
Rejected takeoff, Lockheed L-1011-385-1-15, August 7, 1997

Micro-summary: This Lockheed L-1011-385-1-15 aborted takeoff, to be followed by a brake fire.

Event Date: 1997-08-07 at 1935 HST

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

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

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		NTSB ID: LAX97FA276		Aircraft Registration Number: N740DA	
		Occurrence Date: 08/07/1997		Most Critical Injury: Serious	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place HONOLULU	State HI	Zip Code 96819	Local Time 1935	Time Zone HST	
Airport Proximity: On Airport		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Lockheed		Model/Series L-1011-385-1-15		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>HISTORY OF FLIGHT</p> <p>On August 7, 1997, at 1935 hours Hawaiian standard time, Delta Airlines Flight 54, a Lockheed L-1011-385-1-15, N740DA, aborted takeoff on runway 8R at the Honolulu, Hawaii, International Airport. A wheel/brake fire ensued as the aircraft came to a stop, and 1 passenger sustained serious injuries during the subsequent emergency evacuation, while another 59 received minor injuries. The aircraft sustained minor damage and the remaining 245 occupants were not injured. The aircraft was operated by Delta Airlines, Inc., as a scheduled domestic passenger flight from Honolulu to Atlanta, Georgia, under 14 CFR Part 121. The flight blocked out from the gate about. Visual meteorological conditions prevailed at the time and an IFR flight plan was filed.</p> <p>According to the airline maintenance records, the APU and the A channel of the area overheat system were inoperative when the crewmembers arrived at the aircraft. The dispatcher's records showed that the aircraft departed the gate at 1627 and proceeded to the end of 8R. During the initial taxi out the left wing duct fail light illuminated. The captain completed the checklist and the light went out; however, later in the taxi the light came on again. In view of these facts, the captain elected to return to the gate, arriving back there at 1655. The passengers were deplaned, maintenance was given the aircraft, and troubleshooting began at 1722. Maintenance personnel started all three engines and taxied out to runway 8R for an engine run. The overheat controller was replaced, the aircraft was again returned to the gate and, at 1845, the passengers and crew reboarded.</p> <p>The flight attendants reported that, during the initial takeoff roll, dozens of soda cans spilled from the forward left storage cabinet into the number three cross-aisle when two retaining latches malfunctioned. The takeoff roll continued without further incident until reaching V1 (155 knots), when the captain noted the illumination of the door caution light on the pilot's caution and annunciator warning panel (PCAWP). He announced to the crew that he intended to continue the takeoff. Identification of the door causing the pilot's caution light to illuminate can only be made from the flight engineer's annunciator panel. The C1 cargo door was subsequently identified by the flight engineer.</p> <p>About a second or so later, the captain felt the aircraft began to vibrate, shudder, and then begin a yaw to the left. He also perceived that the aircraft was settling to the left and heard what he described as "popping sounds." At this point, he decided that it would be unsafe to attempt a liftoff. The abort was initiated about Vr (165 knots) with approximately 6,000 feet of runway remaining. He slowed the aircraft by using full braking and reverse thrust. He corrected the left yaw with asymmetric brake and rudder inputs.</p> <p>The first officer stated that he assisted the captain by also applying the brakes with about 2,000 feet of runway remaining. He also reported their aborted takeoff to the control tower while the</p>					
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abort was in progress.

Next, the flight attendants reported that a trash cart separated from its attachment fitting as the aircraft continued to decelerate. The cart began rolling down the aisle until it was stopped by one of the flight attendants. The cart brakes, which serve as a secondary latch, were set but did not prevent the cart from rolling.

As the aircraft came to a stop, the nose wheels were 164 feet short of the overrun area for runway 8R. At this point, the second officer reminded the captain that the brakes would likely be very hot and suggested that an evacuation of the aircraft should be considered.

The first officer contacted the tower requesting that fire and rescue personnel and equipment be dispatched.

The captain was about to direct an evacuation when someone in the back of the aircraft shouted, "fire." Upon hearing that, the captain immediately ordered an evacuation and the second officer said, "abandon the aircraft" to the OBL (on board leader). The captain completed the evacuation checklist and activated the evacuation horn. After the horn sounded, he visually confirmed that the flight attendants were opening the doors and deploying the evacuation slides.

After securing the cockpit with reference to the checklist, the cockpit crew went into the cabin to assist the flight attendants with the evacuation.

The two control tower specialists, working in the midfield tower, stated that they watched as the aircraft taxied into position and held on runway 8R. After the pilot was cleared for takeoff, the aircraft began its takeoff roll. As the aircraft approached the midfield point, both controllers reported hearing a loud boom. They also observed smoke and flames emanating from beneath the aircraft. When the aircraft was finally stopped at the end of the runway, flames remained visible. They observed emergency rescue vehicles rolling on taxiway RA by the time the aircraft halted.

INJURIES TO PERSONS

According to the airline, 56 passengers and 2 flight attendants were treated for minor abrasions or smoke inhalation at the airport. A single passenger received a broken ankle and was transported to Queens hospital. Most of these injuries were sprains and abrasions that were sustained due to the use of the slides.

DAMAGE TO AIRCRAFT

After the accident, a Federal Aviation Administration (FAA) inspector arrived at the aircraft to oversee the investigation and the removal of the aircraft from the runway prior to the arrival of the Safety Board investigator. An airline mechanic documented the aircraft as follows: The 2R door was opened halfway with girt bar engaged, the slide pulled out halfway, and the emergency handle pulled into the full detent position. There was no evidence that the 3L door had been opened. The 4R door had opened approximately 2 inches with the girt bar engaged. The emergency handle was found in the stowed position. (Doors are numbered from fore to aft and then as left or right.)

In the cockpit, all ignition switches were off, the boost pumps were on, the throttles were at idle, and the fire T-handles were pulled. The flaps were at 14 degrees, the spoilers were down, there was minor damage to right inboard leading edge slat, and the 3R brake line was severed. The right engine was inspected for FOD; however, none was found. (Brakes and wheels are numbered from the left to right and then as front or rear.)

An inspection of the C1 door revealed no physical damage or other anomalies associated with the door latching mechanism or proximity sensor.

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The 3R brake line was fractured and the leading edge slat had minor impact damage and black smears, both in the vicinity of the 3F tire. There were black smears on the fractured brake line. The 3F tire was fragmented. The 3F fuse plugs were intact.

The 2L slide was found to have partially deflated. When maintenance personnel inspected it, they discovered it had a slow leak.

The 4R slide backboard was cracked and a piece of the backboard was found lying in the forward doorsill.

AIRCRAFT INFORMATION

The dispatch records show that, as the aircraft reached the takeoff point on the runway, it was at its maximum gross weight for takeoff of 510,000 pounds and was carrying 183,000 pounds of fuel on board.

All eight main gear tires use an independent anti-skid sensing and control that are independent of each other. The anti-skid system is designed to deactivate as the aircraft's speed drops below 13 to 17 knots.

There is no cockpit monitoring system to warn of excessive heat buildup in the tires. In addition, there are no charts or warnings in the pilot's manuals to indicate how extended taxi distances can affect tire integrity.

The aircraft was manufactured with brake temperature gauges as standard equipment; however, the airline declined the gauges and elected to use the panel space for other equipment.

The procedure for closing the C1 cargo door calls for holding the door switch to the closed position until the green light appears. The green cargo door light means the electrical operation of the door is complete and further depression of the close door switch has no effect. The extinguishment of the individual cargo door light at the flight engineer's panel indicates the door is locked. A proximity sensor located at the door lock mechanism triggers this door locked logic. Additionally, a direct viewing window located on the exterior of the cargo door provides visual capability to ensure the door is properly closed and locked.

COMMUNICATIONS

After getting out of their vehicles and having to rely on their hand-held radios, the firefighters found that they were unable to communicate with the cockpit crew due to frequency incompatibility.

Once the emergency checklist/shutdown was completed, the PA and inter-phone became inoperative since they are both powered by the DC essential buss, which was deactivated when the battery was switched to the off position. At this point, the flight attendants were unable to communicate electronically with the cockpit crew or vice versa.

FLIGHT RECORDERS

The flight data recorder was reviewed by Safety Board investigators at the Board's FDR laboratory in Washington, D.C. Takeoff parameters were normal until FDR Subframe Reference Number (FDR SRN) 15968. This corresponded to 159 knots IAS. Acceleration remained as expected until 15972 SRN, when the abort was initiated at 165 knots IAS. There were a number of data misses in this area. A reduction in the acceleration was noted just before 15972 SRN and the number 1 EPR showed a reduction at 15972 SRN. Aircraft deceleration began after 15973 SRN, after the aircraft had reached a peak of 168 knots IAS.

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Engines reached idle at about 15975 SRN and the reversers were deployed at 15976 SRN. Full reverse was in effect by 15980 SRN and at 135 knots IAS. At SRN 15997, the aircraft recorded its minimum reading of 46 knots IAS and remained there throughout the remainder of the abort. Full reverse was still in use at SRN 15998. The first positive reduction in reverse was at SRN 16001. Engines were at idle and the thrust reversers stowed by SRN 16004. By SRN 16005, deceleration on the aircraft reached minimum.

The abort sequence lasted about 34 seconds. Braking was already in effect as was noted by the deceleration loads prior to the thrust reversers being deployed.

The cockpit voice recorder was reviewed by Safety Board investigators at the Board's CVR laboratory in Washington, D.C. The final taxi out was unremarkable with no extraneous conversation. The crew started the No. 3 engine after being cleared to taxi into position and hold. The engine had 4 to 5 minutes of warm-up time before the takeoff roll started.

When cleared for takeoff, the final checklist items were accomplished. The only discrepancy in any responses was the captain's reply to rudder pedal steering of "Coming On" instead of "On." As the aircraft reached V1, the captain said, "Door light, we're going" in response to the illuminated C1 cargo door light. About 5 seconds later a pop was heard, followed by a loud shuddering noise.

The first officer called out the abort to tower. Someone said "110 knots" during the abort. About the time the aircraft stopped, a "dinging" chime began to sound and continued until a crewmember picked up the PA and inter-phone handset. The crew was discussing the possibility of hot brakes when the second officer mentioned the possibility of a fire. The captain ran the evacuation checklist and notified the flight attendants to evacuate. At this point, the CVR stopped recording.

WRECKAGE AND IMPACT INFORMATION

The first physical indication on the runway was a rubber smear. The smear could be traced from the its initial point to the final position of the 3F tire as it came to a stop on the runway. The 3F tire partially separated with 6,170 feet of runway remaining. Measurements indicated that the aircraft was on the center of the runway at the time. All deviation measurements were referenced from the right truck to the centerline.

At 6,000 feet the right truck was 19 feet right of the centerline. Evidence of light braking began at 5,300 feet. At 5,000 feet, the right truck was 10 feet right of center. At 4,625 feet, the right truck reached its maximum left deviation of 7 feet right of the centerline. At 4,000 feet, the right truck was still 7 feet right of the centerline. Between 4,000 feet and 3,500 feet, it became difficult to see evidence of any left truck braking. At 3,575 feet, the right truck was 9 feet right of centerline and abeam the east end of taxiway RG. The right truck crossed the centerline at 2,750 feet.

Between 3,500 feet and 2,200 feet, the left truck showed evidence of rubber removal from the runway surface. At 2,150 feet, the left truck started to deposit rubber on the runway. At 2,135 feet, the right truck was 7 feet left of the centerline. At 2,075 feet, the right truck started to deposit rubber on the runway. At 2,000 feet, the right truck was 4 feet left of the centerline. At 2,830 feet, the right truck crossed back over the centerline toward the right.

At 1,510 feet and beyond the installed gear arresting cable, the right truck was 16 feet right of the centerline. At 1,750 feet to 900 feet, the left truck marks became more easily visible. At 1,000 feet and abeam the windsock, the right truck was 33 feet right of the centerline. At 900 feet, the right truck reached a maximum right deviation, 35 feet right of the centerline. With 417 feet remaining and abeam the eastern edge of taxiway RH, the right truck was 16 feet right of the centerline.

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Heavy skid marks began on the right truck with 405 feet remaining. No braking was evident during the last 200 feet on left truck. The aircraft stopped with the right truck 16 feet right of the centerline. The nose gear came to rest near the centerline and 164 feet from end of runway.

The left main gear exhibited evidence of sooting and melting. The 1F and 2R hubs had fractured along the center seam and the tires were deflated. Rubber deposits and smearing on the runway corresponded to the position of the 3F tire. The tire marks continued from the initial rubber smear marks up to the point at which the 3F tire stopped on the runway. Heavy skid marks began with 405 feet remaining.

FIRE

An assistant fire chief at Fire Station No. 2 reported hearing the sound of what described as a normal takeoff until he heard two explosions, or pops, after which time he heard the sound of the engines throttling down. He then heard engines go into reverse and saw flames from the left gear as the airplane began decelerating. He made an announcement over the ground internet and stated that they were "rolling" before the initial alarm had been received from the tower. The response time from Station No. 2, which included three trucks, was between 45 seconds and 1 minute.

By the time fire equipment and personnel arrived at the aircraft, the left main gear was fully involved, producing flames 10 to 15 feet high. They expelled foam from turrets for 10 to 15 seconds, successfully knocking down the fire. Next, they pulled out their hand lines and applied foam on the right main gear wheels that were glowing cherry red. After the fire was knocked down, a few small flare-ups occurred on the left truck, but they, too, were extinguished within about 8 minutes. After spraying the foam, a dry chemical extinguishing agent was applied.

Fire Station No. 1 sent additional two trucks, for a total of five fire trucks responding to the scene.

SURVIVAL ASPECTS

The first and second officers stated that they were unable to get to their assigned evacuation positions at the over-wing exits due to the flow of passengers coming forward to exit through the front doors.

The OBL asked the second officer to assist people as they came down the slide. He responded by exiting through the 1L door and then began assisting the passengers as they came down the slide. He stated that the total number of evacuees soon overwhelmed him. As they came down the slide, they began colliding and piling up on each other at the bottom of the slide. He shouted for the flight attendants to slow the evacuation, but later reported that, as far as he could tell, the rate of the evacuation did not slow.

The flight attendants reported that some passengers were still attempting to take their carry-on luggage with them in spite of being told not to do so. Purses and bags were found scattered on the ground at the bottoms of the slides.

The captain and the first officer finally exited through the 1R door after they determined that there were no passengers remaining on board.

The flight attendants informed the captain that the 2R and 4R doors had failed to open sufficiently to be utilized in the evacuation. Although the 4L door opened fully and the slide completely deployed, the flight attendants decided not to use that door because of the proximity of the smoke and fire emanating from the left main gear. As a result of the fire outside the 4L door, they also decided not to attempt to open the 3L door, again, because of its proximity to the fire. The 1L,

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1R, 2L, and 3R doors opened fully and there respective slides deployed completely.

The assistant fire chief reported that as people came down the evacuation slides, the slides were "bouncing." He said the slides appeared to be on a steeper angle than he had expected to see.

Once out of the aircraft, passengers stumbled and fell while walking or running over the uneven surface next to the runway in the dim evening light.

Firefighters complained that they were unable to account for all the passengers since the passenger count does not include lap children. They also reported a delay in receiving the reported passenger count from the airline.

The assistant chief also told Safety Board investigators that the airline apparently had no organized method in effect for supervising passengers after they had been evacuated from the aircraft. Several passengers had begun walking away from the aircraft and back toward the passenger terminal. Another active runway, 8L, lay between those passengers and the terminal building.

A dog in the cargo compartment was rescued only after a ground power unit was connected so that the cargo door could be opened.

A bus finally transported the passengers and crew to gate 34 at the terminal.

TESTS AND RESEARCH

The aircraft had taxied approximately 11.3 miles in a 3-hour period, with half of that time accruing within the 70 minutes prior to the abort. In addition, the aircraft had traveled another mile down the runway on its takeoff roll before the crew noticed the abnormality.

Several takeoff/aborts were flown in a Delta L-1011 simulator with an effort made to duplicate the conditions at the time of the accident. With the weather conditions replicated, the abort was initiated at 168 knots IAS, with full spoilers, full braking, and full reverse thrust. The initial runs were accomplished with a blown 3F tire and a brake loss on 3R. The aircraft had some tendency to pull left and stopped with about 1,800 feet remaining. The 3F brake failed as well on the next test, and it was found that the aircraft stopped with about 1,000 feet remaining. This test was conducted using a simulator based on new aircraft performance parameters, with new brakes, and a crew who knew the aborts were coming. The tire and skid marks found on runway were comparable in centerline deviation when compared to the runway track recorded by the simulator.

The procedures that the flight crew followed during the RTO was compared to the prescribed directives provided by the simulator instructor and were found to be in compliance.

The airline service history for the L-1011 revealed that "phantom" door lights have been reported occasionally over the life of the fleet. Maintenance personnel have attributed this to the flexing of the fuselage (doorframe) that occurs as the aircraft's weight shifts from the landing gear to the wings on takeoff resulting in a temporary misalignment of the proximity sensor.

The tire manufacturer stated that the nature of the tire failure, a bead separation, would have been difficult to predict based only on taxi distance. Furthermore, they contended, the airline's use of recapped tires makes reliable prediction virtually impossible since the available tabular data is predicated on new tires.

The 3F tire had been recapped 3 times (a maximum of 5 recaps are permitted by the FAA; however, the tire manufacturer does not approve of utilizing recapped tires), and there were 141 cycles on the wheel and tire at the time of the tire disintegration. According to the manufacturer, the expected

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tire life is approximately 165 cycles. The manufacturer reported that shearography of the bead area did not reveal any abnormalities.

The following information was provided by Goodyear to illustrate potential tire temperatures at the end of each taxi cycle. The temperatures shown below assume no cooling time; however, Goodyear advises that cooling occurs slowly due to the insulating effect of the bead rubber. These estimates are based on data generated from DC-10 main tire tests using 50x20.0-20 tires that are similar, but not identical to the 52x20.5-20 tires used on the L-1011-250/500s.

Taxi Cycle	Tread Temperature	Bead Temperature
Fahrenheit	190 degrees Fahrenheit	100 degrees Fahrenheit
	250 degrees Fahrenheit	150 degrees Fahrenheit
	3	175-190 degrees Fahrenheit
degrees Fahrenheit		350-400 degrees Fahrenheit

Goodyear states that the bead area begins to degrade at 250-280 degrees Fahrenheit and the fuse plugs melt at 338 degrees Fahrenheit. The tire bead temperature was estimated by investigators to have reached about 350 to 400 degrees Fahrenheit based on this data. Initial field observations of the 3F tire showed visual evidence of tire bead separation, which was later confirmed by the tire manufacturer.

After the accident the airline maintenance personnel tested the anti-skid control box. They found a stuck test switch and improper electrical resistance in the test switches.

The emergency operation of all doors was checked during the scheduled C maintenance in late July 1997.

The 2R door had only opened approximately 36 inches when it stopped. The flight attendant that tried to open this door stated that when the door stopped moving she recycled the T-handle and then "pumped the handle" but nothing happened. Her subsequent actions were not applicable to a partially opened door.

The three functions of the T-handle are to remove the door lock pin from the door track; to release the electrical door actuator brake; and to release the brake from the counterbalance. Pumping the T-handle has no effect on a partially opened door. She did not try to manually lift the door.

When the 2R door was functionally tested without the slide, the door came up within the prescribed time, but would stall after retracting about 2 to 3 feet if any additional load was placed on the door. During an actual emergency deployment of the slide, the counterbalances have to overcome the friction of the slide being pulled out of the pack and the slide deployment pins being pulled from the slide. This is in addition to the force required to retract the door. It was noted that when 10 to 20 pounds of upward force was applied to the bottom of the door, the door continued to open, even after it had stalled initially. Maintenance personnel replaced the spring counterbalance, and the door opened properly under all conditions.

The 2R slide was inspected and was found to have been packed in accordance with current technical directives. The slide was last removed and replaced July 28, 1997. The normal overhaul interval is 3 years.

The serviceability testing method of the emergency exit doors calls for the door to retract to the full open position in the emergency mode with the slide still in the pack within 6 seconds. The faulty 2R door spring counterbalance was operated on the test stand and the output performance plotted and compared to a previous plot done in 1984. The unit had reduced output torque throughout its entire cycle.

The unit was then disassembled and one of the 18 springs was found broken as well as the main

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bearing races being worn. The manufacturer concluded that the loss of the spring and the additional friction caused by the worn bearing races reduced the capability of the counterbalance to overcome the load encountered during an emergency deployment.

The 4R had jammed at about 2.25 inches from the closed position. The door was opened in the emergency mode with the slide disengaged. It opened in 4.16 seconds, which was within the 3 to 6 second design requirement. The slide was found to be properly packed and the release tests of the girt bar met specifications. While opening the door, maintenance personnel placed an additional 100-pound load on it. Even with the additional load, the door still opened fully.

After opening the door, a piece of the slide backboard was found at the bottom of the forward doorsill. The broken piece was from the forward part of the slide casing that supports the girt bar. The broken piece was removed but when the 4R door was cranked to the closed position the forward end of the girt bar did not engage the latch, but rather tended to slide over the latch cover. Upon further inspection, the vertical adjustment of the girt bar was found it to be out of tolerance. When the girt bar was adjusted downward about .10 inch, the tolerance was achieved and the door closed properly.

The slide was examined by representatives of the slide manufacturer. They also noted damage to the forward attach bracket for the girt bar and the backboard for the slide. The aft end of the girt bar had pulled out of its attach bracket normally; however, the forward end did not release as evidenced by the unbroken lock wire. All of the pins that release the slide were still in place. The aft portion of the girt bar was out of its aluminum bracket while the front part was still secured. The manufacturer's representatives concluded that misrigging had placed a strain on packing board, which eventually fractured. The fractured piece was found in a position that would have allowed it to physically jam the girt bar. The inspection revealed that the only physical damage to the 4R door was the fractured section of backboard.

The 4R slide was manufactured in 1994, overhauled in 1995, and reinstalled in September 1996.

During the abort, a trash cart came loose from its attachment point, commonly referred to as a mushroom, at the 2R mid-service center (MSC) and rolled down the cabin aisle. When repositioned on the mushroom, the cart was unable to remain engaged when either pushed or pulled. The mechanical friction brakes are designed to rub against the outside of the wheels when applied. The cart's wheels were visibly worn and the resistance from the friction brakes was limited.

The cabinet that opened during takeoff had a primary latch that was worn and would not stay engaged when positioned. The secondary latch on the side was also worn. It, too, was loose and had dropped down into a vertical position, no longer providing any locking function for the door. The cabinet was marked with a placard that states that it contains "2 gal water, 12 shopping bags and 15 red trash bags." Instead, it had been loaded with 12 6-packs of sodas.

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Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation	Runway Used	Runway Length	Runway Width
HONOLULU INTERNATIONAL	HNL	13 Ft. MSL	8R	12000	200
Runway Surface Type: Asphalt					
Runway Surface Condition: Dry					
Type Instrument Approach:					
VFR Approach/Landing:					
Aircraft Information					
Aircraft Manufacturer		Model/Series		Serial Number	
Lockheed		L-1011-385-1-15		193C-1244	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 310	Certified Max Gross Wt.	510000 LBS	Number of Engines: 3	
Engine Type:	Engine Manufacturer:	Model/Series:	Rated Power:		
Turbo Fan	Rolls-Royce	RB211-524B4I	41000 LBS		
- Aircraft Inspection Information					
Type of Last Inspection	Date of Last Inspection	Time Since Last Inspection	Airframe Total Time		
Continuous Airworthiness	08/1997	84 Hours	60686 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?	ELT Operated?	ELT Aided in Locating Accident Site?			
Owner/Operator Information					
Registered Aircraft Owner		Street Address			
DELTA AIR LINES INC.		HARTSFIELD ATLANTA INT'L AP			
		City	State	Zip Code	
		ATLANTA	GA	30320	
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:			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 Only					

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First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 54
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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; Single-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--w/ waivers/lim.	Date of Last Medical Exam: 03/1997
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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	20000	2000								
Pilot In Command(PIC)										
Instructor										
Last 90 Days		153								
Last 30 Days										
Last 24 Hours		7								

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed?	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 HNL	Departure Time 1934	Time Zone HST
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Destination ATLANTA	State GA	Airport Identifier ATL	
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Type of Clearance: IFR

Type of Airspace: Class A

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
HNL	2005	HST	13 Ft. MSL	0 NM	0 Deg. Mag.
Sky/Lowest Cloud Condition: Scattered			4000 Ft. AGL	Condition of Light: Dusk	
Lowest Ceiling: None		0 Ft. AGL	Visibility: 12	SM	Altimeter: 30.00 "Hg
Temperature: 26 °C	Dew Point: 20 °C	Wind Direction: 60		Density Altitude: Ft.	
Wind Speed: 8	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: Minor	Aircraft Fire: Ground	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			2	7	9
Other Crew				2	2
Passengers		1	56	234	291
- TOTAL ABOARD -		1	58	246	305
Other Ground	0	0	0		0
- GRAND TOTAL -	0	1	58	246	305

National Transportation Safety Board

FACTUAL REPORT

AVIATION



NTSB ID: LAX97FA276

Occurrence Date: 08/07/1997

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

ROBERT R. CRISPIN

Additional Persons Participating in This Accident/Incident Investigation:

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