

---

## Partial runway excursion, Boeing 737-300, May 10, 1996

---

**Micro-summary:** This Boeing 737-300 left the runway for a time, following touchdown in heavy rain.

---

**Event Date:** 1996-05-10 at 2318 CDT


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

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

---

### **Cautions:**

1. Accident reports can be and sometimes are revised. Be sure to consult the investigative agency for the latest version before basing anything significant on content (e.g., thesis, research, etc).
  2. Readers are advised that each report is a glimpse of events at specific points in time. While broad themes permeate the causal events leading up to crashes, and we can learn from those, the specific regulatory and technological environments can and do change. ***Your company's flight operations manual is the final authority as to the safe operation of your aircraft!***
  3. Reports may or may not represent reality. Many many non-scientific factors go into an investigation, including the magnitude of the event, the experience of the investigator, the political climate, relationship with the regulatory authority, technological and recovery capabilities, etc. It is recommended that the reader review all reports analytically. Even a "bad" report can be a very useful launching point for learning.
  4. Contact us before reproducing or redistributing a report from this anthology. Individual countries have very differing views on copyright! We can advise you on the steps to follow.
-

		NTSB ID: FTW96IA210		Aircraft Registration Number: N315SW	
		Occurrence Date: 05/10/1996		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place DALLAS	State TX	Zip Code 75235	Local Time 2318	Time Zone CDT	
Airport Proximity: On Airport		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Boeing		Model/Series 737-300		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:					
<p>On May 10, 1996, at 2318 central daylight time, a Boeing 737-300, N315SW, registered to, and operated by Southwest Airlines Inc., as a Title 14 CFR Part 121 scheduled domestic passenger flight #768, sustained minor damage during landing roll at Dallas Love Field, Dallas, Texas. Visual meteorological conditions prevailed and an instrument flight plan was filed. The airline transport rated pilot-in-command, first officer, 3 cabin attendants, and 45 passengers were not injured. The flight originated from San Antonio International Airport, San Antonio, Texas, approximately 48 minutes prior to the incident.</p> <p>According to the captain (who was not at the controls), thunderstorms (north of the airport and moving south) were visually observed and displayed on the aircraft's weather radar system. He stated that the airport was "in sight throughout the approach." After encountering light rain at about 200 feet AGL, the captain activated the windshield wipers (low setting). The rain intensified at 100 feet AGL and the captain switched to "high wiper." At 50 feet AGL, "the visibility was [further] reduced by heavy rain."</p> <p>The captain further stated that after touchdown on runway 31L, he sensed a drift to the left. He then advised the first officer (who was at the flight controls and seated in the right cockpit crew station) for a correction, to which the first officer acknowledged, "I have full rudder input." The captain confirmed full rudder application with his feet. Subsequent to the rudder inputs, the crew "was able to re-center the aircraft on the runway" and the captain took control of the aircraft (normal procedure subsequent to a right seat landing/roll out). The aircraft taxied to the gate without further incident and the passengers were deplaned.</p> <p>The first officer stated that runway 31L was visually acquired at approximately 8 miles and that they were cleared for a visual approach. He stated that approximately 4 to 5 miles from the runway, he "saw some obscuration of the 31L departure end runway lights." He determined that the obscuration correlated to the weather radar display and queried the captain for a possible "go-around." He further stated that "he flew the approach at Vref plus 20 knots [flaps 40 degrees] and the approach was stabilized with centered ILS." He added that there were no signs of wind shear and he was able to maintain visual contact with the approach lights and the approach end of the runway as the aircraft passed through 200 feet AGL. He added that the rain intensity continued to increase passing through 100 feet AGL. Upon touch down, he noticed the aircraft to be slightly left of centerline and corrected with right rudder input.</p> <p>Southwest Airlines flight #62 (Boeing 737) was taxiing from the gate to a position near the threshold of runway 31L (time approximately 2305). The captain of flight #62 reported that, "when we got to the end of the runway, we elected to wait for some weather in our departure path." He stated that weather conditions at the time were "some rain, and a cell sitting in our departure corridor, approximately 6-7 miles [northwest] of the field." He further stated that, after approximately 15 minutes of waiting he observed flight #768's "lights at least to the city, and</p>					
FACTUAL REPORT - AVIATION					
Page 1					

National Transportation Safety Board

## FACTUAL REPORT

AVIATION

NTSB ID: FTW96IA210

Occurrence Date: 05/10/1996

Occurrence Type: Incident


## Narrative (Continued)


approximately 10 miles out." After observing flight #768 land, he noticed "nothing unusual during the touch down." Shortly after the touch down, he observed "the aircraft disappeared into a wall of water."

Southwest Airlines flight #1134 (Boeing 737) was in sequence to land at the airport (approximately 3 minutes behind flight #768). The captain of flight #1134 reported that, while on extended final, dispatch advised that there were currently thunderstorms in the Love Field area and that they should pass in about fifteen minutes. He stated that downtown (Dallas) was visible, "but not the airfield." After being cleared to land, the captain decided to "break off the approach and go into holding until the weather had passed." While in holding approach control advised that two Southwest aircraft had landed without any problems. Subsequently, a normal approach and landing was executed in intermittent light rain and 8 knots of wind. The captain added that the runway condition was "wet but not cluttered." According to the captain, the aforementioned sequence of events occurred between approximately 2220 and 2336.

Examination of the airplane by the operator revealed the presence of mud on the left main landing gear, wheel well, engine, and engine pylon area. Inspection of the runway after the incident by airport authorities revealed evidence that the left main landing gear departed the paved surface of the runway for approximately 700 feet. Additionally, six runway edge lights (left side of the runway 31L), approximately 2100 feet south of the threshold, were found damaged.

According to weather information sources and the flight crew, visual meteorological conditions prevailed throughout the approach; however, the aircraft did encounter heavy rain and reduced visibility immediately after touch down.

		NTSB ID: FTW96IA210			
		Occurrence Date: 05/10/1996			
		Occurrence Type: Incident			
<b>Landing Facility/Approach Information</b>					
Airport Name DALLAS LOVE FIELD	Airport ID: DAL	Airport Elevation 487 Ft. MSL	Runway Used 31L	Runway Length 8800	Runway Width 150
Runway Surface Type: Asphalt					
Runway Surface Condition: Wet					
Type Instrument Approach:					
VFR Approach/Landing: Full Stop					
<b>Aircraft Information</b>					
Aircraft Manufacturer Boeing		Model/Series 737-300		Serial Number 23337	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 142	Certified Max Gross Wt. 130000 LBS	Number of Engines: 2		
Engine Type: Turbo Fan	Engine Manufacturer: GE	Model/Series: CFM56	Rated Power: 20000 LBS		
<b>- Aircraft Inspection Information</b>					
Type of Last Inspection Continuous Airworthiness	Date of Last Inspection	Time Since Last Inspection Hours	Airframe Total Time Hours		
<b>- Emergency Locator Transmitter (ELT) Information</b>					
ELT Installed?	ELT Operated?	ELT Aided in Locating Accident Site?			
<b>Owner/Operator Information</b>					
Registered Aircraft Owner SOUTHWEST AIRLINES		Street Address 2833 SHORECREST DRIVE			
		City DALLAS	State TX	Zip Code 75235	
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: SWAA		
<b>- Type of U.S. Certificate(s) Held:</b>					
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					

 <p><b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b></p>	NTSB ID: FTW961A210
	Occurrence Date: 05/10/1996
	Occurrence Type: Incident

**First Pilot Information**

Name On File	City On File	State On File	Date of Birth On File	Age 49
-----------------	-----------------	------------------	--------------------------	-----------

Sex: M	Seat Occupied: Left	Principal Profession: Civilian Pilot	Certificate Number: On File
--------	---------------------	--------------------------------------	-----------------------------

Certificate(s): Airline Transport

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

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s): None

Type Rating/Endorsement for Accident/Incident Aircraft? Yes	Current Biennial Flight Review?
---	---------------------------------

Medical Cert.: Class 1	Medical Cert. Status: Valid Medical--no waivers/lim.	Date of Last Medical Exam: 04/1996
------------------------	--	------------------------------------

- 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	12000	7000	1000	11000						
Pilot In Command(PIC)	7500	5000	1000	5500						
Instructor										
Last 90 Days	200	200		200						
Last 30 Days	70	70		70						
Last 24 Hours	10	10		10						

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? No	Second Pilot? Yes
--------------------	----------------------------	--------------------------	-------------------

**Flight Plan/Itinerary**

Type of Flight Plan Filed: IFR

Departure Point SAN ANTONIO	State TX	Airport Identifier SAT	Departure Time 2236	Time Zone CDT
--------------------------------	-------------	---------------------------	------------------------	------------------

Destination Same as Accident/Incident Location	State	Airport Identifier DAL	
---	-------	---------------------------	--


Type of Clearance: IFR

Type of Airspace: Class B

**Weather Information**

Source of Briefing:  
Company

Method of Briefing:

 <p><b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b></p>	NTSB ID: FTW96IA210
	Occurrence Date: 05/10/1996
	Occurrence Type: Incident

<b>Weather Information</b>					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
DAL	2252	CDT	487 Ft. MSL	0 NM	0 Deg. Mag.
Sky/Lowest Cloud Condition: Scattered			700 Ft. AGL	Condition of Light: Night/Dark	
Lowest Ceiling: Overcast		4500 Ft. AGL		Visibility: 10 SM	Altimeter: 30.00 "Hg
Temperature: 24 °C	Dew Point: 22 °C	Wind Direction: 360		Density Altitude: Ft.	
Wind Speed: 16	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): 0 Ft.	Visibility (RVV) 0 SM	Intensity of Precipitation: Light			
Restrictions to Visibility: Blowing Spray					
Type of Precipitation: Rain					

<b>Accident Information</b>		
Aircraft Damage: Minor	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				3	3
Other Crew					
Passengers				45	45
- TOTAL ABOARD -				50	50
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	0	50	50

National Transportation Safety Board

**FACTUAL REPORT**

**AVIATION**



NTSB ID: FTW96IA210

Occurrence Date: 05/10/1996

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

ALEXANDER LEMISHKO

Additional Persons Participating in This Accident/Incident Investigation:

JOSEPH M MCDONALD  
FAA FSDO  
DFW, TX 75612