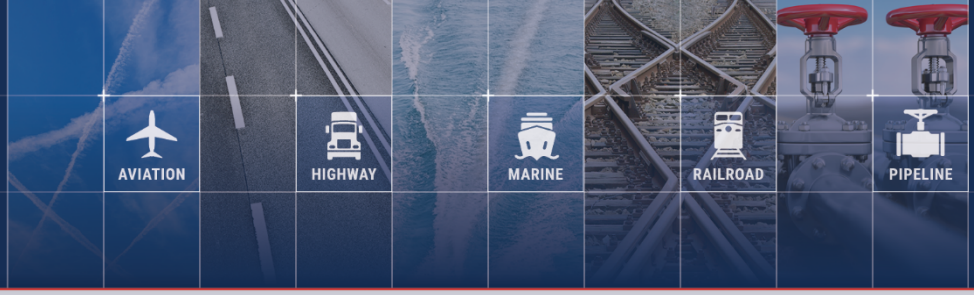

Aviation Investigation Final Report

Location:	Hodgdon, Maine	**Accident Number:**	ERA09LA457
Date & Time:	August 8, 2009, 19:20 Local	**Registration:**	N569WT
Aircraft:	Tidd Wesley Mini-Max	**Aircraft Damage:**	Substantial
Defining Event:	Fuel starvation	**Injuries:**	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot of the experimental amateur-built airplane stated that while in flight the engine lost power. After switching fuel tanks, the pilot attempted a restart, and the engine performed about 25 to 30 revolutions; however, the engine would not restart. While approaching the field selected for a forced landing, he realized the grass was about 5 feet tall. Upon landing, grass wrapped around his "wheel bar" and the airplane nosed over. The pilot reported to law enforcement personnel on scene that he felt he ran out of gas. Inspection of the fuel tanks revealed that the right tank was void of fuel and the left tank was approximately three-fourths full. Additionally, the fuel selector was observed in the right fuel tank position. A small amount of fuel and air were noted in the fuel line leading to the engine, preventing the correct amount of fuel and air to mix, which would allow the engine to restart. No other anomalies were noted during the wreckage examination.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's mismanagement of the fuel supply, which resulted in fuel starvation.

Findings

Personnel issues	Fuel planning - Pilot
Aircraft	Fuel - Fluid management

Factual Information

History of Flight

Enroute-cruise	Fuel starvation (Defining event)
Enroute-cruise	Loss of engine power (total)
Emergency descent	Off-field or emergency landing
Landing-landing roll	Nose over/nose down

On August 8, 2009, about 1920 eastern daylight time, an experimental amateur-built Mini-Max, N569WT, was substantially damaged during a forced landing near Hodgdon, Maine. Visual meteorological conditions prevailed, and no flight plan was filed for the local personal flight. The certificated private pilot was seriously injured. The personal flight was conducted under Title 14 Code of Federal Regulations Part 91. The flight departed Houlton International Airport (HUL), Houlton, Maine about 1900 and approximately 4 statute miles from the accident location.

Witnesses to the accident reported hearing and visually acquiring the airplane. A period of time after first hearing the airplane, one witness reported to the Maine State Police that the engine began to sputter and then the engine stopped. The witness continued to watch the airplane as it began its approach into a field located behind their residence. According to the witness, she saw the airplane land in the field and then nose over and come to rest on top of the vertical stabilizer as well as the canopy. According to the Main State Police report, the pilot "felt he might had run out of fuel."

During a phone interview with an NTSB investigator, the pilot reported that after the engine began to stop, he switched fuel tanks utilizing the tank selector mounted under the dash board. He also pulled the choke and attempted to restart the engine. He thought the engine performed about "25 to 30 revolutions of the propeller," however he was unsuccessful. He proceeded to land in a hayfield, but as he approached the field he realized the grass was about 5 feet tall. Upon touch down the grass "wrapped around the wheel bar" and proceeded to nose the airplane over.

The Federal Aviation Administration (FAA) inspector that examined the airplane reported that there was no indication on the wooden propeller of rotation at the time of the accident. The top of the vertical stabilizer was damaged and the right wing aft support was bent approximately 45 degrees from its normal position. The fuel tanks were examined; the left fuel tank was approximately three-fourths full and the right tank was empty. No breach of the right tank was found. The fuel valve, located under the dash, was selected in the right fuel tank position. The plastic hoses from each fuel tank to the engine were connected to their respective fittings and a small amount of fuel and air was located in the hoses.

The pilot held a private pilot certificate issued November 23, 1996, with a rating for airplane single-engine land. His most recent FAA third-class medical certificate was issued on October 13, 2005. The pilot had approximately 200 total hours of total flight experience and 57 total hours of flight experience in the accident airplane make and model.

A review of the airplane maintenance log revealed that the last conditional inspection recorded was October 24, 2005 and at that time the airplane had 23.6 hours of time in service. The most recent entry recorded was on July 15, 2009, which was a wing repair; however, no time in service was recorded. During an interview with the pilot, he stated to the NTSB investigator that he performed the inspections on his airplane he "just did not record them."

The airplane was manufactured in 2003 and was issued a special operating certificate on October 24, 2005. The operating certificate required that the airplane be flown within a 25 statute mile radius of HUL.

The recorded weather observation at HUL at 1853, included winds from 280 degrees at 4 knots; visibility 10 miles, a broken cloud layer at 8,500 feet above ground level, temperature 20 degrees C, dew point 9 degrees C; altimeter 30.07 inches of mercury.

Pilot Information

Certificate:	Private	**Age:**	49,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Single
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Without waivers/limitations	**Last FAA Medical Exam:**	October 1, 2005
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	(Estimated) 200 hours (Total, all aircraft), 57 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Tidd Wesley	**Registration:**	N569WT
Model/Series:	Mini-Max	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	1098
Landing Gear Type:	Tailwheel	**Seats:**	1
Date/Type of Last Inspection:	October 24, 2005 Condition	**Certified Max Gross Wt.:**	560 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	24 Hrs as of last inspection	**Engine Manufacturer:**	Zenoah
ELT:	Not installed	**Engine Model/Series:**	G-50
Registered Owner:	On file	**Rated Power:**	45 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Dusk
Observation Facility, Elevation:	HUL,489 ft msl	**Distance from Accident Site:**	3 Nautical Miles
Observation Time:	18:53 Local	**Direction from Accident Site:**	242°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Broken / 8500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	280°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.06 inches Hg	**Temperature/Dew Point:**	20°C / 9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Houlton, ME (HUL)	**Type of Flight Plan Filed:**	None
Destination:	Houlton, ME (HUL)	**Type of Clearance:**	None
Departure Time:	19:00 Local	**Type of Airspace:**	

Airport Information

Airport:	Houlton International Airport HUL	**Runway Surface Type:**	
Airport Elevation:	489 ft msl	**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious	**Latitude, Longitude:**	46.088054,-67.838058(est)

Administrative Information

Investigator In Charge (IIC):	Etcher, Shawn
Additional Participating Persons:	Joseph Simokaitis; FAA/FSDO; Portland, ME
Original Publish Date:	June 17, 2010
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=74500