



# Aviation Investigation Final Report

<b>Location:</b>	Northville, Michigan	<b>Accident Number:</b>	CHI01LA285
<b>Date &amp; Time:</b>	August 18, 2001, 11:15 Local	<b>Registration:</b>	N62PT
<b>Aircraft:</b>	Waters Avid Bandit	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The airplane experienced a loss of engine power during cruise flight and was substantially damaged during a forced landing. The pilot reported, "... I noticed uneven fuel usage from tanks. Decision made to return to airport immediately, but engine quit en route." He attempted an engine re-start but was unsuccessful. He executed a forced landing to a racetrack. He reported the airplane collided with a concrete building. The airplane had no fuel in the right tank and 8 gallons of fuel in the left tank. No fuel leak was observed. The pilot reported that during the flight, he had the right wing fuel selector ON and the left wing fuel selector OFF. He forgot to select the left wing fuel selector to ON, and when the right wing fuel tank ran out of fuel, the engine quit. The pilot reported there were no mechanical malfunctions.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: fuel starvation due to the pilot's improper fuel calculations. A factor was the concrete building.

## Findings

Occurrence #1: LOSS OF ENGINE POWER

Phase of Operation: CRUISE

Findings

1. (C) FUEL SYSTEM - STARVATION
2. (C) FUEL CONSUMPTION CALCULATIONS - IMPROPER - PILOT IN COMMAND

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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: LANDING - ROLL

Findings

3. (F) OBJECT - BUILDING(NONRESIDENTIAL)

## Factual Information

On August 18, 2001, at 1115 eastern daylight time, an experimental Waters Avid Bandit, N62PT, sustained substantial damage during a forced landing. The 14 CFR Part 91 personal flight departed the Mettetal-Canton Airport (1D2), Plymouth, Michigan, at 1030, on a local flight. The airplane was in cruise flight returning to 1D2 when it experienced a loss of engine power and a forced landing was made to a racetrack located about 5 miles from the airport. The airplane hit a concrete building during landing roll. The pilot and passenger received serious injuries. Visual meteorological conditions prevailed and no flight plan was filed.

The pilot reported, "... I noticed uneven fuel usage from tanks. Decision made to return to airport immediately, but engine quit en route." He attempted an engine re-start but was unsuccessful. He executed a forced landing to a racetrack. He reported the airplane collided with a cement wall.

A Federal Aviation Administration Airworthiness Inspector examined the airplane and found no fuel in the right tank and 8 gallons of fuel in the left tank. No fuel leak was observed. He reported the pilot had informed him that during the flight, the pilot had the right wing fuel selector ON and the left wing fuel selector OFF. The pilot reported he forgot to select the left wing fuel selector to ON, and when the right wing fuel tank ran out of fuel, the engine quit.

The pilot reported there were no mechanical malfunctions.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	65,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 3 Valid Medical--w/ waivers/lim	<b>Last FAA Medical Exam:</b>	July 12, 2000
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	August 19, 2000
<b>Flight Time:</b>	472 hours (Total, all aircraft), 314 hours (Total, this make and model), 472 hours (Pilot In Command, all aircraft), 18 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Waters	<b>Registration:</b>	N62PT
<b>Model/Series:</b>	Avid Bandit	<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>	1509E
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	July 21, 2001 Annual	<b>Certified Max Gross Wt.:</b>	1250 lbs
<b>Time Since Last Inspection:</b>	5 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	315 Hrs at time of accident	<b>Engine Manufacturer:</b>	Rotax
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	912 UL
<b>Registered Owner:</b>	Peter T. Waters	<b>Rated Power:</b>	80 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>	
<b>Observation Facility, Elevation:</b>	YIP, 716 ft msl	<b>Distance from Accident Site:</b>	11 Nautical Miles
<b>Observation Time:</b>	10:53 Local	<b>Direction from Accident Site:</b>	195°
<b>Lowest Cloud Condition:</b>		<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Broken / 8000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	5 knots / None	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	160°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	21°C / 16°C
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Plymouth, MI (1D2)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	10:30 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>	Mettetal-Canton Airport 1D2	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	696 ft msl	<b>Runway Surface Condition:</b>	Unknown
<b>Runway Used:</b>		<b>IFR Approach:</b>	Unknown
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Serious	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Serious	<b>Latitude, Longitude:</b>	42.429882,-83.479316(est)

## Administrative Information

Investigator In Charge (IIC):	Silliman, Jim
Additional Participating Persons:	Cliff Carter; FAA; Belleville, MI
Original Publish Date:	October 24, 2002
Last Revision Date:	
Investigation Class:	<a href="#">Class</a>
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	<a href="https://data.nts.gov/Docket?ProjectID=53091">https://data.nts.gov/Docket?ProjectID=53091</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](#).