



Aviation Investigation Final Report

Location:	Bryan, Texas	Accident Number:	CEN12FA108
Date & Time:	December 19, 2011, 21:50 Local	Registration:	N3590T
Aircraft:	Piper PA-32-260	Aircraft Damage:	Substantial
Defining Event:	Aircraft structural failure	Injuries:	5 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane was on a cross-country flight in level cruise flight about 8,000 feet msl when the pilot flew into an area of heavy rain showers. The pilot informed an air traffic controller that he was diverting around an area of thunderstorms. The pilot last reported that he was in "bad" weather and was going to try to get out of it. Following that transmission, radio and radar contact was lost. A witness on the ground heard a sound resembling an explosion. She reported that at the time she heard the noise the rain was falling as a light drizzle. However, by the time she and her husband got outside to see what the explosion was, the rain started "pouring down." The witness's husband found the airplane's main wreckage about 450 feet southwest of their house. The main wreckage consisted of the entire airplane except for the left wing, vertical stabilizer, rudder, and the right wing tip fuel tank. Those components were located about 200 feet north-northeast of the main wreckage. An examination of the left wing spar showed that the wing failed in positive overload. Flight control continuity was confirmed at the accident site. A postcrash examination of the airplane's engine and other systems did not reveal any preimpact anomalies. A weather study of conditions in the area at the time of the accident indicated the potential for heavy rain showers, thunderstorms, wind in excess of 45 knots, clear air turbulence, and low-level wind shear. While the pilot's toxicology testing results were positive for tetrahydrocannabinol carboxylic acid (marijuana) in the liver and kidney, the levels were determined not to be impairing. The pilot had a global positioning system (GPS) unit with a current subscription for Next-Generation Radar (NEXRAD).

At the time of the accident the depiction in the cockpit would have reflected weather conditions that occurred a couple of minutes earlier. The GPS unit's owner's manual states that NEXRAD weather data should be used for "long-range planning purposes only," and not to "penetrate hazardous weather," as the "NEXRAD data is not real-time."

On June 19, 2012, the NTSB issued a Safety Alert to warn pilots using in-cockpit flight information services broadcasts (FIS-B) and satellite weather display systems that the NEXRAD "age indicator" can be misleading. The actual NEXRAD data can be as much as 20 minutes older than the age indication on the display in the cockpit. If misinterpreted, this difference in time can present potentially serious safety hazards to aircraft operating in the vicinity of fast-moving and quickly developing weather systems. In addition to raising pilot awareness on this issue, the Safety Alert also reminds pilots of the importance of obtaining a thorough preflight weather briefing.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadvertent encounter with severe weather, which resulted in the airplane's left wing failing in positive overload. Contributing to the accident was the pilot's reliance on outdated weather information that he received on his in-cockpit Next-Generation Radar (NEXRAD).

Findings	
Environmental issues	Thunderstorm - Effect on equipment
Environmental issues	Thunderstorm - Timing of related info
Environmental issues	Thunderstorm - Decision related to condition

Factual Information

History of Flight

Enroute	Other weather encounter
Enroute	Loss of control in flight
Uncontrolled descent	Aircraft structural failure (Defining event)

HISTORY OF FLIGHT

On December 19, 2011, about 2144 Central Standard Time, a Piper PA-32-260, N3590T, impacted terrain following an in-flight breakup near Bryan, Texas. The instrument rated private pilot and four passengers were fatally injured. The airplane sustained substantial damage. The airplane was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Instrument meteorological conditions prevailed and an instrument flight rules (IFR) flight plan was on file. The cross-country flight had originated from the Clayton County Airport (4A7), Hampton, Georgia, approximately 1345. After a planed fuel stop at the Jackson-Evers International Airport (JAN), Jackson, Mississippi, the flight departed about 1750 for the TSTC Waco Airport (CNW), Waco, Texas.

At 2119, the pilot contacted Houston Intercontinental Terminal Radar Approach Control (TRACON) and reported he was "level at eight thousand [feet mean sea level]". The controller for Houston TRACON acknowledged and told the pilot that his present heading was good for about 40 miles, at which he should make a right turn "towards t-s-t-c (CNW)." The pilot responded, "Okay ... I was looking at my nexrad, is up ahead ... [and considering] taking about a two-five-zero heading for a little while, that be all right?" The controller told the pilot, "that two-fifty will put you in some moderate to heavy precip ... from what I am showing right now". The controller then said, "... you're looking good right now till about twenty miles north of College [Station] then you can start bending it to the right, there is some pretty good gaps in the weather once you get around that area." The pilot acknowledged.

At 2132, the controller told the pilot, "I am showing you're skirting right along the edge of a uh light to moderate precipitation area". The pilot responded that he was seeing the same thing and maneuvering south to find a "hole" to go through.

At 2133, the controller told the pilot, "I do have a uh heavy to extreme cell at your one to two o'clock and about eight miles, um looks like once you get on the back side of that uh you can make a right turn toward uh t-s-t-c that will be pretty good." The pilot acknowledged and said, "... if it's all right with you we will hold this heading right here until we get south of that." The controller said that was alright.

At 2137, the controller inquired if the pilot was "getting any lightning" off of his right side. The

pilot said no, but that he was going to make a left 15-degree turn for about two to three minutes. The controller said that was fine and "as you are able you can turn right direct to uh t-s-t-c." The pilot then said that he was showing a "pretty good storm" to his right and were about to be past it, after which he would make a right turn direct to CNW.

At 2142, the controller told the pilot that he was showing "pretty heavy weather" southeast of CNW that appeared to be moving northeast. The controller then contacted the pilot and said, "It looks like you just made a left three-sixty on me; what's going on?" Then the controller said, "November nine zero tango, I show you headed right into heavy weather, now uh I would suggest you turn back right to about a two-two-zero heading." The pilot responded, "Okay, yea, we're turning right. We're in some bad weather here. I'm going to try to get out of it."

That was the last radio transmission the pilot made.

A review of radar track data showed the airplane traveling on a west-southwest heading of about 230 degrees and an altitude of 8,000 feet mean sea level (msl). At 2137, the airplane turned south to a heading of 193 degrees. Two minutes later, the airplane turned back to a southwesterly heading. Then at 2142, the airplane made a right turn toward the northeast and began descending at a rate of about 600 feet per minute. The descent continued until radar contact was lost at 2144. At that time, the airplane was at 6,800 feet, descending at a rate of 840 feet per minute, and on a heading of 315 degrees. The airplane's position was 18 nautical miles northeast of College Station, Texas.

About 2150 an ear witness, located in her house, heard a sound resembling an explosion. The witness reported that at the time she heard the noise, the rain was falling as a light drizzle. However, by the time she and her husband got outside to see what the explosion was, the rain started pouring down. The witness's husband located the main airplane wreckage approximately 450 feet southwest of their house.

PERSONNEL INFORMATION

The pilot, age 33, held a private pilot certificate with a single-engine land and instrument airplane ratings. A review of the pilot's logbook showed he had successfully completed an instrument check ride on September 13, 2009.

Further review of the pilot's logbook showed he had 392 total flying hours, with 347 hours as pilot-in-command, and 378 hours being in the airplane make and model. The pilot had recorded 14 hours of actual instrument time, and 40 hours simulated instrument time. The logbook also showed the pilot had flown 46 hours in the 90 days prior to the accident, 15 hours in the 30 days prior to the accident, and two hours in the previous 24 hours up to the accident.

The pilot held a current Third Class medical certificate with no limitations or waivers, dated January 28, 2010.

AIRCRAFT INFORMATION

The airplane was a 1966 Piper Aircraft, model PA-32-260, serial number 32-336. The airplane was powered by a Lycoming model O-540-E4B5 carbureted engine rated at 260 horsepower at 2,700 rpm.

The airplane was registered to the pilot and another individual on March 22, 2011.

A review of the airplane logbooks showed the airplane underwent an annual inspection on February 8, 2011. The total airframe time recorded at the annual was 6,125.0 hours. The last recorded maintenance actions performed on the airplane was an altimeter certification, static leak check, transponder certification, and altitude reporting test on September 12, 2011. The airframe time at the test was 6,327.8 hours.

METEOROLOGICAL INFORMATION

The National Transportation Safety Board's Meteorologist gathered all relevant weather data from the National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) sources including the National Climatic Data Center (NCDC).

The NWS Surface Analysis Chart for 2100 CST depicted an outflow boundary just northwest of the accident site stretching northeastward from the accident site into northeast Texas. A low pressure system was located in the Texas Panhandle with an occluded front stretching northeastward into Oklahoma before becoming a stationary front and stretching southward through central Texas. The station models north and west of the accident site depicted temperatures in the mid 50's and 60's [degrees] Fahrenheit (F), with temperature-dew point spreads of 3 degrees or less, a variable wind at 5 knots, cloudy skies, and light rain. Station models to the south and east of the accident site had temperatures in the low 60's to low 70's F, temperature-dew point spreads of 5 degrees F or less, a south to southeast wind of 5 to 15 knots and cloudy skies with moderate rain.

The accident site was located in a region of relatively flat terrain with warm moist air located throughout eastern Texas. With an outflow boundary, and its ability to be a lifting mechanism and lift the warm moist air located near the accident site, thunderstorms, rain showers, and associated turbulence would be expected near the accident site at the time of the accident.

The NWS Storm Prediction Center Constant Pressure Charts for 1800 CST depicted a mid-level trough, an elongated area of low atmospheric pressure, southwest of the accident site, which acted as a lifting mechanism to help in the formation of clouds, showers, and thunderstorms in central, northern, and eastern Texas.

The closest weather reporting station to the accident site was an Automated Weather Observing System (AWOS) located at Hearne Municipal Airport (KLHB), 19 miles westsouthwest of the accident site. At 2135, the weather was wind calm, 5 miles visibility and light rain, a broken ceiling at 2,700 feet agl, overcast skies at 3,400 feet, temperature 16 degrees Celsius (C), dew point temperature 15 degrees C, an altimeter setting of 29.88 inches of mercury, and remarks: automated weather observation station with a precipitation discriminator, one-hourly precipitation of 0.19 inches.

At 2155, the weather at KLHB was wind calm, 10 miles visibility, a broken ceiling at 2,700 feet agl, overcast skies at 3,200 feet, temperature 16 degrees C, dew point temperature 15 degrees C, an altimeter setting of 29.88 inches of mercury, and remarks: automated weather observation station with a precipitation discriminator, lightning distant northeast, one-hourly precipitation of 0.33 inches.

The closest upper air sounding to the accident site was from Fort Worth, Texas (KFWD) site number 72249, located about 123 miles northwest of the accident site. At 1800 CST, the sounding depicted a conditionally unstable vertical environment with the Lifted Condensation Level (LCL), the height at which a parcel of moist air becomes saturated when it is lifted dry adiabatically, at 726 feet msl, and a Convective Condensation Level (CCL), the level in the atmosphere to which an air parcel if heated from below will rise adiabatically without becoming colder than its environment just before the parcel becomes saturated, of 8,892 feet. The sounding had a relative humidity of 80 percent or more from the surface to 1,500 feet, and again from 4,500 feet to 13,000 feet. The freezing level was identified at 11,414 feet. The precipitable water value was 1.13 inches.

The KFWD sounding indicated a moist conditionally unstable environment considered favorable for the development of clouds and precipitation from the surface through 14,000 feet. The potential for clouds was indicated by Rawinsonde Observation (RAOB) between the surface and 1,500 feet, then again from 4,500 feet through 14,000 feet. Icing conditions were indicated by RAOB about 13,000 feet.

The sounding wind profile indicated a surface wind from 275 degrees at 3 knots that increased to 40 knots by 4,000 feet with the wind out of the southwest. The wind backed to the south from 4,000 feet through 14,000 feet while increasing in speed to 60 knots. Low-level wind shear (LLWS) was identified by RAOB between the surface and 2,000 feet. RAOB detected the potential for clear air turbulence in several layers between the surface and 14,000 feet.

A computer model generated upper air sounding created for the accident site for 2100 CST depicted a conditionally unstable vertical environment with the LCL at 703 feet, a CCL of 2,089 feet, and a Level of Free Convection, the level at which a parcel of saturated air becomes warmer than the surrounding air and begins to rise freely, at 3,511 feet. The sounding had a relative humidity of 80 percent or more from the surface to 8,000 feet. The freezing level was identified at 11,662 feet. The precipitable water value was 1.38 inches. The model sounding indicated a moist conditionally unstable environment, which would have been supportive of cloud formation, rain showers, and thunderstorms. The maximum vertical velocity possible with rain showers and thunderstorm updrafts was 33 meters per second or 64 knots given the model sounding environment. The potential for clouds was indicated by RAOB between 1,000

feet and 10,000 feet. No icing conditions were indicated by RAOB below 14,000 feet.

The model sounding wind profile indicated a surface wind from 149 degrees at 9 knots that increased to 50 knots by 4,000 feet with the wind veering to the southwest. The wind remained at 45 knots while out of the southwest through 14,000 feet. LLWS was identified by RAOB between the surface and 2,500 feet. RAOB detected the potential for clear air turbulence between the surface and 10,000 feet.

Infrared data from the Geostationary Operational Environmental Satellite number 13 (GOES-13), from 2140 to 2202 CST, showed a narrow enhanced band of clouds that moved eastward over the accident site. The GOES-13 brightness temperature over the accident site at 2145 was minus 8 degrees C, which when considering the 2100 CST model sounding indicated cloud top heights of about 16,000 feet.

The closest NWS Weather Surveillance Radar-1988, Doppler (WRS-88D) was in Granger, Texas (KGRK), about 60 miles west-southwest of the accident site. The WSR-88D operates in several scanning modes identified as Mode A and Mode B. Mode A is the precipitation scan and has two common scanning strategies, the most common of which is where the radar makes 14 elevation scans from 0.5 degrees to 19.5 degrees every four minutes. This scanning strategy is documented as column coverage pattern 12 (VCP-12). Mode B is the clear-air mode where the radar makes 5 elevation scans during a 10 minute period. At the time of the accident the Granger WSR-88D was operating in the normal precipitation mode (Mode A, VCP-12).

The base range reflectivity image for 2136 CST depicted a line of strong to intense echoes west of the accident site corresponding to a line of heavy rain showers. A new area of echoes was seen southwest of the accident site on two of the elevations scans, 0.9 degrees and 1.4 degrees. This new area of echoes intensified forming along the south side of the line of rain showers. At 2145, elevation scans at 0.5 degrees, 0.9 degrees and 1.4 degrees showed the strong to intense echoes continue to move northwestward and over the accident site.

Airplane radar track data obtained from Air Traffic Control overlaid on the base reflectivity at 2136 CST showed the airplane flying southwest with very strong echoes just west of the airplane's flight path. About 2141 CST the airplane had entered light echoes with strong to very strong echoes located just to the southwest of the airplane and along the airplane's flight direction. At 2145 CST the base reflectivity at 0.9 degrees showed very strong to intense echoes above the last part of the airplane's recorded track and over the accident site. These very strong to intense echoes were indicative of a strong rain shower.

Two SIGMETS were valid for the area west of the accident site at the accident time. Convective SIGMET 5C and Convective SIGMET 7C advised of a line of storms moving from 200 degrees at 45 knots with embedded severe thunderstorms. Thunderstorm tops were forecast above Flight Level 450 with wind gusts to 50 knots possible.

No AIRMETS were active for the accident site at the accident time.

For additional information, see National Transportation Safety Board, Weather Study, CEN12FA108 in the NTSB Docket Management System.

WRECKAGE AND IMPACT INFORMATION

The airplane came down in a pasture field approximately 20 miles north-northeast of Bryan, Texas on a 018-degree magnetic heading.

The airplane wreckage came to rest spread over an area approximately 1/2 mile long by 200 feet wide. The debris path followed an approximate heading of 210 degrees.

The main wreckage was located at 30 degrees, 56.844 minutes North latitude and 096 degrees, 16.124 minutes West longitude. It was resting nearly inverted against several small trees. The main wreckage consisted of the airplane cabin and fuselage, right wing, right main landing gear, the vertical stabilator and elevator, the nose gear, engine, engine cowling, and propeller. The fuselage, cabin and engine were oriented on a 220 degree heading.

The engine and propeller were partially buried in the ground so that only the right side and top of the engine could be seen. The upper cowling was broke and rested on top of the engine. The propeller blades were partially exposed. The blades showed torsional bending and chordwise scratches. The propeller spinner was crushed inward on one side. The airplane's nose gear was broken aft and to the right.

The airplane's cabin was crushed inward and aft. The windscreen was broken out and the frame was bent inward. The cabin door was broken open remaining attached to the cabin door post. The glare shield, instrument panel, rudder pedals and control yokes were broken forward and down. The seats were broken forward. The baggage compartment and aft fuselage were crushed inward.

The airplane's right wing was broken forward at the root. The front inboard four feet of the leading edge and fuel tank were crushed inward. The remainder of the wing showed bends and buckling. The right flap was in the full up position. The right aileron was attached to the wing, positioned up about 10 degrees, and showed no damage. Control continuity from the control yokes to the right aileron was confirmed. The right main landing gear showed crush damage to the wheel pant.

The stabilator and elevator were crushed and bent. The left outboard two feet of the stabilator and elevator were broken aft. Control continuity from the control yokes to the elevator was confirmed.

The vertical stabilizer and rudder were broken off at the base. The bottom portion of the rudder including the control horn and rudder cables remained with the main wreckage. Control continuity from the rudder pedals to the rudder was confirmed.

About 150 to 200 feet north-northeast of the main wreckage was the airplane's left wing. It was found resting on the left main landing gear and outboard forward leading edge. The wing spar was broken upward at the root. Several bends, tears, and paint transfer marks were noted along the outboard leading edge. An examination of the fractured spar surface showed that the wing broke upward and twisted aft in positive overload. The left flap was broken out. The left aileron was intact and positioned upward. The left wing aileron cables found with the main wreckage showed unraveling and fracturing consistent with overload failure where the wing separated from the fuselage.

Also in this area was the right outboard wing tip fuel tank. It was broken longitudinally along the rivet attachment points.

Nearby were the left flap and the vertical stabilizer with the top portion of the rudder attached. The left flap was broken out at the hinges and actuator arm and was bent upward about 60 degrees, approximately two feet in from its inboard edge.

The vertical stabilizer was broken aft at the base attachments. The top portion of the rudder with the counterweight remained attached to the vertical stabilizer. Transfer marks at the rudder fracture were consistent with paint from the left wing.

Following the on site examination, the airplane wreckage was recovered to a secure facility for further examination.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was conducted on the pilot by the Travis County Office of the Medical Examiner, in Austin, Texas, on December 21, 2010.

Results of toxicology testing of samples taken were positive for the following drugs:

0.008 (ug/ml, ug/g) Tetrahydrocannabinol Carboxylic Acid (Marihuana) detected in Liver. 0.0064 (ug/ml, ug/g) Tetrahydrocannabinol Carboxylic Acid (Marihuana) detected in Kidney.

The levels of Tetrahydrocannabinol Carboxylic Acid (Marihuana) in liver and kidney was determined to not be such where impairment could have occurred.

TESTS AND RESEARCH

The airplane was examined at Bryan, Texas, on December 20, 2011.

An examination of engine showed all pistons and valves intact and properly functional. Continuity testing on the engine showed that the crankshaft, camshaft and all piston rods were properly connected and functional. Engine accessories were examined and tested. All proved to function properly. Fuel was found in the carburetor bowl. It was tested for water and sediment. None was found. Measurable fuel was found in the fuel tanks. The examination did not reveal any abnormalities that would have prevented normal operation and production of rated horsepower in the engine.

The heading indicator and attitude indicator gyro housings were opened and examined. Both showed rotational rubs and scoring on the inside housing walls.

The airplane's weight and balance and center of gravity charts were reviewed. Based on the estimated fuel that would have been on board at the time of the accident, and on the weight of the persons on board and of baggage and personal effects found at the accident site, it was determined that the airplane was within the proper operational center of gravity.

ADDITIONAL INFORMATION

Weather radar mosaic imagery from Next Generation Radars (NEXRAD) is available to pilots in the cockpit via Flight information Service-Broadcast (FIS-B) and private Satellite Weather vendors. A mosaic presents radar data from multiple radar ground sites on a single image. Data from individual ground sites may not be updated with each new mosaic image. The age-indicator displayed to the pilot in the cockpit is not the age of the actual weather conditions as detected by the NEXRAD system. Instead, the age indicator refers to the age of the mosaic that is created by the service provider. The actual age of the oldest weather conditions is always older than the age indication on the display.

Due to latencies inherent in processes used to detect and deliver the NEXRAD data from the ground site, as well as the frequency of the mosaic-creation process used by the service provider, the NEXRAD data can age significantly by the time the mosaic image is created. Although not believed to be typical, in extreme latency and mosaic-creation scenarios allowed by the service provider, the actual age of the oldest NEXRAD data on the display can exceed the age in the cockpit by up to 15 minutes for Satellite Weather and 20 minutes for FIS-B.

For additional information refer to NTSB Safety Alert, "In-Cockpit NEXRAD Mosaic Imagery".

The National Transportation Safety Board's Meteorologist conducted a time and data comparison between the KGRK WSR-88D base reflectivity images and the XM Sirius satellite weather NEXRAD data. The accident pilot had a valid subscription to XM data and a Garmin 696, which would support XM data, was found in the airplane. The XM data was a weather radar service provided by XM Sirius and displayed on the Garmin 696. The XM data was provided to the Gamin unit via satellite using multiple sources at a nominal update rate. The Garmin GPSMAP 695/696 Owner's Manual specifically states that NEXRAD weather data should be used for "long-range planning purposes only", and not to "penetrate hazardous weather", as the "NEXRAD data is not real-time."

The closest matching base reflectivity image to the 2145 CST XM data was the 1.4 degree

elevation scan which began at 21:37:42 CST. And gives the 2145 CST XM data a time latency; that is the time difference between the actual conditions defined by the WSR-88D base reflectivity data and the time of the XM data, of 7 minutes and 18 seconds. There was an additional one minute and four seconds for the XM data to be created so that it could be displayed on the Garmin unit, so the total approximate time latency of the 2145 CST XM data was 8 minutes and 22 seconds. The XM data age indicator in the cockpit should have indicated that the XM data was one minute old; the time it took for the XM data to be created and sent to the airplane. On the indicator in the airplane at 2144 CST, while the airplane was in a very strong rain shower, the 2145 CST XM data would have shown the line of rain showers one mile east of the airplane's flight path.

Pilot Information

Certificate:	Private	Age:	33,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 None	Last FAA Medical Exam:	January 28, 2010
Occupational Pilot:	No	Last Flight Review or Equivalent:	September 13, 2011
Flight Time:	392 hours (Total, all aircraft), 378 hours (Total, this make and model), 46 hours (Last 90 days, all aircraft) 15 hours (Last 30 days, all aircraft) 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N3590T
Model/Series:	PA-32-260	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	32-366
Landing Gear Type:	Tricycle	Seats:	6
Date/Type of Last Inspection:	February 8, 2011 Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	6125 Hrs as of last inspection	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	O-540 SERIES
Registered Owner:	On file	Rated Power:	250 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Night
Observation Facility, Elevation:	KLHB,285 ft msl	Distance from Accident Site:	19 Nautical Miles
Observation Time:	21:35 Local	Direction from Accident Site:	
Lowest Cloud Condition:		Visibility	5 miles
Lowest Ceiling:	Broken / 2700 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.87 inches Hg	Temperature/Dew Point:	16°C / 15°C
Precipitation and Obscuration:			
Departure Point:	Jackson, MS (JAN)	Type of Flight Plan Filed:	IFR
Destination:	Waco, TX (CNW)	Type of Clearance:	IFR
Departure Time:	17:50 Local	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:	4 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	5 Fatal	Latitude, Longitude:	30.947221,-96.268608

Administrative Information

Investigator In Charge (IIC):	LeBaron, Timothy
Additional Participating Persons:	Jim Moore; Federal Aviation Adminstration; Houston, TX Michael McClure; Piper Aircraft, Inc; Duncanville, TX John Butler; Lycoming Engines; Arlington, TX
Original Publish Date:	August 20, 2012
Last Revision Date:	
Investigation Class:	<u>Class</u>
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=82539

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.