



National Transportation Safety Board Aviation Accident Factual Report

Location:	Grover Hill, OH	Accident Number:	CEN15FA040
Date & Time:	11/06/2014, 1800 EST	Registration:	N811CD
Aircraft:	CIRRUS DESIGN CORP SR22	Aircraft Damage:	Destroyed
Defining Event:	Loss of control in flight	Injuries:	3 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

"The following is an INTERIM FACTUAL SUMMARY of this accident investigation. A final report that includes all pertinent facts, conditions, and circumstances of the accident will be issued upon completion, along with the Safety Board's analysis and probable cause of the accident:"

HISTORY OF FLIGHT

On November 6, 2014, about 1800 eastern standard time, a Cirrus Design Corporation SR22 airplane, N811CD, impacted a farm field near Grover Hill, Ohio, and a post impact fire occurred. The pilot, a pilot-rated passenger, and another passenger sustained fatal injuries. The airplane was destroyed by the impact and subsequent fire. The airplane was registered to and operated by Orthopedic Aviation Services LLC under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Night instrument flight rules (IFR) conditions prevailed in the area of the accident. The flight operated on an activated IFR flight plan. The flight originated about 1545 from the Washington Municipal Airport (AWG), near Washington, Iowa, and was destined for the Findlay Airport (FDY), near Findlay, Ohio.

A fueling receipt from AWG showed that N811CD was serviced with 26.67 gallons of 100 low lead aviation gasoline at 1519. The AWG airport manager indicated that he was at the airport at 1530 and he talked to three people who flew in N811CD. There were two men and a woman of the same age. He reported that they said they were flying east and would be back on Sunday as part of their return flight. Witnesses reported to the airport manager that they thought the woman was seated in the front right seat. The manager indicated that from 300 feet away, the airplane looked very clean. He was outside when they took off and the engine start-up sounded normal as did the engine run-up. The manager said that the takeoff appeared to be under full power and they climbed at a normal rate of climb.

According to records from the Federal Aviation Administration (FAA), the accident airplane communicated with the Terminal Radar Approach Control (TRACON) located near Ft. Wayne, Indiana. About 1729, the pilot requested a climb to 10 or 11 thousand feet above mean seal level (MSL) because he was "picking up a little ice". The air traffic controller cleared the flight to

10,000 feet MSL, and asked for more details. The pilot reported that the windshield was picking up a little ice, and the outside air temperature was minus six degrees. About 1746, the pilot reported that the cloud tops were ragged between 9,500 and 10,300 feet MSL. About 1749, the pilot requested a lower altitude and the controller cleared the flight to 5,000 feet MSL. About 1751, the controller handed the flight off to Toledo TRACON.

About 1752, the pilot checked on with Toledo TRACON and indicated that he was on descent to 5,000 feet. The controller asked if the pilot had the current FDY weather. About 1754, the pilot reported that he had the current FDY weather and requested the RNAV [Area Navigation] Runway 25 approach to FDY. The controller advised the pilot to expect that RNAV approach. The last radio transmission from the airplane restated that the RNAV Runway 25 approach was requested and that transmission was received about 1754. The last transponder reply was about 1757, which indicated the airplane was at 3,600 feet MSL. That transponder reply showed the airplane was located to the south and east of the intersection of Route 60 and Town Road 137, near Grover Hill, Ohio.

A witness was driving in her car eastbound on Route 60 and was approaching Town Road 117. This intersection was about three miles west of the accident site. She indicated that she was driving about 45 to 50 mph. It was dark at the time and "spit" rain was coming down. She said that she could see through the car's windshield. She stated that above woods just south of Route 60, she saw a light coming down slowly. She described it as looking similar to a comet. The descent angle she physically gestured while being interviewed was about 35 to 45 degrees downward in the direction of the accident site. She said she saw the descending light for about two seconds. She subsequently saw an explosion, which was orange in color.

Another witness was in a house about a third of a mile northwest of the accident site. She indicated that a heavy wind or tornado sound is what got her attention. She also heard a sound she vocally described as "NEEEEEER." She saw a reflection of light in a mirror. An explosion occurred when the NEEEEER sound stopped. She said that the conditions at that time were windy, dark, and rainy.

PERSONNEL INFORMATION

The 59-year-old pilot held a FAA private pilot certificate with an airplane single-engine land and instrument ratings. He had been issued a FAA third-class medical certificate on October 15, 2014, with a limitation that he must have available glasses for near vision. The pilot reported on the application for that medical certificate that he had accumulated 987 hours of total flight time and 150 hours of flight time in the six months before that application.

The last entry in the pilot's logbook was dated November 5, 2014. The pilot recorded that he had accumulated 1,000.3 hours of total flight time, 151.5 hours of flight time during night conditions, 127.8 hours of flight time in SR22 airplanes, and 19.3 hours of flight time in actual instrument conditions. A certified flight instructor's endorsement in the pilot's logbook showed

that the pilot received a flight review on August 16, 2014.

The 65-year-old pilot rated passenger held a FAA commercial pilot certificate with airplane single-engine land, airplane multiengine land, and instrument airplane ratings. He also held a FAA flight instructor certificate with airplane single-engine and instrument airplane ratings. He had been issued a FAA second-class medical certificate on April 21, 2014. This medical certificate was issued to the pilot rated passenger as a Time-limited Special Issuance Second Class Medical Certificate with the following limitation(s): "Not Valid for Any Class After 04/30/2015" and "Must wear corrective lenses for near and distant vision." He reported on the application for that special issuance medical certificate that he had accumulated 5,016 hours of total flight time and 160 hours of flight time in the six months prior to that application.

AIRCRAFT INFORMATION

N811CD, a 2001 model Cirrus Design Corporation SR22, serial number 0120, was a four-place single engine low-wing airplane powered by a six-cylinder, 310-horsepower, Continental Motors model IO-550-N7B engine, with serial number 686224, that drove a three-bladed Hartzell constant speed propeller. According to airplane logbook entries, an annual inspection was completed on October 8, 2014. The airplane accumulated 1806.2 hours of total flight time at the time of that inspection.

The aircraft was fitted with a Cirrus Airframe Parachute System (CAPS) designed to recover the aircraft and its occupants to the ground in the event of an in-flight emergency. The CAPS contains a parachute (within a deployment bag) located within a fiberglass CAPS enclosure compartment, a solid-propellant rocket contained within a launch tube to deploy the parachute, a pick-up collar assembly and attached Teflon-coated steel cable lanyard and incremental bridle, a rocket activation system that consisted of an activation T-handle, an activation cable, and a rocket igniter, and a harness assembly which attached the parachute to the fuselage.

The accident airplane was not certified for flight in icing conditions.

METEOROLOGICAL INFORMATION

A National Transportation Safety Board (NTSB) senior meteorologist collected factual weather data in reference to the accident flight and produced a group chairman's factual weather report. The report showed that the accident pilot was provided weather information from Lockheed-Martin Flight Service through the ForeFlight.com website. He also filed an IFR flight plan for a direct flight from AWG to FDY. The pilot also requested a standard text weather briefing format. Standard weather information for the accident flight, to include the airmen's

meteorological information (AIRMETs), area forecast (FA), meteorological terminal air reports (METARs), terminal aerodrome forecasts (TAFs), and pilot reports (PIREPs), was contained in the text weather briefing package. Meteorological Impact Statements (MIS) were not contained in the weather briefing information package. There is no record of any additional weather briefing information the accident pilot received.

A review of the 1900 surface analysis chart showed that it depicted a surface trough stretching from central New York westward across northern Pennsylvania, northern Ohio, and central Indiana. Constant pressure charts depicted a low-level trough over or just to the northwest of the accident site around the accident time with temperatures below freezing.

At 1753, the recorded weather about 38 miles and 93 degrees from the accident site at FDY was: Wind 260 degrees at 10 knots; visibility 3 statute miles; present weather mist; sky condition overcast clouds at 600 feet; temperature 7 degrees C; dew point 6 degrees C; altimeter 29.81 inches of mercury.

At 1753, the recorded weather about 18 miles and 10 degrees from the accident site at the Defiance Memorial Airport, near Defiance, Ohio, (DFI) was: Wind 280 degrees at 8 knots; visibility 6 statute miles; present weather light rain, mist; sky condition overcast ceiling at 1,000 feet; temperature 8 degrees C; dew point 6 degrees C; altimeter 29.81 inches of mercury.

At 1853, the recorded weather at DFI was: Wind 320 degrees at 15 knots with gusts to 20 knots; visibility 9 statute miles; present weather light rain; sky condition overcast ceiling at 1,100 feet; temperature 8 degrees C; dew point 6 degrees C; altimeter setting 29.87 inches of mercury.

The 1900 Wilmington, Ohio, (KILN) upper air sounding was plotted. The plotted sounding depicted the lifted condensation level at 1,502 feet, a convective condensation level of 2,554 feet, and a level of free convection at 1,675 feet. The freezing level was located at 3,829 feet. The precipitable water value was 0.54 inches.

The sounding indicated a relatively moist vertical environment from the surface through 12,000 feet MSL with several layers of conditional instability. This environment would have been conducive of cloud formation from the surface to 12,000 feet and icing (clear, rime, and mixed) between 4,000 and 12,000 feet MSL. Additionally, the sounding was close to saturation between 0 degrees C and -11 degrees C (between 4,000 and 12,000 feet MSL) which, according to articles in professional meteorology journals, is considered a temperature range supportive of the growth of supercooled liquid water droplets (SLD).

Visible and infrared data from the Geostationary Operational Environmental Satellite number 13 (GOES-13) was obtained and plotted. GOES-13 imagery at a wavelength of 0.65 microns (μm) and 10.7 μm depicted brightness temperatures for the scene and imagery surrounding the time of the accident, from 1400 through 2000 at approximately 15-minute intervals, were reviewed. The review revealed a general northwest to southeast movement of the clouds over the accident site about the accident time. Based on the brightness temperatures above the

accident site and the vertical temperature profile provided by the 1900 KILN sounding, the approximate cloud-top heights over the accident site were 13,000 feet at 1800.

Fort Wayne, Indiana, (KIWX) Weather Surveillance Radar-1988, Doppler (WSR-88D), was located about 57 miles west-northwest of the accident site. Archive radar data was plotted with the airplane's radar track. Plotted base reflectivity values are located over and along the route of flight with the precipitation targets moving from north to south between 1755 and 1757. These reflectivity values correspond to very light precipitation targets. There were no lightning strikes near the accident site at the accident time.

KIWX WSR-88D dual-polarization (dual-pol) archived radar data was obtained and plotted. About 1750, radar data showed the accident flight began a descent from 10,000 feet and dual-pol depicted conditions near the aircraft location at the precipitation targets indicated small hydrometeor sizes, and/or a small amount of hydrometeors in the beam, hydrometeors that were much more horizontally shaped as they fell than spherical, and all the hydrometeors in the scan had very similar characteristics. These shape characteristics are similar to the freezing drizzle and supercooled liquid water characteristics described in articles in professional meteorology journals.

PIREPs, two hours before and after the accident and within 300 miles of the accident site, were reviewed. A portion of the PIREPS reported light or moderate icing conditions to include one report of severe clear icing at 4,000 feet MSL at 1900 about 180 degrees and 175 miles south of the accident site.

There was no issued significant meteorological information valid for the area of the accident site at the accident time.

There was no issued Center Weather Service Unit (CWSU) advisory valid for the area of the accident site at the accident time.

There was a MIS issued at 1344 by the CWSU near Cleveland, Ohio, valid for the accident site at the accident time. The MIS discussed patchy light to moderate icing conditions with bases at 4,500 feet in the northern half of Cleveland's airspace, with the icing base at 7,500 feet across the southern half of Cleveland's airspace. The top of the icing was forecast to be at 16,000 feet with patchy instrument conditions in the precipitation.

AIRMET Zulu was issued at 1545 and was valid at the accident time. It was the only AIRMET valid for the accident site, at the accident time, and the accident flight level. AIRMET Zulu forecasted moderate icing conditions between the freezing level and flight level (FL)180 with the forecasted freezing level between 2,000 and 7,000 feet within the AIRMET airspace.

A corrected FA issued at 1540, valid at the accident time, forecasted an overcast ceiling from 1,500 to 2,500 feet MSL with tops to FL240, visibility between 3 and 5 miles, scattered light rain showers, and mist.

The Ft Wayne, Indiana, TAF, valid at the time of the accident, was issued at 1235 and was valid for a 24-hour period beginning at 1300. The TAF forecast for the time period surrounding the accident was for wind from 300 degrees at 16 knots with gusts to 26 knots, 6 miles visibility, light rain shower, and an overcast ceiling at 2,000 feet.

The current icing potential (CIP) supplements other icing advisories. The CIP icing probabilities, icing severity, and SLD potential, valid at 1700 and 1800 EST at 10,000, 9,000, 8,000, 7,000, and 6,000 feet MSL were reviewed. The CIP icing probabilities depicted 50 to above 85 percent probability of icing at every flight level between 10,000 and 6,000 feet around the accident site around the time of the accident. The highest probabilities for icing were located between 8,000 and 6,000 feet with the tongue of greater than 85 percent probability of icing stretching westward from the accident time into northern Indiana. In addition to the CIP indicating greater than 85 percent probability of icing, the CIP indicated that the icing severity around the accident site was between light and moderate. Below 8,000 feet, the icing severity around the accident site was depicted as mostly moderate icing at both 1700 and 1800. SLD potential was also calculated by CIP. Around the accident site at the accident time, where the SLD potential was calculated as "unknown", the SLD potential was between 40 and 70 percent with the highest probability of SLD between 9,000 and 6,000 feet.

WRECKAGE AND IMPACT INFORMATION

The main sections of the airplane fuselage and empennage were found impacted and buried in soft terrain about 199 degrees and 907 feet from the intersection of Route 60 and Town Road 137. The airplane's resting heading was about 77 degrees. The airplane's airframe was found fragmented with its heavier components north of the main wreckage and its lighter components east of the main wreckage. The observed debris field of components extended about 124 feet north and about 187 feet east of the main wreckage.

Flight control cable and engine cable continuity was not established due to fragmentation and thermal damage. Airframe components in the debris field exhibited localized discoloration and charring consistent with a post-impact ground fire. Both navigation light covers were found and green glass fragments were found under the navigation light cover on the south side of the main wreckage. The engine cowling was fragmented and it exhibited a crush line consistent with a right wing low impact. Both left and right ailerons and flaps were found resting on the ground in the debris field to the north of the main wreckage. The empennage, to include the lower section of the rudder, was found discolored and deformed consistent with thermal damage. The empennage was found under charred sections of the fuselage at the southwest side of the main wreckage. The upper section of the rudder was found resting on the ground in the debris to the north of the main wreckage. Separation surfaces on the upper and lower sections exhibited consistent sized and shaped tears and separations. The upper rudder section did not exhibit the same dark discoloration as the lower section did. The rudder sections were shipped to the NTSB Materials Laboratory for examination.

The rocket motor and parachute were found within subsurface empennage and fuselage fragments in the main wreckage area. The rocket motor was found with its propellant expended and it exhibited discoloration consistent with thermal damage. The parachute was found in a packed state and it exhibited deformation and discoloration consistent with thermal damage.

Disassembly of the attitude indicator revealed rotational scoring on its rotor and cage.

The propeller and propeller flange separated from its engine crankshaft and was found buried about four feet below the field. The propeller blades exhibited S-shaped bending and leading edge gouges. The engine was found deformed and buried about eight feet below the field. The no. five and no. six cylinders separated from their crankcase. Disassembly of the fuel pump showed its shear shaft separated in overload and its shaft was bent. The pump's vanes were intact and the pump rotated by hand freely about a quarter turn. The pump's mixture arm also rotated when moved by hand. Both magnetos sustained impact damage. One magneto produced spark when its impulse coupling was rotated by hand. Removed sparkplugs exhibited normal combustion discoloring and a "worn out, normal condition" when compared to a Champion Check-A-Plug chart. Accessible cylinders were inspected using a lighted borescope and no preimpact anomalies were detected during the borescope inspection. Disassembly of the oil pump revealed no debris or preimpact anomalies. Disassembly of the fuel manifold revealed that its seal surface facing its screen and valve exhibited deterioration and its seal surface facing its spring did not exhibit deterioration.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot and pilot-rated passenger by the Paulding County Coroner's Office. Both their causes of death were listed as blunt force trauma. Toxicological samples were not able to be taken on neither the pilot nor the pilot-rated passenger.

FIRE

The main wreckage exhibited charring, deformation, and discoloration consistent with a ground fire. Separated airframe components in the debris field exhibited localized discoloration and charring consistent with a post-impact ground fire. A witness reported the sound of an explosion consistent with a ground impact explosion.

TESTS AND RESEARCH

An NTSB senior air traffic specialist obtained radar data from the FAA. He produced a table of the data and graphical images of the airplane's radar returns. The data was given to the weather group chairman and vehicle performance group chairman for use in their reports. The radar data and graphics are appended to the docket material associated with this case.

An NTSB senior aerospace engineer, who was the vehicle performance group chairman, used the radar data to produce a three dimensional graphic. The graphic does not depict the airplane's airspeed or descent rates. However, the graphic visually shows the slope of the accident airplane's descent near the accident site. The vehicle performance graphic is appended to the docket material associated with this case.

An NTSB chemist indicated that the submitted rudder from this accident was sent to the NTSB Materials Laboratory to determine if rocket fuel residue from the parachute system was present on the exterior surface of the rudder skin. The entire surface was swabbed and the individual swabs were analyzed using a Fourier transform infrared spectrometer with a diamond attenuated total reflectance accessory in accordance to ASTM E1252-98 (American Society for Testing Materials E1252-98: Standard Practice for General Techniques for Obtaining Infrared Spectra for Qualitative Analysis). The spectra from all the samples were compared to a known spectra for the rocket fuel components. No spectral signatures matching the rocket fuel components were found in any of the swab samples.

ADDITIONAL DATA/INFORMATION

Both the pilot and pilot-rated passenger were heard communicating on the air traffic control frequency during the flight. Additionally, the investigation could not determine which pilot-rated occupant was flying the airplane or where each pilot-rated occupant was seated due to the fragmentation of the airplane.

According to NTSB accident report CEN13FA096 , on December 10, 2012, about 2016 central standard time, a Messerschmitt Bolkow-Blohm model BK 117-A3 helicopter, N911BK, impacted the ground near Compton, Illinois. The pilot, flight nurse, and flight paramedic were fatally injured, and the helicopter sustained substantial damage from impact forces. The emergency medical services (EMS) equipped helicopter was registered to Rockford Memorial Hospital, and operated by Air Methods Corporation under the provisions of 14 Code of Federal Regulations Part 135 as an on-demand air-taxi flight. Night visual meteorological conditions prevailed for the flight, which operated on a company visual flight rules flight plan. The flight originated from the Rockford Memorial Hospital Heliport (LL83), Rockford, Illinois, about 1958 and was en route to the Mendota Community Hospital Heliport (14IL), Mendota, Illinois, where it was to pick up a patient for transport back to the Rockford Memorial Hospital.

Within the report, weather data and reports from first responders indicated that the flight likely encountered areas of snow, freezing drizzle, and supercooled liquid water.

The National Transportation Safety Board determined the probable cause in reference CEN13FA096 as follows: The inadvertent encounter with inclement weather, including snow, freezing rain, and reduced visibility conditions, which led to the pilot's spatial disorientation and loss of aircraft control.

According to preliminary information supplied to the NTSB, on October 18, 2013, about 1017 central daylight time, N610ED, a Cessna 500, Citation, multi-engine turboprop airplane, was destroyed during impact with terrain near Derby, Kansas. The pilot and passenger were fatally injured. The airplane was registered to and operated by Dufresne, Inc.; Murrieta, California. Day visual meteorological conditions (VMC) prevailed at the time of the accident and an instrument flight rules flight plan had been filed for the 14 Code of Federal Regulations Part 91 business flight. The airplane departed Wichita Mid-Continent Airport (ICT), Wichita, Kansas, about 1007 and was destined for New Braunfels Regional Airport (BAZ), New Braunfels, Texas.

Preliminary data from Federal Aviation Administration (FAA) air traffic control showed normal operations during climb before the pilot contacted the FAA Kansas City Air Route Traffic Control Center at 1014 and reported leveling at 15,000 feet. The controller cleared the pilot to proceed direct to Millsap, Texas and climb to 23,000 feet. Over the next minute, the aircraft made an abrupt right turn followed by an abrupt left turn. Radar data showed the airplane descended to 14,600 feet before resuming climb and reaching 15,200 feet at 1016:20. The aircraft then made an abrupt descending left turn and radar and radio contact was lost.

Several witnesses reported seeing the airplane below the clouds in a nose down vertical dive. One witness reported that after impact he saw a fireball about 500 feet high followed by a column of smoke. Evidence at the accident scene showed evidence of a postimpact fire with most of the wreckage located in or near a single impact crater. The outboard portion of the left wing and the left aileron was located about 3,000 feet west of the main wreckage.

At 1038, the closest official surface weather observation site at McConnell Air Force Base (IAB), Wichita, Kansas, reported a northeast wind at 12 knots, light rain, and a broken ceiling at 1,700 feet above ground level. Satellite imagery indicated abundant cloud cover with the cloud cover top near 21,000 feet mean sea level (msl). Pilot reports in the area indicated light to moderate icing conditions above 6,000 feet msl at the accident time. This accident investigation's report number is CEN14FA009

According to the Australian Transport Safety Bureau (ATSB) Aviation Occurrence Investigation AO-2007-018, on February 5, 2007, a Cirrus SR22 aircraft, registered VH-HYY, with a pilot and one passenger on board, was being operated on a private flight from Canberra, ACT to Bankstown, NSW. As the aircraft approached the Cecil Park area, NSW, the pilot reported to air traffic control that the engine had lost power and he was attempting a forced landing. Soon after, the aircraft impacted terrain close to the M7 motorway and both occupants sustained serious injuries.

The ATSB report, in part, indicated that before impact, the pilot activated the Cirrus Airframe Parachute System (CAPS), but the system malfunctioned and the parachute did not deploy

correctly. According to the report, subsequent testing by the aircraft and CAPS manufacturers found that the pick-up collar could move prematurely from the top of the rocket launch tube during activation. Such movement was considered to have the potential to adversely affect the rocket's trajectory. However, the trajectory of the rocket that was evident in this accident, was not able to be replicated.

Subsequent to this ATSB report, the FAA issued airworthiness directive (AD) 2007-14-03 for Cirrus Design Corporation Models SR20 and SR22 Airplanes. The AD, in part, stated:

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Cirrus Design Corporation (CDC) Models SR20 and SR22 airplanes. This AD requires you to replace the pick-up collar support and nylon screws, of the Cirrus Airplane Parachute System (CAPS), with a new design pick-up collar support and custom tension screws. This AD results from a CDC report of an in-flight CAPS activation where the parachute failed to successfully deploy. We are issuing this AD to correct pick-up collar support fasteners of the CAPS, which could result in the premature separation of the collar. This condition, if not corrected, could result in the parachute failing to successfully deploy (CAPS failure).

Logbook entries revealed that AD 2007-14-03 had been complied with on N811CD before the accident.

According to NTSB incident report CEN13IA285, on May 16, 2013, about 1120 central daylight time, a Cirrus Design Corp (CDC) SR22, N715CD, airplane ballistic parachute was activated by the pilot during flight near Dallas, Texas, following a loss of control in cruise flight. The parachute pack remained in its compartment, its rocket was deployed, and the rocket propellant was expended. The airplane received no damage. The private pilot was uninjured. The airplane was registered to Jeramiah 2911 Inc and operated by the pilot under the provisions of 14 Code of Federal Regulations (CFR) Part 91. Marginal visual flight rules conditions prevailed and the flight was operating on instrument flight rules (IFR) plan for the flight that originated from Addison Airport (ADS), Dallas, Texas, about 1055 and was destined for Independence Municipal Airport (IDP), Independence, Kansas. The flight returned to ADS and landed without further incident.

The report, in part, stated that the postincident examination of the parachute system did not reveal any system component failure. Postincident testing showed that off-axis deployment of the parachute could exceed the forces required for a successful deployment of the parachute. If the airplane has a large pitch or bank angle or angular rates (or a combination of these) as the parachute rocket leaves the airplane, the airplane will rotate and cause the rocket tether to pull at an angle other than that intended, and the parachute will fail to deploy. Radar data showed that the airplane was in a very dynamic flight pattern with extreme pitch and bank angles when the parachute system was activated. Thus, the parachute likely failed to deploy when activated due to the dynamic maneuvering of the airplane at the time of the activation, which exceeded the parachute system's certification requirements.

The National Transportation Safety Board determined the probable cause in reference to CEN13IA285 as follows: The failure of the airplane's parachute to deploy when activated during a loss of control in cruise flight due to the dynamic maneuvering of the airplane at the time of the activation, which exceeded the parachute system's certification requirements.

Pilot Information

Certificate:	Private	Age:	59
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 With Waivers/Limitations	Last Medical Exam:	10/15/2014
Occupational Pilot:	No	Last Flight Review or Equivalent:	08/16/2014
Flight Time:	(Estimated) 1000.3 hours (Total, all aircraft), 127.8 hours (Total, this make and model)		

Pilot-Rated Passenger Information

Certificate:	Flight Instructor; Commercial	Age:	65
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Unknown
Other Aircraft Rating(s):		Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Single-engine; Instrument Airplane	Toxicology Performed:	Yes
Medical Certification:	Class 2 With Waivers/Limitations	Last Medical Exam:	04/21/2014
Occupational Pilot:	No	Last Flight Review or Equivalent:	12/12/2013
Flight Time:	5016 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	CIRRUS DESIGN CORP	Registration:	N811CD
Model/Series:	SR22 NO SERIES	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	0120
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	10/08/2014, Annual	Certified Max Gross Wt.:	3400 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1806.2 Hours	Engine Manufacturer:	CONT MOTOR
ELT:	Installed, not activated	Engine Model/Series:	IO-550-N7B
Registered Owner:	ORTHOPEdic AVIATION SERVICES LLC	Rated Power:	310 hp
Operator:	ORTHOPEdic AVIATION SERVICES LLC	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	KFDY, 812 ft msl	Observation Time:	1753 EST
Distance from Accident Site:	38 Nautical Miles	Condition of Light:	Night/Dark
Direction from Accident Site:	93°	Conditions at Accident Site:	Instrument Conditions
Lowest Cloud Condition:		Temperature/Dew Point:	7° C / 6° C
Lowest Ceiling:	Overcast / 600 ft agl	Visibility	3 Miles
Wind Speed/Gusts, Direction:	10 knots, 260°	Visibility (RVR):	
Altimeter Setting:	29.81 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	Mist; No Precipitation		
Departure Point:	WASHINGTON, IA (AWG)	Type of Flight Plan Filed:	IFR
Destination:	FINDLAY, OH (FDY)	Type of Clearance:	IFR
Departure Time:	1545 EST	Type of Airspace:	

Airport Information

Airport:	FINDLAY (FDY)	Runway Surface Type:	Asphalt
Airport Elevation:	813 ft	Runway Surface Condition:	Unknown
Runway Used:	25	IFR Approach:	RNAV
Runway Length/Width:	5883 ft / 100 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	2 Fatal	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	On-Ground
Total Injuries:	3 Fatal		

Administrative Information

Investigator In Charge (IIC):	Edward F Malinowski
Additional Participating Persons:	John Welsh; Federal Aviation Administration; Columbus, OH Brannon Mayer; Cirrus Design; Duluth, MN Nicole Charnon; Continental Motors; Mobile, AL Rick Beach; COPA; San Diego, CA Gregg Ellsworth; Ballistic Recovery Systems, Inc.; South St Paul, MN
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=90368