



National Transportation Safety Board Aviation Accident Final Report

Location:	Geneva, Florida	Accident Number:	WPR18FA045
Date & Time:	December 8, 2017, 11:15 Local	Registration:	N19LW
Aircraft:	Beech C90	Aircraft Damage:	Destroyed
Defining Event:	Loss of control in flight	Injuries:	3 Fatal
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The flight instructor, commercial pilot receiving instruction, and commercial pilot-rated passenger were conducting an instructional flight in the multi-engine airplane during instrument meteorological conditions. After performing a practice instrument approach, the flight was cleared for a second approach; however, the landing runway changed, and the controller vectored the airplane for an approach to the new runway. The pilot was instructed to turn to a southwesterly heading and maintain 1,600 ft until established on the localizer. Radar information revealed that the airplane turned to a southwesterly heading on a course to intercept the localizer and remained at 1,600 ft for about 1 minute 39 seconds before beginning a descending right turn to 1,400 ft. The descent continued to 1,100 ft; at which time the air traffic control controller issued a low altitude alert. Over the following 10 seconds, the airplane continued to descend at a rate in excess of 4,800 ft per minute (fpm). The controller issued a second low altitude alert to the crew with instructions to climb to 1,600 ft immediately. The pilot responded about 5 seconds later, "yeah I am sir, I am, I am." The airplane then climbed 1,400 ft over 13 seconds, resulting in a climb rate in excess of 6,700 fpm, followed by a descent to 1,400 ft over 5 seconds, resulting in a 1,500-fpm descent before radar contact was lost in the vicinity of the accident site.

Radar data following the initial instrument approach indicated that the airplane was flying a relatively smooth and consistent flightpath with altitude and heading changes that were indicative of autopilot use until the final turn to intercept the localizer course. Maneuvering the airplane in restricted visibility placed the pilot in conditions conducive to the development of spatial disorientation. The accident circumstances, including altitude and course deviations and the subsequent high-energy impact, are consistent with the known effects of spatial disorientation. Additionally, examination of the airframe, engines, and propellers revealed no evidence of any preexisting anomalies that would have precluded normal operation. Therefore, it is likely that the pilot receiving instruction was experiencing the effects of spatial disorientation when the accident occurred.

Toxicology testing of the flight instructor identified significant amounts of oxycodone as well as its active metabolite, oxymorphone, in liver tissue; oxycodone was also found in muscle.

Oxycodone is an opioid pain medication available by prescription that may impair mental and/or physical ability required for the performance of potentially hazardous tasks. The flight instructor's tissue levels of oxycodone suggest that his blood level at the time of the accident was high enough to have had psychoactive effects, and his failure to recognize and mitigate the pilot's spatial disorientation and impending loss of control further suggest that the flight instructor was impaired by the effects of oxycodone.

Toxicology testing of all three pilots identified ethanol in body tissues; however, given the varying amounts and distribution, it is likely that the identified ethanol was from postmortem production rather than ingestion.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's loss of airplane control due to spatial disorientation during an instrument approach in instrument meteorological conditions, and the flight instructor's delayed remedial action. Contributing to the accident was the flight instructor's impairment from the use of prescription pain medication.

Findings

Personnel issues	Aircraft control - Pilot
Personnel issues	Spatial disorientation - Pilot
Environmental issues	(general) - Effect on operation
Environmental issues	(general) - Response/compensation
Personnel issues	Delayed action - Instructor/check pilot
Personnel issues	Prescription medication - Instructor/check pilot

Factual Information

History of Flight

Approach-IFR initial approach	Loss of control in flight (Defining event)
Approach-IFR initial approach	Collision with terr/obj (non-CFIT)

On December 8, 2017, about 1115 eastern standard time, a Beech C90, N19LW, was destroyed when it impacted the waters of Lake Harney, near Geneva, Florida. The flight instructor, commercial pilot receiving instruction, and commercial pilot-rated passenger were fatally injured. The airplane was registered to Planemarketing LLC, Vero Beach, Florida, and was being operated by L3 Airline Academy as a Title 14 *Code of Federal Regulations* Part 91 instructional flight. Instrument meteorological conditions existed in the area and an instrument flight rules flight plan was filed for the flight, which originated from Orlando Sanford International Airport (SFB), Sanford, Florida, about 0753.

The chief flight instructor at L3 Airline Academy reported that the accident flight was the students' (commercial pilots) first flight in the Beech C90 as part of their High-Performance Aircraft course. He stated that, during the course, the flight instructor would be seated in the left seat, and the two pilots receiving instruction would take turns in the right seat during the flight. The chief flight instructor stated that the accident flight initially flew to Baldwin County Airport (MLJ), Milledgeville, Georgia, before returning to Sanford, most likely due to weather in the area.

Review of air traffic control and radar information provided by the Federal Aviation Administration (FAA) revealed that the flight returned to SFB and conducted a practice instrument approach to runway 9. After completing the instrument approach, the pilot contacted the Central Florida Terminal Radar Approach Control facility at 1603:22, advising that the flight was flying runway heading at 800 ft mean sea level (msl). Shortly thereafter, the controller verified radar contact with the airplane and asked if they wanted to conduct an ILS approach to runway 9 left (9L), to which the pilot responded, "affirm, two of 'em please." At 1603:45, the controller instructed the pilot to turn left to a heading of 030° for vectors to the ILS for runway 9L, and climb to 3,000 ft. The pilot repeated the instructions.

Between 1604 and 1607, the controller advised the pilot of a runway change at SFB and informed him that the next approach would be an ILS approach to runway 27 right (27R). The controller vectored the airplane north, then east. At 1607:21, the pilot requested "extended vectors." The controller asked the pilot to repeat the request and instructed them to fly a heading of 120°. At 1607:37, the pilot asked for "one minute to set up" and repeated the instruction to fly the 120° heading. The controller then instructed the pilot to fly a heading of 140°, which the pilot acknowledged. Radar data showed a right turn to a southeasterly course while the airplane maintained an altitude of 3,000 ft msl.

At 1608:19, the controller broadcasted updated weather information at SFB, which included a cloud ceiling broken at 800 ft above ground level (agl) and overcast at 1,600 ft agl. At 1609:22, the pilot advised the controller that they were ready to continue the approach, and the controller instructed the flight to descend to 1,600 ft. The pilot acknowledged, and radar data depicted the airplane beginning a descent.

At 1610:08, the controller instructed the pilot to turn right to a heading of 180°, which the pilot confirmed. At 1611:26, the controller issued the pilot a right turn to a heading of 240°, stated that the airplane was 5 miles from the UTIMY intersection, instructed him to remain at 1,600 ft until established on the localizer, and subsequently cleared the airplane for the ILS runway 27R approach. The pilot acknowledged, and radar data showed that the airplane remained level at 1,600 ft and initiated a right turn to a southwesterly course at 1611:38.

At 1612:37, the controller told the pilot that he would appreciate any cloud base reports on final, to which the pilot responded, "ok, wilco." Radar data showed that the airplane remained at 1,600 ft until 1612:12, then climbed to 1,700 ft briefly before descending back to 1,600 ft. At 1613:07, the airplane had turned to a westerly heading, descended to 1,400 ft, and continued a descent through 1,100 ft while initiating a left turn to a southerly heading. Shortly thereafter, the controller issued the airplane two low altitude alerts, about 10 seconds apart, and instructed the pilot to "maintain 1,600 immediately" until established on the approach. Radar data showed that, during this time, the airplane continued its descent, reaching 300 ft before climbing back to 800 ft, as it continued on a southeasterly heading. At 1613:31, the pilot stated, "yeah I am sir, I am, I am." No further radio communication was received from the airplane. The last three radar targets recorded at 1613:37, 1613:41, and 1613:46 showed the airplane at 1,300, 1,700, and 1,400 ft msl, respectively, in the vicinity of the accident site. (Figure 1)

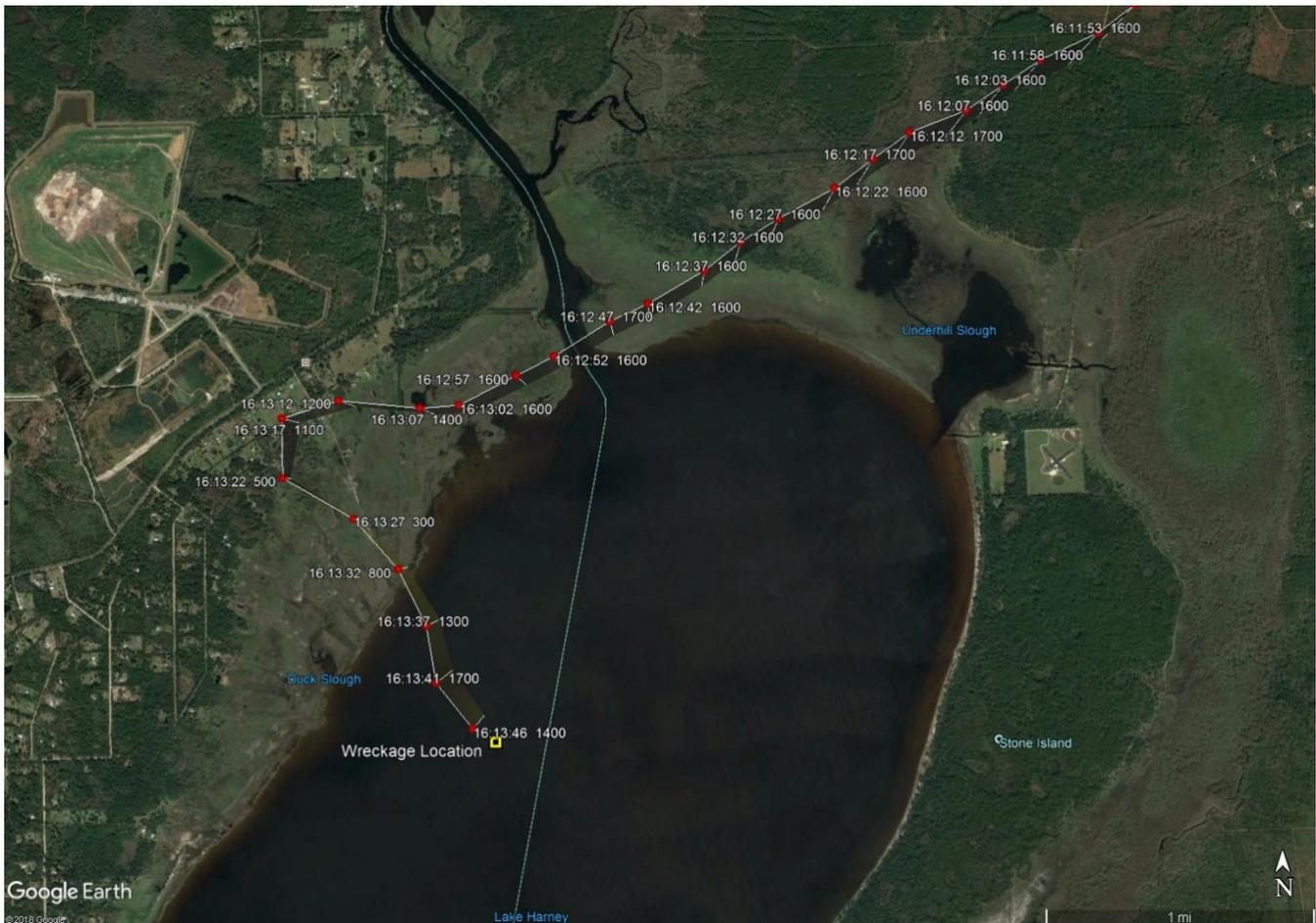


Figure 1: Final portion of recorded radar data

A witness located on a boat near the north end of Lake Harney reported hearing a low-flying airplane approach his position. The witness stated that he could not see the airplane initially due to low clouds and light ground fog; however, he then saw the airplane below the cloud ceiling at 250 to 300 ft above ground level, then it climbed rapidly. The witness further stated that he was looking in the general direction of the engine noise when he saw the airplane dive vertically into the lake south of his location.

Flight instructor Information

Certificate:	Airline transport	Age:	56, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):		Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	Yes
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	August 19, 2017
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	4800 hours (Total, all aircraft), 357 hours (Total, this make and model), 233 hours (Last 90 days, all aircraft), 62 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Student pilot Information

Certificate:	Commercial	Age:	23, Male
Airplane Rating(s):	Single-engine sea; Multi-engine sea	Seat Occupied:	Right
Other Aircraft Rating(s):		Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	April 20, 1994
Occupational Pilot:		Last Flight Review or Equivalent:	November 30, 2017
Flight Time:	243 hours (Total, all aircraft), 0 hours (Total, this make and model), 88 hours (Pilot In Command, all aircraft), 44 hours (Last 90 days, all aircraft), 23 hours (Last 30 days, all aircraft)		

Flight Instructor

The instructor, age 56, held an airline transport pilot certificate with an airplane multi-engine land rating, with commercial privileges for airplane single-engine land. He held a flight instructor certificate with airplane single- and multi-engine and instrument airplane ratings. The pilot's most recent FAA third-class airman medical certificate was issued on August 19, 2017, with a limitation for corrective lenses. On the application for that medical certificate, he reported 4,500 total hours of flight experience. Flight

school personnel reported that, at the time of the accident, the instructor had accumulated 4,800 total hours of flight experience, of which 357 hours were in the accident airplane make/model, 233 hours were in the previous 90 days, 62 hours were in the previous 30 days, and 6 hours were in the previous 24 hours.

Representatives of the flight school reported that the instructor provided training in their flight instructor and high-performance courses. The instructor was also a company check pilot for their single- and multi-engine courses. In addition, the instructor was approved to provide end-of-course exams, which included the issuance of a pilot certificate or rating for that respective course.

Pilot Receiving Instruction

The pilot receiving instruction, age 23, held a commercial pilot certificate with airplane single-engine land, multi-engine land, and instrument airplane ratings. His most recent second-class FAA airman medical certificate was issued on December 8, 2016, with a limitation for corrective lenses. Flight school personnel reported that, at the time of the accident, he had accumulated 243 total hours of flight experience, of which 44 hours were in the previous 90 days. In addition, he had accumulated 8 hours of actual instrument experience and 49 hours of simulated instrument experience.

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N19LW
Model/Series:	C90 UNDESIGNAT	Aircraft Category:	Airplane
Year of Manufacture:	1981	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	LJ-991
Landing Gear Type:	Retractable - Tricycle	Seats:	9
Date/Type of Last Inspection:	October 13, 2017 Continuous airworthiness	Certified Max Gross Wt.:	9989 lbs
Time Since Last Inspection:		Engines:	Turbo prop
Airframe Total Time:	10571.2 Hrs as of last inspection	Engine Manufacturer:	Pratt & Whitney Canada
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	PT6-21A
Registered Owner:		Rated Power:	579 Horsepower
Operator:		Operating Certificate(s) Held:	None

The seven-seat, low-wing, retractable-gear, twin-engine airplane, serial number (S/N) LJ-991, was manufactured in 1981. It was powered by two Pratt & Whitney Canada PT6A-21 engines, each rated at 550 shaft horsepower, which each drove a Hartzell adjustable pitch propeller.

Review of the airframe and engine maintenance logbooks revealed that the most recent phase inspection was completed on October 13, 2017, at a total time and Hobbs time of 10,571.2 hours, left and right engine total time of 10,571.2 hours, 6,568.1 hours since overhaul, and 1,205.4 hours since hot section

inspection. The reported Hobbs time at the time the airplane was dispatched for the accident flight was 10,648.9 hours.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KSFB, 55 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	15:53 Local	Direction from Accident Site:	275°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Broken / 800 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	170°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.88 inches Hg	Temperature/Dew Point:	21° C / 18° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Sanford, FL (SFB)	Type of Flight Plan Filed:	IFR
Destination:	Sanford, FL (SFB)	Type of Clearance:	IFR
Departure Time:	07:53 Local	Type of Airspace:	Class E

Recorded data at 1053 from the SFB automated weather observation station, located about 10 miles west of the accident site, included wind from 170° at 8 knots, 10 statute miles visibility, a broken cloud layer at 800 ft, an overcast cloud layer at 1,600 ft, temperature 21°C, dew point 18°C, and an altimeter setting of 29.89 inches of mercury.

The National Weather Service (NWS) Weather Forecast Office, located in Melbourne, Florida, issued the SFB Terminal Aerodrome Forecast at 0627, which was valid for a 24-hour period beginning at 0700. The forecast from 0700 to 1100 was for wind from 030° at 3 knots, visibility better than 6 miles, scattered clouds at 800 ft agl, overcast at 1,500 ft. From 1100 to 1300, wind was predicted to be from 190° at 5 knots, visibility better than 6 miles, ceiling broken at 1,500 ft agl. AIRMET Sierra for IFR conditions was current at the time of the accident for most of central Florida, including the area of the accident site.

For further meteorological information, see the weather study in the public docket for this investigation.

Airport Information

Airport:	ORLANDO SANFORD INTL SFB	Runway Surface Type:	Asphalt
Airport Elevation:	54 ft msl	Runway Surface Condition:	Dry
Runway Used:	27R	IFR Approach:	ILS
Runway Length/Width:	11002 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 Fatal	Latitude, Longitude:	28.764722,-81.061111

The airplane impacted the waters of Lake Harney near the northwestern shoreline, just south of the final approach course for the ILS Runway 27R approach. Wreckage was spread throughout a 200-square-ft area along the bottom of the lake. The reported water depth was 10 ft.

According to recovery company personnel, the recovery of the wreckage from the lake spanned about 8 days with the use of a diver who specialized in underwater construction and operation. The diver reported that the underwater visibility was about 5 inches. A dredger was used to displace the mud/silt in order to locate additional debris; however, company personnel reported that due to the restricted underwater visibility, various parts and/or components may not have been located. The company personnel further reported that both engines were located about 15 ft under the floor of the lake, lodged within the mud/silt.

Examination of the recovered wreckage revealed that the fuselage was severely fragmented. The structure was bent, buckled, and torn throughout. Remains of the cockpit area were located within the wreckage, which included the control column, a rudder pedal, and trim wheel pedestal. The instrument panel was fragmented into multiple portions with numerous instruments displaced. The directional gyro and compass gyros were removed from their housings and exhibited rotational scoring. The left and right engine nacelle structure and the inboard portions of the left and right wing structure from the nacelles to the fuselage were fragmented.

The left wing exhibited accordion-like compression damage throughout. The left aileron and inboard flap were separated from the left wing structure. The outboard left flap remained attached. The right wing exhibited accordion-like compression damage throughout. The right aileron, inboard and outboard flaps were separated.

The empennage was separated from the fuselage. The right horizontal stabilizer and elevator were separated. The right elevator trim tab actuator was found in a position consistent with about 5° tab up. The left elevator was separated from the left horizontal stabilizer. The left elevator trim tab actuator was found in a position consistent with about 3.5° tab up. The leading edge of the vertical stabilizer was crushed aft. The upper portion of the vertical stabilizer was crushed aft and downward in a tapered manner. The rudder trim tab remained attached to the rudder; however, the upper portion of the trim tab was partially separated about the upper 15 inches. The rudder trim tab actuator was found in a position consistent with the tab between 0 and 5° left.

Both engines were separated from the airframe, and both propeller assemblies were separated from the engines.

Left Propeller

The left propeller blade damage is consistent with rotation under power. Blade angle was unable to be determined, however, witness marks were consistent with a near "low" pitch blade position. Blade damage includes bending and twisting opposite direction of rotation, and a tip fracture on one blade.

Right Propeller

The right propeller blade damage is consistent with rotation under power. Blade angle was unable to be determined, however, witness marks were consistent with a near "low" pitch blade position. Blade damage includes bending and twisting opposite direction of rotation. One blade fractured at the blade shank location and exhibited "S" bending.

Both engines were shipped to the manufacturer for further examination.

Both engines were heavily contaminated with organic debris. Both propeller shafts were fractured behind the propeller bolting flange. Heavy impact and structural deformation was present on all structural cases. Heavy circular rubbing contact was observed on both engines' power turbine disks, compressor turbine disks, and all components of the compressors. Both engines displayed similar impact signatures. Examination revealed no pre-impact anomalies that would have prevented either engine from producing power before impact.

For further information, see the Accident Site, Airframe, and Engine Examination Summary Report within the public docket for this accident.

Additional Information

Spatial Disorientation

The FAA publication, "Medical Facts for Pilots (AM-400-03/1)," discusses the vestibular aspects of spatial orientation and states, in part, the following:

The inner ear contains the vestibular system, which is also known as the organ of equilibrium...the vestibular system contains two...semicircular canals, which detect changes in angular acceleration, and the otolith organs...which detect changes in linear acceleration and gravity. Both the semicircular canals and the otolith organs provide information to the brain regarding our body's position and movement. A connection between the vestibular system and the eyes helps to maintain balance and keep the eyes focused on an object while the head is moving or while the body is rotating...The semicircular canals are three half-circular, interconnected tubes located inside each ear that are the equivalent of three gyroscopes located in three planes perpendicular...to each other. Each plane corresponds to the rolling, pitching, or yawing motions of an aircraft....Illusions involving the semicircular canals of the vestibular system occur primarily under conditions of unreliable or unavailable external visual

references and result in false sensations of rotation.

These illusions include the graveyard spiral, about which, the publication states, in part, the following:

The graveyard spiral...is associated with a return to level flight following an intentional or unintentional prolonged bank turn. For example, a pilot who enters a banking turn to the left will initially have a sensation of a turn in the same direction. If the left turn continues (~20 seconds or more), the pilot will experience the sensation that the airplane is no longer turning to the left. At this point, if the pilot attempts to level the wings this action will produce a sensation that the airplane is turning and banking in the opposite direction (to the right). If the pilot believes the illusion of a right turn (which can be very compelling), he/she will reenter the original left turn in an attempt to counteract the sensation of a right turn. Unfortunately, while this is happening, the airplane is still turning to the left and losing altitude. Pulling the control yoke/stick and applying power while turning would not be a good idea—because it would only make the left turn tighter. If the pilot fails to recognize the illusion and does not level the wings, the airplane will continue turning left and losing altitude until it impacts the ground.

Figure 2 is a graphic from the FAA's Pilot's Handbook of Aeronautical Knowledge, showing a graveyard spin and a graveyard spiral.

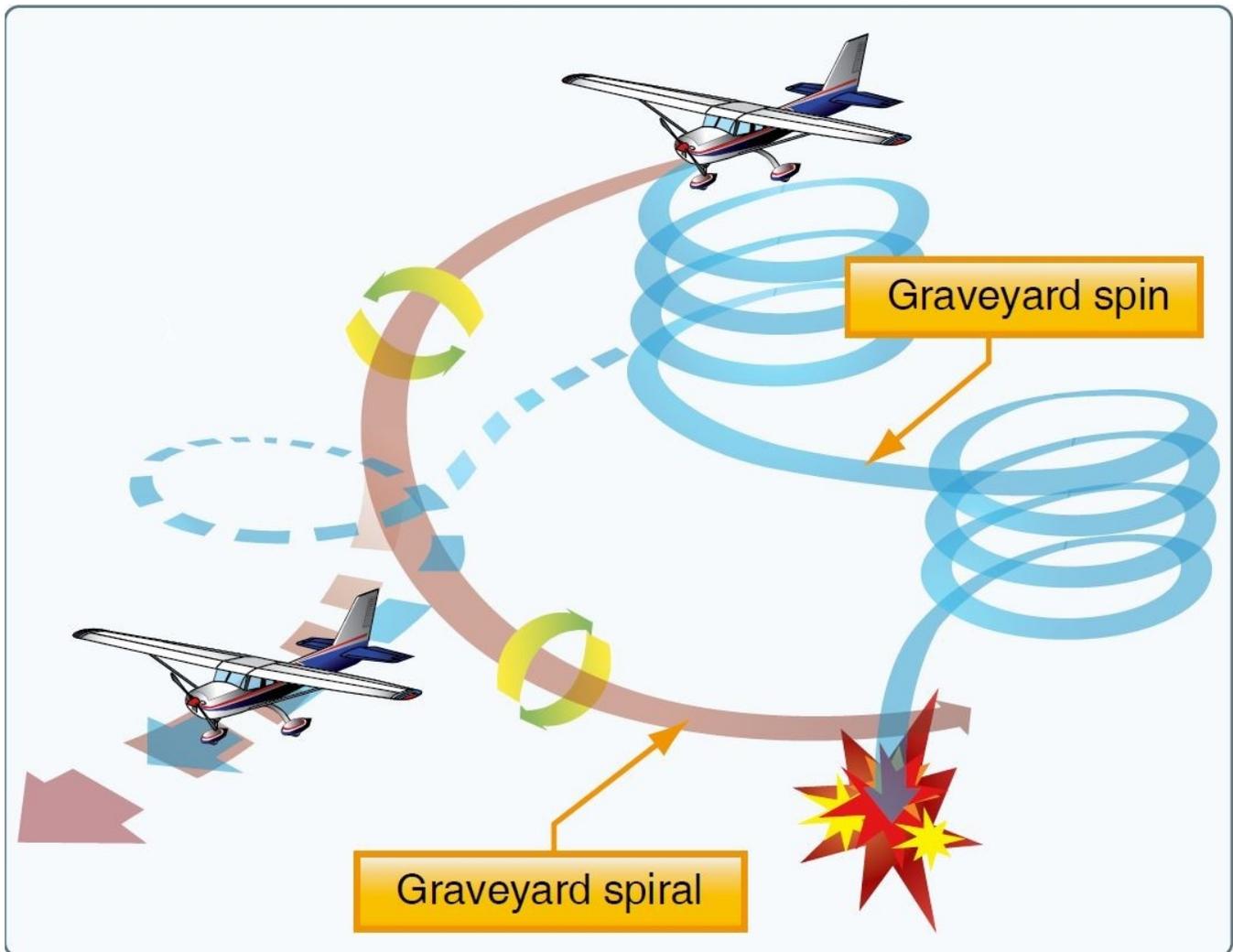


Figure 2: Graphic depicting a graveyard spin and graveyard spiral.

Medical and Pathological Information

Flight Instructor

The Seminole County Medical Examiner, Daytona Beach, Florida, performed an autopsy of the instructor. The autopsy report indicated that the cause of death was multiple blunt force injuries. Toxicology testing performed by the National Medical Services (NMS) Labs at the request of the medical examiner identified oxycodone (370 ng/gm; 0.370 µg/gm) and its active metabolite, oxymorphone (340 ng/gm; 0.340 µg/gm), in liver tissue.

Toxicology testing on specimens recovered from the flight instructor performed at the FAA Forensic

Sciences Laboratory identified ethanol at 0.073 gm/dg and N-butanol in muscle tissue, as well as 0.028 gm/dg of ethanol in lung. In addition, oxycodone was found at 0.382 µg/gm and its active metabolite, oxymorphone, at 0.253 µg/gm in liver tissue; in muscle there was 0.102 µg/gm of oxycodone, but testing was inconclusive for oxymorphone.

Oxycodone is an opioid pain medication available by prescription, usually in combination with acetaminophen (Tylenol); common marketing names are Percocet and Oxycontin. Oxycodone is a Schedule II controlled substance, indicating significant potential for abuse and addiction. Oxycodone carries a warning, "Patients should be advised that oxycodone hydrochloride tablets may impair mental and/or physical ability required for the performance of potentially hazardous tasks (e.g., driving, operating heavy machinery)." Oxymorphone is its primary active metabolite, but is also available as a prescription drug alone; a common marketing name is Opana. It carries the warning, "Warn patients not to drive or operate dangerous machinery unless they are tolerant to the effects of oxymorphone hydrochloride tablets and know how they will react to the medication."

The instructor's wife reported that her husband had back issues. She was unsure of the extent but knew that he took prescription ibuprofen. She could not recall if her husband had a prescription for oxymorphone or oxycodone.

Pilot Receiving Instruction (Flying Pilot)

The Seminole County Medical Examiner, Daytona Beach, Florida, performed an autopsy of the pilot. The autopsy report indicated that the cause of death was multiple blunt force injuries.

Toxicology testing on specimens recovered from the pilot performed at the FAA Forensic Sciences Laboratory identified ethanol at 0.022 gm/dg of ethanol in lung; no ethanol was identified in muscle tissue. No other tested-for substances were identified.

Pilot-Rated Passenger

The Seminole County Medical Examiner, Daytona Beach, Florida, performed an autopsy of the pilot-rated passenger. The autopsy report indicated that the cause of death was multiple blunt force injuries.

Toxicology testing on specimens recovered from the passenger performed at the FAA Forensic Sciences Laboratory identified ethanol at 0.022 gm/dg of ethanol in brain tissue, but no ethanol in muscle tissue. No other tested-for substances were identified.

Given the varying amounts and distribution of ethanol identified in body tissue of all three pilots, it is likely that the identified ethanol was from postmortem production rather than ingestion.

Organizational and Management Information

Information provided by the director of flight operations and the chief flight instructor revealed that both students were enrolled in a 14 CFR Part 141-approved training course which was also accredited by the

Civil Aviation Administration of China (CAAC). Students would typically arrive with no experience in aviation. Upon arrival, the students underwent a one-month class focused on aviation-related English and a second month divided between English classes and private pilot ground school before starting their flight training. Before a student was allowed to begin their flight training, the school required the student to pass the private pilot written test. Upon completing their private pilot training, students progressed into the instrument ground school. Upon completion, they were dual-enrolled in the commercial and instrument flight courses, which included transition into the Cirrus SR20. Following completion of their instrument certificate, the students continued to build flight time with a flight instructor, and eventually complete multi-engine commercial ground school, followed by flight training in the Piper PA-44. Upon completion of their commercial multi-engine rating, students transitioned into high-performance ground school, which is about 4 weeks in length, before transitioning into the Beech C90, which is taught by four in-house instructors and four contract instructors.

The operator reported that they conducted initial hire drug testing for all employees and had a random drug test program for employees; however, the random drug test program was not actively used unless there was an incident that warranted a drug test.

Administrative Information

Investigator In Charge (IIC):	Cawthra, Joshua
Additional Participating Persons:	Ronnie L Faulkner; Federal Aviation Administration; Orlando, FL Peter Basile; Textron Aviation; Wichita, KS Marc Gratton; Pratt & Whitney Canada; Montreal Marc Hamilton; Transportation Safety Board of Canada; Ottawa Les Doud; Hartzell Propeller; Piqua, OH
Original Publish Date:	April 8, 2020
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=96440

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](#).