



# Aviation Investigation Final Report

<b>Location:</b>	LITTLETON, Colorado	<b>Accident Number:</b>	DEN85LA078
<b>Date &amp; Time:</b>	January 13, 1985, 09:15 Local	<b>Registration:</b>	N81DS
<b>Aircraft:</b>	RAVEN S55A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	3 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

THE BALLOON ENVELOPE COLLIDED WITH POWER LINES AFTER DRAGGING THE BASKET & OCCUPANTS APRX 200 YARDS ALONG AN OPEN FLD AND THROUGH A FENCE WHICH DAMAGED THE BASKET CONTAINING THE OCCUPANTS. THE BALLOON PLT SAID THAT THE WIND WAS ONLY 5 KTS AT TAKEOFF BUT AFTER 30 MINUTES OF FLT A WIND DESCRIBED BY THE PLT AS 'SHEER (SIC) FROM APRX 150 FT TO SURFACE, 30-35 MPH-FLAPGS ON FLAG POLES STANDING STRAIGHT OUT-LOOKED FOR LNDG AREA-VENTED THE BALLOON & PREPARED FOR LNDG.' FURTHER ATATEMENT BY THE PLT CONTAINED INFO THAT THE VENT OPENING CREATED A SAIL EFFECT TO INCREASE THE RESULTANT DRAG. PLT ALSO SAID, 'TRIED PULLING TOP OUT OF BALLOON BUT ONLY 1/3 OF TOP RELEASED CAUSING A DRAGGING EFFECT.' THE BALLOON ENVELOPE FINALLY CONTACTED & DRAPED OVER THE POWER LINES & WAS DAMAGED DURING THE CONTACT & LATER DURING REMOVAL. INTERVIEWS WITH SEVERAL COMMERCIAL BALLOON PLTS & A REPRESENTATIVE OF RAVEN INDUSTRIES, SIOUX FALLS, SD, REVEALED THAT MOST BALLOON PLTS CAN EXPECT A SAFE LNDG IN WINDS OF 10 MPH OR LESS & A RISK IN HIGHER WINDS.

## Probable Cause and Findings

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

## Findings

Occurrence #1: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

### Findings

1. (F) WEATHER CONDITION - HIGH WIND
2. (C) PREFLIGHT PLANNING/PREPARATION - INADEQUATE - PILOT IN COMMAND
3. (C) PREFLIGHT PLANNING/PREPARATION - INACCURATE - ATC PERSONNEL(FSS)
4. (C) COMPENSATION FOR WIND CONDITIONS - NOT UNDERSTOOD - PILOT IN COMMAND
5. (C) JUDGMENT - INACCURATE - PILOT IN COMMAND

-----

Occurrence #2: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: LANDING - ROLL

### Findings

6. (F) OBJECT - FENCE
7. (F) OBJECT - WIRE, TRANSMISSION
8. (C) BALLOON EQUIPMENT, ENVELOPE - IMPROPER
9. (C) BALLOON EQUIPMENT, ENVELOPE - FAILURE, PARTIAL
10. (F) BALLOON EQUIPMENT, BASKET - PENETRATED

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	35,Female
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Unknown
<b>Other Aircraft Rating(s):</b>	Balloon	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	None None	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	144 hours (Total, all aircraft), 144 hours (Total, this make and model), 126 hours (Pilot In Command, all aircraft), 2 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	RAVEN	<b>Registration:</b>	N81DS
<b>Model/Series:</b>	S55A S55A	<b>Aircraft Category:</b>	Balloon
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	748
<b>Landing Gear Type:</b>		<b>Seats:</b>	
<b>Date/Type of Last Inspection:</b>	February 16, 1984 Annual	<b>Certified Max Gross Wt.:</b>	600 lbs
<b>Time Since Last Inspection:</b>	30 Hrs	<b>Engines:</b>	0 Unknown
<b>Airframe Total Time:</b>	252 Hrs	<b>Engine Manufacturer:</b>	NONE
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	NONE
<b>Registered Owner:</b>	WYNONA K. SIVERSON	<b>Rated Power:</b>	
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	09:15 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	50 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	30 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	180°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	-7°C / -14°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	CHATFIELD RESER, CO	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	08:27 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	Dirt;Snow
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	Snow
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Precautionary landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	2 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	3 None	<b>Latitude, Longitude:</b>	39.590324,-105.010063(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Tranter, Verlin
<b>Additional Participating Persons:</b>	ALLEN LUNDQUIST; BROOMFIELD , CO
<b>Original Publish Date:</b>	
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=16635">https://data.nts.gov/Docket?ProjectID=16635</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](#).