



# Aviation Investigation Final Report

<b>Location:</b>	Winchester, Virginia	<b>Accident Number:</b>	GAA18CA513
<b>Date &amp; Time:</b>	August 27, 2018, 11:30 Local	<b>Registration:</b>	N53051
<b>Aircraft:</b>	Cessna 172	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control on ground	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The student pilot reported that he completed a touch-and-go landing and applied full power to increase the airplane's ground speed. During the takeoff roll, the engine power increased, and the airplane drifted to the left side of the runway. The student applied full right rudder, but it was ineffective. He then reduced the engine power to idle and applied brakes, but the airplane exited the left side of the runway, collided with a drainage culvert, and then came to rest inverted.

The airplane sustained substantial damage to the right wing lift strut, the vertical stabilizer, and the rudder.

The student reported that he thought that a mechanical malfunction of the rudder system might have occurred before the accident sequence. However, Federal Aviation Administration aviation safety inspectors reported that, during a postaccident airplane examination, the rudder system was operational, and rudder control continuity was established.

## Probable Cause and Findings

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

The student pilot's failure to maintain directional control during the takeoff roll.

## Findings

<b>Personnel issues</b>	Aircraft control - Student/instructed pilot
<b>Aircraft</b>	Directional control - Not attained/maintained
<b>Environmental issues</b>	(general) - Contributed to outcome

## Factual Information

### History of Flight

Landing-landing roll	Loss of control on ground (Defining event)
Landing-landing roll	Attempted remediation/recovery
Landing-landing roll	Runway excursion
Landing-landing roll	Collision with terr/obj (non-CFIT)
Landing-landing roll	Nose over/nose down

### Pilot Information

Certificate:	Student	Age:	60,Male
Airplane Rating(s):	None	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 None	Last FAA Medical Exam:	February 12, 2018
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 17 hours (Total, all aircraft), 17 hours (Total, this make and model), 2 hours (Pilot In Command, all aircraft), 9 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N53051
<b>Model/Series:</b>	172 P	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1981	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	17274673
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	July 27, 2018 100 hour	<b>Certified Max Gross Wt.:</b>	2300 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	12049.7 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	C91 installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	O-320
<b>Registered Owner:</b>		<b>Rated Power:</b>	160 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KOKV, 727 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	15:15 Local	<b>Direction from Accident Site:</b>	151°
<b>Lowest Cloud Condition:</b>		<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Broken / 7500 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	5 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	220°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.2 inches Hg	<b>Temperature/Dew Point:</b>	27°C / 22°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Winchester, VA (OKV )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Winchester, VA (OKV )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	11:20 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	Winchester Rgnl OKV	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	726 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	32	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5498 ft / 100 ft	<b>VFR Approach/Landing:</b>	Touch and go;Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	39.143611,-78.144447(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Hicks, Michael
<b>Additional Participating Persons:</b>	Spence Watson ; FAA; Dulles, VA
<b>Original Publish Date:</b>	June 10, 2019
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=98169">https://data.nts.gov/Docket?ProjectID=98169</a>

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