



# Aviation Investigation Final Report

<b>Location:</b>	Casper, Wyoming	<b>Accident Number:</b>	WPR23LA277
<b>Date &amp; Time:</b>	July 17, 2023, 07:20 Local	<b>Registration:</b>	N277GH
<b>Aircraft:</b>	EVOLUTION AIRCRAFT INC REVOLT	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Aircraft wake turb encounter	<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The pilot reported being cleared to land by air traffic control and reported being cautioned of wake turbulence by an airplane that landed ahead in sequence. The pilot aimed to touchdown at a point beyond the presence of the wake turbulence. The airplane encountered light turbulence prior to landing and contacted the runway misaligned with the runway centerline. The pilot applied opposite input correction which produced a roll force resulting in the right wing contacting the ground, substantially damaging the airplane. The pilot reported that there were no preaccident mechanical failures or malfunctions 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 loss of directional control during landing after encountering wake turbulence.

## Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Landing flare - Capability exceeded

## Factual Information

### History of Flight

<b>Landing-flare/touchdown</b>	Aircraft wake turb encounter (Defining event)
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### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	61
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	Glider	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	
<b>Instructor Rating(s):</b>	Sport pilot	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 3 With waivers/limitations	<b>Last FAA Medical Exam:</b>	September 26, 2022
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	November 8, 2021
<b>Flight Time:</b>	2000 hours (Total, all aircraft), 25 hours (Total, this make and model), 40 hours (Last 90 days, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	EVOLUTION AIRCRAFT INC	<b>Registration:</b>	N277GH
<b>Model/Series:</b>	REVOLT	<b>Aircraft Category:</b>	Weight-shift
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	001022
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	Annual	<b>Certified Max Gross Wt.:</b>	
<b>Time Since Last Inspection:</b>	15 Hrs	<b>Engines:</b>	1
<b>Airframe Total Time:</b>	74.7 Hrs at time of accident	<b>Engine Manufacturer:</b>	
<b>ELT:</b>		<b>Engine Model/Series:</b>	
<b>Registered Owner:</b>	KC CONSTRUCTION	<b>Rated Power:</b>	
<b>Operator:</b>	KC CONSTRUCTION	<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>	KCPR, 5290 ft msl	<b>Distance from Accident Site:</b>	1 Nautical Miles
<b>Observation Time:</b>	07:53 Local	<b>Direction from Accident Site:</b>	224°
<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>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.14 inches Hg	<b>Temperature/Dew Point:</b>	19°C / 9°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Casper, WY	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Casper, WY (CPR)	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	08:00 Local	<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	Casper/Natrona County Airport KCPR	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	5344 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	03	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	10165 ft / 150 ft	<b>VFR Approach/Landing:</b>	Full stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Minor	<b>Latitude, Longitude:</b>	42.905861,-106.46363

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Basti, Paymaun
<b>Additional Participating Persons:</b>	Bruce Hanson; FAA FSFO; Casper, WY
<b>Original Publish Date:</b>	January 4, 2024
<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.nts.gov/Docket?ProjectID=192666">https://data.nts.gov/Docket?ProjectID=192666</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](#).