



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	COLUMBIA, TN	<b>Accident Number:</b>	ATL91LA122
<b>Date &amp; Time:</b>	07/02/1991, 1856 CDT	<b>Registration:</b>	N500FM
<b>Aircraft:</b>	LEARJET 23	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Non-scheduled		

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## Analysis

THE PILOT HAD COMPUTED LANDING PERFORMANCE INFORMATION FOR A LANDING ON A WET RUNWAY WITH ANTI-SKID; SUFFICIENT RUNWAY SURFACE WAS AVAILABLE. TOUCHDOWN WAS NORMAL, HOWEVER DURING THE BRAKING PROCESS, THE AIRPLANE STARTED TO FISHTAIL AND THE PILOT BELIEVED THAT THE ANTI-SKID SYSTEM HAD FAILED. THEREFORE, THE PILOT TURNED THE ANTI-SKID SYSTEM OFF AND CONTINUED THE ROLLOUT WITH NORMAL BRAKING. THE AIRPLANE WENT OFF THE DEPARTURE END OF RUNWAY 05 AND SUSTAINED SUBSTANTIAL DAMAGE. PERFORMANCE DATA INDICATED MORE RUNWAY SURFACE WAS REQUIRED FOR A SAFE LANDING ON A WET RUNWAY WITHOUT ANTI-SKID ASSISTANCE. THE BRAKING SEQUENCE OF EVENTS DESCRIBED BY THE PILOT RESEMBLED DYNAMIC HYDROPLANING WHERE THERE WAS A COMPLETE LOSS OF BRAKING EFFECTIVENESS RATHER THAN AN ANTI-SKID MALFUNCTION. AN EXAMINATION OF THE AIRPLANE FAILED TO DISCLOSE ANY MECHANICAL PROBLEMS.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S PREMATURE DECISION TO TURN OFF THE ANTI-SKID DURING LANDING ROLL. FACTORS TO THIS ACCIDENT WERE HYDROPLANING CONDITIONS.

## Findings

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Occurrence #1: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER  
Phase of Operation: LANDING - ROLL

### Findings

1. TERRAIN CONDITION - GROUND
2. LANDING GEAR,ANTI-SKID BRAKE SYSTEM
3. (C) PROCEDURES/DIRECTIVES - DISCONTINUED - PILOT IN COMMAND
4. (C) PLANNING/DECISION - PREMATURE - PILOT IN COMMAND
5. (F) AIRCRAFT PERFORMANCE,HYDROPLANING CONDITION

## Factual Information

### Pilot Information

<b>Certificate:</b>	Airline Transport; Flight Instructor	<b>Age:</b>	28, Female
<b>Airplane Rating(s):</b>	Multi-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 Single-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--w/ waivers/lim.	<b>Last Medical Exam:</b>	03/01/1991
<b>Occupational Pilot:</b>	<b>Last Flight Review or Equivalent:</b>		
<b>Flight Time:</b>	4964 hours (Total, all aircraft), 4039 hours (Total, this make and model), 4039 hours (Pilot In Command, all aircraft), 285 hours (Last 90 days, all aircraft), 77 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	LEARJET	<b>Registration:</b>	N500FM
<b>Model/Series:</b>	23 23	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	23-088
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	06/10/1991, AAIP	<b>Certified Max Gross Wt.:</b>	12499 lbs
<b>Time Since Last Inspection:</b>	43 Hours	<b>Engines:</b>	2 Turbo Jet
<b>Airframe Total Time:</b>	13594 Hours	<b>Engine Manufacturer:</b>	GE
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	CJ610-4
<b>Registered Owner:</b>	CONNIE KALITTA SERVICES, INC.	<b>Rated Power:</b>	2850 lbs
<b>Operator:</b>	CONNIE KALITTA SERVICES, INC.	<b>Air Carrier Operating Certificate:</b>	On-demand Air Taxi (135)

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	MRC, 676 ft msl	Observation Time:	1600 CDT
Distance from Accident Site:	1 Nautical Miles	Direction from Accident Site:	360°
Lowest Cloud Condition:	Clear / 0 ft agl	Temperature/Dew Point:	
Lowest Ceiling:	None / 0 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	4 knots, 290°	Visibility (RVR):	0 ft
Altimeter Setting:	29 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:	YOUNGTOWN, OH (YNG)	Type of Flight Plan Filed:	IFR
Destination:		Type of Clearance:	VFR
Departure Time:	1830 CDT	Type of Airspace:	Class D; Class E

## Airport Information

Airport:	MAURY COUNTY	Runway Surface Type:	Asphalt
Airport Elevation:	626 ft	Runway Surface Condition:	Wet
Runway Used:	5	IFR Approach:	None
Runway Length/Width:	5009 ft / 75 ft	VFR Approach/Landing:	Full Stop

## Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	PHILLIP POWELL	Adopted Date:	07/13/1993
Additional Participating Persons:	LYNN LA FEVER; NASHVILLE, TN		
Publish Date:			
Investigation Docket:	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> .		

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