



# National Transportation Safety Board Aviation Accident Data Summary

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<b>Location:</b>	SPEARFISH, SD	<b>Accident Number:</b>	CHI98LA235
<b>Date &amp; Time:</b>	07/01/1998, 1100 CDT	<b>Registration:</b>	N5181Z
<b>Aircraft:</b>	Piper PA-22-108	<b>Injuries:</b>	1 Fatal, 1 Minor
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The airplane suffered a partial loss of engine power. The pilot conducted a forced landing; however, impacted trees and the terrain during the descent. The pilot told a physician that the airplane suffered a loss of about 70% power and later told his attorney that the airplane suffered fuel exhaustion. An examination of the airplane subsequent to the accident revealed no mechanical anomalies other than those associated with impact. Emergency responders and Federal Aviation Administration inspectors were on site within two hours of the accident. They did not find any fuel leaking from the airplane and did not smell fuel. An examination of the left fuel tank found only unusable fuel. The fuel selector was found positioned to the left fuel tank.

## Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilots improper preflight planning, which failed to detect the fuel selector positioned on the left fuel tank, which had insufficient fuel, resulting in fuel starvation, and the loss of engine power.

## Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - NONMECHANICAL  
Phase of Operation: CLIMB - TO CRUISE

### Findings

1. (F) FLUID,FUEL - STARVATION
2. (C) FUEL TANK SELECTOR POSITION - IMPROPER - PILOT IN COMMAND
3. (C) PREFLIGHT PLANNING/PREPARATION - IMPROPER - PILOT IN COMMAND

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

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: EMERGENCY DESCENT/LANDING

### Findings

4. (F) OBJECT - TREE(S)

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	35
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Instrument Rating(s):</b>	None
<b>Other Aircraft Rating(s):</b>	None	<b>Instructor Rating(s):</b>	None
<b>Flight Time:</b>	600 hours (Total, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N5181Z
<b>Model/Series:</b>	PA-22-108 PA-22-108	<b>Engines:</b>	1 Reciprocating
<b>Operator:</b>	HARLEY OPPERMAN	<b>Engine Manufacturer:</b>	Lycoming
<b>Operating Certificate(s) Held:</b>	None	<b>Engine Model/Series:</b>	O-290-D2
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual Conditions	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	RAP, 3202 ft msl	<b>Weather Information Source:</b>	Weather Observation Facility
<b>Lowest Ceiling:</b>	Unknown / 0 ft agl	<b>Wind Speed/Gusts, Direction:</b>	7 knots / , 170°
<b>Temperature:</b>	21 °C	<b>Visibility</b>	10 Miles
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	, SD (SPF)	<b>Destination:</b>	CHEYENNE, WY (CYS)

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Minor	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Latitude, Longitude:</b>			

## Administrative Information

<b>Investigator In Charge (IIC):</b>	STEPHEH A WILSON	<b>Adopted Date:</b>	09/28/1999
<b>Investigation Docket:</b>	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government

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agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.