Aviation Investigation Final Report

Location:	Chesaning, Michigan	**Accident Number:**	CEN19LA050
Date & Time:	December 29, 2018, 10:23 Local	**Registration:**	N1095V
Aircraft:	Cessna R172K	**Aircraft Damage:**	Destroyed
Defining Event:	Loss of control in flight	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot departed on a personal flight about 10 minutes before the accident. According to a witness, the pilot was conducting touch-and-go landings at the airport when the engine "cut out" and the airplane went "straight down." Two other witnesses described a steep bank or a sharp turn before the airplane descended at a steep angle and impacted the ground and then a building. The pilot was fatally injured.

Ground scars at the accident site and damage to the airplane were consistent with a left-wing-low attitude and the engine operating at high power at the time of impact. The airplane's steep bank and descent at a steep angle were consistent with a loss of control. The examination of the airplane and engine revealed no mechanical malfunctions or failures that would have precluded normal operations.

Toxicology testing revealed the pilot was using a combination of phenobarbital and phenytoin at the time of the accident. Although these drugs can cause various impairing symptoms, the type of impairment that these drugs cause is unlikely to lead to a sudden loss of control. Both drugs can be used to prevent seizures in patients with epilepsy. Although a seizure or other neurologic event causing sudden incapacitation could have occurred without leaving autopsy evidence, there was not enough available information to indicate that the pilot had an increased risk of such an event. Thus, the investigation could not determine, based on the available information, whether the pilot's loss of airplane control was related to a medical issue.

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 for reasons that could not be determined based on the available information.

Findings

Personnel issues	Aircraft control - Pilot
Environmental issues	Residence/building - Contributed to outcome

Factual Information

History of Flight

Approach-VFR pattern downwind	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On December 29, 2018, about 1020 eastern standard time, a Cessna R172K, N1095V, impacted the ground and then the side of a building in a park about 1 mile south of Howard Nixon Memorial Airport (50G), Chesaning, Michigan. The commercial pilot was fatally injured, and the airplane was destroyed. The airplane was operated as a Title 14 Code of Federal Regulations Part 91 personal flight. Visual meteorological conditions prevailed, and no flight plan had been filed for the local flight, which originated at Oswosso Community Airport (RNP), Owosso, Michigan, about 1010.

Due to the government furlough, neither the National Transportation Safety Board nor the Federal Aviation Administration responded to the accident site.

According to excerpts from the Saginaw County Sheriff's Office report, the pilot's wife stated that he left home about 0930 to go flying and would be back about 1130.

The sheriff's office report indicated that there were three witnesses to the accident. One witness reported that the pilot was making touch-and-go landings at 50G. The witness also reported hearing the engine "cut out" and observing the airplane go "straight down." Another witness stated that she was walking around the park and saw a low-flying airplane approaching from the south. She also stated that the airplane turned and continued descending. She further stated that the airplane was "not level" when it struck the ground. The last witness reported that he saw the airplane flying east over the park before making a sharp turn to the south. He also reported seeing the wings "go vertical" before the airplane struck the north side of a building.

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	83,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 Without waivers/limitations	**Last FAA Medical Exam:**	January 24, 2018
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	April 1, 2017
Flight Time:	13476 hours (Total, all aircraft), 12 hours (Total, this make and model), 13476 hours (Pilot In Command, all aircraft)		

The pilot, age 83, held a commercial pilot certificate with airplane single-engine land, multiengine land, and instrument ratings and a flight instructor certificate with airplane single-engine and multiengine ratings. He also held a third-class medical certificate, dated January 24, 2018. According to his last application for medical certification, the pilot had accumulated about 13,500 hours of total flight experience, of which 30 hours occurred in the previous 6 months. According to his wife, the pilot had 20 logbooks dating back to 1958. She said that it was too much for her to accurately determine how his hours were categorized, though she said he had instructor and night time in the same make and model airplane. She did report him having 13,476 hours of total flight experience and 12 hours in single engine airplanes. Three of the 12 hours had been logged in the last 30 days, and of that, one hour was in the make and model of airplane.

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N1095V
Model/Series:	R172K	**Aircraft Category:**	Airplane
Year of Manufacture:	1976	**Amateur Built:**	
Airworthiness Certificate:	Normal; Utility	**Serial Number:**	R1722117
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	December 20, 2018 Annual	**Certified Max Gross Wt.:**	2550 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	2561 Hrs as of last inspection	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	IO-360-KB
Registered Owner:		**Rated Power:**	195 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KRNP,737 ft msl	**Distance from Accident Site:**	11 Nautical Miles
Observation Time:	10:36 Local	**Direction from Accident Site:**	190°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Overcast / 2500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	330°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.29 inches Hg	**Temperature/Dew Point:**	-3°C / -7°C
Precipitation and Obscuration:			
Departure Point:	Chesaning, MI (50G)	**Type of Flight Plan Filed:**	None
Destination:	Chesaning, MI (50G)	**Type of Clearance:**	None
Departure Time:	10:10 Local	**Type of Airspace:**	Class G

At 1035, the automated weather observing system at RNP, located 11 miles south of the accident site, reported the following conditions: wind from 330° at 5 knots, visibility 10 miles, ceiling 2,500 ft overcast, temperature -3°C, dew point -7°C, and altimeter setting 30.29 inches of mercury.

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	43.166942,-84.133331(est)

Photographs taken by the Saginaw County Sheriff's Office of the accident site revealed a severed left wingtip on the ground followed by skid marks that led to the main impact point. The propeller was found separated in the debris path. From the main impact point, the airplane twisted 90° to the left and skidded 20 to 30 ft further, striking the building. Both wings were crushed and bent aft against the fuselage, with the right wing between the fuselage and the side of the building. The cockpit and cabin were crushed. The vertical stabilizer was displaced to the right. Both horizontal stabilizers were also damaged.

The wreckage was moved to Myers Aviation, Oshkosh, Wisconsin, where it was examined by Textron Aviation and Continental Motors personnel under the oversight of a Federal Aviation Administration (FAA) inspector. According to Textron Aviation, the aileron interconnect cable and left aileron direct cable exhibited tension overload signatures. Propeller blade No. 1 was straight with chordwise scratches and some twisting. Blade No. 2 was bent aft 90° about 8 inches from the tip. The blade exhibited leading-edge gouges and chordwise scratches. Flight control continuity was confirmed.

According to the Continental Motors representative, the fuel tank finger screens were clear of debris. The fuel selector handle position placard could be rotated about the shaft. The left fuel cap was not vented; the right cap was vented. The engine could only be partially rotated due to impact damage. The oil screen was clear of debris. The left magneto produced interment spark on some leads when rotated. The right magneto impulse couple functioned when manually rotated. The inspection of the engine revealed no preimpact anomalies that would have precluded normal operation.

Medical and Pathological Information

An autopsy of the pilot was performed by the Saginaw County Medical Examiner's Office, Saginaw, Michigan. The pilot's cause of death was multiple blunt force injuries.

Toxicology testing performed at the FAA Forensic Sciences Laboratory identified dextromethorphan and its metabolite dextrorphan, phenobarbital (6.308 µg/mL), and phenytoin (2.246 µg/mL) in the pilot's blood specimens. No carbon monoxide or ethanol was detected.

Dextromethorphan is a cough suppressant available over the counter in various preparations. At recommended doses, it is not considered impairing.

Phenobarbital is a long-acting central nervous system depressant that is typically used as a sedative or an anticonvulsant. It is available by prescription as a schedule IV controlled substance and carries the

following precaution: "Phenobarbital may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks, such as driving a car or operating machinery. The patient should be cautioned accordingly." In addition, the medication warns against mixing it with other central nervous depressants because of additive effects. Common blood levels in patients at stable doses are between 10 and 20 µg/mL.

Phenytoin is an anticonvulsant available by prescription, often marketed with the name Dilantin. Particularly at higher levels, it can cause various neurologic symptoms, including dizziness, drowsiness, irritability, and insomnia. Prescribers are asked to "advise patients taking extended phenytoin sodium capsules not to drive, operate complex machinery, or engage in other hazardous activities until they have become accustomed to any such effects associated with extended phenytoin sodium capsules." Common blood levels in patients at stable doses are between 10 and 20 µg/mL.

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	Michael W Matthews; FAA Flight Standards District Office; Grand Rapids, MI
Original Publish Date:	June 29, 2020
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=98809