Aviation Investigation Final Report

Location:	Jackson, Wyoming	**Accident Number:**	WPR20CA267
Date & Time:	August 3, 2020, 08:13 Local	**Registration:**	N12171
Aircraft:	Cameron A 315	**Aircraft Damage:**	Substantial
Defining Event:	Hard landing	**Injuries:**	1 Serious, 8 Minor, 10 None
Flight Conducted Under:	Part 91: General aviation - Business		

Analysis

The balloon pilot reported that while on final approach to land, about 20 ft above the ground, he saw two balloons he was following, both on their final approaches, suddenly reverse direction, by a strong wind from the southwest. Shortly after, the accident balloon lifted about 50 ft above the ground, followed by a downdraft. The pilot maneuvered the balloon to land and activated both burners to cushion the landing. When the descent rate was less than 500 ft per minute, he deactivated the burners and shouted to the passengers to "hold on" and pulled the quick vent deflate line before touchdown. The balloon landed hard, skidded on its side about 300 ft, and came to rest against an irrigation ditch embankment. The balloon sustained substantial damage to the envelope and a passenger sustained a serious injury.

The balloon pilot reported that there were no mechanical malfunctions or failures to the balloon that would have precluded normal operation.

A weather study revealed that the weather encountered by the balloon flight was not forecasted.

Probable Cause and Findings

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

The balloon pilot's inability to maintain the proper descent rate during the balloon's approach to landing during un-forecasted weather, which resulted in a hard landing.

Findings

Aircraft	Descent/approach/glide path - Attain/maintain not possible
Personnel issues	Aircraft control - Pilot
Environmental issues	Downdraft - Effect on operation

Factual Information

History of Flight

Approach	Other weather encounter
Landing	Hard landing (Defining event)

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	68,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Center
Other Aircraft Rating(s):	Balloon; Glider	**Restraint Used:**	None
Instrument Rating(s):	Airplane	**Second Pilot Present:**	
Instructor Rating(s):	Airplane single-engine	**Toxicology Performed:**	No
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	June 1, 2020
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	May 25, 2020
Flight Time:	(Estimated) 4500 hours (Total, all aircraft), 400 hours (Total, this make and model), 50 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cameron	**Registration:**	N12171
Model/Series:	A 315 No Series	**Aircraft Category:**	Balloon
Year of Manufacture:	2006	**Amateur Built:**	
Airworthiness Certificate:	Balloon	**Serial Number:**	6453
Landing Gear Type:	None	**Seats:**	17
Date/Type of Last Inspection:	October 1, 2019 Annual	**Certified Max Gross Wt.:**	6300 lbs
Time Since Last Inspection:	10 Hrs	**Engines:**	8 Liquid rocket
Airframe Total Time:	461.7 Hrs at time of accident	**Engine Manufacturer:**	Cameron
ELT:	Not installed	**Engine Model/Series:**	Sirocco
Registered Owner:	Wyoming Balloon Co	**Rated Power:**	
Operator:	Wyoming Balloon Co	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Dawn
Observation Facility, Elevation:	KJAC,6451 ft msl	**Distance from Accident Site:**	6 Nautical Miles
Observation Time:	05:00 Local	**Direction from Accident Site:**	30°
Lowest Cloud Condition:	Clear	**Visibility**	
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:		**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:		**Temperature/Dew Point:**	
Precipitation and Obscuration:			
Departure Point:	Teton Village , WY	**Type of Flight Plan Filed:**	
Destination:	Teton Village , WY	**Type of Clearance:**	VFR
Departure Time:	07:07 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Serious, 8 Minor, 9 None	**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	1 Serious, 8 Minor, 10 None	**Latitude, Longitude:**	43.587501,-110.82777(est)

Administrative Information

Investigator In Charge (IIC):	Nepomuceno, Eleazar
Additional Participating Persons:	
Original Publish Date:	August 26, 2021
Last Revision Date:	
Investigation Class:	Class 4
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=101783