



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	WALDRON, AR	<b>Accident Number:</b>	FTW99FA104
<b>Date &amp; Time:</b>	04/04/1999, 1831 CDT	<b>Registration:</b>	N497CA
<b>Aircraft:</b>	Piper PA-46-350P	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal

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

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## Analysis

While in cruise flight at 24,000 feet msl, the pilot of the Piper Malibu Mirage advised Memphis Center that he had encountered icing conditions and was experiencing a fuel imbalance. The pilot requested and was cleared to deviate to the north. Subsequently, radio and radar contact were lost. A witness reported hearing the sound of the airplane's engine stop running and observed the airplane descending from the dark clouds in a nose down attitude and rotating clockwise. Residents of the area reported that the weather at the time of the accident was high ceilings with heavy rain just before and after the accident. There were thunderstorms with lightning in the area at the time of the accident. The wreckage of the airplane was scattered along an area of about four miles. The airplane was equipped with an autopilot, weather radar, and an ice protection system. The pilot had recently purchased the 1999 model airplane and had completed a Mirage initial training course. At the time of the accident the pilot had accumulated a total of 21.4 hours in the make and model of the accident aircraft. No anomalies were found with the airframe or engine that would have prevented normal operation.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's encounter with adverse weather and loss of aircraft control, which resulted in exceeding the aircraft's design stress limits. Factors were the pilot's lack of total experience in the make and model of airplane, and the icing and thunderstorm weather conditions.

## Findings

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Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER  
Phase of Operation: CRUISE

### Findings

1. (F) WEATHER CONDITION - THUNDERSTORM
  2. (F) WEATHER CONDITION - ICING CONDITIONS
  3. (C) FLIGHT INTO ADVERSE WEATHER - ENCOUNTERED - PILOT IN COMMAND
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Occurrence #2: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: CRUISE

### Findings

4. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
  5. (F) LACK OF TOTAL EXPERIENCE IN TYPE OF AIRCRAFT - PILOT IN COMMAND
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Occurrence #3: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation: DESCENT - UNCONTROLLED

### Findings

6. (C) DESIGN STRESS LIMITS OF AIRCRAFT - EXCEEDED - PILOT IN COMMAND
  7. WING - SEPARATION
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Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

### Findings

8. TERRAIN CONDITION - MOUNTAINOUS/HILLY

## Factual Information

### HISTORY OF FLIGHT

On April 4, 1999, approximately 1831 central daylight time, a Piper PA-46-350P Malibu Mirage single-engine airplane, N497CA, was destroyed after the aircraft broke up while in cruise flight near Waldron, Arkansas. The instrument rated private pilot, sole occupant of the airplane, was fatally injured. The airplane was registered to Robert R. Meredith & Co., Inc., of Rumson, New Jersey, and operated by the pilot as a 14 Code of Federal Regulations Part 91 business flight. An IFR flight plan was filed for the cross-country flight that originated from New Jersey. An intermediate stop was made at Nashville, Tennessee, where the airplane was refueled. The flight departed Nashville, at 1614, on the final leg of the flight to the Addison Airport, Dallas, Texas.

Following takeoff from Nashville, the pilot established initial contact with the Memphis Air Route Traffic Control Center (ARTCC), at 1625. At 1641, the Memphis ARTCC controller at the high altitude sector (R26) assigned the pilot the cruise altitude of FL240 (24,000 feet msl). At 1711, R26 confirmed with the pilot that his route of flight was to Texarkana then direct to Addison. At this time R26 asked the pilot if he would rather go direct to Addison. The pilot replied he would and R26 cleared him direct to Addison.

At 1745, the Memphis ARTCC controller at the Conway high sector (R21B) asked the pilot if he copied the weather south of Little Rock. The pilot replied "ah I don't cop I don't have ah weather on ah radar yet." R21B advised the pilot that most of the aircraft going to Dallas had been deviating towards McAlester and if he wanted to start a right deviation that was approved and if he wanted to continue on that was also approved. The pilot replied "ah I'd like to be directed if uh they're going to McAlester ah can you give me a vector and I'll find it then." R21B told the pilot to "turn right heading two seven zero." The pilot acknowledged.

At 1817:10, the pilot checked in with the Memphis ARTCC Razorback high sector controller (R22A). On the initial call the pilot asked if there was a better route to avoid weather than his direct route to McAlester. R22A replied "probably ah going to ah Addison ah McAlester is going work fine," and that the other traffic destined for Dallas-Forth Worth (DFW) was being rerouted over Tulsa for spacing. The pilot asked if the weather was fine to go direct Addison. R22A replied "negative ah naw you won't get direct Addison." The pilot asked, "then direct ah McAlester then direct Addison?" R22A cleared the pilot direct McAlester then direct Addison as requested. The pilot acknowledged the clearance and then stated "ah thank you seven ah char Charlie alpha appreciate keeping an eye I don't paint anything yet [on his weather radar] but if you hear anything or see anything please let me know." R22A did not respond to the pilot's request.

At 1828:52 (approximately 10 minutes after the last communication exchange), the pilot advised Memphis ARTCC that "I.. I'm gonna deviate out of eight (unintelligible) getting some ice I'd like to head north." At 1829:08, R22A asked, "ah who wanted direct somewhere?" At 1829:11, the pilot replied, "seven Charlie alpha picking up ice I'd like to head north." At 1829:14, R22A replied, "november seven Charlie alpha deviation ah north of course is approved you wanta change altitude?" At 1829:20, the pilot responded, "ah I can't go up much higher I'm really having ice." At 1829:27, the pilot reported, "I'm really getting a lot of ice ah I have a fuel imbalance." At 2329:32, Memphis Center asked the pilot if he would like to go lower. The pilot replied, "I.. I don't (unintelligible)." Radio communication was lost.

A review of available radar data indicated a deterioration of airspeed began at 1825:40. Over the next 5 minutes, the data indicates the airplane's ground speed decreased from 180 knots to 81 knots as the heading changed from 268 degrees to 295 degrees. At 1829:40, the altitude started decreasing from 24,000 feet msl. At 1830:04, the aircraft passed through 17,900 feet msl as it continued in its descent. Radar contact was lost at 1831:10, at an altitude of 5,800 feet msl.

A witness, located near the accident site, reported hearing the sound of the engine stop running, and observed the airplane descending from the dark clouds in a nose down attitude and rotating clockwise. The wreckage of the airplane was scattered along an area of about four miles, approximately 3.8 miles east of Waldron.

Residents in the area of the accident reported that weather at the time of the accident was high ceilings with heavy rain prior to and after the accident. There were thunderstorms with lightning in the area at the time of the accident.

#### PERSONNEL INFORMATION

According to FAA records, the pilot was issued a private pilot certificate on May 8, 1993, with an airplane single-engine land rating. On August 29, 1993, he was issued an instrument rating. The pilot held a valid third class medical certificate, issued November 02, 1998. The certificate stipulated a limitation to wear corrective lenses for distant vision, and possess corrective lenses for near vision when operating an aircraft.

The pilot's most recent biennial flight review was completed on March 19, 1999, at the end of the Mirage Initial Training administered by Attitudes International Inc., in Vero Beach, Florida. According to the pilot's reconstructed training records, the training consisted of 5.5 hours in a flight simulator and 4.6 hours in the accident airplane, which the pilot had just purchased.

According to the pilot's three flight logbooks, as of April 4, 1999, he had accumulated a total flight time of 731 hours, of which 21.4 hours were in the make and model of the accident airplane. He had accumulated a total of 60.8 hours actual instrument flight time, with November 02, 1995, as the last actual instrument flight logged. The pilot had accumulated a total of 3.5 hours simulated instrument flight time in the accident airplane.

#### AIRCRAFT INFORMATION

The Piper PA-46-350P Malibu Mirage was a turbocharged single-engine, all metal, retractable landing gear, low wing airplane. It was powered by a Textron Lycoming TIO-540-AE2A engine, rated at 350 horsepower, and a Hartzell composite, three-blade, constant speed propeller. On March 17, 1999, the airplane, with a total of 5.3 hours, was issued a standard airworthiness certificate.

The cabin was pressurized with seating for six occupants, and it had two separate luggage compartments. Fuel was stored in two main integral wing tanks, and the fuel capacity for each fuel tank was 60 usable gallons and 1 gallon of unusable fuel, for a total of 122 gallons. The fuel tanks were selected by using a selector valve, which is controlled by a thumb-size handle. The detent selections were OFF, LEFT, and RIGHT.

The Pilot Operating Handbook (POH) states on page 7-35, section 7, paragraph 7.17, that when beginning flight operations with an equal amount of fuel in each tank, start, taxi, takeoff, and climb on the left tank. The POH further states that after establishing a cruise configuration,

change to the right tank. To maintain lateral balance, it is suggested that alternate tanks be selected in 20 gallon (approximately 60 minute) increments, thus requiring minimal aileron force to keep the wings level. In any case, the fuel imbalance limitations in Section 2 must not be exceeded (maximum fuel imbalance is 10 gallons). According to the POH, the pilot must monitor the fuel gauges and switch tanks as required. Fuel cannot be used from both tanks at the same time.

According to performance calculations provided by the aircraft manufacturer, the total amount of fuel used for start, taxi, run-up, and climb to 24,000 feet msl was approximately 18 gallons. The fuel used in cruise flight was approximately 33.3 gallons. The total fuel used was approximately 51.3 gallons.

The airplane was equipped with a Bendix/King KFC 225 Autopilot, a Bendix/King RDR 2000 weather radar system, and an ice protection system, which included windshield heat, propeller heat, a heated pitot head, a wing ice detection light, and pneumatic wing and empennage boots.

The POH states on page 4-32, section 4, paragraph 4.27, that the pilot should monitor weather conditions while flying, and be alert for meteorological conditions which might lead to icing. Even aircraft equipped with a complete deicing option are not approved for flight in heavy icing, heavy snow, or freezing rain. Immediate steps shall be taken to exit any area where such icing conditions are inadvertently encountered. The POH further states on page 9-6, section 9, supplement 3, section 2, Limitations, that the ice protection system was designed and tested for operation in the meteorological conditions of FAR 25, Appendix C, for continuous maximum and intermittent maximum icing conditions. The ice protection system was not designed or tested for flight in freezing rain and/or mixed conditions or for icing conditions more severe than those of FAR 25, Appendix C. Therefore, flight in those conditions may exceed the capabilities of the ice protection system. The POH also states on page 9-19, section 9, supplement 3, section 4-Normal Procedures, that operating in icing conditions of Continuous Maximum and Intermittent Maximum as defined in FAR 25, Appendix C, has no correlation between these conditions and forecasts of reported "Light, Moderate and Severe" conditions. Flight into severe icing is not approved.

The POH states on page 9-22, section 9, Supplement 3, Note, "an icing encounter can render the aircraft radar unreliable due to beam reflection off of the ice layer on the radome. Also, there may be a degradation of communication and navigation equipment due to ice accumulation on antennas."

A review of the airframe and engine maintenance records, by the NTSB investigator-in-charge (IIC), did not reveal evidence of any uncorrected maintenance defects. The aircraft had experienced an autopilot trim runaway, and according to the aircraft maintenance records, on March 24, 1999, at a total time of 12.8 hours, the pitch servo was removed and replaced. A ground run was performed, and the aircraft was found to be airworthy and returned to service.

The aircraft's maximum takeoff weight is 4,340 pounds, and an estimate of the weight of the aircraft at the time of the accident placed it within weight and balance limits.

#### METEOROLOGICAL INFORMATION

An Area Forecast was issued by the NWS Aviation Weather Center located in Kansas City, Missouri, at 1345 on April 4, 1999, and was valid until 0200 on April 5, 1999, and stated in part:

Northwestern and west-central Arkansas; visibility unrestricted, scattered clouds at 3,000 feet agl and scattered clouds at 10,000 feet. Between 2000 and 2100, expect scattered clouds at 5,000 feet agl, and a broken layer of clouds at 10,000 feet with tops to 15,000 feet, with occasional ceilings broken at 2,500 feet with widely scattered thunderstorms and rain. Cumulonimbus tops to 40,000 feet. Outlook from 0200 through 0800, VFR conditions with thunderstorms and rain.

The NWS Aviation Weather Center issued the following weather advisory regarding thunderstorms across the region:

Convective SIGMET 36C issued at 1757, and valid until 1955, for activity over parts of Oklahoma, Arkansas, Louisiana and Texas. The area enclosed was from 20 miles east-northeast of McAlester, Oklahoma (MLC), to 50 miles east-northeast of El Dorado, Arkansas (ELD), to 30 miles northwest of Baton Rouge, Louisiana (BTR), to 50 miles west northwest of Lufkin, Texas (LFK), and then back to 20 miles east-northeast of McAlester, Oklahoma (MLC). The Convective SIGMET was issued due to an area of severe thunderstorms moving from 210 degrees at 25 knots. Tops were above 45,000 feet. Hail to 2 inches, severe or greater turbulence, and wind gusts to 60 knots were possible with these storms. The accident site was north of the Convective SIGMET area.

The NWS Forecast Office in North Little Rock, Arkansas, issued the following severe weather warnings to the general public during the evening of April 4, 1999:

At 1759, a severe thunderstorm warning was issued for Polk County in western Arkansas, which included the accident site. The advisory stated that at 1759, Doppler radar indicated a severe thunderstorm was located 24 miles southwest of Mena or 15 miles south of Big Fork, Arkansas (approximately 43 miles south of Waldron). The thunderstorm was moving northeast at 40 mph. Another severe thunderstorm warning was issued at 1808, for Pike and Clark Counties in southwestern Arkansas.

There was an Urgent PIREP issued at 1702, from McAlester, Oklahoma. The PIREP reported thunderstorm with marble size hail, approximately 65 miles southwest of the accident site.

No official weather reporting facilities exist at Waldron, Arkansas.

Fort Smith Regional Airport, located 28 miles northwest of the accident site, reported at 1753, wind from 070 degrees at 16 knots, visibility 10 miles, sky clear, temperature 23.9 degrees C, dew point temperature 11.7 degrees C, altimeter 29.81 inches of mercury (Hg). Remarks: Automated Surface Observation System (ASOS), thunderstorm south through southwest moving northeast, sea level pressure 1010.9 hectopascals (hPa).

Fort Smith reported at 1853, wind from 090 degrees at 13 knots, visibility 10 miles in light rain, a few clouds at 5,500 feet, scattered clouds at 10,000 feet, temperature 21.7 degrees C, dew point temperature 12.2 degrees C, altimeter 29.80 inches of mercury (Hg). Remarks: ASOS, rain began at 1849, sea level pressure 1008.7 hPa, precipitation in the last hour reported as a trace (less than 0.01 inch of rain), trace precipitation in the last 6 hours, maximum temperature 25.0 degrees C, low temperature last 6 hours 18.9 degrees C, pressure tendency falling 1.9 hPa over the last 3 hours.

Fort Smith special weather observation at 1906, wind from 090 degrees at 12 knots, visibility 10 miles in thunderstorm and moderate rain, scattered clouds at 6,000 feet, temperature 22 degrees C, dew point 12 degrees C, altimeter 29.79 inches of HG. Remarks: thunderstorm

began at 1900, pressure falling rapidly, lightning in-cloud, cloud-to-cloud, and cloud-to-ground, trace of precipitation.

Hot Springs Memorial Field Airport, located 54 miles east-southeast of the accident site, reported at 1813, wind from 100 degrees at 10 knots, visibility 15 miles in a thunderstorm, scattered clouds at 4,500 feet with cumulonimbus clouds, ceiling overcast at 15,000 feet, temperature 22 degrees C, dew point temperature 17 degrees C, altimeter 29.87 inches of mercury (Hg). Remarks: rain ended at 1800, and thunderstorm began.

Muskogee Davis Field Airport, located 79 miles west-northwest of the accident site, reported at 1753, automated observation, wind from 120 degrees at 13 knots, visibility 10 miles, sky clear below 12,000 feet, temperature 23.9 degrees C, dew point temperature 11.1 degrees C, altimeter 29.82 inches of mercury (Hg).

Weather radar and radar ground track show a group of cells in a general east-to-west orientation over the area of the accident, with a VIP level 6, extreme intensity, cell located 4 miles north-northeast of N497CA's flight track and 2 miles from the accident site. Another line of activity was located 16 miles to the south and oriented east-southeast to west-northwest. Along the flight track, reports of VIP level 1, very light intensity, were observed. Other cells were also identified approximately 12 miles south of the flight track, with the strongest cell reaching VIP level 4, very strong intensity.

Federal Aviation Administration records revealed that the pilot called the Nashville Automated Flight Service Station (AFSS) by telephone at 1503, and obtained an abbreviated weather briefing on thunderstorm activity along the route between Nashville, Tennessee, to Dallas, Texas. Additionally, the pilot requested the frequencies for the high altitude Enroute Flight Advisory Service (EFAS). The pilot also commented to the AFSS briefer that he was new to high altitude flying and was not familiar with the frequencies. The AFSS briefer provided the Memphis and Dallas high altitude EFAS frequencies and indicated he could obtain more weather updates from the Memphis ARTCC and from EFAS.

#### WRECKAGE IMPACT INFORMATION

The fuselage was located in a pasture approximately 3.8 miles east-northeast of Waldron, Arkansas, at latitude 34 degrees 54.842 minutes north and longitude 094 degrees 01.739 minutes west. The fuselage, with the engine and propeller attached, came to rest inverted on a heading of 332 degrees magnetic. Black transfer marks were observed on top of the fuselage in the area of the right aft facing seat, as well as above the right horizontal stabilizer's leading edge. The fuel selector was found selected to the left main fuel tank. An aeronautical map was found spread out over the instrument panel partially covering the pilot side instruments.

The left wing separated outboard of the main landing gear trunion brace. The outboard wing section was found about 0.94 mile north of the fuselage. The outboard wing section upper spar cap displayed a "slight upward bend." The main spar web on the inboard section was bent aft approximately 40 degrees. The bottom spar cap showed a 45-degree angled upward break. Black transfer marks were observed at the aft spar in the area of the center flap hinge. The aileron was in place and secure. Both aileron cables displayed separations consistent with tension overload. The stall vane was in place, free to move and showed no damage. The stall strip was in place. The pitot tube was in place, and it was secure and clear. The fuel cap was in place, and fuel was found in the wing. The outboard section of the flap was separated and not recovered. The inboard section of the flap was located approximately 2.17 miles north-

northeast of the fuselage.

The right wing separated outboard of the main landing gear trunion brace. The outboard wing section was found about 1.03 miles north of the fuselage and 428 feet beyond the left wing. The top spar cap was bent down approximately 50 degrees, and the bottom spar cap was bent slightly upward and forward. The aileron was in place and secure. Both aileron cables displayed separations consistent with tension overload. The stall strip was in place. The fuel cap was in place, and fuel was found in the wing. The outboard section of the flap was in place, and the inboard section was located approximately 2.09 miles north-northeast of the fuselage and 790 feet east-southeast of the inboard section of the left flap.

The elevator was separated into two sections and they were located about 504 feet from each other and approximately 0.3 and .37 mile respectively north-northeast of the fuselage. The center and the right portion of the elevator were secured to the rear bulkhead with both hinge points. The other section of the elevator (left portion), displayed black transfer marks on the bottom surface.

The right horizontal stabilizer was found approximately 1.79 miles north-northeast of the fuselage. The outboard end was bent upward about 90 degrees, and the bottom skin was ripped from the trailing edge forward to the de-ice boot. The vertical stabilizer forward attach point bolt was pulled upward and to the right approximately 30 degrees. The left horizontal stabilizer, vertical stabilizer, and rudder were not recovered.

A skin panel was found approximately 3.4 miles north-northeast of the fuselage. A baggage door was found about 3.7 miles north-northeast of the fuselage and 1,095 feet beyond the skin panel.

The aircraft wreckage was transported to Air Salvage Of Dallas of Lancaster, Texas, for further examination.

#### MEDICAL AND PATHOLOGICAL INFORMATION

The Arkansas State Crime Laboratory, Little Rock, Arkansas, performed an autopsy of the pilot.

The FAA Civil Aeromedical Institute toxicology laboratory noted 37.000 (mg/dl, mg/hg) ethanol detected in kidney fluid, 35.000 (mg/dl, mg/hg) ethanol detected in muscle fluid, 2.000 (mg/dl, mg/hg) acetaldehyde detected in muscle fluid and 10.000 (mg/dl, mg/hg) acetaldehyde detected in kidney fluid. No blood, urine, or vitreous fluid was available for testing. The report noted that specimens were received in a putrefied condition.

#### TEST AND RESEARCH

An examination of the airplane's airframe and engine was conducted at Air Salvage Of Dallas on April 27, 1999.

The continuity of the Lycoming TIO-540-AE2A engine, S/N L-10144-61A, was verified from the propeller flange to the accessory gears. The crankshaft was rotated and piston movement was verified in all cylinders. Impact damage precluded full verification of valve continuity on all cylinders. The left and right magnetos produced spark at all posts when rotated by an electric drill. Both the upper and lower vacuum pumps were removed, disassembled and examined. Both internal rotors were found shattered and vanes were found in position with some edge and corner damage.



The propeller was attached to the engine. One composite blade was separated from the propeller hub. The second composite blade had little visible damage. The third composite blade was broken and displaced aft at the hub.

During the examination of the airframe, control continuity was verified from the elevator sector in the empennage to the lower forward cabin area beneath the floorboards. Impact damage to the control wheels and the forward control system precluded movement of the cable forward of the lower cabin area. Control continuity was verified for the rudder controls from the rudder sector to the same area of the lower forward cabin area. Control continuity was verified from the aileron sectors to the cable separations on both outer wings.

The pneumatic de-ice lines were examined for blockage from the pneumatic valve manifold to an area at the base of the wing and empennage de-ice boots. All lines were found open and free of obstruction. Pneumatic and vacuum supply lines from both the upper and lower engine driven pumps to the pneumatic regulators were found free of obstruction.

#### ADDITIONAL DATA

The airplane was released to a representative of the owner.

#### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	54, Male
<b>Airplane Rating(s):</b>	Single-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>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 3 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	11/02/1998
<b>Occupational Pilot:</b>	<b>Last Flight Review or Equivalent:</b>		
<b>Flight Time:</b>	732 hours (Total, all aircraft), 23 hours (Total, this make and model), 655 hours (Pilot In Command, all aircraft), 23 hours (Last 90 days, all aircraft), 23 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N497CA
Model/Series:	PA-46-350P PA-46-350P	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	4636197
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	03/17/1999, Annual	Certified Max Gross Wt.:	4340 lbs
Time Since Last Inspection:	25 Hours	Engines:	1 Reciprocating
Airframe Total Time:	30 Hours	Engine Manufacturer:	Lycoming
ELT:	Installed	Engine Model/Series:	TIO-540-AE2A
Registered Owner:	ROBERT R. MEREDITH & CO., INC.	Rated Power:	350 hp
Operator:	ROBERT R. MEREDITH	Operating Certificate(s) Held:	None
Operator Does Business As:	ROBERT R. MEREDITH & CO., INC.	Operator Designator Code:	

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	FSM, 469 ft msl	Distance from Accident Site:	28 Nautical Miles
Observation Time:	1753 CDT	Direction from Accident Site:	325°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	16 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	70°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	24° C / 12° C
Precipitation and Obscuration:			
Departure Point:	NASHVILLE, TN (BNA)	Type of Flight Plan Filed:	IFR
Destination:	DALLAS, TX (ADS)	Type of Clearance:	IFR
Departure Time:	1614 CDT	Type of Airspace:	Class A

## Wreckage and Impact Information

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

## Administrative Information

**Investigator In Charge (IIC):** DOUGLAS D WIGINGTON **Report Date:** 05/09/2001

**Additional Participating Persons:** HARRY L KIFER; LITTLE ROCK, AR  
MICHAEL C MCCLURE; VERO BEACH, FL  
GERALD R JAMES; WILLIAMSPORT, PA

**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](mailto:pubinq@ntsb.gov), or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.

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](#).