



# Aviation Investigation Final Report

---

<b>Location:</b>	Anchorage, Alaska	<b>Incident Number:</b>	ANC04IA058
<b>Date &amp; Time:</b>	May 31, 2004, 14:13 Local	<b>Registration:</b>	N550NW
<b>Aircraft:</b>	Boeing 757-251	<b>Aircraft Damage:</b>	None
<b>Defining Event:</b>		<b>Injuries:</b>	1 Minor, 187 None
<b>Flight Conducted Under:</b>	Part 121: Air carrier - Scheduled		

---

## Analysis

After a Boeing 757-251 airplane arrived at a terminal gate and was parked, a flight attendant went to door 2L of the aircraft. The customer service agent (CSA) positioned outside the airplane on the jetway knocked on the door. This is the signal to the flight attendant that the door will be opened, if the flight attendant provides a visible "thumbs-up" signal to the agent on the jetway. The flight attendant reported that in response to the knock, she gave a thumbs-up, and stepped away from the door. The door did not open, but she heard a second knock. The flight attendant gave a second thumbs-up through the cabin door window. As she was giving the signal, the door handle came down on her wrist. The CSA reported that after his first knock, he did not receive a thumbs-up, and knocked a second time. The flight attendant inside the airplane then gave a thumbs-up signal. The CSA then opened the airplane door from the outside. During the door opening procedure, the inside handle of the door struck the flight attendant on the forearm. The flight attendant was taken to a local hospital where she was initially diagnosed with a fractured wrist. On June 23, 2004, the operator informed the NTSB Investigator-In-Charge that the injured flight attendant had a follow-up examination with her own physician in Minnesota. The physician took additional x-rays of the injured wrist and determined that it was not broken, but had sustained a sprain. The flight attendant continued to have pain, and had a magnetic resonance image (MRI) of her wrist on July 2, 2004, which was normal. Airline personnel provided a copy of their cabin operating standards, which states, in part: "To prepare cabin door for opening; 1. CSA knocks on door and awaits "thumbs-up" signal from FA. 2. FA gives thumbs-up signal to CSA to indicate that door is disarmed and safe to open. 3. CSA opens cabin door after FA moves hands clear of door." Additional information provided by the airline indicated that the door opening procedure precludes a second thumbs-up signal unless the CSA knocks a second time.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: The failure of the flight attendant to follow the appropriate door opening procedure by remaining clear of the door handle when the passenger door was opened from the outside by customer service personnel, which resulted in a wrist injury to the flight attendant when she was struck by the door handle.

### Findings

Occurrence #1: MISCELLANEOUS/OTHER

Phase of Operation: STANDING - ENGINE(S) NOT OPERATING

Findings

1. DOOR,PASSENGER - ACTIVATED
2. (C) PROCEDURES/DIRECTIVES - NOT FOLLOWED - FLIGHT ATTENDANT

## Factual Information

On May 31, 2004, about 1413 Alaska daylight time (ADT), a cabin crewmember received a minor injury during the cabin door-opening procedure of a Boeing 757-251 airplane, N550NW, after parking at Gate B-10 of the Ted Stevens Anchorage International Airport, Anchorage, Alaska. The airplane was being operated as an instrument flight rules (IFR) scheduled domestic passenger flight under Title 14, CFR Part 121, when the incident occurred. The airplane, operated as Flight 843 by Northwest Airlines Inc., St. Paul, Minnesota, was not damaged. The 2 airline transport certificated pilots, 4 other cabin crewmembers, and the 181 passengers, were not injured. Visual meteorological conditions prevailed. An IFR flight plan was filed. The flight originated at the Minneapolis International Airport, Minneapolis, Minnesota, at 0850 ADT.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC), on June 1, 2004, an air safety investigator with Northwest Airlines reported that after the airplane parked at the gate, the flight attendant was positioned at door 2L. The customer service agent (CSA) positioned outside the airplane on the jetway knocked on the door. This is the signal to the flight attendant that the door will be opened, if the flight attendant provides a visible "thumbs-up" signal to the agent on the jetway. The flight attendant reported that in response to the knock, she gave a thumbs-up, and stepped away from the door. The door did not open, but she heard a second knock. The flight attendant gave a second thumbs-up through the cabin door window. As she was giving the signal, the door handle came down on her wrist.

The jetway gate agent reported that after his first knock, he did not receive a thumbs-up, and knocked a second time. The flight attendant inside the airplane then gave a thumbs-up signal. The agent then opened the airplane door from the outside. During the door opening procedure, the inside handle of the door struck the flight attendant on the forearm. The flight attendant was taken to a local hospital in Anchorage, where she was initially diagnosed with a fractured wrist. Her wrist was placed in a temporary splint.

On June 23, the Northwest Airlines investigator informed the NTSB IIC that the injured flight attendant had a follow-up examination with her own physician in Minnesota. The physician took additional x-rays of the injured wrist and determined that it was not broken, but had sustained a sprain. The flight attendant continued to have pain, and had a magnetic resonance image (MRI) of her wrist on July 2, 2004, which was normal. The flight attendant did not return to work until July 11, 2004.

Northwest Airlines personnel provided a copy of their cabin operating standards, which states, in part: "To prepare cabin door for opening; 1. CSA knocks on door and awaits "thumbs-up" signal from FA (flight attendant). 2. FA gives thumbs-up signal to CSA to indicate that door is

disarmed and safe to open. 3. CSA opens cabin door after FA moves hands clear of door." Additional information provided by Northwest Airlines indicated that the door opening procedure precludes a second thumbs-up signal unless the CSA knocks a second time.

### Pilot Information

<b>Certificate:</b>	Airline transport; Commercial; Flight engineer; Flight instructor	<b>Age:</b>	55, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	
<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>	Airplane multi-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	December 2, 2003
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>			

### Co-pilot Information

<b>Certificate:</b>	Airline transport; Commercial	<b>Age:</b>	57, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	
<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--w/ waivers/lim	<b>Last FAA Medical Exam:</b>	September 11, 2003
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>			

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Boeing	<b>Registration:</b>	N550NW
<b>Model/Series:</b>	757-251	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Transport	<b>Serial Number:</b>	26497
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	199
<b>Date/Type of Last Inspection:</b>	AAIP	<b>Certified Max Gross Wt.:</b>	220000 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	2 Turbo fan
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Pratt & Whitney
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	PW2040
<b>Registered Owner:</b>	Northwest Airlines Inc.	<b>Rated Power:</b>	37500 Lbs thrust
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	Flag carrier (121)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	NWAA

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	PANC,152 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	13:53 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Scattered / 6000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Overcast / 7500 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	13 knots / 21 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	140°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.81 inches Hg	<b>Temperature/Dew Point:</b>	12°C / 6°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	MINNEAPOLIS, MN (MSP)	<b>Type of Flight Plan Filed:</b>	IFR
<b>Destination:</b>	Anchorage, AK (PANC)	<b>Type of Clearance:</b>	IFR
<b>Departure Time:</b>	08:50 Local	<b>Type of Airspace:</b>	Class C

## Airport Information

<b>Airport:</b>	Anchorage International PANC	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	152 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor, 6 None	<b>Aircraft Damage:</b>	None
<b>Passenger Injuries:</b>	181 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Minor, 187 None	<b>Latitude, Longitude:</b>	61.174446,-149.996383

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Erickson, Scott
<b>Additional Participating Persons:</b>	James Wilkinson; FAA-AL-ANC FSDO 03; Anchorage, AK
<b>Original Publish Date:</b>	April 28, 2005
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=59358">https://data.ntsb.gov/Docket?ProjectID=59358</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).