



Aviation Investigation Final Report

Location:	GREENVILLE, Missouri	Accident Number:	CHI96FA353
Date & Time:	September 26, 1996, 11:30 Local	Registration:	N195WR
Aircraft:	Cessna 195	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	4 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot had telephoned the Jonesboro FSS and was advised by the briefer 'moderate turbulence... icing... visibilities one to two with thunderstorms and rain.... VFR flight is not recommended.' The pilot reported 'I'm gonna file that way and then I'll go just as close as I can get and when it gets bad I'll just shut it down.' Instrument meteorological conditions, severe rain, and thunderstorms were reported by witnesses in the vicinity of the accident site. Several people reported that they heard the sound of the airplane flying overhead at 'a low altitude.' No eyewitnesses were located. The outboard nine feet of the left wing was located approximately 1/4 mile from the main wreckage. Examination of the wing spar fragments and a section of the wing from the vicinity of the left wing fracture revealed 'features typical of overstress separations. Deformation associated with the fracture in the upper and lower spar caps was indicative of a bending overstress separation in the downward direction. No fatigue cracking or other types of progressive deterioration was noted.' Examination of the wreckage revealed no other evidence of preimpact malfunction.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's decision to fly into known adverse weather which resulted in an overload failure and separation of the left wing.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: CRUISE

Findings

1. (C) WEATHER CONDITION - THUNDERSTORM
2. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - ATTEMPTED - PILOT IN COMMAND
3. (C) WING,SPAR - OVERLOAD
4. WING,SPAR - SEPARATION

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

HISTORY OF FLIGHT

On September 26, 1996, about 1130 central daylight time (cdt), a Cessna 195, N195WR, was destroyed when it impacted terrain following an in-flight breakup near Greenville, Missouri. The private rated pilot and three passengers sustained fatal injury. The personal, 14 CFR Part 91 flight originated in West Memphis, Arkansas, about 1035, with a planned destination of Creve Coeur, Missouri. Instrument meteorological conditions, severe rain, and thunderstorms were reported by witnesses in the vicinity of the accident site. A VFR flight plan was filed.

In a written statement, an Air Traffic Controller from the Memphis Air Route Traffic Control Center reported "N195WR checked in on frequency with not very good radios. Once communications were established, I advised him of the general conditions in the area of his destination. He advised that he was going to proceed north as far as he could and then stop." Another controller reported "I attempted a hand-off on N195WR to Kansas City Center. At approximately the same time, I lost radar and radio with the aircraft."

According to the Wayne County Sheriff, several people in the vicinity of the accident site reported that they heard the sound of an airplane flying overhead at "a low altitude." No eyewitnesses were located. The main wreckage was discovered on September 27, 1996, about 1330.

METEOROLOGICAL INFORMATION

The pilot telephoned the Jonesboro Flight Service Station (FSS) at 1013 cdt. He reported that he landed in West Memphis and requested cancellation of his flight plan. He requested weather for a flight from West Memphis to Creve Coeur, Missouri. The briefer advised the pilot of "moderate turbulence... icing... visibilities one to two with thunderstorms and rain." The briefer advised "VFR flight is not recommended." The pilot reported "I'm gonna file that way and then I'll go just as close as I can get and when it gets bad I'll just shut it down."

WRECKAGE AND IMPACT INFORMATION

The accident site was examined by an FAA inspector on September 27, 1996. The main wreckage was located in a wooded river valley at 37 degrees, 04.86 minutes north and 90 degrees, 27.13 minutes west in a wooded river valley. The left aileron was located about 500 yards northeast of the main wreckage. The NTSB on-scene investigation commenced October 7, 1996. The main wreckage had been moved from the accident site. The outboard nine feet of the left wing was subsequently located approximately 1/4 mile to the northeast of the accident site at 37degrees, 05.19 minutes' north and 90 degrees, 26.29 minutes west.

Examination of the accident site revealed a three foot deep crater about five feet by eight feet oriented on a heading of approximately 070 degrees. Foliage surrounding the crater was charred. Foliage to the northeast of the crater was wilted for approximately 30 feet. The trees immediately surrounding the crater exhibited no visible impact damage.

The main wreckage was severely fragmented and burned. All primary airframe components were located with the main wreckage except a portion of the left wing and the left aileron. The right wing and inboard portion of the left wing exhibited severe crushing corresponding to a near vertical aircraft pitch. The forward fuselage and cabin exhibited severe accordion bending. Portions of all empennage components were identified in the main wreckage. The components were severely fragmented and burned.

Continuity of primary flight control cables was established. No evidence of in-flight fire was discovered.

The engine case was shattered. All pistons and connecting rods remained attached to the crankshaft. The heads of several cylinders were fractured from the barrels. One blade of the propeller was fractured at the midspan and the other was fractured near the hub. Both blades exhibited minor torsional bending and chordwise scratching.

The left aileron was intact and exhibited moderate bending in an arc shape. The hinges were fractured forward of the pins. Visual inspection of the fractures revealed no evidence of progressive failure. The left wing spar was fractured nine feet three inches from the tip. The outboard wing section exhibited crushing to the leading edge near the tip. The spar segments and a portion of the wing surrounding the fracture were retained for laboratory examination.

MEDICAL AND PATHOLOGICAL INFORMATION

The condition of remains was not conducive to toxicological testing or an autopsy.

TESTS AND RESEARCH

The wing spar fragments and a section of the wing from the vicinity of the left wing fracture were examined at the NTSB laboratory by a NTSB metallurgist. In his factual report, he stated "examination of the fractures in the components revealed features typical of overstress separations. Deformation associated with the fracture in the upper and lower spar caps was indicative of a bending overstress separation in the downward direction (wing tip moving downward). No fatigue cracking or other types of progressive deterioration was noted."

ADDITIONAL INFORMATION

Parties to the investigation were the Federal Aviation Administration Flight Standards District Office, St. Louis, Missouri, and the Cessna Aircraft Company. Following the on-scene portion

of the investigation, the main wreckage was released to the Wayne County Sheriff. At the request of the owner, retained items were subsequently disposed of.

Pilot Information

Certificate:	Private	Age:	44, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	October 28, 1994
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	1200 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N195WR
Model/Series:	195 195	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	7050
Landing Gear Type:	Tailwheel	Seats:	5
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	3150 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Jacobs
ELT:	Installed, not activated	Engine Model/Series:	L4 /R755-7
Registered Owner:	WILLIAM C. RAYBURN	Rated Power:	245 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Day
Observation Facility, Elevation:	FA ,946 ft msl	Distance from Accident Site:	30 Nautical Miles
Observation Time:	11:35 Local	Direction from Accident Site:	10°
Lowest Cloud Condition:	Scattered / 900 ft AGL	Visibility	5 miles
Lowest Ceiling:	Broken / 1600 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	12 knots / 18 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	190°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	18°C / 17°C
Precipitation and Obscuration:	Heavy - None - Rain		
Departure Point:	WEST MEMPHIS , AR (AWM)	Type of Flight Plan Filed:	VFR
Destination:	CREVE COEUR , MO (1H0)	Type of Clearance:	VFR
Departure Time:	10:35 Local	Type of Airspace:	Class E

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	3 Fatal	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 Fatal	Latitude, Longitude:	37.119796,-90.440681(est)

Administrative Information

Investigator In Charge (IIC): Robbins, Wesley

Additional Participating Persons: NEAL SOWERS; ST. ANN , MO
LEAH RIDDLE; WICHITA , KS

Original Publish Date: March 31, 1998

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=10112>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).