



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Charlotte, North Carolina	Accident Number:	DCA23LA278
Date & Time:	May 5, 2023, 04:54 Local	Registration:	N921US
Aircraft:	Airbus A321-231	Aircraft Damage:	Substantial
Defining Event:	Tailstrike	Injuries:	177 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

American Airlines flight 1753 sustained a tailstrike while landing at Charlotte Douglas International Airport (CLT), Charlotte, NC. The flight was a regularly scheduled domestic passenger flight from Fort Lauderdale, FL to CLT.

According to the flight crew, the captain was the pilot flying, and the first officer (FO) was the pilot monitoring when they were cleared to land on runway 18L at CLT. The airplane was in the landing configuration and on a stabilized approach at 1,000 ft. above ground level (AGL). While crossing the runway's threshold the wind shifted from a 6 -7 knot headwind component to a 6–7 knot tailwind component, the airspeed began to decay, and the airplane's sink rate increased. In an effort to correct for the sink rate the captain applied back sidestick. The airplane touched down firmly and bounced, coincidentally the ground spoilers deployed which resulted in a nose high attitude. The airplane touched down a second time decelerated and taxied uneventfully to the gate.

The captain stated that the ground spoiler deployment coinciding with the bounced touchdown resulted in an airplane nose-up pitch attitude. As a result, the pitch attitude increased until the tail struck the runway. After the tailstrike, and subsequent touchdown the remainder of the landing and landing rollout were normal with no risk of runway overrun or excursion.

The tailstrike resulted in abrasion damage along the aft lower fuselage, over an area of about 14 feet long by 2 feet wide. An inspection revealed substantial damage to several frames.

Probable Cause and Findings

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

The captain's failure to maintain the appropriate airspeed and pitch attitude during landing which resulted in a tailstrike.

Findings

Aircraft	Pitch control - Not attained/maintained
Aircraft	Airspeed - Not attained/maintained
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

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

Certificate:	Airline transport; Commercial; Flight engineer	Age:	55,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	5-point
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	April 25, 2023
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	August 17, 2022
Flight Time:	1744 hours (Total, this make and model)		

Co-pilot Information

Certificate:	Airline transport; Commercial; Flight engineer; Flight instructor	Age:	
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	5-point
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	
Instructor Rating(s):	Airplane multi-engine; Helicopter; Instrument airplane; Instrument helicopter	Toxicology Performed:	
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	June 6, 2022
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	June 6, 2022
Flight Time:	652 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Airbus	Registration:	N921US
Model/Series:	A321-231	Aircraft Category:	Airplane
Year of Manufacture:	2015	Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	6523
Landing Gear Type:	Retractable - Tricycle	Seats:	379
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	2
Airframe Total Time:		Engine Manufacturer:	
ELT:	C126 installed, not activated	Engine Model/Series:	
Registered Owner:	AMERICAN AIRLINES INC	Rated Power:	
Operator:	AMERICAN AIRLINES INC	Operating Certificate(s) Held:	Flag carrier (121)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KCLT, 730 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	16:52 Local	Direction from Accident Site:	340°
Lowest Cloud Condition:	Few / 6500 ft AGL	Visibility	10 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	230°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.15 inches Hg	Temperature/Dew Point:	23°C / 7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Fort Lauderdale, FL	Type of Flight Plan Filed:	IFR
Destination:	Charlotte, NC	Type of Clearance:	IFR
Departure Time:		Type of Airspace:	Class B

Airport Information

Airport:	CHARLOTTE/DOUGLAS INTL CLT	Runway Surface Type:	Asphalt;Concrete
Airport Elevation:	747 ft msl	Runway Surface Condition:	Dry
Runway Used:	18L	IFR Approach:	ILS
Runway Length/Width:	8677 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	5 None	Aircraft Damage:	Substantial
Passenger Injuries:	172 None	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	177 None	Latitude, Longitude:	35.215878,-80.950875

Administrative Information

Investigator In Charge (IIC): Banning, David

Additional Participating Persons:

Original Publish Date: July 18, 2023

Last Revision Date:

Investigation Class: [Class 4](#)

Note: The NTSB did not travel to the scene of this accident.

Investigation Docket: <https://data.ntsb.gov/Docket?ProjectID=135369>

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).