



# Aviation Investigation Final Report

<b>Location:</b>	STERLING, Virginia	<b>Accident Number:</b>	NYC99LA127
<b>Date &amp; Time:</b>	May 28, 1999, 15:10 Local	<b>Registration:</b>	N282SC
<b>Aircraft:</b>	Boeing 727	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	90 None
<b>Flight Conducted Under:</b>	Part 121: Air carrier - Scheduled		

## Analysis

The Boeing 727 was being pushed back by one person, who operated the pushback tug. The tug operator waited for an Airbus to approach the gate next to the pushback airplane and then began the pushback procedure. A catering truck was stopped behind the left wing of the 727, while the truck's driver waited for the Airbus to shut down its engines. The catering truck driver stated, 'My partner yelled, 'He's moving or something' and instantly I tried to accelerate, but at the same time we were struck on the side and we were turning over...' Ramp personnel in the area observed the airplane heading towards the parked catering truck, and attempted to alert the tug operator. The Boeing 727's left wing struck the aft section of the catering truck. The airplane's left aileron and left wing tip were damaged. The distance from the airplane's left wingtip when parked at the gate, to the north edge of the service road where the catering truck was stopped, was about 75 feet.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Inadequate visual lookout by the tug operator. A factor in this accident was inadequate pushback procedures by the airline which failed to provide proper assistance (wing walkers) to the tug operator.

### Findings

Occurrence #1: ON GROUND/WATER COLLISION WITH OBJECT  
Phase of Operation: TAXI - PUSHBACK/TOW

Findings

1. OBJECT - VEHICLE
2. (C) VISUAL LOOKOUT - INADEQUATE - DRIVER OF VEHICLE
3. (F) PROCEDURE INADEQUATE - COMPANY/OPERATOR MANAGEMENT

## Factual Information

On May 28, 1999, about 1510 eastern daylight time, a Boeing 727, N282SC, operated by Sun Country Airlines, as flight 744, was substantially damaged when its left wing struck a catering truck during pushback at the Washington Dulles International Airport, Sterling, Virginia. The 3 flight crew members, 4 flight attendants, and 83 passengers were not injured. The two occupants of the catering truck were also not injured. Visual meteorological conditions prevailed and an instrument flight rules flight plan had been filed for the flight destined for the Minneapolis-St. Paul International Airport, Minneapolis, Minnesota. The scheduled passenger flight was conducted under 14 CFR Part 121.

The airplane was parked on gate C-24, and was being pushed back by a United Airlines, Aviation Maintenance Technician. The pushback was conducted as a "one person pushback."

In a written statement, the tug operator said he waited for an Airbus 320, to taxi to gate 26, and then began to pushback the airplane for a "west taxi." He also stated that the airplane's rotating beacon was "ON." The tug operator further stated:

"...There were no ground equipment on my left. All the service tugs were to my right. I was particularly concerned about the fueling truck to my right. I cleared all and was now about 125 to 150 feet into my push. Since he was going for a west taxi I started to turn the nose wheel and I know I was on the right side of the aircraft. By now my main wheels were approaching the edge of the service road, which in my experience is a sign that I was clear to taxi way. I engaged the food truck and my tow bar sheared and I stopped."

In a written statement, the catering truck operator said he had stopped the truck behind the left wing of the 727, while he waited for the Airbus to shut down its engines. "My partner ...yelled, 'He's moving or something' and instantly I tried to accelerate, but at the same time we were struck on the side and we were turning over..."

Ramp personnel in the area observed the airplane heading towards the parked catering truck, and attempted to alert the tug operator before the collision.

According to a Federal Aviation Administration Inspector, the airplane's left wing struck the aft section of the catering truck. The catering truck then flipped over onto its side. The airplane's left aileron and left wing tip were damaged.

According to airport personnel, the distance from the airplane's left wingtip when parked at the gate, to the north edge of the service road where the catering truck was parked, was about 75 feet.

Subsequent to the accident, United Airlines revised the "One Person Pushback" procedures for the Boeing 727 and 737 aircraft to include a "guide person." The responsibilities of the guide person included signaling the tug operator that the ramp is clear, and maintaining verbal or visual contact with the tug operator until the aircraft clears the gate envelope.

## Pilot Information

<b>Certificate:</b>	Airline transport; Flight instructor	<b>Age:</b>	37, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<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 single-engine; Instrument airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical—no waivers/lim.	<b>Last FAA Medical Exam:</b>	May 18, 1999
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	9500 hours (Total, all aircraft), 6508 hours (Total, this make and model), 5475 hours (Pilot In Command, all aircraft), 214 hours (Last 90 days, all aircraft), 69 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Boeing	<b>Registration:</b>	N282SC
<b>Model/Series:</b>	727 727	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Transport	<b>Serial Number:</b>	22558
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	180
<b>Date/Type of Last Inspection:</b>	May 28, 1999 Continuous airworthiness	<b>Certified Max Gross Wt.:</b>	190500 lbs
<b>Time Since Last Inspection:</b>	9 Hrs	<b>Engines:</b>	3 Turbo fan
<b>Airframe Total Time:</b>	43670 Hrs	<b>Engine Manufacturer:</b>	P&W
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	JT8D
<b>Registered Owner:</b>	GEMANCO	<b>Rated Power:</b>	16400 Lbs thrust
<b>Operator:</b>	SUN COUNTRY AIRLINES	<b>Operating Certificate(s) Held:</b>	Flag carrier (121)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	IAD ,313 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	13:51 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Scattered / 9000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	6 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	310°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	29°C / 9°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	(IAD )	<b>Type of Flight Plan Filed:</b>	IFR
<b>Destination:</b>	MINNEAPOLIS , MN (MSP )	<b>Type of Clearance:</b>	IFR
<b>Departure Time:</b>	00:00 Local	<b>Type of Airspace:</b>	Class B

## Airport Information

<b>Airport:</b>	WASHINGTON DULLES IAD	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	313 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	7 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	83 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	90 None	<b>Latitude, Longitude:</b>	38.989898,-77.460083(est)

## Administrative Information

**Investigator In Charge (IIC):** Schiada, Luke

**Additional Participating Persons:** WILLIAM C BERGMANN; DULLES , VA  
JEFF PLANTZ; CHICAGO , IL

**Original Publish Date:** June 22, 2000

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.ntsb.gov/Docket?ProjectID=46524>

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