



# Aviation Investigation Final Report

<b>Location:</b>	ENGLEWOOD, Colorado	<b>Accident Number:</b>	DEN91LA137
<b>Date &amp; Time:</b>	September 21, 1991, 07:45 Local	<b>Registration:</b>	N4036Y
<b>Aircraft:</b>	RAVEN RALLEY RX7	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

DURING AN ATTEMPTED LANDING, THE BALLOON TOUCHED DOWN HARD AND THE BASKET TIPPED OVER. A LOAD CABLE INADVERTENTLY TANGLED IN THE HEATER ACTIVATION DEVICE AND LIT THE BURNER WHICH SET THE ENVELOPE AND SURROUNDING GRASS ON FIRE. THE PILOT EXTINGUISHED BOTH FIRES.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A HARD LANDING AND INADVERTENT DEPLOYMENT OF THE BALLOON HEATER. A FACTOR WAS: INADVERTENT ENTANGLEMENT OF A LOAD CABLE WITH THE HEATER ACTIVATION DEVICE.

## Findings

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

Findings  
1. (C) TOUCHDOWN - ABRUPT - PILOT IN COMMAND  
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Occurrence #2: FIRE/EXPLOSION  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

2. (C) BALLOON EQUIPMENT, BURNER SYSTEM - DEPLOYED INADVERTENTLY
3. (F) BALLOON EQUIPMENT, SUSPENSION SYSTEM/CABLES - ENTANGLED

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	57, Male
<b>Airplane Rating(s):</b>	Single-engine land	<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>	Class 3 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	February 21, 1990
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1544 hours (Total, all aircraft), 121 hours (Total, this make and model), 1503 hours (Pilot In Command, all aircraft), 7 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	RAVEN	<b>Registration:</b>	N4036Y
<b>Model/Series:</b>	RALLEY RX7 RALLEY RX7	<b>Aircraft Category:</b>	Balloon
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	RX7-304
<b>Landing Gear Type:</b>		<b>Seats:</b>	
<b>Date/Type of Last Inspection:</b>	May 18, 1991 Annual	<b>Certified Max Gross Wt.:</b>	1480 lbs
<b>Time Since Last Inspection:</b>	1 Hrs	<b>Engines:</b>	0 Unknown
<b>Airframe Total Time:</b>	201 Hrs	<b>Engine Manufacturer:</b>	
<b>ELT:</b>		<b>Engine Model/Series:</b>	
<b>Registered Owner:</b>	JAMES E. LONG	<b>Rated Power:</b>	
<b>Operator:</b>	FRANK J. RIEHL	<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>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	20 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	10 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	90°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	21°C / -17°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	ENGLEWOOD , CO (NONE)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	07:45 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	0 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	0 ft / 0 ft	<b>VFR Approach/Landing:</b>	Full stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	39.540466,-104.959022(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Wiemeyer, Norman
<b>Additional Participating Persons:</b>	DAVE GONZALES; DENVER , CO
<b>Original Publish Date:</b>	May 3, 1993
<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=18140">https://data.nts.gov/Docket?ProjectID=18140</a>

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