



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	CHICAGO, IL	<b>Accident Number:</b>	DCA98MA023
<b>Date &amp; Time:</b>	02/09/1998, 0954 CST	<b>Registration:</b>	N845AA
<b>Aircraft:</b>	Boeing 727-223	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	23 Minor, 99 None
<b>Flight Conducted Under:</b>	Part 121: Air Carrier - Scheduled		

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## Analysis

The full report for NTSB Report Number AAB-01-01 is available at [www.nts.gov/publictn/publictn.htm](http://www.nts.gov/publictn/publictn.htm). On February 9, 1998, about 0954 central standard time (CST), a Boeing 727-223 (727), N845AA, operated by American Airlines as flight 1340, impacted the ground short of the runway 14R threshold at Chicago O'Hare International Airport (ORD) while conducting a Category II (CAT II) instrument landing system (ILS) coupled approach. Twenty-two passengers and one flight attendant received minor injuries, and the airplane was substantially damaged. The airplane, being operated by American Airlines as a scheduled domestic passenger flight under the provisions of 14 Code of Federal Regulations (CFR) Part 121, with 116 passengers, 3 flight crewmembers, and 3 flight attendants on board, was destined for Chicago, Illinois, from Kansas City International Airport (MCI), Kansas City, Missouri. Daylight instrument meteorological conditions prevailed at the time of the accident.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the failure of the flight crew to maintain a proper pitch attitude for a successful landing or go-around. Contributing to the accident were the divergent pitch oscillations of the airplane, which occurred during the final approach and were the result of an improper autopilot desensitization rate.

## Findings

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Occurrence #1: ALTITUDE DEVIATION, UNCONTROLLED

Phase of Operation: APPROACH - FAF/OUTER MARKER TO THRESHOLD (IFR)

Findings

1. WEATHER CONDITION - LOW CEILING
  2. (F) AUTOPILOT - IMPROPER
  3. VISUAL/AURAL DETECTION - PILOT IN COMMAND
  4. (C) AIRCRAFT CONTROL - NOT MAINTAINED - FLIGHTCREW
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Occurrence #2: UNDERSHOOT

Phase of Operation: LANDING

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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: LANDING

Findings

5. COMMUNICATIONS/INFORMATION/ATC - NOT COMPLIED WITH - ATC PERSONNEL(LCL/GND/CLNC)
6. AIR/GROUND COMMUNICATIONS - NOT USED - ATC PERSONNEL(LCL/GND/CLNC)

## Factual Information

The full report for NTSB Report Number AAB-01-01 is available at [www.nts.gov/publicctn/publicctn.htm](http://www.nts.gov/publicctn/publicctn.htm).

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## Pilot Information

<b>Certificate:</b>	Airline Transport; Commercial	<b>Age:</b>	42, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>		<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	01/23/1998
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	04/25/1997
<b>Flight Time:</b>	11000 hours (Total, all aircraft), 1319 hours (Total, this make and model), 6000 hours (Pilot In Command, all aircraft), 104 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Boeing	Registration:	N845AA
Model/Series:	727-223 727-223	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal; Transport	Serial Number:	20986
Landing Gear Type:	Retractable - Tricycle	Seats:	150
Date/Type of Last Inspection:	02/06/1998, Continuous Airworthiness	Certified Max Gross Wt.:	178500 lbs
Time Since Last Inspection:	12 Hours	Engines:	3 Turbo Jet
Airframe Total Time:	59069 Hours	Engine Manufacturer:	P&W
ELT:		Engine Model/Series:	JT8D-9
Registered Owner:	AMERICAN AIRLINES	Rated Power:	14500 lbs
Operator:	AMERICAN AIRLINES	Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:		Operator Designator Code:	AALA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ORD, 668 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0956 CST	Direction from Accident Site:	0°
Lowest Cloud Condition:		Visibility	0.5 Miles
Lowest Ceiling:	Overcast / 100 ft agl	Visibility (RVR):	1600 ft
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	-2° C / -2° C
Precipitation and Obscuration:			
Departure Point:	KANSAS CITY, KS (MCI)	Type of Flight Plan Filed:	IFR
Destination:		Type of Clearance:	IFR
Departure Time:	0843 CST	Type of Airspace:	Class B

## Airport Information

Airport:	CHICAGO O'HARE INTERNATIO (ORD)	Runway Surface Type:	Concrete
Airport Elevation:	667 ft	Runway Surface Condition:	Wet
Runway Used:	14R	IFR Approach:	ILS
Runway Length/Width:	13000 ft / 150 ft	VFR Approach/Landing:	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor, 5 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	22 Minor, 94 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	23 Minor, 99 None	<b>Latitude, Longitude:</b>	

## Administrative Information

<b>Investigator In Charge (IIC):</b>	RICHARD G RODRIGUEZ	<b>Report Date:</b>	05/14/2001
<b>Additional Participating Persons:</b>	ROBERT L HENLEY; WASHINGTON, DC RICHARD ANDERSON; RENTON, WA JOHN DARBO; FORT WORTH, TX BRUCE BICKHAUS; FORT WORTH, TX		
<b>Publish Date:</b>			
<b>Investigation Docket:</b>	NTSB accident and incident dockets 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.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).