



# Aviation Investigation Final Report

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

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## Analysis

The pilot reported that during a simulated engine failure after decision speed (V<sub>1</sub>) 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 (V<sub>1</sub>). 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

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

## Factual Information

### History of Flight

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

### Pilot Information

<b>Certificate:</b>	Airline transport; Flight instructor	<b>Age:</b>	61
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Lap only
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 With waivers/limitations	<b>Last FAA Medical Exam:</b>	July 14, 2020
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	September 23, 2020
<b>Flight Time:</b>	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

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	58
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Lap only
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine; Helicopter	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	August 1, 2020
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	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

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

## Meteorological Information and Flight Plan

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

## Airport Information

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

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	41.614972,-90.587418

## Administrative Information

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

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).