



# National Transportation Safety Board Aviation Incident Final Report

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<b>Location:</b>	Atlanta, GA	<b>Incident Number:</b>	ATL04IA085
<b>Date &amp; Time:</b>	03/05/2004, 1539 EST	<b>Registration:</b>	N978AT
<b>Aircraft:</b>	Boeing 717-200	<b>Aircraft Damage:</b>	None
<b>Defining Event:</b>		<b>Injuries:</b>	118 None
<b>Flight Conducted Under:</b>	Part 121: Air Carrier - Scheduled		

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## Analysis

According to the captain, during the climb out from runway 26L at approximately 200 feet, the number 6 display unit on the pilot's instrument panel went blank and the engine alert display left generator off alert displayed. The first officer requested radar vectors from the Atlanta Tower. After contacting the tower the airplane had a complete electrical power failure, and communications with the Atlanta Tower was lost. Emergency electrical power was restored shortly after the electrical failure. The flight attendants advised the captain that there was smoke in the aft part of the cabin area. The captain and first officer "smelled an electrical burning smell", and declared an emergency. The captain returned to the airport and made an emergency landing, and evacuated the airplane on runway 9R. Examination of the Power Conversion Distribution Unit revealed that the tantalum capacitor and the permanent magnet generator input transformer failed. The failed transformer was the apparent source of the smoke in the cabin. No other anomalies were reported by the captain.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: The failure of the tantalum capacitor and the permanent magnet generator input transformer which resulted in total electrical system failure.

## Findings

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Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

### Findings

1. (C) ELECTRICAL SYSTEM - FAILURE,TOTAL

## Factual Information

On March 5, 2004, at 1539 eastern standard time, a Boeing 717-200, N978AT, operating as flight Citrus 852, registered to Wells Fargo Bank Northwest NA Trustee and operated by Air Tran Airways Incorporated, reported smoke in the passenger cabin during takeoff climb from Hartsfield-Jackson International Airport, Atlanta, Georgia. The scheduled domestic passenger flight was operated under the provisions of Part 121 CFR Title 14 with an IFR flight plan filed. Visual meteorological conditions prevailed at the time of the incident, and there was no damage to the airplane. The airline transport rated captain, airline transport rated first officer, three flight attendants, and 116 passengers were uninjured. The flight departed Hartsfield-Jackson International Airport, Atlanta, Georgia on March 5, 2004 at 1405.

According to the captain, during the climb out from runway 26L at approximately 200 feet, the number 6 display unit on the pilot's instrument panel went blank and the engine alert display (EAD) left generator off alert displayed. The first officer requested radar vectors from the Atlanta Tower. After contacting the tower the airplane had a complete electrical power failure, and communications with the Atlanta Tower was lost. Emergency electrical power was restored shortly after the electrical failure. The flight attendants advised the captain that there was smoke in the aft part of the cabin area. The captain and first officer "smelled an electrical burning smell", and declared an emergency. The captain returned to the airport and made an emergency landing, and evacuated the airplane on runway 9R.

According to the flight attendant, during the first taxi departure the airplane returned to the gate for mechanical problems. As the airplane taxied out and proceeded to takeoff the emergency lights came on in the cabin. The flight attendant in the forward jump seat yelled, "smoke in the cabin". Smoke was observed emitting from the baseboard vents on the left of the aircraft. The flight attendant notified the captain of the smoke condition and the captain replied, "We are going back". The smoke was extinguished and an announcement was made to inform the passengers that we were returning to the airport..

Examination of the Power Conversion Distribution Unit revealed that the tantalum capacitor and the permanent magnet generator input transformer failed. No other anomalies were reported by the captain.

## Pilot Information

<b>Certificate:</b>	Airline Transport; Commercial	<b>Age:</b>	32, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	04/19/2004
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	7300 hours (Total, all aircraft)		

## Co-Pilot Information

<b>Certificate:</b>	Airline Transport; Commercial	<b>Age:</b>	37, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	11/08/2003
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	8000 hours (Total, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Boeing	<b>Registration:</b>	N978AT
<b>Model/Series:</b>	717-200	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Transport	<b>Serial Number:</b>	55037
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	117
<b>Date/Type of Last Inspection:</b>	Continuous Airworthiness	<b>Certified Max Gross Wt.:</b>	67000 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	2 Turbo Fan
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Rolls-Royce
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	BR 715
<b>Registered Owner:</b>		<b>Rated Power:</b>	18500 lbs
<b>Operator:</b>	AIRTRAN AIRWAYS INC	<b>Operating Certificate(s) Held:</b>	Flag carrier (121)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	ZZDA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KATL, 1034 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1539 EST	Direction from Accident Site:	0°
Lowest Cloud Condition:	Few / 3500 ft agl	Visibility	10 Miles
Lowest Ceiling:	Broken / 9000 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	190°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.07 inches Hg	Temperature/Dew Point:	24° C / 17° C
Precipitation and Obscuration:			
Departure Point:	ATLANTA, GA (ATL)	Type of Flight Plan Filed:	IFR
Destination:	MINNEAPOLIS, MI (MSP)	Type of Clearance:	IFR
Departure Time:	1405 EST	Type of Airspace:	Class B

## Airport Information

Airport:	THE WILLIAM B HARTSFIELD ATLAN (ATL)	Runway Surface Type:	Asphalt
Airport Elevation:	1026 ft	Runway Surface Condition:	Dry
Runway Used:	9R	IFR Approach:	Visual
Runway Length/Width:	9001 ft / 150 ft	VFR Approach/Landing:	Full Stop

## Wreckage and Impact Information

Crew Injuries:	5 None	Aircraft Damage:	None
Passenger Injuries:	113 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	118 None	Latitude, Longitude:	33.640278, 0.000000

## Administrative Information

Investigator In Charge (IIC):	Eric H Alleyne	Report Date:	03/30/2005
Additional Participating Persons:	Glen Thompson; Atlanta SDO; College Park, GA		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).