
Taxiway landing, Boeing 737-300, February 24, 2004

Micro-summary: This Boeing 737-300 landed on a taxiway in error.


Event Date: 2004-02-24 at 930 PST


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

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

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		NTSB ID: SEA04IA045		Aircraft Registration Number: N368SW	
		Occurrence Date: 02/24/2004		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place Seattle		State WA	Zip Code 98188	Local Time 0930	Time Zone PST
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility: 1		Direction From Airport: 340	
Aircraft Information Summary					
Aircraft Manufacturer Boeing		Model/Series 737-300		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>On February 24, 2004, approximately 0930 Pacific standard time, the First Officer of a Southwest Airlines 737-300, N368SW, inadvertently aligned the aircraft for a landing on Taxiway Tango at Seattle-Tacoma International Airport (SEATAC), Seattle, Washington. There were no injuries to the flight crew, three flight attendants, or any of the 89 passengers, and there was no damage to the aircraft, which is owned and operated by Southwest Airlines Company. The scheduled Part 121 domestic passenger flight, which departed Oakland, California, about 85 minutes prior to the incident, was being operated in visual meteorological conditions at the time of the subject event. The flight had been on an IFR flight plan, and had been cleared for a visual approach to Runway 16 Right at SEATAC.</p> <p>According to the flight crew, while they were west of the airport, the flight was cleared for the Bay Visual Approach to Runway 16 Right. The First Officer, who was flying at the time, made a right turn over Elliott Bay and lined up on what he believed to be Runway 16 Right. When the aircraft was about one mile from the end of the taxiway, the first officer noticed a yellow X located just off the northern end of the surface he intended to land on. Upon realizing he was lined up on the wrong surface, he initiated a sidestep to Runway 16 Right. He subsequently completed an uneventful landing on Runway 16 Right, and taxied to the gate for a normal deplanement of the passengers. According to recorded radar tracking data, at the time of the turn to initiate the sidestep, the aircraft was approximately 600 feet above the ground (AGL).</p> <p>In a post-incident interview, the First Officer said that he did not realize he was lined up to land on the wrong surface until he saw the yellow X. He also said that there were varying degrees of reflection and glare at different areas of the airfield environment, and that the size and shape of the taxiway made it look very much like a runway. He further stated that although he was eventually able to see the Runway 16 Right identification markings, he never did clearly see any markings that indicated Taxiway Tango was a taxiway. When advised that there was also a temporary lighted-X near the permanent yellow X, he responded that the only X he had seen was the solid yellow X. When told that the Runway 16 centerline lights were on in the dim position, he said that he did not remember seeing them, even after executing the sidestep maneuver.</p> <p>In a post-incident interview with the Captain, he stated that he knew which surface was the runway and which was the taxiway soon after the aircraft rolled out on final, but at the time he first visually acquired the runway environment, it looked to him like the First Officer was lining up on Runway 16 Right. The Captain explained that since they had been cleared to land long, his attention was diverted from the runway environment while he explained the landing/deceleration technique he wanted the first Officer to use, and then waited for the First Officer's response. He added that almost immediately after the First Officer confirmed that he understood his instructions, the First Officer made a comment and started a shallow left turn. At that point, the Captain briefly checked the airspeed, and then returned his attention to the runway/taxiway environment. He said that it was at that point in time when he realized that the First Officer had lined up to the right (west)</p>					
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 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: SEA04IA045	
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Narrative (Continued)

of Runway 16 Right, and was now correcting to it. He also mentioned that he too briefly saw the yellow X at that point in time. The Captain said that he thought briefly about a go-around, but since the bank angle was shallow, and the runway very nearby, he elected to let the First Officer continue the sidestep.

At the time of the event, the airport's paved surfaces were wet from a recent rain shower, and although the Captain was aware of the note on the airport diagram advising crews not to mistake Taxiway Tango for a landing surface, this note was not discussed prior to or during the approach sequence. He said that because the ILS was out, they had no localizer backup. Both crew members mentioned that there was a need for a better/clearer identification of the runways, but that some type of markings making it clear that Taxiway Tango is not a runway was the most important action that could be taken.

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		Occurrence Type: Incident				
Landing Facility/Approach Information						
Airport Name		Airport ID:	Airport Elevation	Runway Used	Runway Length	Runway Width
Seattle-Tacoma International		KSEA	433 Ft. MSL	16R	9426	150
Runway Surface Type: Concrete						
Runway Surface Condition: Wet						
Type Instrument Approach: Visual						
VFR Approach/Landing: Full Stop						
Aircraft Information						
Aircraft Manufacturer		Model/Series		Serial Number		
Boeing		737-300		26579		
Airworthiness Certificate(s): Transport						
Landing Gear Type: Retractable - Tricycle						
Homebuilt Aircraft? No		Number of Seats: 145	Certified Max Gross Wt. 139000 LBS		Number of Engines:	
Engine Type:		Engine Manufacturer:		Model/Series:	Rated Power:	
Turbo Fan		General Electric		CFM-56	20000 LBS	
- Aircraft Inspection Information						
Type of Last Inspection		Date of Last Inspection	Time Since Last Inspection		Airframe Total Time	
Continuous Airworthiness		12/2003	640 Hours		36024 Hours	
- Emergency Locator Transmitter (ELT) Information						
ELT Installed? No		ELT Operated?		ELT Aided in Locating Accident Site?		
Owner/Operator Information						
Registered Aircraft Owner		Street Address				
		2702 Love Field Drive				
SOUTHWEST AIRLINES CO		City		State	Zip Code	
		Dallas		TX	75235	
Operator of Aircraft		Street Address				
		Same as Reg'd Aircraft Owner				
Same as Reg'd Aircraft Owner		City		State	Zip Code	
Operator Does Business As: Southwest Airlines				Operator Designator Code: SWAA		
- Type of U.S. Certificate(s) Held:						
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						

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First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 56
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Sex: M	Seat Occupied: Left	Principal Profession: Civilian Pilot	Certificate Number: On File
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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? 12/2003
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Medical Cert.: Class 1	Medical Cert. Status: Valid Medical--w/ waivers/lim.	Date of Last Medical Exam: 11/2003
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- 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	25000	12000	400	24600						
Pilot In Command(PIC)	10000	6000		6000						
Instructor										
Last 90 Days	240	240		240						
Last 30 Days	80	80		80						
Last 24 Hours	6	6		6						

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? No	Second Pilot? Yes
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Flight Plan/Itinerary

Type of Flight Plan Filed: IFR

Departure Point Oakland	State CA	Airport Identifier OAK	Departure Time 0740	Time Zone PST
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Destination Same as Accident/Incident Location	State	Airport Identifier SEA	
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Type of Clearance: IFR

Type of Airspace: Class D

Weather Information

Source of Briefing: Company; Flight Service Station

Method of Briefing: Unknown

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WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
SEA	0956		433 Ft. MSL	2 NM	340 Deg. Mag.
Sky/Lowest Cloud Condition: Scattered			12000 Ft. AGL	Condition of Light:	
Lowest Ceiling: Broken		17000 Ft. AGL	Visibility: 10	SM	Altimeter: 29.62 "Hg
Temperature: 10 °C	Dew Point: 4 °C	Wind Direction: 170		Density Altitude: Ft.	
Wind Speed: 4	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): Ft.	Visibility (RVV)	SM	Intensity of Precipitation:		
Restrictions to Visibility: None					
Type of Precipitation: None					

Accident Information		
Aircraft Damage: None	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				89	89
- TOTAL ABOARD -				94	94
Other Ground					
- GRAND TOTAL -				94	94

National Transportation Safety Board

FACTUAL REPORT

AVIATION



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Occurrence Date: 02/24/2004

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

Orrin K. Anderson

Additional Persons Participating in This Accident/Incident Investigation:

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