



National Transportation Safety Board Aviation Accident Final Report

Location:	MASON CITY, IA	Accident Number:	MKC87FA138
Date & Time:	07/13/1987, 2017 CDT	Registration:	N9391R
Aircraft:	AERO COMMANDER 500-B	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Serious
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

THE AIRPLANE WAS IN A NORMAL APPEARING CLIMB AFTER TAKEOFF WHEN IT PITCHED UP TO A 70 TO 80 DEGREE ATTITUDE, STALLED, DROPPED THE RIGHT WING, THEN LEVELED THE WINGS AND HIT THE GROUND IN A NEAR-FLAT ATTITUDE. THE WEIGHT AND CG WERE WITHIN LIMITS. NO PREIMPACT PROBLEMS WERE FOUND THAT COULD CAUSE AN INADVERTENT PITCHUP. PILOT'S ONLY MEMORY IS THAT HE COULDN'T GET THE CONTROL COLUMN FAR ENOUGH FORWARD TO STOP THE PITCHUP. THE PILOT'S SEAT WAS FOUND IN THE FULL FORWARD POSITION WITH THE RIGHT LOCKING PIN IN THE LOCKING HOLE AND THE LEFT PIN 1/4TH OF AN INCH FORWARD OF THE FRONT LOCKING HOLE. THERE WERE NO VISIBLE MARKS ON EITHER OF THE LOCKING PINS. DEEP SCRATCHES WERE FOUND ON THE SIDES OF THE RAIL WHERE THE SEAT ATTACHMENTS NORMALLY SLIDE BACK AND FORTH WHEN THE SEAT IS ADJUSTED. EXAM OF THE OUTBOARD SIDE RECESSED SURFACE NEAR THE AFT END DISCLOSED WHAT APPEARED TO BE A FRESH SCRATCH.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) FUSELAGE,SEAT - UNLOCKED
2. (C) CHECKLIST - NOT FOLLOWED - PILOT IN COMMAND
3. (F) PULL-UP - INADVERTENT - PILOT IN COMMAND
4. (F) STALL - INADVERTENT - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Factual Information

Pilot Information

Certificate:	Commercial	Age:	38, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	09/01/1986
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	81 hours (Total, this make and model), 1561 hours (Pilot In Command, all aircraft), 81 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	AERO COMMANDER	Registration:	N9391R
Model/Series:	500-B 500-B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	500A-906-15
Landing Gear Type:	Retractable - Tricycle	Seats:	2
Date/Type of Last Inspection:	02/25/1987, 100 Hour	Certified Max Gross Wt.:	6750 lbs
Time Since Last Inspection:	90 Hours	Engines:	2 Reciprocating
Airframe Total Time:	8390 Hours	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	IO-540
Registered Owner:	JOHN D. TOWNER	Rated Power:	290 hp
Operator:	MILLER FLYING SERVIC, INC.	Operating Certificate(s) Held:	On-demand Air Taxi (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Dusk
Observation Facility, Elevation:	MCW, 1213 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	2017 CDT	Direction from Accident Site:	310°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	15 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	300°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	17° C / 13° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	IFR
Destination:	DES MOINES, IA (DSM)	Type of Clearance:	IFR
Departure Time:	2017 CDT	Type of Airspace:	Airport Advisory Area

Airport Information

Airport:	MASON CITY MUNICIPAL (MCW)	Runway Surface Type:	Asphalt
Airport Elevation:	1213 ft	Runway Surface Condition:	Dry
Runway Used:	30	IFR Approach:	None
Runway Length/Width:	5500 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	EUGENE ROTH	Report Date:	01/11/1989
Additional Participating Persons:	LEROY G MONSON; DES MOINES, IA ROBERT J HILLOCK; DES MOINES, IA		
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 pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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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](#).