



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Denver, CO	<b>Accident Number:</b>	GAA19CA306
<b>Date &amp; Time:</b>	06/02/2019, 0800 MDT	<b>Registration:</b>	N581SD
<b>Aircraft:</b>	Cirrus SR22	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Hard landing	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Instructional		

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## Analysis

The pilot under instruction reported that he had recently purchased the airplane and that the accident occurred during his third dual-instruction flight in the airplane. The flight instructor requested a short approach to accomplish a simulated engine failure approach and landing. The pilot reported that ground instruction for the simulated engine failure was never accomplished. The instructor requested a simulated emergency landing on runway 17, which was denied by the tower controller due to traffic. The instructor then requested a simulated emergency landing on runway 28, which the tower controller approved. The airplane intersected the extended centerline of runway 28 at a 45° angle. The instructor told the pilot to reduce the power to idle and initiate the approach at 100 knots. The pilot recalled that, by the time glide speed was established, "we were on top of the numbers." The instructor told the pilot to turn right, but he believed that it was too late to turn and align the airplane with the runway heading. The airplane touched down hard on the left edge of the runway, exited the left side of the runway, and impacted runway lights.

The flight instructor reported that he had provided the pilot ground instruction on how to execute a power-off landing at least twice. The instructor added that, when he told the pilot to start turning, he did not respond and that, after the airplane overshot the right turn point toward the runway, he took the controls, leveled the airplane, and then applied full power. After the airplane exited the left side of the runway, he pulled the power off. His hand was on top of the pilot's, who subsequently added full power. The instructor reduced the power, but the pilot added full power again. The instructor was able to steer the airplane and stop it on the runway.

A review of surveillance footage of the accident provided by the Federal Aviation Administration revealed that, during the approach, the airplane converged on about a 45° angle toward runway 28. When the airplane approached the runway numbers, the right wing dropped rapidly, and the nose pitched up. Seconds later, the left wing dropped rapidly, and the airplane impacted the left side of the runway just before reaching the runway aim point markings. The airplane exited the left side of the runway and collided with runway lighting. The airplane remained upright and returned to the runway surface before coming to a stop about mid-field. The airplane sustained substantial damage to the

elevator and vertical stabilizer. Both pilots reported that there were no preaccident 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 improper control inputs on approach, which resulted in a hard landing near the runway edge, a runway excursion, and impact with runway lighting. Contributing to the accident was the flight instructor's delayed remedial action.

### Findings

<b>Aircraft</b>	Directional control - Not attained/maintained (Cause)
<b>Personnel issues</b>	Use of equip/system - Pilot (Cause) Aircraft control - Pilot (Cause) Delayed action - Instructor/check pilot (Factor)
<b>Environmental issues</b>	Runway/taxi/approach light - Effect on operation (Cause)

## Factual Information

### History of Flight

Landing-flare/touchdown	Miscellaneous/other Hard landing (Defining event) Collision with terr/obj (non-CFIT)
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### Pilot Information

Certificate:	Private	Age:	70, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without Waivers/Limitations	Last FAA Medical Exam:	06/19/2017
Occupational Pilot:	No	Last Flight Review or Equivalent:	07/15/2017
Flight Time:	(Estimated) 1444 hours (Total, all aircraft), 7 hours (Total, this make and model), 1444 hours (Pilot In Command, all aircraft), 8 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

### Flight Instructor Information

Certificate:	Airline Transport; Commercial; Flight Engineer	Age:	65, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	Toxicology Performed:	No
Medical Certification:	Class 2 With Waivers/Limitations	Last FAA Medical Exam:	03/26/2019
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	01/31/2018
Flight Time:	(Estimated) 18000 hours (Total, all aircraft), 67 hours (Total, this make and model)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Cirrus	Registration:	N581SD
Model/Series:	SR22 Undesignat	Aircraft Category:	Airplane
Year of Manufacture:	2008	Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	3171
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	3100 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	753 Hours at time of accident	Engine Manufacturer:	Continental
ELT:	C91 installed, not activated	Engine Model/Series:	IO-550-N
Registered Owner:	On file	Rated Power:	315 hp
Operator:	On file	Operating Certificate(s) Held:	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KAPA, 5883 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1353 UTC	Direction from Accident Site:	90°
Lowest Cloud Condition:	Few / 8000 ft agl	Visibility	10 Miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.08 inches Hg	Temperature/Dew Point:	17° C / 8° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Denver, CO (APA)	Type of Flight Plan Filed:	None
Destination:	Denver, CO (APA)	Type of Clearance:	VFR
Departure Time:	0715 MDT	Type of Airspace:	Class D

## Airport Information

Airport:	Centennial (APA)	Runway Surface Type:	Asphalt
Airport Elevation:	5885 ft	Runway Surface Condition:	Dry
Runway Used:	28	IFR Approach:	None
Runway Length/Width:	4800 ft / 75 ft	VFR Approach/Landing:	Full Stop; Traffic Pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<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>	39.570000, -104.849444 (est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Michael A Hicks	<b>Report Date:</b>	04/13/2020
<b>Additional Participating Persons:</b>	Aaron E Gonzales; FAA; Denver, CO		
<b>Publish Date:</b>	04/13/2020		
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.		
<b>Investigation Docket:</b>	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=99534">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=99534</a>		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).