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## Near-miss on landing, McDonnell Douglas MD11 and Swearingen SA227, February 27, 1995

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**Micro-summary:** This MD-11 landed, passing over a Swearingen SA227 which had already taken the runway.

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**Event Date:** 1995-02-27 at 2054 CST


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

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

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		NTSB ID: FTW95IA126A		Aircraft Registration Number: N1763	
		Occurrence Date: 02/27/1995		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place DALLAS-FT WORTH		State TX	Zip Code 75261	Local Time 2054	Time Zone CST
Airport Proximity: On Airport		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer MCDONNELL DOUGLAS		Model/Series MD11		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 February 27, 1995, at 2054 central standard time (CST), a McDonnell Douglas MD11, N1763, and a Swearingen SA227, N355AE, were involved in a runway incursion at the Dallas/Fort Worth International Airport (DFW), Texas. Neither aircraft sustained damage. The MD11 was operated as American Airlines Flight 2351 (AA2351) under 14 CFR Part 121, while the SA227 was operated as Lone Star Airlines Flight 1219 (LS1219) under 14 CFR Part 135. There were 10 crewmembers and 58 passengers on the MD11 and 2 crewmembers and 8 passengers on the SA227. None of the crewmembers or passengers sustained any injuries. Visual meteorological conditions prevailed with 15 miles visibility.</p> <p>American Flight 2351 was "cleared to land on runway 35R" at 2052:56 CST; thereafter Lone Star Flight 1219 was instructed "taxi into position and hold on runway 35R" at 2053:03 CST. Both clearances were given by the same controller and acknowledged by the appropriate crews. Neither crew heard the others clearance. An examination of the radar data revealed that the MD11 flew over the SA227 at 2054:30, touching down approximately 1200 to 1500 feet beyond the approach threshold. The radar data also indicated that the vertical clearance between both aircraft was 35 feet.</p> <p>The captain and first officer of the MD-11 had originated their duty day at DFW and were on a turn-around trip from O'Hare Airport, Chicago, Illinois. The crew of AA2351 had begun their duty day at 1200 CST and had been on duty approximately 9 hours.</p> <p>The crew of LS1219, consisting of a captain and first officer, began their duty day at 1520 CST and had been on duty approximately 8 hours at the time of the occurrence. They had originated the flight at the Baxter County Regional Airport, Mountain Home, Arkansas, to DFW. LS1219 made 2 scheduled stops at Harrison, and Hot Springs, Arkansas prior to landing at DFW.</p> <p>The Lone Star aircraft was put into position and hold on runway 35R, with the American Airlines aircraft on final approach, cleared to land on runway 35R. The tower cab supervisor noticed traffic on the runway, while viewing the Airport Surface Detection Equipment (ASDE) and alerted the local controller. The local controller could not recall the call sign for the MD11. He looked at the BRITE display for the identification; however, "the data had dropped off." In an attempt to issue emergency instructions the controller issued go around clearance 2054:33 to "AA1251 and AA1261," both non-existent flights (see enclosed group chairman's report).</p> <p>The controller, assigned to runway 35R, 35L, and 31R, was working the Local Control East 35 (LCE-35) position, in the center tower, when he issued the instructions to both aircraft. During the period of time, 9 minutes prior to the incident, when he was in direct contact with both aircraft he was also handling a Sabliner that was preparing to takeoff from 35R. While handling the Sabliner a 2 minute loss of communication occurred, he could not get acknowledgment following his issued clearance for takeoff.</p>					
FACTUAL REPORT - AVIATION					

National Transportation Safety Board

## FACTUAL REPORT

AVIATION

NTSB ID: FTW95IA126A

Occurrence Date: 02/27/1995

Occurrence Type: Incident

## Narrative (Continued)

Fifteen minutes prior to the incident the controller was queried by his supervisor, "is there anything I can do to help?" the controller responded that he needed a break and that he was getting uncomfortable. The controller reported that he was further confused when he noticed that AA901 was identified on the BRITE as Delta 262, this confusing situation was not reported to the supervisor. During an interview the controller stated that at some point as the work load increased he felt he needed a cab coordinator. Other events that the controller thought lead to the confusion were the interruptions by the "departure controller" coming into his ear who was attempting to clarify the erroneous tag up. A review of the enclosed transcripts revealed that the "departure controller" interrupted the controller involved in the incident 8 times in a 3 minute period.

During the investigation team's visit to the facility it was noted that the BRITE display was inconsistent. The identification of arriving aircraft was dropping off at various intervals, upto 1 mile from the runway threshold. No data tag drops occurred further than 1 mile from the runway threshold.

Interviews with both crews revealed that the MD11 crew had no knowledge that they had flown over the SA227. The crew of the SA227 realized that an aircraft was over flying them when they saw the "bright white lights of an approaching aircraft."

During interviews with the crew of LS1219 they reported that although they were aware that a "large aircraft" had flown over them, they did not notify the tower because they were given instructions to takeoff and they anticipated instructions from the tower to contact somebody. They proceeded to Mountain Home, Arkansas, and reported the event through their company.

The crew of LS1219 became concerned after being in position for departure for 2 to 3 minutes and hearing that another aircraft, AA2351 was on approach and was cleared to land on the same runway they were holding on. Due to his concern the captain reported that he turned his taxi lights so that they would be more visible. The Co-pilot attempted to contact the tower and inform them of LS1219's position on runway 35R; however, due to the volume of traffic he was unsuccessful, this attempted transmission was not on the ATC tape or transcription of the tape.

It was also noted during the interviews and in the subsequent review of the communications transcripts that the controller failed to comply with the requirements outlined in the Federal Aviation Administration order 7110.65H dated December 5, 1994 and General Notice RWA 4/89. This order requires that when issuing instructions for taxiing into position and hold the controller must advise aircraft of the existing traffic inbound to that runway. It also requires that approaching aircraft must be informed of aircraft cleared to taxi into position and hold. During the controller interview he acknowledged his awareness of this requirement and stated the reason he did not comply with FAA Order 7110.65H was due to his work load and "he simply forgot."

During the interview with the controller he reported that landing traffic crossing from 31L to 35R and 35L increased his work load. LS1219 was issued instructions to taxi into position and hold until the incident. During this period he issued the following clearances: crossing runway instructions to 5 aircraft, told 6 aircraft to contact ground control, 2 aircraft to contact departure control, ground instructions to 1 aircraft, taxi instructions to 1 aircraft, 1 landing clearance, continue instructions to 1 aircraft, and completed 2 calls with departure radar. All these calls were required in addition to the communications ongoing with departure and approach aircraft to runways 31R and 35L

The crew of American Airlines flight 1032 witnessed the incident while in position for takeoff from runway 35L. During an interview the captain reported that initially the situation was "pretty normal" until they neared the runway. He realized they were going to depart from runway 35L and that traffic was also landing on that runway. He further reported that he felt the controller was "looking for relief from congestion," by side stepping the approaching aircraft from 35R to 35 L. The captain stated that it took 43 minutes from gate departure to takeoff. The crew of AA1032

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## Narrative (Continued)

stated that they felt "so uncomfortable" with the situation that he cocked the aircraft to the left, so he could see up the approach path, and turned on his cornering lights so that he would be more easily identified as being on the runway. The captain reported that the controller workload was "very heavy."

Being adjacent to LS1219 on runway 35R the crew of AA1032 observed the MD11 overly the Lone Star aircraft by about 50 feet and touchdown approximately 2,000 feet down the runway and exit via the high speed taxiway. He further reported that as he was looking at the aircraft on the adjacent runway, it was like a "black hole;" the only thing he could see on LS1219 was his rotating beacon.

A review of the DFW operations and physical aspects revealed the airport is serviced by 3 towers, east, west, and center; however, during the period of time of this incident only one tower was operational. The controllers reported that both east and west towers have lighting interference from the terminal buildings at the center of the airport and accordingly the controllers in the east and west towers transition the center tower. The facility did not utilize a cab coordinator at the time of the accident, they reported that the physical layout of the tower made it hard to accommodate one. The controllers and supervisors stated that a coordinator would have reduced the workload of the controller on duty. He would have taken all communications of the departure controller from the controller involved in the incident.

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		Occurrence Date: 02/27/1995			
		Occurrence Type: Incident			
<b>Landing Facility/Approach Information</b>					
Airport Name	Airport ID:	Airport Elevation	Runway Used	Runway Length	Runway Width
DALLAS-FORT WORTH INTL	DFW	562 Ft. MSL	35R	11388	150
Runway Surface Type: Concrete					
Runway Surface Condition: Dry					
Type Instrument Approach: NONE					
VFR Approach/Landing: Full Stop					
<b>Aircraft Information</b>					
Aircraft Manufacturer		Model/Series		Serial Number	
MCDONNELL DOUGLAS		MD11		48533	
Airworthiness Certificate(s): Transport					
Landing Gear Type: Retractable - Tricycle					
Homebuilt Aircraft? No	Number of Seats: 249	Certified Max Gross Wt.	625000 LBS	Number of Engines: 3	
Engine Type:	Engine Manufacturer:	Model/Series:	Rated Power:		
Turbo Fan	GE	CF680C2D-1F	62504 LBS		
- Aircraft Inspection Information					
Type of Last Inspection	Date of Last Inspection	Time Since Last Inspection	Airframe Total Time		
Continuous Airworthiness	02/1995	8691 Hours	8726 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? No	ELT Operated?	ELT Aided in Locating Accident Site?			
<b>Owner/Operator Information</b>					
Registered Aircraft Owner		Street Address			
AMERICAN AIRLINES		P.O. BOX 61916			
		City	State	Zip Code	
		DFW AIRPORT	TX	75261	
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:			Operator Designator Code:		
- 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					

 <p><b>National Transportation Safety Board</b> <b>FACTUAL REPORT</b> <b>AVIATION</b></p>	NTSB ID: FTW951A126A
	Occurrence Date: 02/27/1995
	Occurrence Type: Incident

**First Pilot Information**

Name On File	City On File	State On File	Date of Birth On File	Age 54
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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; Flight Engineer

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?
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Medical Cert.: Class 1	Medical Cert. Status: Valid Medical--w/ waivers/lim.	Date of Last Medical Exam: 09/1994
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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	26137	279								
Pilot In Command(PIC)	14487									
Instructor	2681									
Last 90 Days	75									
Last 30 Days	12									
Last 24 Hours	4									

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 CHICAGO	State IL	Airport Identifier ORD	Departure Time 1856	Time Zone CST
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Destination Same as Accident/Incident Location	State	Airport Identifier DFW	
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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: FTW95IA126A	
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<b>Weather Information</b>					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
DFW	2050	CST	562 Ft. MSL	0 NM	0 Deg. Mag.
Sky/Lowest Cloud Condition: Scattered			25000 Ft. AGL	Condition of Light: Night/Dark	
Lowest Ceiling: None		0 Ft. AGL	Visibility: 15	SM	Altimeter: 29.00 "Hg
Temperature: 17 °C	Dew Point: 12 °C	Wind Direction: 250		Density Altitude: Ft.	
Wind Speed: 6	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): 0 Ft.	Visibility (RVV) 0	SM	Intensity of Precipitation: Unknown		
Restrictions to Visibility: None					
Type of Precipitation: None					

<b>Accident Information</b>		
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				8	8
Other Crew					
Passengers				58	58
- TOTAL ABOARD -				68	68
Other Ground	0	0	0		0
- GRAND TOTAL -	0	0	0	68	68

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**FACTUAL REPORT**

**AVIATION**



NTSB ID: FTW95IA126A

Occurrence Date: 02/27/1995

Occurrence Type: Incident

Administrative Information

Investigator-In-Charge (IIC)

MATTHEW ELLIS

Additional Persons Participating in This Accident/Incident Investigation:

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