500 LBS		
- Aircraft Inspection Information					
Type of Last Inspection Continuous Airworthiness	Date of Last Inspection 08/1996	Time Since Last Inspection 21 Hours	Airframe Total Time 48427 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner DELTA AIRLINES		Street Address HARTSFIELD INTL ARPT			
		City ATLANTA	State GA	Zip Code 30320	
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:			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>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: NYC961A168
	Occurrence Date: 08/14/1996
	Occurrence Type: Incident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 59
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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: 04/1996
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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										
Pilot In Command(PIC)										
Instructor										
Last 90 Days										
Last 30 Days										
Last 24 Hours										

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? No	Second Pilot?
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Flight Plan/Itinerary

Type of Flight Plan Filed: Unknown

Departure Point Same as Accident/Incident Location	State	Airport Identifier LGA	Departure Time 0000	Time Zone
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Destination TAMPA	State FL	Airport Identifier TPA	
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Type of Clearance: IFR

Type of Airspace: Class B

Weather Information

Source of Briefing:

Method of Briefing:

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: NYC96IA168
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Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
LGA	0000		0 Ft. MSL	0 NM	0 Deg. Mag.
Sky/Lowest Cloud Condition: Clear			0 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: Broken		13000 Ft. AGL		Visibility: 10 SM	Altimeter: 30.00 "Hg
Temperature: 24 °C	Dew Point: 18 °C	Wind Direction: 120		Density Altitude: Ft.	
Wind Speed: 10	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): 0 Ft.	Visibility (RVV) 0 SM	Intensity of Precipitation: Unknown			
Restrictions to Visibility:					
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				4	4
Other Crew					
Passengers				132	132
- TOTAL ABOARD -				139	139
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	0	139	139

National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: NYC96IA168

Occurrence Date: 08/14/1996

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

ROBERT L. HANCOCK

Additional Persons Participating in This Accident/Incident Investigation:

LOUIS ALVAREZ
FAA FLIGHT STANDS. DISTR. OFF
GARDEN CITY, NY

JAMES HOOKEY
NTSB
WASHINGTON, DC