

---

## Ground collision between two Airbus A320s at Denver, March 5, 2004

---

**Micro-summary:** This A320 struck another A320 while taxiing for takeoff.

---

**Event Date:** 2004-03-05 at 2025 MST


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

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

---

### **Cautions:**

1. Accident reports can be and sometimes are revised. Be sure to consult the investigative agency for the latest version before basing anything significant on content (e.g., thesis, research, etc).
  2. Readers are advised that each report is a glimpse of events at specific points in time. While broad themes permeate the causal events leading up to crashes, and we can learn from those, the specific regulatory and technological environments can and do change. ***Your company's flight operations manual is the final authority as to the safe operation of your aircraft!***
  3. Reports may or may not represent reality. Many many non-scientific factors go into an investigation, including the magnitude of the event, the experience of the investigator, the political climate, relationship with the regulatory authority, technological and recovery capabilities, etc. It is recommended that the reader review all reports analytically. Even a "bad" report can be a very useful launching point for learning.
  4. Contact us before reproducing or redistributing a report from this anthology. Individual countries have very differing views on copyright! We can advise you on the steps to follow.
-

		NTSB ID: DEN04IA050A		Aircraft Registration Number: N467UA	
		Occurrence Date: 03/05/2004		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place Denver	State CO	Zip Code 80249	Local Time 2025	Time Zone MST	
Airport Proximity: On Airport		Distance From Landing Facility: 0.1		Direction From Airport: 360	
Aircraft Information Summary					
Aircraft Manufacturer Airbus Industrie		Model/Series A320-232		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>On March 5, 2004, at 2025 mountain standard time, an Airbus Industrie A320-232, N467UA, owned by United Air Lines, Incorporated, and operated as United Airlines Flight 1443, collided during taxi for takeoff with an Airbus Industrie A320-232, N482UA, being operated as TED Flight 831, at the Denver International Airport (DEN), Denver, Colorado. The TED A320 was standing and connected to a tug at the time of the incident. Both airplanes sustained minor wingtip damage. The airline transport certificated captain, airline transport certificated first officer, 4 cabin crew members and 67 passengers on the United A320 were not injured. The airline transport certificated captain, airline transport certificated first officer, 4 cabin crew members and 130 passengers on the TED A320 were not injured. Both airplanes were operating on instrument flight rules flight plans under the provisions of Title 14 CFR Part 121. Flight 1443 was planned to fly from DEN to Phoenix, Arizona. Flight 831 was planned to fly from DEN to Ontario, California. Night visual meteorological conditions prevailed.</p> <p>In his written statement, the captain on the United A320 said that during their pushback, the TED A320 was being pushed back at an angle from its gate toward their position. The captain said he relayed his concern to the ground crew, but did not receive a clear response. As the TED A320 approached, two persons from their push crew ran out, "apparently to get a better view. Both airplanes were finally stopped in close proximity. We were positioned to the east of our push line, toward the other aircraft." The captain said that he requested that his tug remain in place in case they had to return to the gate for a sick passenger. When it was determined the passenger could fly, they started engines and released the pushback crew. He said the crew disconnected and they received a salute and a release from guidance for a left turn out. The captain said that to their right, the TED A320 was still connected to its tug and one of its ground crew was standing to the left front of the airplane facing aft. "He was looking toward us and holding his right hand overhead, and with his left arm out and slightly raised, indicating the wingtip clearance distance." The captain said, "I taxied slowly forward at idle thrust and eased toward the left. After a short distance, the wingtips collided."</p> <p>The captain on the United A320 said that communicating with their tug was difficult due to language and non-standard phraseology used by the pushback crew. The captain said clarification was needed and asked for at least two times. The captain said, "The ground communicator had no apparent knowledge of SOP (standard operating procedures) language or response for the pushback procedure."</p> <p>The first officer on the United A320 said that after the passenger issue was resolved, they started their engines. "Engine start was normal and after my after start flow the captain announced I have a salute and release from guidance, and then taxi clearance." The first officer said both he and the captain looked at a ground crew member standing in front and between the two airplanes, looking at us with wand raised and other arm held out horizontally indicating wing clearance. I called for taxi and we were cleared for a left turn out. With wing man guidance and a visual check I told the captain we were cleared on the right. We started to move and I glanced forward. When I looked</p>					
FACTUAL REPORT - AVIATION					
					Page 1

National Transportation Safety Board

## FACTUAL REPORT

AVIATION

NTSB ID: DEN04IA050A

Occurrence Date: 03/05/2004

Occurrence Type: Incident


## Narrative (Continued)


back out to the right, the wing walker was gone, and then the wingtips made contact. I had no time to react before impact."

One of the ground crew members on the TED A320 said he was wing walking for the airplane on the first officer's side. Another ground crew member was on the captain's side of the TED A320. The first ground crew member said the other ground crew member stopped the pushback. He said he went around to see what was happening. As he did, the first ground crew member saw the wings of the two airplanes "about 20 to 30 feet apart." The first ground crew member said he looked at the first officer on the United A320 and gave him "the hold sign." He said he then went to the tug operator to discuss the position of the airplane. As he was talking with the tug operator, the United A320 "proceeded to move and clipped the wing."

An examination of the United A320 showed crush damage to the leading edge spoiler of the right wing, just inboard of the winglet. An examination of the TED A320 showed crush and tearing damage to the underside of the left winglet.

The United Airlines pushback procedures for Gates A46 and A48 at the Denver International Airport cited, "The coordination of the pushback must include ... verbal agreement between gate crews ... on which aircraft is being moved first, [and] continual visual observance of the clearance between aircraft ..."

 <b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b>		NTSB ID: DEN04IA050A			
		Occurrence Date: 03/05/2004			
		Occurrence Type: Incident			
<b>Landing Facility/Approach Information</b>					
Airport Name DENVER INTL	Airport ID: DEN	Airport Elevation 5431 Ft. MSL	Runway Used NA	Runway Length	Runway Width
Runway Surface Type: Unknown					
Runway Surface Condition: Unknown					
Type Instrument Approach: NONE					
VFR Approach/Landing: None					
<b>Aircraft Information</b>					
Aircraft Manufacturer Airbus Industrie		Model/Series A320-232		Serial Number 1359	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 145	Certified Max Gross Wt. 169750 LBS	Number of Engines: 2		
Engine Type: Turbo Jet	Engine Manufacturer: International Aero Engines	Model/Series: V2500	Rated Power: 25000 LBS		
- Aircraft Inspection Information					
Type of Last Inspection Continuous Airworthiness	Date of Last Inspection 04/2002	Time Since Last Inspection 6554 Hours	Airframe Total Time 10929 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? No	ELT Operated? No	ELT Aided in Locating Accident Site? No			
<b>Owner/Operator Information</b>					
Registered Aircraft Owner United Air Lines, Incorporated		Street Address 1200 E Algonquin Road			
		City Elk Grove Village	State IL	Zip Code 60007	
Operator of Aircraft Same as Reg'd Aircraft Owner		Street Address Same as Reg'd Aircraft Owner			
		City	State	Zip Code	
Operator Does Business As: United Airlines			Operator Designator Code: UALA		
- 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					
FACTUAL REPORT - AVIATION					

 <p><b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b></p>	NTSB ID: DEN041A050A
	Occurrence Date: 03/05/2004
	Occurrence Type: Incident

**First Pilot Information**

Name On File	City On File	State On File	Date of Birth On File	Age 54
-----------------	-----------------	------------------	--------------------------	-----------

Sex: M	Seat Occupied: Left	Principal Profession: Civilian Pilot	Certificate Number: On File
--------	---------------------	--------------------------------------	-----------------------------

Certificate(s): Airline Transport; Flight Instructor

Airplane Rating(s): Multi-engine Land; Single-engine Land; Single-engine Sea

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s): Airplane Single-engine

Type Rating/Endorsement for Accident/Incident Aircraft? Yes	Current Biennial Flight Review? 09/2002
---	---

Medical Cert.: Class 1	Medical Cert. Status: Valid Medical--no waivers/lim.	Date of Last Medical Exam: 02/2004
------------------------	--	------------------------------------

- 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	5937	2000								
Pilot In Command(PIC)	4063	2000								
Instructor										
Last 90 Days	206	206								
Last 30 Days	85	85								
Last 24 Hours	4	4								

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? No	Second Pilot? Yes
--------------------	----------------------------	--------------------------	-------------------

**Flight Plan/Itinerary**

Type of Flight Plan Filed: IFR

Departure Point Same as Accident/Incident Location	State	Airport Identifier DEN	Departure Time 2025	Time Zone MST
---	-------	---------------------------	------------------------	------------------

Destination Phoenix	State AZ	Airport Identifier PHX	
------------------------	-------------	---------------------------	--


Type of Clearance: None

Type of Airspace: Class B

**Weather Information**

Source of Briefing: Company

Method of Briefing: Teletype

 <b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b>	NTSB ID: DEN04IA050A
	Occurrence Date: 03/05/2004
	Occurrence Type: Incident

<b>Weather Information</b>					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
DEN	1953	MST	5431 Ft. MSL	1 NM	180 Deg. Mag.
Sky/Lowest Cloud Condition: Few			1600 Ft. AGL	Condition of Light: Night	
Lowest Ceiling: Broken		2600 Ft. AGL		Visibility: 2 SM	Altimeter: 29.63 "Hg
Temperature: -1 °C	Dew Point: -2 °C	Wind Direction: 200		Density Altitude: 5273 Ft.	
Wind Speed: 11	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): Ft.	Visibility (RVV) SM	Intensity of Precipitation: Light			
Restrictions to Visibility: None					
Type of Precipitation: Snow					

<b>Accident Information</b>		
Aircraft Damage: Minor	Aircraft Fire: None	Aircraft Explosion: None

Classification: U.S. Registered/U.S. Soil					
<b>- Injury Summary Matrix</b>	Fatal	Serious	Minor	None	TOTAL
First Pilot				1	1
Second Pilot				1	1
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants				4	4
Other Crew					
Passengers				67	67
- TOTAL ABOARD -				73	73
Other Ground					
- GRAND TOTAL -				73	73

National Transportation Safety Board

**FACTUAL REPORT**

**AVIATION**



NTSB ID: DEN04IA050A

Occurrence Date: 03/05/2004

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

David C. Bowling

Additional Persons Participating in This Accident/Incident Investigation:

John Stevenson  
Air Safety Inspector  
Federal Aviation Administration  
Denver, CO 80249

John McCoy  
Senior Staff Investigator  
United Airlines  
San Francisco, CA 94128