Aviation Investigation Final Report

Location:	Hartford, Wisconsin	**Accident Number:**	GAA19CA096
Date & Time:	December 11, 2018, 18:00 Local	**Registration:**	N6650M
Aircraft:	Beech 36	**Aircraft Damage:**	Substantial
Defining Event:	Aerodynamic stall/spin	**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot in the retractable-landing gear-equipped airplane reported that, during an instrument flight rules night flight, he initiated an approach in instrument meteorological conditions. During the approach, he saw that rime ice had accumulated on the left wing. He continued the approach, extended the landing gear, and then configured the flaps for landing.

The pilot attempted to level off at 1,620 ft, although the minimum descent altitude was 1,600 ft, but the airplane stalled. He applied forward pressure on the yoke to lower the nose and applied full throttle. He recalled that the airplane was extremely slow to respond and that it was "flying on the ragged edge of stall." The airplane exited the clouds, and he could see the airport, but the airplane impacted a field about 2.4 nautical miles short of the runway.

The airplane sustained substantial damage to both wings and the fuselage.

The pilot reported that there were no mechanical malfunctions or failures with the airplane that would have precluded normal operation.

Probable Cause and Findings

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

The pilot's exceedance of the airplane's critical angle of attack, which resulted in an aerodynamic stall and impact with terrain during landing in icing conditions.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Angle of attack - Capability exceeded
Environmental issues	Conducive to structural icing - Effect on operation

Factual Information

History of Flight

Approach-IFR final approach	Structural icing
Approach-IFR final approach	Aerodynamic stall/spin (Defining event)
Approach-IFR final approach	Attempted remediation/recovery
Approach-IFR final approach	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	61,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 single-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	October 31, 2018
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	March 22, 2017
Flight Time:	(Estimated) 2158 hours (Total, all aircraft), 97 hours (Total, this make and model), 2102 hours (Pilot In Command, all aircraft), 110 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N6650M
Model/Series:	36 A36	**Aircraft Category:**	Airplane
Year of Manufacture:	1979	**Amateur Built:**	
Airworthiness Certificate:	Utility	**Serial Number:**	E-1518
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	September 7, 2018 Annual	**Certified Max Gross Wt.:**	3600 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	3545 Hrs as of last inspection	**Engine Manufacturer:**	Continental
ELT:	C91 installed	**Engine Model/Series:**	IO-550-B112B
Registered Owner:		**Rated Power:**	300 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Night
Observation Facility, Elevation:	KETB,884 ft msl	**Distance from Accident Site:**	10 Nautical Miles
Observation Time:	00:15 Local	**Direction from Accident Site:**	58°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Overcast / 1000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	80°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.03 inches Hg	**Temperature/Dew Point:**	-3°C / -4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Kalamazoo, MS (AZO)	**Type of Flight Plan Filed:**	VFR/IFR
Destination:	Hartford, WI (HXF)	**Type of Clearance:**	IFR;VFR flight following
Departure Time:	16:30 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Hartford Muni HXF	**Runway Surface Type:**	Asphalt
Airport Elevation:	1070 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	29	**IFR Approach:**	RNAV
Runway Length/Width:	3000 ft / 75 ft	**VFR Approach/Landing:**	Forced landing;Straight-in

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	43.330276,-88.32611(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Michael
Additional Participating Persons:	Todd Davis; FAA; Milwaukee, WI
Original Publish Date:	September 26, 2019
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=98771