



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	WAUKEGAN, IL	<b>Accident Number:</b>	CHI94LA186
<b>Date &amp; Time:</b>	05/30/1994, 1842 CDT	<b>Registration:</b>	N900CD
<b>Aircraft:</b>	Hawker Siddeley DH-125-3A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None

**Flight Conducted Under:** Part 91: General Aviation - Positioning

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## Analysis

THE CORPORATE JET'S SINK RATE INCREASED DURING SHORT FINAL APPROACH. THE COPILOT APPLIED ELEVATOR BACK PRESSURE AND NOSE UP TRIM. THE SINK RATE CONTINUED TO INCREASE. THE CAPTAIN OBSERVED THE COPILOT'S EFFORTS AND BEGAN APPLYING BACK PRESSURE ON HIS CONTROL YOKE. THROUGH COMBINED EFFORTS OF BOTH PILOTS THEY WERE ABLE TO INCREASE THE PITCH ENOUGH THAT THE AIRPLANE TOUCHED DOWN ON THE MAIN GEAR FIRST. HOWEVER, THE TOUCHDOWN WAS HARD. THE ON-SCENE INVESTIGATION REVEALED THAT A TRIP MANIFEST CONTAINER WAS LODGED BETWEEN THE COPILOT'S CONTROL YOKE COLUMN AND SEAT FRAME. THE PILOTS STATED THE CONTAINER IS REQUIRED TO BE CARRIED IN THE COCKPIT DURING FLIGHTS. BOTH PILOTS SAID THERE IS NO DESIGNATED SPACE IN THE COCKPIT TO RETAIN THE CONTAINER.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: was the pilot-in-command disregarding the location of the flight manifest container in the cockpit. Factor's associated with the accident were a jammed control column and inadequate procedures for the use and storage of the flight manifest container on the part of company management.

## Findings

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Occurrence #1: HARD LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

### Findings

1. (C) FLT CONTROL SYST, YOKE/CONTROL STICK - JAMMED
2. FLIGHT CONTROL, ELEVATOR - MOVEMENT RESTRICTED
3. (C) MISCELLANEOUS EQUIPMENT - DISREGARDED - PILOT IN COMMAND
4. (F) PROCEDURES/DIRECTIVES - INADEQUATE - COMPANY/OPERATOR MANAGEMENT
5. REMEDIAL ACTION - ATTEMPTED - PILOT IN COMMAND

## Factual Information

On May 30, 1994, at 1842 central daylight time (CDT), a Hawker- Siddeley DH-125-3A, N900CD, registered to D.B. Aviation/Ditka Corporation, of Waukegan, Illinois, and piloted by an airline transport and commercially rated crew, was substantially damaged during a hard landing on runway 23 (6,000'X 150' dry concrete) at the Waukegan Regional Airport, Waukegan, Illinois. Visual meteorological conditions prevailed at the time of the accident. The 14 CFR Part 91 positioning flight was not operating on a flight plan. The pilots reported no injuries. The flight departed Wheeling, Illinois, at 1835 CDT.

According to the captain's written statement attached to NTSB Form, 6120.1/2, the copilot was flying the approach which was normal until about 200 feet above the ground. He stated the sink rate then increased and he called out, "descending below vasi." Elevator back pressure was increased with little or no effect. Trim to increase pitch-up was also applied. The callout "pull up" was then made. At this time the control yoke was pulled back with great force by both pilots. A hard landing followed.

During the flight crew's post flight inspection of the airplane a trip manifest container was found wedged between the copilot's seat and control yoke column. The container was "...severely bent", according to the captain's written statement.

Both pilots were asked where the trip manifest container is normally stored. They responded that there is no storage space specifically designated in the cockpit for the container. According to the captain, the container is usually stored against the cockpit's right sidewall. Both pilots said the container has always been stored in that position since they have been with the company. They said the company required that the container be kept in the cockpit. The copilot stated the container's size was 9" X 12" X 1".

## Pilot Information

<b>Certificate:</b>	Airline Transport	<b>Age:</b>	43, Male
<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 Multi-engine; Airplane Single-engine; Instrument Airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Unknown	<b>Last FAA Medical Exam:</b>	03/31/1994
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	10000 hours (Total, all aircraft), 950 hours (Total, this make and model), 8800 hours (Pilot In Command, all aircraft), 81 hours (Last 90 days, all aircraft), 38 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Hawker Siddeley	Registration:	N900CD
Model/Series:	DH-125-3A DH-125-3A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	111
Landing Gear Type:	Retractable - Tricycle	Seats:	10
Date/Type of Last Inspection:	05/24/1994, AAIP	Certified Max Gross Wt.:	21700 lbs
Time Since Last Inspection:	7 Hours	Engines:	2 Turbo Jet
Airframe Total Time:		Engine Manufacturer:	ROLLS-ROYCE
ELT:	Not installed	Engine Model/Series:	VIPER 52201
Registered Owner:	D.B. AVIATION/DITKA CORP.	Rated Power:	
Operator:	D.B. AVIATION/DITKA CORP.	Operating Certificate(s) Held:	On-demand Air Taxi (135)
Operator Does Business As:		Operator Designator Code:	IEY

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	UGN, 720 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	1800 CDT	Direction from Accident Site:	90°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	40 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	14 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	300°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	26° C / 3° C
Precipitation and Obscuration:			
Departure Point:	WHEELING, IL (PWK)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	IFR
Departure Time:	1835 CST	Type of Airspace:	Class E

## Airport Information

Airport:	WAUKEGAN REGIONAL AIRPORT (UGN)	Runway Surface Type:	Concrete
Airport Elevation:	720 ft	Runway Surface Condition:	Dry
Runway Used:	23	IFR Approach:	
Runway Length/Width:	6000 ft / 150 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:	Unknown
Total Injuries:	2 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	FRANK S GATTOLIN	Report Date:	02/14/1995
Additional Participating Persons:	WM HELING; WEST CHICAGO, IL		
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.ntsbt.gov/pubdms/">http://dms.ntsbt.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](#).