



# Aviation Investigation Final Report

<b>Location:</b>	Trident, Montana	<b>Accident Number:</b>	SEA03LA065
<b>Date &amp; Time:</b>	April 20, 2003, 17:30 Local	<b>Registration:</b>	N9705T
<b>Aircraft:</b>	Piper PA-38	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The pilot was on a cross country flight to use up the aircrafts fuel in order to perform a weight and balance. The pilot reported that he felt there was enough fuel on board for the trip. Approximately thirty minutes after departure the engine experienced a complete power loss. Following the loss of power, the pilot elected to land in a nearby field. After a "hard" landing and during the landing rollout, the airplane collided with a fence post resulting in substantial damage. During the subsequent investigation both fuel tanks were found to be empty.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Fuel exhaustion while in cruise flight due to inadequate preflight planning / preparation. A fence was a factor.

### Findings

Occurrence #1: LOSS OF ENGINE POWER

Phase of Operation: CRUISE

Findings

1. (C) FLUID,FUEL - EXHAUSTION
2. (C) PREFLIGHT PLANNING/PREPARATION - INADEQUATE - PILOT IN COMMAND

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Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

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Occurrence #3: HARD LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

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Occurrence #4: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: LANDING - ROLL

Findings

3. (F) OBJECT - FENCE POST

## Factual Information

On April 20, 2003, about 1730 mountain daylight time, a Piper PA-38 Tomahawk, N9705T, sustained substantial damage during an off airport forced landing following a loss of engine power near Trident, Montana. The airplane is registered to Aero Flight School of Belgrade, Montana, and was being operated as a visual flight rules (VFR) personal/pleasure flight under the provisions of Title 14, CFR Part 91, when the accident occurred. The private pilot, the sole occupant of the airplane, was not injured. Visual meteorological conditions prevailed and no flight plan had been filed. The cross-country flight originated from Gallatin Field, Bozeman, MT (BZN), with a stop at Helena Regional, Helena, MT (HLN) and a planned return to BZN.

During a telephone interview and subsequent written statement, the pilot reported that the purpose of the flight was to use up the aircraft's fuel in order to perform a weight and balance. The pilot also stated that he felt he had enough fuel on board for the round trip. Approximately thirty minutes after leaving Helena Regional (HLN), the engine experienced a complete power loss. Following the loss of power, the pilot elected to land in a nearby field. After a "hard" landing, and during the landing rollout, the airplane collided with a fence post resulting in substantial damage.

Personnel who recovered the airplane reported that both fuel tanks were empty.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	52, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--w/ waivers/lim	<b>Last FAA Medical Exam:</b>	November 21, 2002
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	June 26, 2002
<b>Flight Time:</b>	1427 hours (Total, all aircraft), 3 hours (Total, this make and model), 1334 hours (Pilot In Command, all aircraft), 34 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N9705T
<b>Model/Series:</b>	PA-38	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	38-78A0161
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	November 1, 2002 Annual	<b>Certified Max Gross Wt.:</b>	1670 lbs
<b>Time Since Last Inspection:</b>	26.2 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3056 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-235-L2C
<b>Registered Owner:</b>	Aero Flight School	<b>Rated Power:</b>	112 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>	KBZN,4474 ft msl	<b>Distance from Accident Site:</b>	17 Nautical Miles
<b>Observation Time:</b>	16:56 Local	<b>Direction from Accident Site:</b>	130°
<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>	7 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	120°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.04 inches Hg	<b>Temperature/Dew Point:</b>	18°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Helena, MT (HLN )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Bozeman, MT (BZN )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	17:00 Local	<b>Type of Airspace:</b>	Class G

## 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>	46.033332,-111.383331

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Hogenson, Dennis
<b>Additional Participating Persons:</b>	Edward H Warmoth; Federal Aviation Administration; Helena, MT
<b>Original Publish Date:</b>	November 25, 2003
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=56858">https://data.ntsb.gov/Docket?ProjectID=56858</a>

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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](#).