



Aviation Investigation Final Report

Location:	Philadelphia, Pennsylvania	Accident Number:	DCA18CA266
Date & Time:	July 31, 2018, 13:15 Local	Registration:	N192AN
Aircraft:	Boeing 757	Aircraft Damage:	Substantial
Defining Event:	Tailstrike	Injuries:	181 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

On July 31, 2018, about 1315 eastern daylight time, American Airlines flight 89, a Boeing 757-223, N192AN, experienced a hard landing at Philadelphia International Airport (PHL), Philadelphia, Pennsylvania. There were no injuries to the 181 passengers and crew onboard. The airplane was substantially damaged. The regularly scheduled international passenger flight was operated under the provisions of 14 Code of Federal Regulations Part 121 from Shannon International Airport (SNN), Shannon, Ireland, to PHL.

The captain was the pilot flying and the first officer was the pilot monitoring. The flight crew stated that the ILS 09R approach was normal and the airplane landed in the touchdown zone. The captain stated that as the airplane touched down the nose pitched up abruptly when the spoilers auto-deployed but that he quickly countered the pitch up and flew the nose back on to the runway. As the flight was taxiing to the gate a flight attendant called on the interphone to inform the crew that they had heard an unusual noise during landing.

At the time of landing, the winds were reported to be from 130 degrees at 5 knots, with no gusts.

Postflight examination of the airplane found that the aft pressure bulkhead was buckled. The skin was worn through around Station (STA) 1720 to the pressure bulkhead, and the skin was wrinkled from STA 1701 to STA 1743 and Stringer 23L to 23R.

Probable Cause and Findings

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

The captain's improper control of the airplane during the landing flare.

Findings

Personnel issues	Incorrect action performance - Pilot
-------------------------	--------------------------------------

Factual Information

History of Flight

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

Pilot Information

Certificate:	Airline transport	Age:	63, Male
Airplane Rating(s):	Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	5-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	March 31, 2018
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	April 15, 2018
Flight Time:	22181 hours (Total, all aircraft), 2514 hours (Total, this make and model), 11567 hours (Pilot In Command, all aircraft), 123 hours (Last 90 days, all aircraft), 14 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

Co-pilot Information

Certificate:	Airline transport	Age:	49, Male
Airplane Rating(s):	Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	5-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	June 13, 2018
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	4598 hours (Total, all aircraft), 3327 hours (Total, this make and model), 56 hours (Last 90 days, all aircraft), 14 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Boeing	Registration:	N192AN
Model/Series:	757 223	Aircraft Category:	Airplane
Year of Manufacture:	2001	Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	32386
Landing Gear Type:	Retractable - Tricycle	Seats:	
Date/Type of Last Inspection:	July 30, 2018 Continuous airworthiness	Certified Max Gross Wt.:	228178 lbs
Time Since Last Inspection:		Engines:	2 Turbo fan
Airframe Total Time:	60494 Hrs at time of accident	Engine Manufacturer:	Rolls-Royce
ELT:	Installed	Engine Model/Series:	
Registered Owner:		Rated Power:	
Operator:		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:	PHL, 36 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	12:54 Local	Direction from Accident Site:	0°
Lowest Cloud Condition:	Few / 2600 ft AGL	Visibility	10 miles
Lowest Ceiling:	Overcast / 4000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	130°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	-6°C
Precipitation and Obscuration:			
Departure Point:	Shannon, OF (SNN)	Type of Flight Plan Filed:	IFR
Destination:	Philadelphia, PA (KPHL)	Type of Clearance:	IFR
Departure Time:	11:11 Local	Type of Airspace:	

Airport Information

Airport:	Philadelphia Int'l KPHL	Runway Surface Type:	Asphalt
Airport Elevation:	36 ft msl	Runway Surface Condition:	Dry
Runway Used:	9R	IFR Approach:	ILS
Runway Length/Width:	12000 ft / 200 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	8 None	Aircraft Damage:	Substantial
Passenger Injuries:	173 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	181 None	Latitude, Longitude:	39.874443,-75.2425

Administrative Information

Investigator In Charge (IIC):	Lovell, John		
Additional Participating Persons:			
Original Publish Date:	June 8, 2021	Investigation Class:	4
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=98079		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).