



# Aviation Investigation Final Report

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<b>Location:</b>	Joplin, Missouri	<b>Accident Number:</b>	CHI04LA098
<b>Date &amp; Time:</b>	April 3, 2004, 10:34 Local	<b>Registration:</b>	N5223K
<b>Aircraft:</b>	Navion B	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

The airplane sustained substantial damage during a forced landing after a loss of engine power. The pilot reported the airplane had about 54 gallons of fuel on board. He reported the flight normally took one hour and twenty minutes to complete. During the VFR approach for landing, the engine suddenly quit. The pilot performed the emergency procedure checklist for engine restart but without success. He established a 85 mph glide airspeed and executed a forced landing to a highway. He reported that he "held the aircraft 6 or 8 feet above the highway until the aircraft could no longer fly." The airplane contacted the highway wings level but the nose gear collapsed, and then the left and right main gear collapsed. The right wing impacted a road sign and the left wing was sheared off at the wing root when it struck two steel posts. The pilot exited the airplane. He reported smelling fuel and that fuel was "running out of the right tip tank." The inspection of the engine revealed that all cylinders exhibited thumb compression, and spark was verified from both magnetos to all ignition leads. All spark plugs were in good condition. Fuel was found in the supply line to the engine driven fuel pump. The engine driven fuel pump was disassembled and proper operation was verified.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of engine power for undetermined reasons. The posts, unsuitable terrain and signs were factors to the accident.

### Findings

Occurrence #1: LOSS OF ENGINE POWER  
Phase of Operation: APPROACH

#### Findings

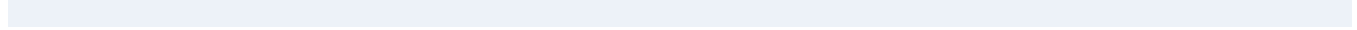
1. (C) REASON FOR OCCURRENCE UNDETERMINED  
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Occurrence #2: FORCED LANDING  
Phase of Operation: EMERGENCY DESCENT/LANDING  
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Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT  
Phase of Operation: EMERGENCY DESCENT/LANDING

#### Findings

2. (C) UNSUITABLE TERRAIN OR TAKEOFF/LANDING/TAXI AREA - ENCOUNTERED  
3. (F) OBJECT - SIGN  
4. (F) OBJECT - POLE



## Factual Information

On April 3, 2004, at 1034 central standard time, a Navion B, N5223K, sustained substantial damage during a forced landing near Joplin, Missouri, after a loss of engine power. The pilot was not injured. The 14 CFR Part 91 personal flight departed Lonoke, Arkansas, and was en route to Joplin Regional Airport (JLN), Joplin, Missouri. Visual meteorological conditions prevailed at the time of the accident. No flight plan was filed.

The pilot reported that he conducted a preflight of the airplane around 0830. The pilot reported that he had fueled the airplane with 33.6 gallons. The airplane's main tanks were topped off and had 20 gallons in each tank, and the tip tanks had about 7 - 8 gallons in each tank. He reported the flight normally took one hour and twenty minutes to complete.

He reported that he departed and climbed to 6,500 feet mean sea level (msl) for cruise flight. He reduced engine power to 2,250 RPM, set 20 inches of manifold pressure, and leaned the fuel mixture to 100 degrees rich of peak exhaust gas temperature (EGT). He reported the fuel consumption was 13.1 gallons per hour. He reported that when he was 25 miles from JLN, the main fuel tank gauge indicated 25 gallons of fuel remaining, and the engine analyzer indicated about 18 gallons of fuel had been used.

The pilot reported that when he was five miles from JLN, he was told he was number two for landing behind a corporate jet. The pilot reported that he stopped his descent at 2,800 feet msl and made a left turn to the west for spacing and maintained 100 mph indicated airspeed. After less than a minute the pilot made a right turn back to the airport. The pilot reported, "Shortly after that, the engine suddenly quit."

The pilot reported that he performed the emergency procedure checklist for engine restart but without success. He established a 85 mph glide airspeed and executed a forced landing to a highway. He lowered the landing gear and pumped the emergency hydraulic hand pump handle, and the gear locked down with three green gear light indications. He reported he maneuvered the airplane in order to avoid automobiles that were on the highway. He turned off the battery and ignition switches and lowered the wing flaps with the emergency hydraulic hand pump.

He reported that he "held the aircraft 6 or 8 feet above the highway until the aircraft could no longer fly." The airplane contacted the highway wings level but the nose gear collapsed, and then the left and right main gear collapsed. The right wing impacted a road sign and the right wingtip separated from the wing. The left wing was sheared off at the wing root when it struck two steel posts. The pilot exited the airplane. He reported smelling fuel and that fuel was "running out of the right tip tank."

A Federal Aviation Administration airworthiness inspector examined the airplane. He reported that all cylinders exhibited thumb compression, and spark was verified from both magnetos to all ignition leads. He reported that all spark plugs were in good condition. Fuel was found in the supply line to the engine driven fuel pump. The engine driven fuel pump was disassembled and proper operation was verified.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	61, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<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-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	January 24, 2003
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	August 11, 2003
<b>Flight Time:</b>	4904 hours (Total, all aircraft), 190 hours (Total, this make and model), 4100 hours (Pilot In Command, all aircraft), 75 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

<b>Aircraft Make:</b>	Navion	<b>Registration:</b>	N5223K
<b>Model/Series:</b>	B	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	NAV 4-2123B
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	July 1, 2003 Annual	<b>Certified Max Gross Wt.:</b>	3100 lbs
<b>Time Since Last Inspection:</b>	90 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	4654 Hrs at time of accident	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-250-BA12B
<b>Registered Owner:</b>	Peter Farmer	<b>Rated Power:</b>	285 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>	JLN,981 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	09:53 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	12 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	10°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.15 inches Hg	<b>Temperature/Dew Point:</b>	17°C / 2°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Lonoke, AR	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Joplin, MO (JLN )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	09:10 Local	<b>Type of Airspace:</b>	Class D

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<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 None	<b>Latitude, Longitude:</b>	37.151668,-94.498054

## Administrative Information

**Investigator In Charge (IIC):** Silliman, James

**Additional Participating Persons:** Val Ziedens; FAA; Kansas City, MO

**Original Publish Date:** September 1, 2004

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.ntsb.gov/Docket?ProjectID=59054>

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