Aviation Investigation Final Report

Location:	Frisco, Texas	**Accident Number:**	DFW06CA161
Date & Time:	June 14, 2006, 20:00 Local	**Registration:**	N1410C
Aircraft:	Lindstrand Balloons 105A	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Other work use		

Analysis

The 6,500-hour airline transport rated pilot reported on the Pilot/Operator Accident Incident Report (NTSB Form 6120.1) that he elected to land the hot air balloon in a large open field that was bordered on the approach heading by a large housing area that contained mostly 2-story homes, and was bordered by utility power lines. The pilot added that after clearing the power lines, he initiated his planned shallow approach to the open field. The pilot was aware that the grass at the intended landing location was tall, approximately knee high. The pilot discussed with his balloon pilot rated passenger that he would turn off the pilot light valve on one burner and only use the second burner until he was assured clearance of obstacles for a safe landing. After the balloon cleared the power lines, the pilot "vented for approximately 1 second" and began a gentle descent. The pilot added that "it appeared my approach angle was good" and he announced to his passenger that he was going to turn off the second burner for landing. The approach angle was then noted to be near vertical and a hard landing was imminent. During the hard landing sequence the pilot was ejected from the basket. The approximate 200 pounds of weight change caused the balloon to become airborne again. The pilot rated passenger, who remained in the basket, relit a burner in an attempt to get heat back into the balloon. With the balloon top out and the balloon mouth closed, fabric had to be burned away in an attempt to get heat into the envelope to slow the descent. The basket again made contact with the ground and the passenger elected to exit the basket as the lower panels of the balloon were on fire. The balloon again became airborne with no one on board. The basket was dragged across the field creating several small grass fires and came to rest upon being entangled with a light pole. The pilot and passenger were not injured. The basket was destroyed and the balloon was substantially damaged. The grass fires and the balloon fire were extinguished by the local fire department. Weather at the time was reported to be clear skies, winds 160 degrees at 12 knots, visibility of 10 statute miles and a temperature of 91 degrees Fahrenheit.

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 the proper glidepath while landing. Contributing factors were the prevailing high winds and the downdraft encountered on final approach.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: LANDING

Findings
1. (F) WEATHER CONDITION - DOWNDRAFT
2. (F) WEATHER CONDITION - HIGH WIND

Occurrence #2: HARD LANDING
Phase of Operation: DESCENT - UNCONTROLLED

Findings
3. (C) PROPER GLIDEPATH - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

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Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	**Age:**	57,Male
Airplane Rating(s):	Single-engine sea; Multi-engine land	**Seat Occupied:**	Unknown
Other Aircraft Rating(s):	Balloon; Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Helicopter; Instrument airplane; Instrument helicopter	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	January 1, 2006
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	6500 hours (Total, all aircraft), 10 hours (Total, this make and model), 3700 hours (Pilot In Command, all aircraft), 5 hours (Last 90 days, all aircraft), 0 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Lindstrand Balloons	**Registration:**	N1410C
Model/Series:	105A	**Aircraft Category:**	Balloon
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	5184
Landing Gear Type:	None	**Seats:**	0
Date/Type of Last Inspection:	August 1, 2005 Annual	**Certified Max Gross Wt.:**	1950 lbs
Time Since Last Inspection:		**Engines:**	0
Airframe Total Time:		**Engine Manufacturer:**	
ELT:	Not installed	**Engine Model/Series:**	
Registered Owner:	Airventure Balloonport, Inc	**Rated Power:**	
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:	Airventure Baslloonport, Inc	**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	12 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	160°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.93 inches Hg	**Temperature/Dew Point:**	33°C / 10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Plano, TX	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	19:00 Local	**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	2 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	Both in-flight and on-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	33.121944,-96.792221

Administrative Information

Investigator In Charge (IIC):	Gamble, William
Additional Participating Persons:	FAA Fort Worth FSDO; Fort Worth, TX
Original Publish Date:	October 3, 2006
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=63914