Aviation Investigation Final Report

Location:	Green Cove Sprg, Florida	**Accident Number:**	MIA03LA109
Date & Time:	May 15, 2003, 19:40 Local	**Registration:**	N93WD
Aircraft:	Bill Darling Rans S9	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated that he performed a normal preflight and started the engine per the checklist. He performed an engine run-up before takeoff which included checking the magnetos; no discrepancies were reported. The flight departed from runway 18 with 8 gallons of automotive fuel, and at approximately 250 feet , the engine failed. The airplane crashed into a tree line, and after coming to rest, he evacuated the airplane. According to an FAA inspector who examined the airplane and accident site area, a witness reported observing the airplane take off from runway 18, and when the flight was approximately 200 feet above ground level during the upwind leg, he heard the engine experience a loss of power. The airplane was observed to bank to the left and continued the turn. The witness lost sight of the airplane due to obstructions and reported hearing the accident. Examination of the accident site by the FAA inspector revealed the airplane descended nearly vertically and came to rest upright in a wooded area. Both wing fuel tanks were breached; the smell of fuel was noted. The propeller was rotated by hand revealing the engine was not seized. Impact damage to the ignition system and fuel injector precluded operation of the engine or bench testing of the components. No determination was made as to the reason for the loss of engine power. Examination of the flight controls revealed no evidence of preimpact failure or malfunction.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power for undetermined reasons.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
1. (F) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: DESCENT - UNCONTROLLED

Findings
2. OBJECT - TREE(S)

Factual Information

On May 15, 2003, about 1940 eastern daylight time, a homebuilt Rans S9, N93WD, registered to and operated by a private individual, collided with trees then the ground following a loss of engine power shortly after takeoff from Haller Airpark, Green Cove Springs, Florida. Visual meteorological conditions prevailed at the time and no flight plan was filed for the 14 CFR Part 91 personal flight. The airplane was substantially damaged and the commercial rated pilot, the sole occupant, sustained serious injuries. The flight was originating at the time of the accident.

The pilot stated that he performed a normal preflight and started the engine per the checklist. He performed an engine run-up before takeoff which included checking the magnetos; no discrepancies were reported. The flight departed from runway 18 with 8 gallons of automotive fuel, and at approximately 250 feet , the engine failed. The airplane crashed into a tree line, and after coming to rest, he evacuated the airplane and crawled to safety.

According to an FAA inspector who examined the airplane and accident site area, a witness reported observing the airplane take off from runway 18, and when the flight was approximately 200 feet above ground level during the upwind leg, he heard the engine experience a loss of power. The airplane was observed to bank to the left and continued the turn. The witness lost sight of the airplane due to obstructions and reported hearing the accident.

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Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	54,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Center
Other Aircraft Rating(s):	Glider; Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	October 15, 2001
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	2652 hours (Total, all aircraft), 77 hours (Total, this make and model), 2470 hours (Pilot In Command, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bill Darling	**Registration:**	N93WD
Model/Series:	Rans S9	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	1287037
Landing Gear Type:	Tailwheel	**Seats:**	1
Date/Type of Last Inspection:	July 1, 2002 Condition	**Certified Max Gross Wt.:**	770 lbs
Time Since Last Inspection:	33.2 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	108.2 Hrs	**Engine Manufacturer:**	Hirth
ELT:	Not installed	**Engine Model/Series:**	2706E
Registered Owner:	George B. Tower Jr.	**Rated Power:**	65 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KSGJ,10 ft msl	**Distance from Accident Site:**	
Observation Time:	19:35 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	9 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	140°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.94 inches Hg	**Temperature/Dew Point:**	25°C / 21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Green Cove Sprg, FL (7FL4)	**Type of Flight Plan Filed:**	None
Destination:	Green Cove Sprg, FL (7FL4)	**Type of Clearance:**	None
Departure Time:	19:40 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Haller Airpark 7FL4	**Runway Surface Type:**	Grass/turf
Airport Elevation:	75 ft msl	**Runway Surface Condition:**	Unknown
Runway Used:	18	**IFR Approach:**	Unknown
Runway Length/Width:	2600 ft / 72 ft	**VFR Approach/Landing:**	Unknown

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious	**Latitude, Longitude:**	29.903055,-81.685836

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	Roy E Miller; FAA Flight Standards District Office; Orlando, FL
Original Publish Date:	June 2, 2004
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=57007