



# National Transportation Safety Board Aviation Accident Final Report

<b>Location:</b>	ORLANDO, FL	<b>Accident Number:</b>	MIA00LA206
<b>Date &amp; Time:</b>	07/02/2000, 1142 EDT	<b>Registration:</b>	N460PR
<b>Aircraft:</b>	Boeing 737-49R	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	128 None
<b>Flight Conducted Under:</b>	Part 121: Air Carrier - Scheduled		

## Analysis

Upon arrival at the gate the captain observed another aircraft still parked at the gate. After holding away from the gate the other aircraft was pushed away and the captain began to taxi into the gate. A ground crewman signaled the captain to stop, but the captain continued to taxi into the gate. Another ground crewman then signaled the captain to stop, and again he continued to taxi into the gate. The ground crewman then directed the captain to turn to the right, to avoid ground equipment. The captain continued to taxi straight ahead and a short time later the left wing of the aircraft collided with a cargo container loader, resulting in substantial damage to the aircraft's wing. A FAA inspector was riding on the cockpit jumpseat, performing an enroute inspection of the flight, and observed the accident.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The captain's failure to stop the aircraft when given a stop signal by the ground marshaller and his failure to turn the aircraft when given a turn signal by the ground marshaller as he taxied into the gate resulting in the aircraft's left wing colliding with ground equipment.

## Findings

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

### Findings

1. OBJECT - OTHER
2. PROCEDURES/DIRECTIVES - ISSUED - GROUND PERSONNEL
3. (C) PROCEDURES/DIRECTIVES - NOT FOLLOWED - PILOT IN COMMAND

## Factual Information

On July 2, 2000, about 1142 eastern daylight time, a Boeing 737-49R, N460PR, registered to G.E. Capital Corporation, and operated by Pro Air, Inc. as flight 212, a Title 14 CFR Part 121 scheduled domestic passenger flight from Atlanta, Georgia, to Orlando, Florida, collided with a cargo container loader while taxiing into to the gate on arrival at Orlando International Airport. Visual meteorological conditions prevailed at the time and a instrument flight rules flight plan was filed. The aircraft received substantial damage. The airline transport-rated captain, first officer, 3 flight attendants, FAA inspector on the cockpit jumpseat, and 122 passengers were not injured. The flight originated from Atlanta, the same day, about 1015.

The captain stated that after landing on runway 36 right at Orlando International Airport, they were cleared to turn right onto taxiway "J" and to use taxiway C2 to the gate. He slowed the taxi when he observed an aircraft parked at gate 24, their assigned gate. There was confusion on the Signature Flight Support radio frequency due to a lady on the radio who was only filling in and was not used to using the radio. He told ground control that his gate was occupied and they asked for how long. The Signature Flight Support lady could not tell them how long the delay was, so he told ground control and was cleared to pull forward on the ramp and exit at taxiway "B4", turn right "C" taxiway and hold short of taxiway "C2". He did this and then observed a Boeing 727 push from his gate. He told ground control this and was cleared to taxi to the gate. He did this ahead of Pro Air 216 who was holding short also. This flight was assigned gate 28, which was next door to gate 24. He taxied to gate 24, started his turn in on the taxi line, and followed the marshaller's signals. As he gave him the stop signal, they felt a bump and the first officer and he looked at each other. The marshaller then gave a normal "chocks in" signal and he assumed that the marshaller never knew that they had hit anything. He stated he went out and examined the aircraft and observed ground handling equipment positioned under the left wing and a puncture in the non-metallic portion of the wing tip. The equipment had contacted the wing approximately 1 foot from the wing tip. He checked the position of the aircraft and noted that the nosegear was on the lead-in line and parked between 6 and 8 feet ahead of the 737 stop line. It was parked on the 767/320 stop line. He stated it was obvious that if the aircraft had been stopped in the correct position, the incident with the wingtip would not have occurred.

The first officer stated that they landed on runway 36 right and exited the runway on taxiway "J". He then called ground control and requested taxi clearance to their assigned gate, airside 1, gate 24. They were cleared to taxi via "C2" to the gate. Once on "C2", they saw that the gate was still occupied by a Boeing 727. The captain stopped the aircraft on "C2", and he called the Signature Flight Support dispatcher on the radio. The lady working the radio stated they had no information about when the gate would be open. They called ground control and were told to hold on taxiway "B". After holding on taxiway "B", they observed the Boeing 727 being pushed from gate 24. They called ground control and were cleared to taxi to the gate. The Boeing 727 was pushed far enough from the gate for them to taxi into the gate. Approaching the gate they were called by the Signature Flight Support dispatcher to report that the gate was now open. They approached the gate, there was no ground marshaller to take them into the gate. When about 100 feet from the gate one Signature Flight Support ground handler, who was posted on the yellow line, abeam the jetway, raised his left hand, trying to imitate a "stop" instruction. The captain slowed the aircraft to almost a still position and a second later the

ground marshaller came running from gate 28 towards gate 24, giving signs to move forward. The captain moved forward at a slow speed, following the marshaller's instructions. During the last 2-2.5 feet, before the stop and chocked signal, they felt a light vibration in the aircraft and they commented that the ground guys must have chocked the airplane before they came to a stop. He was made aware of the wing strike about 10 minutes later when a flight attendant reported it to him. He walked outside and observed the nose wheel was on the yellow line, about 6-8 feet passed the 737 mark.

The FAA inspector who was seated on the cockpit jumpseat stated he was conducting a cockpit en route inspection of the flight. When they taxied to the gate they observed another aircraft still parked at their assigned gate. They held away from the gate and when the aircraft was pushed from the gate, the captain started to taxi into the gate. No ground personnel were in position to assist the flight into the gate. As the airplane approached the gate, a ground person on a tug at the gate and another person near the jetway started waving their arms from side to side. The captain continued to taxi into the gate. Another ground person appeared and gave the captain an emergency stop signal and looked toward the left wing. The captain barely slowed his approach speed and continued to taxi forward into the gate. The ground person then gave the captain a right turn signal. Within 5-10 seconds after the right turn signal, the aircraft struck something on its left side. The ground person was again giving the emergency stop signal and the captain brought the aircraft to a stop. When he exited the aircraft he noticed the nose tire was forward of the Boeing 737 mark and on the 727/747 mark. He also noticed the left wing had serious damage to the underside.

Ground personnel stated that after an aircraft was pushed from gate 24 for departure, Proair 212 cut in front of the departing aircraft and approached gate 24. One ground person gave the captain a stop signal, but the captain continued toward the gate. Another ground person gave the captain a stop signal, but the captain again continued toward the gate at a "pretty good pace". The ground person then tried to get the captain to steer to the right to avoid ramp equipment. The captain continued straight ahead and the left wing collided with a cargo container loader. Postcrash examination of the aircraft by FAA inspectors and company maintenance personnel showed the left wing front spar lower chord had received damage.

## Pilot Information

<b>Certificate:</b>	Airline Transport; Flight Instructor; Flight Engineer	<b>Age:</b>	52, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane Multi-engine; Instrument Airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--w/ waivers/lim.	<b>Last Medical Exam:</b>	02/22/2000
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	12920 hours (Total, all aircraft), 1844 hours (Total, this make and model), 6340 hours (Pilot In Command, all aircraft), 91 hours (Last 90 days, all aircraft), 28 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	Boeing	<b>Registration:</b>	N460PR
<b>Model/Series:</b>	737-49R 737-49R	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Transport	<b>Serial Number:</b>	28881
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	154
<b>Date/Type of Last Inspection:</b>	06/22/2000, Continuous Airworthiness	<b>Certified Max Gross Wt.:</b>	143500 lbs
<b>Time Since Last Inspection:</b>	94 Hours	<b>Engines:</b>	2 Turbo Fan
<b>Airframe Total Time:</b>	8427 Hours	<b>Engine Manufacturer:</b>	Cfm
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	CFM56-3
<b>Registered Owner:</b>	G. E. CAPITAL CORPORATION	<b>Rated Power:</b>	23500 lbs
<b>Operator:</b>	PRO AIR, INC.	<b>Air Carrier Operating Certificate:</b>	Flag carrier (121)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	P9OA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	MCO, 96 ft msl	Observation Time:	1153 EDT
Distance from Accident Site:	1 Nautical Miles	Direction from Accident Site:	180°
Lowest Cloud Condition:	Scattered / 3400 ft agl	Temperature/Dew Point:	29° C / 21° C
Lowest Ceiling:	None / 0 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	14 knots/ 21 knots, 60°	Visibility (RVR):	0 ft
Altimeter Setting:	30 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:	ATLANTA, GA (ATL)	Type of Flight Plan Filed:	IFR
Destination:	(MCO)	Type of Clearance:	IFR
Departure Time:	1015 EDT	Type of Airspace:	Class B

## Airport Information

Airport:	ORLANDO INTERNATIONAL (MCO)	Runway Surface Type:	
Airport Elevation:	96 ft	Runway Surface Condition:	
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	

## Wreckage and Impact Information

Crew Injuries:	6 None	Aircraft Damage:	Substantial
Passenger Injuries:	122 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	128 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	JEFFREY L KENNEDY	Adopted Date:	12/04/2000
Additional Participating Persons:	ROBERT BINGHAM; ORLANDO, FL		
Publish Date:			
Investigation Docket:	NTSB accident and incident docket serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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.

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