



# National Transportation Safety Board Aviation Accident Data Summary

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<b>Location:</b>	Wonewoc, WI	<b>Accident Number:</b>	CEN13LA216
<b>Date &amp; Time:</b>	04/01/2013, 1220 CDT	<b>Registration:</b>	N8033B
<b>Aircraft:</b>	CESSNA 172	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The pilot reported that, during the flight before the accident flight, the engine began running roughly during cruise flight with the right wing fuel tank selected. After attempting to resolve the issue by applying carburetor heat, he made a precautionary landing at a nearby grass airstrip. After landing, the pilot loosened the right fuel tank cap and heard a "whoosh" sound and the metal fuel tank "crinkle." The pilot stated that he thought he had resolved the fuel tank venting issue when he removed the right fuel tank cap. After spending 30 minutes on the ground, the pilot restarted the engine with both fuel tanks selected and performed an uneventful engine run-up before departing. Shortly after takeoff, the engine experienced a total loss of power, and the pilot executed a forced landing into a marsh. A postaccident examination revealed that the external and cross-tank vent lines were obstructed by foreign material likely deposited by insects. In this condition, the engine responded to cockpit controls during an operational test run. Following the engine test run, the right fuel tank cap was loosened, and a "whoosh" sound was heard. Testing of the right fuel cap revealed a restriction to the flapper-valve assembly, which prevented air from passing freely through the vented cap as designed. The combination of a restricted vented fuel cap and the obstructed vent lines likely prevented the fuel from flowing to the engine and resulted in fuel starvation and the total loss of engine power.

## Flight Events

- Initial climb - Fuel related
- Initial climb - Fuel starvation
- Initial climb - Loss of engine power (total)
- Landing - Off-field or emergency landing
- Landing - Collision with terr/obj (non-CFIT)

## Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The restricted vented fuel cap and obstructed fuel vent lines, which resulted in a total loss of engine power due to fuel starvation.

## Findings

Aircraft-Aircraft systems-Fuel system-(general)-Inoperative - C

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	29
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Instrument Rating(s):</b>	Airplane
<b>Other Aircraft Rating(s):</b>	None	<b>Instructor Rating(s):</b>	None
<b>Flight Time:</b>	325 hours (Total, all aircraft), 194 hours (Total, this make and model), 197 hours (Pilot In Command, all aircraft), 15 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	CESSNA	<b>Registration:</b>	N8033B
<b>Model/Series:</b>	172	<b>Engines:</b>	1 Reciprocating
<b>Operator:</b>	On file	<b>Engine Manufacturer:</b>	Continental
<b>Air Carrier Operating Certificate:</b>	None	<b>Engine Model/Series:</b>	O-300-A
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

## Meteorological Information and Flight Plan

<b>Observation Facility, Elevation:</b>	VOK, 912 ft msl	<b>Weather Information Source:</b>	Weather Observation Facility
<b>Conditions at Accident Site:</b>	Visual Conditions	<b>Lowest Ceiling:</b>	None
<b>Condition of Light:</b>	Day	<b>Wind Speed/Gusts, Direction:</b>	18 knots/ 23 knots, 270°
<b>Temperature:</b>	-1 °C / -11 °C	<b>Visibility</b>	10 Miles
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Park Falls, WI (PKF)	<b>Destination:</b>	St Jacob, IL (3K6)

## Airport Information

<b>Airport:</b>	Three Castles Airpark (4D1)	<b>Runway Surface Type:</b>	Grass/turf
<b>Runway Used:</b>	28	<b>Runway Surface Condition:</b>	Snow; Wet
<b>Runway Length/Width:</b>	2740 ft / 90 ft		

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Andrew T Fox	<b>Adopted Date:</b>	01/30/2014
<b>Investigation Docket:</b>	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=86558">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=86558</a>		

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