National Transportation Safety Board
Aviation Accident Factual Report

Location:	Kaneville, IL	**Accident Number:**	CEN19LA216
Date & Time:	07/08/2019, 1600 CDT	**Registration:**	N112EZ
Aircraft:	Rutan VARIEZE	**Aircraft Damage:**	Substantial
Defining Event:	Fuel related	**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

On July 8, 2019, at 1600 central daylight time, a Knight-Wilcox Varieze experimental airplane, N112EZ, made a forced landing to an interstate and collided with a vehicle near Kaneville, Illinois. The pilot sustained minor injuries and the airplane sustained substantial damage. The vehicle occupant was uninjured. The airplane was registered to and operated by the pilot under the provisions of Title 14 *Code of Federal Regulations* Part 91 as a personal flight. Visual meteorological conditions existed near the accident site and a visual flight rules (VFR) flight plan was not filed. The flight departed Waukegan National Airport (UGN), Waukegan, Illinois, at 1537, and was en route to Aurora Municipal Airport (ARR), Aurora, Illinois.

After the accident the pilot stated that he was descending toward the destination airport and contacted the ARR air traffic control (ATC) tower. The controller advised the pilot that the ARR airspace was operating under instrument flight rules (IFR) due to low visibility and haze. The pilot remained north of the ARR airspace and requested a special VFR clearance, which was denied by ATC due to an inbound IFR flight. He stated that while holding outside of ARR airspace with a reduced power setting, about 1,900 rpm, and the carburetor heat off, he reduced the mixture control about one inch of travel and the engine experienced a total loss of power and the propeller completely stopped rotating. While about 1,600 ft above ground level (agl), the pilot initiated a steep dive to increase airspeed and allow the propeller to rotate and the engine to restart. During the maneuver, he added carburetor heat but the propeller would not rotate so he pulled out of the dive about 300 ft agl and determined the interstate was the best place for a forced landing. After aligning with the west bound lane, he glided the airplane over several cars and maneuvered for an opening between vehicles where he could land the airplane. During the landing the right wing contacted a pickup truck in the far right lane, the airplane veered right, the landing gear collapsed, and the pilot was unable to maintain directional control. The airplane rotated 360° and came to rest in the grass median – see figure 1.

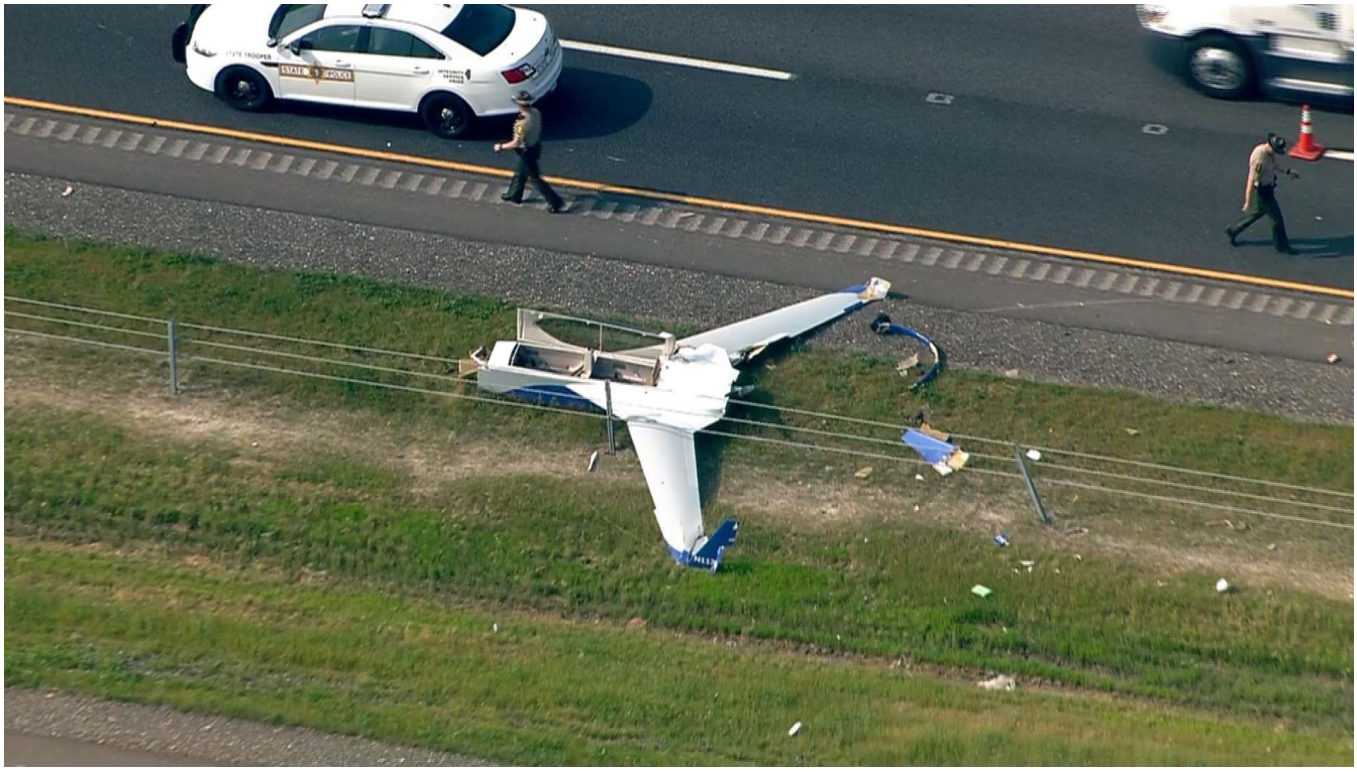

Figure 1 – Airplane in grass median (Courtesy of Chicago WGN9)

The weather conditions reported about the time of the accident included outside air temperature of 83° F, dew point 52° F, and about 34% relative humidity. The carburetor icing probability chart included in the airplane flight manual and the Federal Aviation Administration Special Airworthiness Information Bulletin No. CE-09-35, Carburetor Icing Prevention, indicated that the airplane was operating in an area that was associated with a risk of carburetor ice accumulation at glide and cruise power settings.

The pilot was using the Foreflight application on his tablet to record the flight data. According to the data provided, during the steep dive the airplane reached an airspeed about 189 mph. According to the Varieze airplane flight manual, the propeller minimum wind-milling speed is 70 mph. If the propeller is stopped, the propeller restart speed in a steep dive is 150 mph.

The responding Federal Aviation Administration (FAA) inspector reported that the airplane was recovered to a local hangar where an engine functional test run was conducted. The functional test run was successful and no engine anomalies were noted. The test was unable to determine why the propeller would not rotate during the steep dive.

Additionally, the pilot reported that two days before the accident while flying the airplane in cruise flight, the carburetor accumulated ice and the engine ran rough. He stated that after applying carburetor heat the engine stumbled but returned to full power after the carburetor ice was cleared.

Pilot Information

Certificate:	Airline Transport; Commercial	**Age:**	46, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	**Toxicology Performed:**	No
Medical Certification:	Class 1 With Waivers/Limitations	**Last FAA Medical Exam:**	06/12/2019
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	11/17/2018
Flight Time:	11028 hours (Total, all aircraft), 14 hours (Total, this make and model), 8924 hours (Pilot In Command, all aircraft), 95 hours (Last 90 days, all aircraft), 39 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Rutan	**Registration:**	N112EZ
Model/Series:	VARIEZE No Series	**Aircraft Category:**	Airplane
Year of Manufacture:	1982	**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental	**Serial Number:**	43
Landing Gear Type:	Retractable - Tricycle	**Seats:**	2
Date/Type of Last Inspection:	09/25/2018, Condition	**Certified Max Gross Wt.:**	1110 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	141.2 Hours as of last inspection	**Engine Manufacturer:**	Continental
ELT:	C91A installed, activated, did not aid in locating accident	**Engine Model/Series:**	C85-12
Registered Owner:	On file	**Rated Power:**	85 hp
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:	1552 CDT	**Direction from Accident Site:**	
Lowest Cloud Condition:		**Visibility**	
Lowest Ceiling:		**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.04 inches Hg	**Temperature/Dew Point:**	28°C / 11°C
Precipitation and Obscuration:	Moderate - Haze		
Departure Point:	Chicago/Waukegan, IL (UGN)	**Type of Flight Plan Filed:**	None
Destination:	Chicago/Aurora, IL (ARR)	**Type of Clearance:**	VFR
Departure Time:	1537 CDT	**Type of Airspace:**	Class E

Airport Information

Airport:	Aurora Muni (ARR)	**Runway Surface Type:**	Asphalt
Airport Elevation:	712 ft	**Runway Surface Condition:**	Dry
Runway Used:	N/A	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced Landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	41.868611, -88.579722

Administrative Information

Investigator In Charge (IIC):	Joshua D Lindberg
Additional Participating Persons:	Spencer Cull; Federal Aviation Administration; Des Plaines, IL
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=99810