



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	NAYLOR, MO	<b>Accident Number:</b>	MKC90MA115
<b>Date &amp; Time:</b>	05/27/1990, 1034 CDT	<b>Registration:</b>	N22EK
<b>Aircraft:</b>	PIPER PA-46-310P	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	2 Fatal
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

AFTER TKOF, THE PLT RCVD PROGRESSIVE ALT CLNCS TO FL200. WHILE CRUISING AT FL200, HE RPRTD 'MODERATE CHOP.' AT ABT 1125 CDT, HE REQD & RCVD CLNC TO FL220. ABT 3 MIN LTR, HE INQUIRED ABT CLD TOPS & SAID HE WAS 'IN A LAYER RIGHT NOW AT ABOUT FLIGHT LEVEL 200 TO 210.' SOON THEREAFTER, THE ACFT BGN ALT DEVIATIONS & WENT ABV THE ASSIGNED ALT OF FL220 (22,000'). IT THEN DSCNDD TO ABT 20,500', WHERE IT PITCHED UP TO AN ALT OF ABT 23,000'. THE ACFT THEN WENT INTO A STEEP DSCNT. SUBSEQUENTLY, AN IN-FLT BREAKUP OF THE ACFT OCCURRED AT ABT THE TIME IT EMERGED FM THE CLDS NR THE 2000 FT LVL. PIECES OF WRECKAGE WERE FND OVR A WIDE AREA. THE LEFT WING WAS FND ABT .2 MI FM THE FUSELAGE; PIECES OF THE RUDDER & STABILIZERS WERE FND ABT 100 YDS FM THE FUSELAGE. AN EXAM OF THE FRACTURES ON MAJOR STRUCTURAL COMPONENTS REVEALED FEATURES TYPICAL OF OVERSTRESS SEPN. NO PREEXISTING CRACKS WERE FND. AN AREA FORECAST HAD FLT PRCTNS FOR IFR, TSTMS, ICING IN THE VCNTY OF CONVECTIVE ACTIVITY. THE PITOT HEAT SW WAS FND IN THE 'OFF' PSN. (SEE: NTSB/SIR-92/03)

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S FAILURE TO ACTIVATE THE PITOT HEAT BEFORE FLYING IN INSTRUMENT METEOROLOGICAL CONDITIONS (IMC) ABOVE THE FREEZING LEVEL, FOLLOWED BY HIS IMPROPER RESPONSE TO ERRONEOUS AIRSPEED INDICATIONS THAT RESULTED FROM BLOCKAGE OF THE PITOT TUBE BY ATMOSPHERIC ICING.

## Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: CLIMB - TO CRUISE

### Findings

1. WEATHER CONDITION - CLOUDS
2. (F) WEATHER CONDITION - ICING CONDITIONS
3. (C) PITOT/STATIC SYSTEM - ICE
4. (C) ANTI-ICE/DEICE SYSTEM - NOT USED - PILOT IN COMMAND
5. (C) FLIGHT/NAV INSTRUMENTS,AIRSPEED INDICATOR - FALSE INDICATION
6. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND

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Occurrence #2: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: DESCENT - UNCONTROLLED

### Findings

7. (C) DESIGN STRESS LIMITS OF AIRCRAFT - EXCEEDED - PILOT IN COMMAND
8. WING - OVERLOAD
9. WING - SEPARATION
10. STABILIZER - OVERLOAD
11. STABILIZER - SEPARATION

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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

## Factual Information

### Pilot Information

Certificate:	Private	Age:	64, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	Yes
Medical Certification:	Class 3 Unknown	Last FAA Medical Exam:	07/18/1988
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	1603 hours (Total, all aircraft), 182 hours (Total, this make and model)		

### Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N22EK
Model/Series:	PA-46-310P PA-46-310P	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:		Serial Number:	46-8508024
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	4100 lbs
Time Since Last Inspection:	0 Hours	Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	CONTINENTAL
ELT:	Installed, not activated	Engine Model/Series:	TSIO-520-BE1B
Registered Owner:	ADAMS, FRANK M	Rated Power:	310 hp
Operator:	ADAMS, FRANK M	Operating Certificate(s) Held:	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	CGI, 828 ft msl	Distance from Accident Site:	61 Nautical Miles
Observation Time:	1151 CDT	Direction from Accident Site:	45°
Lowest Cloud Condition:	Scattered / 1200 ft agl	Visibility	5 Miles
Lowest Ceiling:	Overcast / 2100 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	20°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	22° C / 18° C
Precipitation and Obscuration:			
Departure Point:	SEWANEE, TN (UOS)	Type of Flight Plan Filed:	IFR
Destination:	SPRINGFIELD, MO (SGF)	Type of Clearance:	IFR
Departure Time:	1000 CDT	Type of Airspace:	

## Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Fatal	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	STEPHEN A WILSON	Report Date:	03/05/1993
Additional Participating Persons:			
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:pubinquiry@ntsb.gov">pubinquiry@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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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](#).