Aviation Investigation Final Report

Location:	Creston, Iowa	**Accident Number:**	CHI07CA300
Date & Time:	September 16, 2007, 08:15 Local	**Registration:**	N9539G
Aircraft:	Cameron Balloons O-77	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Serious, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

During a high-wind landing the balloon landed hard, the pilot was ejected from the basket, and the passenger pulled the envelope deflation line. The balloon came to rest against a barbed-wire fence. The passenger was seriously injured with a broken arm and the balloon's envelope was substantially damaged with several fabric tears and punctures. The accident flight was part of an organized balloon launch in conjunction with a balloon festival. At 0630, the pilot attended a prelaunch pilot meeting that included a weather briefing. At the time of that briefing the surface wind velocity was 4 knots. The surface wind velocity was forecasted to increase to approximately 10 knots by 1000 local time. Upon departure the encountered wind was greater than forecasted. As soon as it was practicable, the pilot performed a high-wind landing to an open hayfield at which time the hard landing was encountered. At 0819, a nearby weather station reported the surface wind was from the south-southeast at 4 knots, gusting to 20 knots. During the subsequent accident investigation, a wind model estimated the wind direction and velocity at approximately 700 feet agl to be from the south at 18 knots.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadvertent flight into adverse (high wind) weather conditions, which resulted in a hard landing. Contributing to the accident was the high wind encountered during the balloon flight and the barbed-wire fence.

Findings

Occurrence #1: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
1. (F) WEATHER CONDITION - HIGH WIND
2. (C) FLIGHT INTO ADVERSE WEATHER - INADVERTENT - PILOT IN COMMAND
3. (F) OBJECT - FENCE

Factual Information

During a high-wind landing the balloon landed hard, the pilot was ejected from the basket, and the passenger pulled the envelope deflation line. The balloon came to rest against a barbed-wire fence. The passenger was seriously injured with a broken arm and the balloon's envelope was substantially damaged with several fabric tears and punctures. The accident flight was part of an organized balloon launch in conjunction with a balloon festival. At 0630, the pilot attended a prelaunch pilot meeting that included a weather briefing. At the time of that briefing the surface wind velocity was 4 knots. The surface wind velocity was forecast to increase to approximately 10 knots by 1000 local time. Upon departure the encountered wind was greater than forecast. As soon as it was practicable, the pilot performed a high-wind landing to an open hayfield at which time the hard landing was encountered. At 0819, a nearby weather station reported the surface wind was from the south-southeast at 4 knots, gusting to 20 knots. During the subsequent accident investigation, a wind model estimated the wind direction and velocity at approximately 700 feet agl to be from the south at 18 knots.

Pilot Information

Certificate:	Private	**Age:**	52,Female
Airplane Rating(s):	None	**Seat Occupied:**	
Other Aircraft Rating(s):	Balloon	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	None None	**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	July 1, 2007
Flight Time:	108 hours (Total, all aircraft), 108 hours (Total, this make and model), 91 hours (Pilot In Command, all aircraft), 12 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cameron Balloons	**Registration:**	N9539G
Model/Series:	O-77	**Aircraft Category:**	Balloon
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	5585
Landing Gear Type:	None	**Seats:**	
Date/Type of Last Inspection:	June 1, 2007 Annual	**Certified Max Gross Wt.:**	1540 lbs
Time Since Last Inspection:		**Engines:**	0
Airframe Total Time:		**Engine Manufacturer:**	
ELT:	Not installed	**Engine Model/Series:**	
Registered Owner:	On file	**Rated Power:**	
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	GFZ,1361 ft msl	**Distance from Accident Site:**	12 Nautical Miles
Observation Time:	08:19 Local	**Direction from Accident Site:**	360°
Lowest Cloud Condition:	Clear	**Visibility**	12 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots / 20 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	147°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.03 inches Hg	**Temperature/Dew Point:**	11°C / 6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Creston, IA	**Type of Flight Plan Filed:**	None
Destination:	Creston, IA	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Serious	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious, 1 None	**Latitude, Longitude:**	41.049682,-94.359718(est)

Administrative Information

Investigator In Charge (IIC):	Fox, Andrew
Additional Participating Persons:	Terry Warren; Federal Aviation Administration - Des Moines; Des Moines, IA
Original Publish Date:	November 29, 2007
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=66914