



# Aviation Investigation Final Report

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<b>Location:</b>	Cedar City, Utah	<b>Accident Number:</b>	WPR11CA321
<b>Date &amp; Time:</b>	July 10, 2011, 13:25 Local	<b>Registration:</b>	N2075U
<b>Aircraft:</b>	LEINEKE WALTER L THORP T-211	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Fuel exhaustion	<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

The pilot reported that he was ferrying the homebuilt airplane to its new owner when the accident occurred. Having no prior time in the airplane, he flew it around the pattern to familiarize himself with the airplane's controls. The pilot stated that since he was not sure what the fuel burn of the airplane was he made an estimate using a similar aircraft with the same engine. After refueling the airplane to its 24 gallon maximum capacity, the pilot departed for the cross country flight to the destination airport. En route he climbed the airplane to 9,500 feet, leaned the mixture, and set the engine rpm to 2500. He estimated that the engine was using 4 to 4 1/2 gallons per hour, which by his calculations would give him 5 hours of flight time at that altitude. After 3.8 hours of flight, the pilot noticed the fuel gauge read 1/4 of a tank. About 6 minutes later, the engine lost power and the pilot initiated an off-airport landing. During the landing attempt, the airplane impacted a fence, struck the ground with its left wing, and tumbled. The airplane sustained substantial damage to both wings and the fuselage. The pilot stated that the fuel gauge acted normally during flight, but remained between 1/8 to 1/4 of a tank even after the airplane ran out of gas. An inspection of the fuel gauge by a mechanic showed that the gauge was functional; however, the mechanic described the type of fuel gauge as typically being difficult to calibrate and that they tend to only read accurately when the tank is full. Examination of the airplane's fuel tanks showed they were empty and the fuel system was intact.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's misjudgment of the fuel consumption, which lead to fuel exhaustion. Contributing to the accident was the pilot's lack of experience in the accident airplane.

## Findings

<b>Aircraft</b>	Fuel - Fluid management
<b>Personnel issues</b>	Understanding/comprehension - Pilot
<b>Personnel issues</b>	Knowledge of equipment - Pilot
<b>Aircraft</b>	Fuel - Fluid level

## Factual Information

### History of Flight

<b>Prior to flight</b>	Preflight or dispatch event
<b>Enroute</b>	Fuel exhaustion (Defining event)
<b>Emergency descent</b>	Off-field or emergency landing
<b>Emergency descent</b>	Collision with terr/obj (non-CFIT)

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	57, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane single-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	June 2, 2010
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	September 11, 2009
<b>Flight Time:</b>	6000 hours (Total, all aircraft), 7 hours (Total, this make and model), 6000 hours (Pilot In Command, all aircraft), 60 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	LEINEKE WALTER L	<b>Registration:</b>	N2075U
<b>Model/Series:</b>	THORP T-211	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental (Special); Experimental light sport (Special)	<b>Serial Number:</b>	08
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	June 13, 2011 Condition	<b>Certified Max Gross Wt.:</b>	
<b>Time Since Last Inspection:</b>	2 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	CONT MOTOR
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	O-200-A
<b>Registered Owner:</b>	Charles Lee	<b>Rated Power:</b>	100 Horsepower
<b>Operator:</b>	Randal S Dippold	<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>	Day
<b>Observation Facility, Elevation:</b>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	27°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Carson City, NV (KCXP)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Cedar City, UT (KCOC)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	08:30 Local	<b>Type of Airspace:</b>	Unknown

## Airport Information

<b>Airport:</b>	Cedar City CDC	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	5622 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Minor	<b>Latitude, Longitude:</b>	37.701667,-113.109169(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Rich, Jefferey
<b>Additional Participating Persons:</b>	Lew Olson; Federal Aviation Administration; Salt Lake City, UT
<b>Original Publish Date:</b>	October 6, 2011
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=81067">https://data.nts.gov/Docket?ProjectID=81067</a>

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