Aviation Investigation Final Report

Location:	Davenport, Iowa	**Accident Number:**	CEN21LA118
Date & Time:	January 28, 2021, 16:10 Local	**Registration:**	N217US
Aircraft:	Beech 300	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control on ground	**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The pilot reported that during a simulated engine failure after decision speed (V1) takeoff, when the flight instructor reduced power on the airplane's left engine during the takeoff roll, the airplane yawed left and veered toward the left edge of the runway where there was packed snow. The pilot reported that he applied right rudder and back pressure to rotate the airplane as the instructor pilot added right rudder with his set of rudder pedals. The instructor pilot reported he then attempted to restore left engine power as the airplane struck a snowbank on the edge of the runway. The airplane exited the left side of the runway and came to a stop. The airplane sustained substantial damage to the engine nacelles and the fuselage. The left engine was separated from the airplane and the right engine remained attached by skin. The pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

The instructor pilot reported that the flight's purpose was for the pilot to conduct training in a twin-engine turboprop airplane, in preparation of an upcoming checkride. The plan was to simulate an engine failure during the takeoff roll, after passing takeoff decision speed (V1). He added that the plan was briefed the day prior and that the speeds were calculated and confirmed in the primary flight display (PFD) before the takeoff. The instructor pilot added that the runway was plowed 75 ft wide, with patches of packed snow near the edges.

Probable Cause and Findings

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

The pilot's failure to maintain directional control of the airplane, and the flight instructor's inadequate oversight during a simulated engine out takeoff that resulted in a runway excursion and impact with a snowbank.

Findings

Personnel issues	Aircraft control - Pilot
Personnel issues	Delayed action - Instructor/check pilot
Aircraft	Directional control - Not attained/maintained
Environmental issues	Snow/ice - Contributed to outcome

Factual Information

History of Flight

Takeoff	Loss of control on ground (Defining event)
Takeoff	Simulated/training event
Takeoff	Runway excursion

Pilot Information

Certificate:	Airline transport; Flight instructor	**Age:**	61
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	None	**Restraint Used:**	Lap only
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	**Toxicology Performed:**	
Medical Certification:	Class 1 With waivers/limitations	**Last FAA Medical Exam:**	July 14, 2020
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	September 23, 2020
Flight Time:	19112 hours (Total, all aircraft), 62 hours (Total, this make and model), 18340 hours (Pilot In Command, all aircraft), 73 hours (Last 90 days, all aircraft), 35 hours (Last 30 days, all aircraft), 11 hours (Last 24 hours, all aircraft)		

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	58
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	Lap only
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Helicopter	**Toxicology Performed:**	
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	August 1, 2020
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	1769 hours (Total, all aircraft), 10 hours (Total, this make and model), 1650 hours (Pilot In Command, all aircraft), 43 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N217US
Model/Series:	300	**Aircraft Category:**	Airplane
Year of Manufacture:	2007	**Amateur Built:**	
Airworthiness Certificate:	Commuter	**Serial Number:**	FL-519
Landing Gear Type:	Retractable - Tricycle	**Seats:**	
Date/Type of Last Inspection:	December 21, 2020 Continuous airworthiness	**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	2 Turbo prop
Airframe Total Time:	3214.1 Hrs at time of accident	**Engine Manufacturer:**	P &W
ELT:	Installed	**Engine Model/Series:**	PT-6A-60A
Registered Owner:	MM-AIR LLC	**Rated Power:**	
Operator:	Carver Aero	**Operating Certificate(s) Held:**	Commuter air carrier (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KDVN	**Distance from Accident Site:**	
Observation Time:	16:10 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:		**Visibility (RVR):**	
Wind Speed/Gusts:	8 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	70°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.59 inches Hg	**Temperature/Dew Point:**	-6°C / -13°C
Precipitation and Obscuration:			
Departure Point:	Davenport, IA	**Type of Flight Plan Filed:**	None
Destination:	Davenport, IA	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	

Airport Information

Airport:	Davenport DVN	**Runway Surface Type:**	
Airport Elevation:	751 ft msl	**Runway Surface Condition:**	Snow
Runway Used:	15	**IFR Approach:**	None
Runway Length/Width:	5511 ft / 100 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	2 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	41.614972,-90.587418

Administrative Information

Investigator In Charge (IIC):	Hatch, Craig
Additional Participating Persons:	Luis Deliz; FAA; Ankeny, IA
Original Publish Date:	September 22, 2021
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=102579