



Aviation Investigation Final Report

Location:	GASBURG, Virginia	Accident Number:	NYC99LA118
Date & Time:	May 23, 1999, 08:10 Local	Registration:	N9070T
Aircraft:	Balloon Works FIREFLY-7	Aircraft Damage:	None
Defining Event:		Injuries:	1 Serious, 2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The hot air balloon launched under light wind conditions. As the balloon was approaching the first steerage, at about 50 feet above the ground, the pilot had to climb the balloon to 300 feet to complete the turn. During the climb, a windshear flattened out one side of the balloon, re-inflating a moment later, violently shaking the entire aircraft. The pilot decided to abort the flight. A hay field was spotted about 4 miles ahead of the balloon. As the balloon neared the ground, the winds continued to blow, and the basket collided with a hay bail, at a speed of about 15 knots. After impacting the hay bail, the basket touched down, dragged along the ground, and rolled over. The balloon then collapsed completely to the ground.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The unforecast high winds that required the pilot in command to make a precautionary landing.

Findings

Occurrence #1: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: LANDING

- Findings
1. OBJECT - OTHER

2. (C) WEATHER CONDITION - HIGH WIND
3. PRECAUTIONARY LANDING - PERFORMED - PILOT IN COMMAND

Factual Information

On May 23, 1999, about 0810 Eastern Daylight Time, a Balloon Works, Firefly-7, N9070T, was not damaged while landing in a field, near Gasburg, Virginia. The certificated pilot and one passenger were not injured. A second passenger was seriously injured. Visual meteorological conditions prevailed and no flight plan was filed for the local flight conducted under 14 CFR Part 91.

In a written statement, the pilot reported that he was a participant in a hot air balloon race. A weather briefer was present for the race, and had launched a 12-inch helium weather balloon. The pilot was present with the weather briefer when the weather balloon was launched, and they observed the surface wind from 210 degrees at less than 5 knots, with no significant wind shifts up through 800 feet.

The hot air balloon launched under light wind conditions, about 0745. As the balloon was approaching the first steerage, at about 50 feet above the ground, the pilot had to climb the balloon to 300 feet to complete the turn. During the climb, a windshear flattened out one side of the balloon, re-inflating a moment later, violently shaking the entire balloon. The pilot decided to abort the race, and informed the passenger that they would be landing in the first available field. A hay field was spotted about 4 miles ahead of the balloon, and the pilot maneuvered to it. The field was several hundred yards long, with power lines on the far end. Several other balloons had used the field to land, due to encountering the same type of winds. As the balloon neared the ground, the winds continued to blow, and the basket collided with a hay bail, at a speed of about 15 knots. Event officials, who were on the ground, and witnessed the accident, estimated the speed of the balloon at 20 knots. After impacting the hay bail, the basket touched down, dragged along the ground, and rolled over. The balloon then collapsed completely to the ground.

An airport located 10 miles to the northwest, reported, clear skies, winds from 210 degrees at 6 knots.

Pilot Information

Certificate:	Commercial	Age:	50, Male
Airplane Rating(s):	None	Seat Occupied:	Unknown
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:	UNK	Last Flight Review or Equivalent:	
Flight Time:	830 hours (Total, all aircraft), 338 hours (Total, this make and model), 778 hours (Pilot In Command, all aircraft), 16 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Balloon Works	Registration:	N9070T
Model/Series:	FIREFLY-7 FIREFLY-7	Aircraft Category:	Balloon
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	24634A
Landing Gear Type:		Seats:	0
Date/Type of Last Inspection:	March 16, 1999 Annual	Certified Max Gross Wt.:	1980 lbs
Time Since Last Inspection:	8 Hrs	Engines:	Unknown
Airframe Total Time:	365 Hrs	Engine Manufacturer:	
ELT:	Not installed	Engine Model/Series:	
Registered Owner:	DAVID C. TOMASETTI	Rated Power:	
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	AVC ,430 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	07:01 Local	Direction from Accident Site:	150°
Lowest Cloud Condition:	Clear	Visibility	2.5 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	18°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	LAKE GASTON RES, VA (NONE)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	07:45 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	Dry;Vegetation
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Precautionary landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	None
Passenger Injuries:	1 Serious, 1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious, 2 None	Latitude, Longitude:	36.559951,-77.890235(est)

Administrative Information

Investigator In Charge (IIC):	Demko, Stephen
Additional Participating Persons:	ROBERT CULBERSON; RICHMOND , VA
Original Publish Date:	August 10, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=46378

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