



National Transportation Safety Board Aviation Accident Final Report

Location:	Atlanta, GA	Accident Number:	DCA13CA065
Date & Time:	03/07/2013, 1921 EST	Registration:	N698DL
Aircraft:	BOEING 757-232	Aircraft Damage:	Substantial
Defining Event:	Tailstrike	Injuries:	148 None
Flight Conducted Under:	Part 121: Air Carrier - Scheduled		

Analysis

On March 7, 2013, at 19:21 Eastern Standard Time, a Boeing 757-200, registration N698DL, operated by Delta Air Lines as flight 1693 from Orange County Airport, Santa Ana, California (KSNA) to the Hartsfield Jackson International Airport, Atlanta, Georgia (KATL), experienced a tailstrike while landing on runway 28. The aircraft was substantially damaged, and there were no injuries to the 2 flight crew, 4 flight attendants, or 142 passengers. Weather at the time of the event was reported as winds from 340 degrees at 6 knots, clear skies and 10 miles visibility.

According to the flight crew, the preflight, departure and enroute segments of the flight were normal. The approach was flown with a Vref speed of 129 knots and 25 degrees of flap. Upon landing, the first officer called "speedbrakes not activated" and manually deployed the speedbrakes. The captain reported he felt the airplane "float" and attempted to maintain landing attitude. FDR data indicated that the airplane made an initial touchdown, followed by a brief gear squat switch deactivation, consistent with a slight bounce or light touchdown; the speedbrakes were then manually deployed. Airspeed decayed to approximately 115 knots and pitch attitude increased to about 11 degrees. The Delta 757/767 Flight Crew Training Manual specifies that contact with the runway is possible with pitch attitude greater than 10.5 degrees, with flaps 25 and airspeed of 10 knots below Vref.

The airplane rolled out and taxied to the gate uneventfully. While preparing the aircraft for the next flight the flight crew was informed by maintenance personnel of damage to the tail section of the aircraft. Aircraft inspection revealed an 8 foot scrape on the lower aft fuselage, damage to several stringers and buckling of the aft pressurization dome.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

the pilot's failure to maintain correct airspeed and pitch attitude at touchdown.

Findings

Personnel issues

Incorrect action performance - Flight crew (Cause)

Factual Information

History of Flight

Landing-flare/touchdown	Tailstrike (Defining event)
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Pilot Information

Certificate:	Airline Transport	Age:	62
Airplane Rating(s):	Multi-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Multi-engine	Toxicology Performed:	No
Medical Certification:	Class 1 Without Waivers/Limitations	Last FAA Medical Exam:	
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	01/04/2013
Flight Time:	14013 hours (Total, all aircraft), 2018 hours (Total, this make and model), 135 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft)		

Co-Pilot Information

Certificate:	Airline Transport	Age:	48, Male
Airplane Rating(s):	Multi-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Multi-engine	Toxicology Performed:	No
Medical Certification:	Class 1	Last FAA Medical Exam:	
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	4601 hours (Total, all aircraft), 158 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	BOEING	Registration:	N698DL
Model/Series:	757-232	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	29911
Landing Gear Type:	Retractable - Tricycle	Seats:	191
Date/Type of Last Inspection:	02/12/2013, Continuous Airworthiness	Certified Max Gross Wt.:	241000 lbs
Time Since Last Inspection:		Engines:	2 Turbo Fan
Airframe Total Time:	46669 Hours at time of accident	Engine Manufacturer:	P & W
ELT:	Installed, not activated	Engine Model/Series:	PW2037
Registered Owner:	DELTA AIR LINES INC	Rated Power:	37530 lbs
Operator:	DELTA AIR LINES INC	Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:		Operator Designator Code:	DALA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Dusk
Observation Facility, Elevation:	KATL, 1026 ft msl	Observation Time:	0152 UTC
Distance from Accident Site:	0 Nautical Miles	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	8° C / -2° C
Lowest Ceiling:		Visibility	10 Miles
Wind Speed/Gusts, Direction:	6 knots, 340°	Visibility (RVR):	
Altimeter Setting:	30.23 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:			
Departure Point:	Santa Ana, CA (KSNA)	Type of Flight Plan Filed:	IFR
Destination:	Atlanta, GA (KATL)	Type of Clearance:	IFR
Departure Time:	1235 PST	Type of Airspace:	

Airport Information

Airport:	Hartsfield/Jackson (KATL)	Runway Surface Type:	Concrete
Airport Elevation:	1026 ft	Runway Surface Condition:	Dry
Runway Used:	28	IFR Approach:	ILS; Visual
Runway Length/Width:	9000 ft / 150 ft	VFR Approach/Landing:	Straight-in

Wreckage and Impact Information

Crew Injuries:	6 None	Aircraft Damage:	Substantial
Passenger Injuries:	142 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	148 None	Latitude, Longitude:	33.636667, -84.427778 (est)

Administrative Information

Investigator In Charge (IIC): William R English

Adopted Date: 02/26/2014

Additional Participating Persons:

Publish Date: 01/31/2018

Note: This accident report documents the factual circumstances of this accident as described to the NTSB.

Investigation Docket: <http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=86416>

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