



# Aviation Investigation Final Report

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

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## 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

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Occurrence #1: LOSS OF ENGINE POWER

Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (F) REASON FOR OCCURRENCE UNDETERMINED

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Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

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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.

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. Examination of the flight controls revealed no evidence of preimpact failure or malfunction.

## Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	54, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Center
<b>Other Aircraft Rating(s):</b>	Glider; Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	October 15, 2001
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	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

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

## Meteorological Information and Flight Plan

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

## Airport Information

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

## Wreckage and Impact Information

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

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Monville, Timothy
<b>Additional Participating Persons:</b>	Roy E Miller; FAA Flight Standards District Office; Orlando, FL
<b>Original Publish Date:</b>	June 2, 2004
<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=57007">https://data.nts.gov/Docket?ProjectID=57007</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](#).