Aviation Investigation Final Report

Location:	LaCrosse, Kansas	**Accident Number:**	CEN20LA122
Date & Time:	March 17, 2020, 09:19 Local	**Registration:**	N274PM
Aircraft:	Cessna 208	**Aircraft Damage:**	Destroyed
Defining Event:	Medical event	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled		

Analysis

The pilot was conducting a Part 135 on-demand cargo flight in instrument meteorological conditions. After executing a second missed approach, he informed air traffic control (ATC) of his intentions to divert to an airport located about 36 miles to the southeast.

About 7 minutes after executing the second missed approach, the pilot began making unintelligible radio communications that ATC characterized as very garbled and difficult to understand, “almost hypoxic.” ATC then instructed the pilot to utilize oxygen.

About 19 minutes after the second missed approach, ATC informed the pilot that the airplane had descended 1,600 ft, not following assigned course vectors or instructions and asked if everything was alright, to which no response was received. After attempting to relay communications through other airplanes in the area, an unintelligible response was received from the accident airplane. ATC then made numerous transmissions to the accident pilot urging him to utilize oxygen and open a window. No further communications were received from the accident airplane.

A witness reported that he saw the airplane descend out of a low overcast cloud layer at a high rate of descent. The airplane then abruptly transitioned into a steep climb before re-entering the clouds. A few seconds later, he heard the airplane impact terrain and responded to the accident site.

The sudden change in communications from the pilot indicates a possible impairment. When combined with the ATC data, the witness account, and the lack of any mechanical irregularities or malfunctions with the airplane, it is likely the pilot experienced difficulty controlling the airplane due to impairment. While the pilot was at an increased risk for an acute cardiovascular event, the extremely limited available medical evidence leaves no way to quantify that risk and no evidence regarding whether such an event occurred. As a result, whether the pilot was incapacitated by an acute medical event cannot be determined from the available medical information.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

An infight loss of control as a result of pilot impairment, the cause of which could not be determined.

Findings

Personnel issues	(general) - Pilot
Aircraft	(general) - Not attained/maintained

Factual Information

History of Flight

Enroute-cruise	Medical event (Defining event)
Enroute-cruise	Loss of control in flight

On March 17, 2020, about 0919 central daylight time (CDT), a Cessna 208B, N274PM, was destroyed when it was involved in an accident near La Crosse, Kansas. The pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations (CFR)* Part 135 on-demand cargo flight.

The Planemasters Ltd. flight, PMS1670, was operated on an instrument flight rules flight plan from Wichita Dwight D Eisenhower National Airport (ICT), Wichita, Kansas, to Hays Regional Airport (HYS), Hays, Kansas. A review of Federal Aviation Administration air traffic control (ATC) communications and commercially available radar and Automatic Dependent Surveillance-Broadcast (ADS-B) data revealed that the flight departed ICT about 0751 CDT. About 0831, the radar and ADS-B data were lost as the airplane descended through 4,000 ft while vectored for the instrument landing system (ILS) approach to runway 34. Shortly thereafter, the pilot executed a missed approach, and about 0843, the airplane was re-acquired by radar and ADS-B. The pilot stated to ATC his intention to attempt the ILS approach to runway 34 a second time.

About 0853, radar and ADS-B data were again lost as the airplane descended on the instrument approach. About 0859, the airplane was re-acquired by radar northwest of HYS. At that time, the pilot stated his intention to divert to Great Bend Airport (GBD), Great Bend, Kansas, located about 36 nautical miles to the southeast. The radar and ADS-B data showed the airplane began a turn to the south toward GBD while climbing to about 7,000 ft. About 0918, the airplane began a descent and left turn. The last radar and ADS-B targets were observed about 0918:48.

A witness located about .68 miles northwest of the accident site reported first hearing the airplane and thought it was a crop duster. When he went outside, he saw the airplane descend out of a low overcast cloud layer at a high rate of descent. The airplane then abruptly transitioned into a steep climb before re-entering the clouds. A few seconds later, he heard the airplane impact terrain and responded to the accident site.

Pilot Information

Certificate:	Airline transport; Flight instructor	**Age:**	56,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	None	**Restraint Used:**	Unknown
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 2 With waivers/limitations	**Last FAA Medical Exam:**	April 30, 2019
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	December 13, 2019
Flight Time:	(Estimated) 9900 hours (Total, all aircraft)		

At the time of the accident, the pilot had accumulated over 9,100 total flight hours, of which 400 were in the Cessna 208. Additionally, the pilot had accumulated about 700 hours in actual instrument meteorological conditions.

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N274PM
Model/Series:	208 B	**Aircraft Category:**	Airplane
Year of Manufacture:	1998	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	208B0705
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:		**Certified Max Gross Wt.:**	8752 lbs
Time Since Last Inspection:		**Engines:**	1 Turbo prop
Airframe Total Time:		**Engine Manufacturer:**	Pratt & Whitney
ELT:		**Engine Model/Series:**	PT6A SER
Registered Owner:	Planemasters Ltd	**Rated Power:**	675 Horsepower
Operator:	Planemasters Ltd	**Operating Certificate(s) Held:**	Commuter air carrier (135)
Operator Does Business As:		**Operator Designator Code:**	DPUA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KHYS,1998 ft msl	**Distance from Accident Site:**	21 Nautical Miles
Observation Time:	13:56 Local	**Direction from Accident Site:**	26°
Lowest Cloud Condition:		**Visibility**	0.25 miles
Lowest Ceiling:	Overcast / 200 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	10 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	70°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.26 inches Hg	**Temperature/Dew Point:**	3°C / 2°C
Precipitation and Obscuration:	Moderate - None - Fog		
Departure Point:	Wichita, KS (ICT)	**Type of Flight Plan Filed:**	IFR
Destination:	Hays, KS (HYS)	**Type of Clearance:**	IFR
Departure Time:	07:51 Local	**Type of Airspace:**	Class E

At 0825, the HYS automated weather observation service (AWOS) reported, in part, wind from 080° at 11 knots, visibility 1 statute mile, and overcast clouds at 200 ft above ground level.

At 0841, the HYS AWOS indicated that visibility had dropped to ¼ statute mile in fog.

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	38.54,-99.459999(est)

The wreckage was discovered in a field with the airplane's tail and wings visible above ground. The forward fuselage and engine section buried several feet under the terrain, consistent with a near-vertical, high-speed impact. The main landing gear was bent aft towards the tail with the left and right main wheels protruding from the ground. The smell of Jet-A fuel was present at the accident site. A post-accident wreckage examination revealed no mechanical irregularities or malfunctions with the airplane that would have precluded normal operation.

Communications

A review of archived air traffic control (ATC) communications revealed that around 0906, the pilot began making unintelligible radio communications that air traffic controllers stated were unreadable. At 0914, ATC contacted another airplane operated by Planemasters to inquire if that pilot knew the condition of the radio in the accident airplane. The controller said “he sounds very garbled and difficult to understand almost uh almost hypoxic but that's impossible since he's at seven thousand feet uh is there something with the radio in that airplane do you know anything off the top of your head?”

About 0915, the controller asked the accident pilot if he was turning directly to GBD. After an unintelligible response from the pilot, the controller stated “alright plane master sixteen seventy it's very difficult to understand there might be something wrong with uh your cockpit or your pressurization plane master sixteen seventy oxygen oxygen.” About a minute later, the pilot was more easily understood and the controller stated that he “sounded way better.”

About 0918, ATC made the following transmission with no response from the pilot: “plane master sixteen seventy you've lost uh sixteen hundred feet and uh going off your course is everything alright?” No response was received from the pilot. After attempting to relay communications through other airplanes in the area, about 0920, an unintelligible response was received from the accident airplane. ATC then made numerous transmissions to the accident pilot urging him to utilize oxygen and open a window. No further communications were received from the accident airplane.

Medical and Pathological Information

According to the autopsy performed by the XXIV Judicial District of Kansas Deputy Coroner, the cause of death was fragmentation of the body by blunt impact and the manner of death was accident. There was extensive damage; the brain and majority of the heart were not available for examination. The pathologist reported the presence of hypertensive cardiovascular disease based on the microscopic appearance of the kidneys. No other significant natural disease was identified.

Toxicology testing performed by the FAA’s Forensic Sciences Laboratory identified atorvastatin and trimethoprim in liver and muscle tissues. Neither of these drugs are considered impairing.

Administrative Information

Investigator In Charge (IIC):	Williams, David
Additional Participating Persons:	Mark C Hopp; FAA; Wichita, KS Ricardo Asensio; Textron Aviation; Wichita, KS
Original Publish Date:	April 18, 2022
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=101080