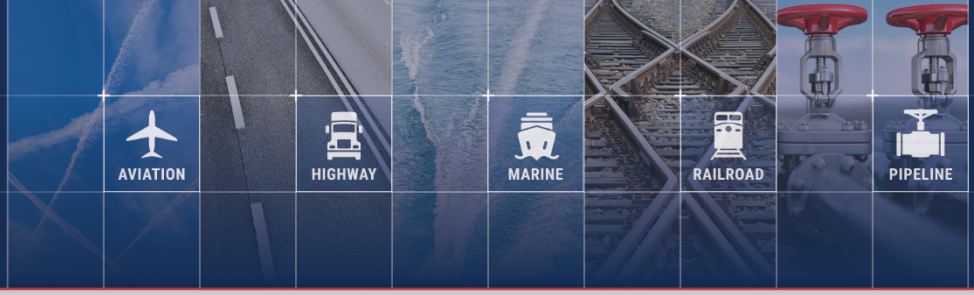

Aviation Investigation Final Report

Location:	Tillamook, Oregon	**Accident Number:**	WPR09CA467
Date & Time:	September 27, 2009, 11:15 Local	**Registration:**	N90LP
Aircraft:	Beech 35-C33	**Aircraft Damage:**	Substantial
Defining Event:	Fuel exhaustion	**Injuries:**	4 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated during the preflight, he checked the fuel gages which indicated 12 gallons in the left wing and 18 gallons in the right wing. The right wing tank indicated just below half a tank. The pilot stated that "it is not possible to visually gauge the fuel quantity once the amount is below 30 gallons per tank," and that it is difficult to know exactly how much fuel is in the airplane. About 24 minutes after takeoff the pilot reported that the engine experienced initial indications of low fuel while operating from the left fuel tank. The pilot then switched to the right fuel tank. Instead of proceeding to his destination, 35 miles away, the pilot diverted to a closer airport, 15 miles away. After 5 minutes, the engine again demonstrated conditions consistent with low fuel. Not believing that he could make the runway, the pilot decided to make a precautionary landing in a cattle pasture about 1 mile from the airport. During the landing, the right main landing gear collapsed and the right wing was structurally damaged. Post-accident inspection of the fuel system found that both fuel tanks were nearly empty of fuel. Inspection of the right fuel gage indicated about 1/3, when in fact the fuel tank was empty.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power due to fuel exhaustion as a result of the pilot's failure to visually verify that sufficient fuel was on board prior to flight. Contributing to the accident was a malfunctioning fuel gage.

Findings

Aircraft	Fuel quantity indicator - Malfunction
Aircraft	Fuel - Fluid level
Personnel issues	Incomplete action - Pilot
Personnel issues	Preflight inspection - Pilot

Factual Information

History of Flight

Landing	Off-field or emergency landing
Emergency descent	Fuel exhaustion (Defining event)

Pilot Information

Certificate:	Airline transport; Flight instructor	**Age:**	50,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	**Toxicology Performed:**	No
Medical Certification:	Class 1 Without waivers/limitations	**Last FAA Medical Exam:**	May 13, 2009
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	July 19, 2009
Flight Time:	18000 hours (Total, all aircraft), 250 hours (Total, this make and model), 11000 hours (Pilot In Command, all aircraft), 260 hours (Last 90 days, all aircraft), 80 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N90LP
Model/Series:	35-C33	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	CD-1047
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	August 25, 2009 Annual	**Certified Max Gross Wt.:**	3050 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	3108 Hrs as of last inspection	**Engine Manufacturer:**	CONT MOTOR
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	IO-470 SERIES
Registered Owner:	ERMAN DAVID G	**Rated Power:**	260 Horsepower
Operator:	ERMAN DAVID G	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KHIO,36 ft msl	**Distance from Accident Site:**	37 Nautical Miles
Observation Time:	10:53 Local	**Direction from Accident Site:**	90°
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:	30.06 inches Hg	**Temperature/Dew Point:**	17°C / 8°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Gleneden Beach, OR (KS45)	**Type of Flight Plan Filed:**	None
Destination:	Astoria, OR (KAST)	**Type of Clearance:**	None
Departure Time:	10:45 Local	**Type of Airspace:**	

Airport Information

Airport:	Tillamook Airport KTMK	**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	3 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	4 None	**Latitude, Longitude:**	45.420276,-123.814163

Administrative Information

Investigator In Charge (IIC):	McKenny, Van
Additional Participating Persons:	Tony Moore; Federal Aviation Administration; Portland, OR
Original Publish Date:	December 29, 2009
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=74810