



# Aviation Investigation Final Report

<b>Location:</b>	Booneville, Missouri	<b>Accident Number:</b>	CEN17LA326
<b>Date &amp; Time:</b>	August 20, 2017, 13:00 Local	<b>Registration:</b>	N182DW
<b>Aircraft:</b>	Cessna 182	<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 - Personal		

## Analysis

The private pilot was landing the airplane after a cross-country flight with a passenger onboard. The pilot reported that, during the landing roll, the left brake locked and the airplane veered to the left, departing the side of the runway into a ravine. A postaccident examination of the airplane revealed no mechanical anomalies with the braking system that would have precluded normal operation, and the locked brake condition could not be duplicated; therefore, the reason for the loss of directional control could not be determined.

## 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 control of the airplane during the landing roll, which resulted in a runway excursion.

## Findings

<b>Aircraft</b>	Directional control - Not attained/maintained
<b>Personnel issues</b>	Aircraft control - Pilot

# Factual Information

## History of Flight

Landing-landing roll	Loss of control on ground (Defining event)
Landing-landing roll	Runway excursion
Landing-landing roll	Collision with terr/obj (non-CFIT)

On August 20, 2017, about 1300 central daylight time, a Cessna 182R airplane, N182DW, was substantially damaged when it departed the runway while landing at the Jesse Viertel Memorial Airport (KVER), Booneville, Missouri. The private pilot and passenger were not injured. The personal flight was conducted under the provisions of Title 14 *Code of Federal Regulations* Part 91. Visual meteorological conditions prevailed and a Federal Aviation Administration (FAA) flight plan had been filed for the flight. The cross-country flight departed Clinton Regional Airport (KCLK) Clinton, Oklahoma, about 1045 and was en route to KVER.

According to the pilot, while landing on runway 18 (4,000 ft by 75 ft, asphalt) the left brake locked and the airplane veered off of the runway and into a ravine. The horizontal stabilizer and fuselage were substantially damaged.

According to the FAA inspector who responded to the accident, there were rubber witness marks, from both the left and the right tire, in a left turning arc that continued to the edge of the runway. The left tire did not have any flat spots consistent with the tire being locked. The master cylinder was full of hydraulic fluid and there was no evidence of a fluid leak. The brake caliper, brake pads, and left brake disc were all in good condition. The inspector was unable to duplicate the locked brake condition. An examination of the airframe and flight controls revealed no anomalies that would have resulted in a loss of directional control during a landing roll.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	78,Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 With waivers/limitations	<b>Last FAA Medical Exam:</b>	January 12, 2017
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	January 28, 2017
<b>Flight Time:</b>	3898 hours (Total, all aircraft), 31 hours (Total, this make and model), 3898 hours (Pilot In Command, all aircraft), 9.6 hours (Last 90 days, all aircraft), 8.3 hours (Last 30 days, all aircraft), 2.2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N182DW
<b>Model/Series:</b>	182 R	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1979	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	R18200982
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	March 16, 2017 Annual	<b>Certified Max Gross Wt.:</b>	3100 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3021.9 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-540-J3C5D
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	235 Horsepower
<b>Operator:</b>	On file	<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>	KVER, 715 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	12:55 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	12 knots / 16 knots	<b>Turbulence Type Forecast/Actual:</b>	/ None
<b>Wind Direction:</b>	170°	<b>Turbulence Severity Forecast/Actual:</b>	/ N/A
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	29°C / 20°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Clinton, OK (KCLK)	<b>Type of Flight Plan Filed:</b>	VFR
<b>Destination:</b>	Boonville, MO (KVER)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	10:45 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>	Jesse Viertel Memorial Airport KVER	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	715 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	18	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	4000 ft / 75 ft	<b>VFR Approach/Landing:</b>	Full stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	38.946666, -92.693336(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Rodi, Jennifer
<b>Additional Participating Persons:</b>	Rod L McLaughlin; Federal Aviation Administration; Kansas City, MO
<b>Original Publish Date:</b>	November 15, 2018
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=95876">https://data.nts.gov/Docket?ProjectID=95876</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](#).