



Aviation Investigation Final Report

Location: Bigfork, Montana **Accident Number:** SEA08CA010

Date & Time: October 14, 2007, 14:30 Local Registration: N475TW

Welch RV-9 Aircraft: Aircraft Damage: Substantial

Defining Event: Injuries: 2 None

Flight Conducted Under: Part 91: General aviation - Personal

Analysis

The pilot reported that at the completion of a third flight for the day, he was returning to the airport for landing. The flight entered downwind when the engine sputtered, ran smoothly, then lost power. The pilot switched the fuel selector from the right tank to the left tank and attempted to restart the engine. The engine would not start and the pilot initially thought that he could make the end of the runway, however the aircraft lost altitude and the landing gear hit the edge of the road short of the runway and the aircraft slid through a barb wire fence and onto the runway. Both wings and the tail section were substantially damaged. After the accident, the pilot stated that he found the right fuel tank "extremely low" and the left fuel tank about a third full. The pilot continued to state that after changing to the left fuel tank, he believed that the fuel pump did not fill the header tank fast enough for an engine restart.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Fuel starvation while on downwind for landing. The pilot's inadequate in-flight fuel management planning was a factor.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL

Phase of Operation: APPROACH - VFR PATTERN - DOWNWIND

Findings

1. (C) FLUID, FUEL - STARVATION

2. (F) IN-FLIGHT PLANNING/DECISION - INADEQUATE - PILOT IN COMMAND

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

3. TERRAIN CONDITION - ROADWAY/HIGHWAY

Page 2 of 6 SEA08CA010

Factual Information

The pilot reported that at the completion of a third flight for the day, he was returning to the airport for landing. The flight entered downwind when the engine sputtered, ran smoothly, then lost power. The pilot switched the fuel selector from the right tank to the left tank and attempted to restart the engine. The engine would not start and the pilot initially thought that he could make the end of the runway, however the aircraft lost altitude and the landing gear hit the edge of the road short of the runway and the aircraft slid through a barb wire fence and onto the runway. Both wings and the tail section were substantially damaged.

After the accident, the pilot stated that he found the right fuel tank "extremely low" and the left fuel tank about a third full. The pilot continued to state that after changing to the left fuel tank, he believed that the fuel pump did not fill the header tank fast enough for an engine restart.

Pilot Information

Certificate:	Private	Age:	56,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Class 3	Last FAA Medical Exam:	June 1, 2006
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	354 hours (Total, all aircraft), 72 hours (Total, this make and model), 20 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft)		

Page 3 of 6 SEA08CA010

Aircraft and Owner/Operator Information

Aircraft Make:	Welch	Registration:	N475TW
Model/Series:	RV-9	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	90475
Landing Gear Type:	Tailwheel	Seats:	
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Subaru
ELT:		Engine Model/Series:	Unknown
Registered Owner:	Thomas Welch	Rated Power:	
Operator:	Bruce W. Piasecki	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:	No Obscuration; No Precipi	ation	
Departure Point:	Bigfork, MT (53U)	Type of Flight Plan Filed:	None
Destination:	(53U)	Type of Clearance:	None
Departure Time:		Type of Airspace:	

Page 4 of 6 SEA08CA010

Airport Information

Airport:	Ferndale 53U	Runway Surface Type:	Asphalt
Airport Elevation:		Runway Surface Condition:	Dry
Runway Used:	33	IFR Approach:	None
Runway Length/Width:	3500 ft / 95 ft	VFR Approach/Landing:	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	
Total Injuries:	2 None	Latitude, Longitude:	48.080554,-114.001663

Page 5 of 6 SEA08CA010

Administrative Information

Investigator In Charge (IIC):Eckrote, DebraAdditional Participating Persons:Last Revision Date:Last Revision Date:December 20, 2007Investigation Class:ClassNote:This accident report documents the factual circumstances of this accident as described to the NTSB.Investigation Docket:https://data.ntsb.gov/Docket?ProjectID=66898

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.

Page 6 of 6 SEA08CA010