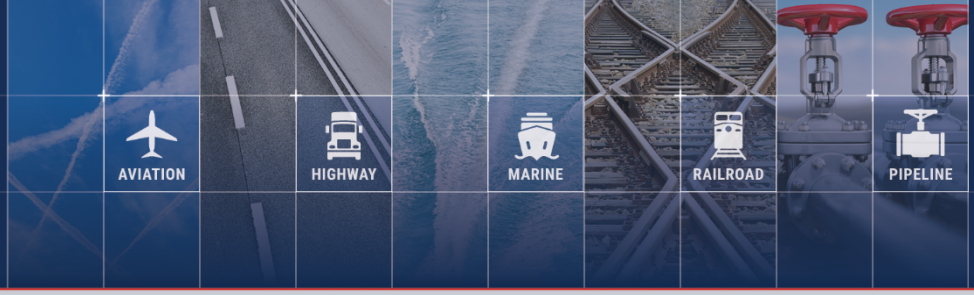

Aviation Investigation Final Report

Location:	Napa, California	**Accident Number:**	WPR11LA410
Date & Time:	August 28, 2011, 12:30 Local	**Registration:**	N6052W
Aircraft:	Beech A36	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (total)	**Injuries:**	3 Minor, 2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

While on final approach to the destination airport, about 1.5 miles from the approach end of the runway, the engine suddenly lost power. The pilot advanced the throttle, checked that the mixture was rich, moved the fuel selector from the left tank to the right tank, and activated the fuel boost pump. The engine did not regain its power, and the pilot executed a gear up landing on a nearby highway. During the landing, the airplane hit a vehicle and the left wing impacted a metal pole and the left fuel tank was breached. First responders reported that there was no indication of fuel in the left tank or leaking from the airplane, and the right tank was about 1/4 full. The propeller blade tips were curled; two blade tips curled forward, and one blade tip curled aft, consistent with a propeller that was under power at the time of contact with the hard, flat roadway. Postaccident examination of the engine revealed no evidence of mechanical malfunctions or failures that would have precluded normal operation. It is likely that the loss of engine power was the result of fuel starvation, and the pilot's action of switching to the right fuel tank resulted in the engine regaining power at the same instant that the airplane landed with its gear up on the highway.

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 a loss of engine power due to fuel starvation.

Findings

Aircraft	Fuel - Fluid management
Personnel issues	Fuel planning - Pilot

Factual Information

History of Flight

Approach-VFR pattern final	Loss of engine power (total) (Defining event)
Approach-VFR pattern final	Fuel starvation
Landing-flare/touchdown	Off-field or emergency landing

HISTORY OF FLIGHT

On August 28, 2011, at 1230 Pacific daylight time, after a loss of engine power, a Beech A36, N6052W, made a gear up landing on State Route 29, 1 mile east of the Napa County Airport, Napa, California. During the landing sequence the airplane struck the rear end of a vehicle on the highway. The three people in the ground vehicle all received minor injuries and the vehicle was damaged. The private pilot and his passenger were uninjured, and the airplane was substantially damaged. The pilot operated the airplane under the provisions of Title 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed, and no flight plan had been filed. The flight originated at South Lake Tahoe, California, around 1130.

The pilot reported in the NTSB Pilot Accident Report (form 6120.1/2) that the airplane departed South Lake Tahoe with both fuel tanks half full, estimating about 40 gallons total, and was airborne for about an hour. The pilot said that while on a 1.5-mile final for runway 24 at Napa County Airport the engine suddenly lost power. He advanced the throttle, checked that the mixture was rich, switched the fuel selector to the right tank, and energized the fuel boost pump. The action did not regain engine power. The pilot made a right-hand turn and executed a gear up landing on the highway. During the landing the airplane's left wing leading edge struck a metal pole creating a 1-foot-wide hole in the fuel tank, and impacted the back end of an automobile.

First responders reported that there was no evidence of fuel present in or around the left wing, or leaking from either wing after the accident. Two blades of the three bladed propeller exhibited forward blade tip curling, and the third blade tip was curled aft.

During the post accident examination of the airplane by a Federal Aviation Administration inspector, 11 gallons of fuel was recovered from the right wing.

The engine was examined by a technical representative of the engine manufacturer under the supervision of the FAA Inspector. The inspection did not reveal any abnormalities that would have prevented normal operation and production of rated horsepower. The fuel selector was inspected and observed to operate normally.

PERSONNEL INFORMATION

The pilot, age 55, held a private pilot certificate with ratings for airplane single-engine land, and instrument airplane dated March 13, 2010. He held a third-class medical certificate issued November 16, 2008, with the limitation that he possess glasses for near vision. The pilot reported total flight time of 1,450 hours, with 1,250 hours in the make and model of the accident airplane. His most recent flight review was conducted in a Beech A36 in September 2009.

AIRCRAFT INFORMATION

The 6-seat, low wing, single engine, airplane with retractable landing gear, serial number E-1497, was manufactured in 1979. It was powered by a Teledyne Continental IO-550B, 300-hp engine, and equipped with a Hartzell controllable pitch propeller. The most recent inspection was an annual inspection conducted on August 22, 2011, at a total airframe time of 3,982 hours. The engine tachometer read 3,986 hours at the time of the accident.

The Beech Bonanza A36 Pilot Operating Handbook (POH) states for manual fuel leaning fuel flow schedule for full throttle and 2,700 rpm, at 8,000 feet msl, fuel flow is 22.4 gph. The pilot reported that the airplane routinely operated at 18.5 gph.

Pilot Information

Certificate:	Private	**Age:**	55,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	October 16, 2008
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	September 1, 2009
Flight Time:	1450 hours (Total, all aircraft), 1250 hours (Total, this make and model), 1450 hours (Pilot In Command, all aircraft), 25 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N6052W
Model/Series:	A36	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Utility	**Serial Number:**	E-1497
Landing Gear Type:	Retractable -	**Seats:**	6
Date/Type of Last Inspection:	August 22, 2011 Annual	**Certified Max Gross Wt.:**	3594 lbs
Time Since Last Inspection:	4 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	3986 Hrs at time of accident	**Engine Manufacturer:**	CONT MOTOR
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	IO 550 SERIES
Registered Owner:	MCCOY JOSEPH W	**Rated Power:**	300 Horsepower
Operator:	MCCOY JOSEPH W	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KAPC,35 ft msl	**Distance from Accident Site:**	15 Nautical Miles
Observation Time:	12:54 Local	**Direction from Accident Site:**	270°
Lowest Cloud Condition:	Scattered / 500 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	210°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	19°C / 13°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	South Lake Taho, CA (KTVL)	**Type of Flight Plan Filed:**	Unknown
Destination:	Napa, CA (KAPT)	**Type of Clearance:**	VFR
Departure Time:	12:00 Local	**Type of Airspace:**	

Airport Information

Airport:	Napa County KAPT	**Runway Surface Type:**	Concrete
Airport Elevation:	35 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	24	**IFR Approach:**	None
Runway Length/Width:	5000 ft / 150 ft	**VFR Approach/Landing:**	Straight-in

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:	3 Minor	**Aircraft Explosion:**	None
Total Injuries:	3 Minor, 2 None	**Latitude, Longitude:**	38.213054,-122.280555(est)

Administrative Information

Investigator In Charge (IIC):	McKenny, Van
Additional Participating Persons:	Brook Stewart; Federal Aviation Administration; San Jose, CA Andrew Swick; Teledyne Continental Motors; Sacramento, CA
Original Publish Date:	January 31, 2013
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=81614