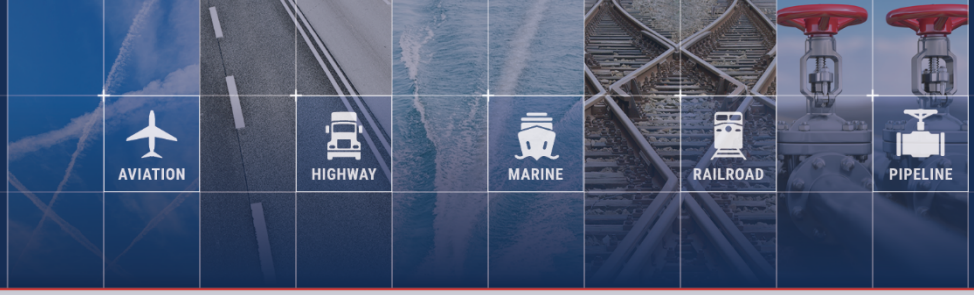

Aviation Investigation Final Report

Location:	DAWSON, Maryland	**Accident Number:**	NYC99FA161
Date & Time:	June 26, 1999, 12:31 Local	**Registration:**	N1548N
Aircraft:	Piper J3C-85	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal, 1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Three Piper J3 Cubs departed an airport in a valley with higher terrain nearby, and a density altitude of about 3,000 feet. Each airplane turned toward rising terrain, consisting of lower finger ridges and canyons, and a higher main ridge. The first airplane carrying only a pilot climbed faster than the terrain, and turned downwind. The second and third airplanes each carried a pilot and passenger and tried to follow similar paths. The pilot of the third airplane, which was operated about 100 pounds (9%) over gross weight, reported he watched the second airplane descend into trees. After overflying the second airplane, he encountered descending air which drove him into the trees. The pilot reported no problems with the airplane or engine. The pilots were briefed on alternate departure routes that would not require an immediate climb over rising terrain, but they were not used. FAA publications advised of the need to download weight when operating with higher density altitudes, and to approach ridgelines at a 45 degree angle to allow for escape in case of turbulence or descending air.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper decision to turn toward rising terrain with inadequate terrain clearance. Factors were the density altitude, downdraft, and the pilot's decision to operate at a weight in excess of the maximum allowable gross weight.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING

Findings
1. (F) WEATHER CONDITION - HIGH DENSITY ALTITUDE
2. (F) WEATHER CONDITION - DOWNDRAFT
3. (F) AIRCRAFT WEIGHT AND BALANCE - EXCEEDED - PILOT IN COMMAND
4. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
5. (C) ALTITUDE/CLEARANCE - INADEQUATE - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: DESCENT - UNCONTROLLED

Findings
6. OBJECT - TREE(S)

Factual Information

Pilot Information

Certificate:	Private	**Age:**	54,U
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Rear
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	November 12, 1998
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	550 hours (Total, all aircraft), 130 hours (Total, this make and model), 40 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N1548N
Model/Series:	J3C-85 J3C-85	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	23081
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	August 27, 1998 Annual	**Certified Max Gross Wt.:**	1220 lbs
Time Since Last Inspection:	130 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	4029 Hrs	**Engine Manufacturer:**	Continental
ELT:	Installed	**Engine Model/Series:**	C-85-12
Registered Owner:	SAMUEL A. LYONS	**Rated Power:**	85 Horsepower
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**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	32°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	DAWSON, MD (NONE)	**Type of Flight Plan Filed:**	None
Destination:	NEW CASTLE, VA (VA85)	**Type of Clearance:**	None
Departure Time:	12:30 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	HIGH ROCK AIRPORT NONE	**Runway Surface Type:**	Grass/turf
Airport Elevation:	760 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	2	**IFR Approach:**	None
Runway Length/Width:	1700 ft / 100 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal, 1 Serious	**Latitude, Longitude:**	39.529312,-78.87976(est)

Administrative Information

Investigator In Charge (IIC):	Hancock, Robert
Additional Participating Persons:	DAVID F GILLEN; BALTIMORE, MD
Original Publish Date:	June 22, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=46667