



Aviation Investigation Final Report

Location:	HAMEL, Minnesota	Accident Number:	CHI83LA310
Date & Time:	July 13, 1983, 08:30 Local	Registration:	N1509W
Aircraft:	BALLOON WORKS FIREFLY 8-24	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 Serious, 4 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

DURING FLT, THE PLT USED FUEL FROM 2 OF 4 PROPANE TANKS, THEN SWITCHED TO THE 2ND 2 TANKS & STARTED A DESCENT. AT APRX 300 FT AGL, HE TRIED TO START THE BURNER, BUT COULD NOT GET A LIGHT BECAUSE THE PILOT LIGHT WAS OUT. HE ATTEMPTED TO MANUALLY RELIGHT THE BURNER WITH A FLINT SPARKER, BUT THE BURNER WOULD NOT RELIGHT. SUBSEQUENTLY, THE BALLOON STRUCK A METAL FENCE, BOUNCED & HIT A TRACTOR. FIVE OF THE PASSENGERS FELL OUT. THE PLT & ONE OTHER PASSENGER WERE CARRIED ANOTHER 200 YARDS INTO A SWAMPY AREA. AN EXAM OF THE FUEL SYS SHOWED THAT THE PILOT LIGHT VALVE WAS A TOGGLE TYPE SWITCH NEAR THE 'FIRE 2' VALVE. THE PLT REPORTED THAT HE COULD HAVE INADVERTENTLY STRUCK & SHUT OFF THE PILOT LIGHT VALVE AS HE ROTATED THE 'FIRE 2' VALVE. WHEN CHECKED, THE PILOT LIGHT & BURNER OPERATED NORMALLY. THE 'FIRE 2' WOULD ONLY LIGHT WITH THE FLINT SPARKER WHEN THE VALVE WAS ONLY SLIGHTLY OPENED.

Probable Cause and Findings

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

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CRUISE

Findings

1. (F) BALLOON EQUIPMENT, BURNER SYSTEM - INOPERATIVE
2. (C) FUEL SYSTEM - INADVERTENT DEACTIVATION - PILOT IN COMMAND

Occurrence #2: FORCED LANDING

Phase of Operation: LANDING

Occurrence #3: HARD LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Factual Information

Pilot Information

Certificate:	Commercial	Age:	39, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	Balloon	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	April 28, 1983
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	184 hours (Total, all aircraft), 2 hours (Total, this make and model), 184 hours (Pilot In Command, all aircraft), 53 hours (Last 90 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BALLOON WORKS	Registration:	N1509W
Model/Series:	FIREFLY 8-24 FIREFLY 8-	Aircraft Category:	Balloon
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	5012
Landing Gear Type:		Seats:	
Date/Type of Last Inspection:	February 2, 1983 Annual	Certified Max Gross Wt.:	900 lbs
Time Since Last Inspection:	29 Hrs	Engines:	Unknown
Airframe Total Time:	110 Hrs	Engine Manufacturer:	
ELT:	Not installed	Engine Model/Series:	
Registered Owner:	BALLOON ASCENTIONS UNLIMITED	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:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	20 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	EXCELSIOR, MN	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	06:35 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	Grass/turf
Airport Elevation:		Runway Surface Condition:	Vegetation
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	3 Serious, 3 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 Serious, 4 Minor	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC): Seidlein, George

Additional Participating Persons:

Original Publish Date:

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=12259>

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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](#).