
Collision with wing walker, Boeing 757-222, September 23, 2001

Micro-summary: This Boeing 757-222 injured a wing walker.


Event Date: 2001-09-23 at 1930 CDT

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

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

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		NTSB ID: CHI01LA331		Aircraft Registration Number: N570UA	
		Occurrence Date: 09/23/2001		Most Critical Injury: Serious	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place Indianapolis		State IN	Zip Code 46241	Local Time 1930	Time Zone CDT
Airport Proximity: On Airport		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Boeing		Model/Series 757-222		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 September 23, 2001, at 1930 central daylight time, a Boeing 757-222, N570UA, operated by United Airlines (UAL) as flight 153, struck and seriously injured a wing walker during push back from gate C-3 at the Indianapolis International Airport (IND), Indianapolis, Indiana. The accident occurred when the airplane rolled forward on the wing walker's leg pinning her leg under the nose wheel following disconnection of the tow bar. Night visual meteorological conditions prevailed at the time of the accident. No other injuries were reported. The scheduled domestic passenger flight was operating on an instrument flight rules flight plan under the provisions of Title 14 CFR Part 121. The flight was scheduled to depart IND at 1915 with a destination of Chicago, Illinois.</p> <p>The injured wing walker reported, "...I was wearing a radio and advised the gate agent ... to advise the captain we would be using hand signals. [The gate agent] confirmed to me that was fine with the captain. We started to push back from gate C3 and proceeded into the alley way. [The push back driver] came to a stop and he gave me the set brakes signal. I made eye contact with the captain and I lifted my hands above my head and gave the captain the set brakes hand signal (open hand to closed fist). He returned the same signal. I gave him the thumbs up acknowledgement. I then walked to the tow bar to begin the disconnect. I moved to release the handle on the tow bar and the plane began to roll on me knocking me to the ground."</p> <p>The tractor driver reported, "On Sep 23 Sunday me and [the wing walker] were ready to push 153 (757). I was in the push back [the wing walker] was wing walking. I had no headset so we use hand signals to release brakes. I push the 757 like I always do, had the a/c inline w/ the alley. Once I was set w/ the airplane I signal[ed] [the wing walker] to tell the pilot to set brakes. From what I saw [the wing walker] gave him the signal to set brakes then she signal[ed] to me that the pilot had set brakes. [The wing walker] proceed[ed] to release the 757 tow bar, when she released the bar the 757 started to roll forward. From what I saw [the wing walker] looked like she was trying to stop the a/c. I immediately put the pushback in reverse [as soon as possible]. Once I was clear of [the wing walker] and the a/c I got out off the pushback and ran to [the wing walker]. Once I realized how much trouble she was in, I ran to go get help."</p> <p>The captain reported, "Flight two hours late out of IND, pushback with no headphone. Last hand signal seen to start engines, CSR that was directing pushback went under nose. Felt aircraft moving forward and put on parking brake. Tug driver signal a problem, shut down engine. Evidently CSR's leg stuck under nose gear. Coordinated with ground to push aircraft back. CSR taken to hospital. No fracture. Problem would have been avoided with working headset better training of out of station personnel on hand signals..."</p> <p>The first officer reported "We were scheduled for a 1710 departure from Indianapolis to Chicago but were delayed approximately two hours and ten minutes due to lightning in the airport area (the last flight's baggage could not be unloaded, or our baggage loaded)".</p>					
FACTUAL REPORT - AVIATION					

National Transportation Safety Board

FACTUAL REPORT

AVIATION

NTSB ID: CHI01LA331

Occurrence Date: 09/23/2001

Occurrence Type: Accident

Narrative (Continued)

"Pushback would be via hand signals for reasons not explained at the time. Initial pushback was uneventful. I had sight of the tow tractor to the right, but never caught sight of the taxi director to the left until after the incident (when she was finally extricated)".

"[The captain] relayed to me that he had been given the signal to start engines, and I commenced the start sequence for engine number one. After rollback on engine number one I initiated start on engine number two but had not yet introduced fuel when I felt the aircraft move very slightly forward. Due to the geometry of the pushback all I could see out my windows was the tow tractor cocked at an angle to the tow bar to my right. I asked [the captain] if the parking brake was supposed to be set. He looked down and set it".

"Very shortly thereafter the tractor driver exited the cab frantically and it was immediately apparent that something was wrong. I secured the left engine and opened the window, simultaneously telling [the captain] that something was going on, evidently at the nose gear".

"We never had voice communications with the ground crew (other than my yelling out the window after the incident) until the female Customer Service Representative who had been directing us was freed and taken to the hospital. Correspondingly, the only command I heard from [the captain] regarding pushback was to start engines".


"We followed ground directions via hand signals and yelling back and forth through my open window to coordinate brake release to enable the tug to push us back and free the Customer Service Representatives leg. After she was freed we requested to be towed back to the gate (after coordination with Dispatch and the Operations Duty Flight Manager), but the tug sheared a tow bar pin during the attempt. We started the left engine, taxied back to the gate, and deplaned without further incident".


The UAL Maintenance Manual states under "No Verbal Communications Dispatching" paragraph B, states, "Starting of any engines must be done at the gate before pushback or after the final pushback 'Brakes set' signal. When starting less than all engines at the gate, the pilot is expected to use the normal sequence for the condition (APU/Ground Pneumatics), then signal for power disconnect when the desired number of engines are running."

The UAL 757 Before Start Checklist includes the parking brake as checklist item, which is to be challenged by the first officer with a response provided by the captain. The item is as follows:

Parking brake Set, pressure normal (C)

The Federal Aviation Administration and UAL were parties to the investigation.

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: CHI01LA331				
		Occurrence Date: 09/23/2001				
		Occurrence Type: Accident				
Landing Facility/Approach Information						
Airport Name Indianapolis International		Airport ID: IND	Airport Elevation 797 Ft. MSL	Runway Used	Runway Length	Runway Width
Runway Surface Type: Unknown						
Runway Surface Condition: Unknown						
Type Instrument Approach: Unknown						
VFR Approach/Landing: Unknown						
Aircraft Information						
Aircraft Manufacturer Boeing		Model/Series 757-222		Serial Number 26678		
Airworthiness Certificate(s): Transport						
Landing Gear Type: Retractable - Tricycle						
Homebuilt Aircraft? No		Number of Seats: 191	Certified Max Gross Wt. 241000 LBS		Number of Engines: 2	
Engine Type: Turbo Fan		Engine Manufacturer: Pratt & Whitney		Model/Series: 2037	Rated Power: 37000 LBS	
- Aircraft Inspection Information						
Type of Last Inspection Continuous Airworthiness		Date of Last Inspection 05/2001	Time Since Last Inspection 1321 Hours		Airframe Total Time 31142 Hours	
- Emergency Locator Transmitter (ELT) Information						
ELT Installed?		ELT Operated?		ELT Aided in Locating Accident Site?		
Owner/Operator Information						
Registered Aircraft Owner United Airlines		Street Address PO Box 66100				
		City Chicago		State IL	Zip Code 60666	
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:				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>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: CHI01LA331
	Occurrence Date: 09/23/2001
	Occurrence Type: Accident

First Pilot Information				
Name On File	City On File	State On File	Date of Birth	Age 53

Sex: M	Seat Occupied: Left	Principal Profession: Civilian Pilot	Certificate Number:
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Certificate(s): Airline Transport; Flight Instructor

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

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s):

Type Rating/Endorsement for Accident/Incident Aircraft? Yes	Current Biennial Flight Review? 08/2001
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Medical Cert.: Class 1	Medical Cert. Status: Unknown	Date of Last Medical Exam: 07/2001
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- 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	7865	2942								
Pilot In Command(PIC)		2942								
Instructor										
Last 90 Days		118								
Last 30 Days		53								
Last 24 Hours		0								

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? No	Second Pilot?
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Flight Plan/Itinerary

Type of Flight Plan Filed: IFR	
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Departure Point Same as Accident/Incident Location	State	Airport Identifier IND	Departure Time 1915	Time Zone CDT
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Destination Chicago	State IL	Airport Identifier ORD	
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Type of Clearance: IFR

Type of Airspace:

Weather Information

Source of Briefing: Unknown


Method of Briefing: Unknown

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Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
IND	1921	CDT	794 Ft. MSL	NM	Deg. Mag.
Sky/Lowest Cloud Condition: Scattered			3100 Ft. AGL	Condition of Light: Night	
Lowest Ceiling: Broken		3800 Ft. AGL	Visibility: 10	SM	Altimeter: 29.89 "Hg
Temperature: 19 °C	Dew Point: 18 °C	Wind Direction: 240		Density Altitude: Ft.	
Wind Speed: 3	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): Ft.	Visibility (RVV)	SM	Intensity of Precipitation:		
Restrictions to Visibility: None					
Type of Precipitation: None					

Accident Information		
Aircraft Damage: None	Aircraft Fire: None	Aircraft Explosion: None

Classification: U.S. Registered/U.S. Soil					
- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot				1	1
Second Pilot				1	1
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants				5	5
Other Crew					
Passengers				33	33
- TOTAL ABOARD -				40	40
Other Ground		1			1
- GRAND TOTAL -		1		40	41

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	Occurrence Type: Accident	

Administrative Information

Investigator-In-Charge (IIC)

Mitchell F. Gallo

Additional Persons Participating in This Accident/Incident Investigation:

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