



# Aviation Investigation Final Report

<b>Location:</b>	Cheyenne, Wyoming	<b>Accident Number:</b>	GAA19CA384
<b>Date &amp; Time:</b>	July 1, 2019, 21:00 Local	<b>Registration:</b>	N387G
<b>Aircraft:</b>	American Aviation AA5	<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 - Personal		

## Analysis

The pilot reported that, while en route, she diverted due to deteriorating weather at the intended destination. She added that, during landing, a second pilot in the right seat reported a right quartering crosswind and that, during the "transition to the roundout," she observed 65 knots on the airspeed gauge, she heard the stall warning horn, and the airplane developed a high sink rate. She attempted to go around, but the airplane landed hard and veered left. The airplane became airborne again, and the pilot attempted to regain the runway centerline, but the fuselage and wing struck objects on the left side of the runway. She decided a go-around was not possible, so she reduced power and landed the airplane in grass left of the runway.

The airplane sustained substantial damage to the right wing.

The pilot reported that there were no preaccident mechanical failures or malfunctions with the airplane that would have precluded normal operation.

An automated weather observation station located about 3 miles west of the airport reported that, about 2 minutes before the accident, the wind was from 020° at 8 knots and that, about 32 minutes after the accident, the wind was from 020° at 9 knots. The pilot landed the airplane on runway 27.

## 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 a proper descent rate and landing flare during landing with a tailwind, which resulted in a hard landing and a subsequent loss of directional control, runway excursion, and collision with objects.

## Findings

<b>Aircraft</b>	Landing flare - Not attained/maintained
<b>Aircraft</b>	Directional control - Not attained/maintained
<b>Aircraft</b>	Descent rate - Not attained/maintained
<b>Personnel issues</b>	Aircraft control - Pilot
<b>Environmental issues</b>	Tailwind - Effect on operation

## Factual Information

### History of Flight

<b>Approach-VFR pattern final</b>	Miscellaneous/other
<b>Landing</b>	Hard landing (Defining event)
<b>Landing</b>	Loss of control on ground
<b>Landing</b>	Runway excursion
<b>Landing</b>	Collision with terr/obj (non-CFIT)

### Pilot Information

<b>Certificate:</b>	Commercial; Military; Private	<b>Age:</b>	43,Female
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Unknown
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	February 25, 2019
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	May 3, 2019
<b>Flight Time:</b>	(Estimated) 965.9 hours (Total, all aircraft), 56.9 hours (Total, this make and model), 486.5 hours (Pilot In Command, all aircraft), 59.5 hours (Last 90 days, all aircraft), 50.2 hours (Last 30 days, all aircraft), 1.6 hours (Last 24 hours, all aircraft)		

### Pilot Information

<b>Certificate:</b>	Commercial; Military; Private	<b>Age:</b>	38,Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Unknown
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	February 18, 2019
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	(Estimated) 1637 hours (Total, all aircraft), 130 hours (Total, this make and model), 1010 hours (Pilot In Command, all aircraft), 195 hours (Last 90 days, all aircraft), 121 hours (Last 30 days, all aircraft), 10 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	American Aviation	<b>Registration:</b>	N387G
<b>Model/Series:</b>	AA5 A	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1977	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal; Utility	<b>Serial Number:</b>	AA5A0387
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	April 9, 2018 100 hour	<b>Certified Max Gross Wt.:</b>	2200 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	4245.6 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	C91 installed, not activated	<b>Engine Model/Series:</b>	O-320-E2G
<b>Registered Owner:</b>	Thunderfighter Llc	<b>Rated Power:</b>	160 Horsepower
<b>Operator:</b>	Western Air Flight Academy	<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>	Dusk
<b>Observation Facility, Elevation:</b>	KFEW, 6160 ft msl	<b>Distance from Accident Site:</b>	3 Nautical Miles
<b>Observation Time:</b>	03:58 Local	<b>Direction from Accident Site:</b>	248°
<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>	8 knots / None	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	20°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.23 inches Hg	<b>Temperature/Dew Point:</b>	15°C / 12°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Casper, WY (CPR )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Denver, CO (BJC )	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	18:30 Local	<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	CHEYENNE RGNL/JERRY OLSON FIEL CYS	<b>Runway Surface Type:</b>	Concrete
<b>Airport Elevation:</b>	6159 ft msl	<b>Runway Surface Condition:</b>	Wet
<b>Runway Used:</b>	27	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	9270 ft / 150 ft	<b>VFR Approach/Landing:</b>	Full stop

## 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>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	41.154998,-104.795555(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Benhoff, Kathryn
<b>Additional Participating Persons:</b>	Robert Nance; FAA; Denver, CO
<b>Original Publish Date:</b>	December 2, 2019
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<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=99764">https://data.nts.gov/Docket?ProjectID=99764</a>

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