National Transportation Safety Board
Aviation Accident Data Summary

Location:	Lake Elmo, MN	**Accident Number:**	CEN16LA061
Date & Time:	12/11/2015, 1400 CST	**Registration:**	N78067
Aircraft:	GLOBE GC 1B	**Injuries:**	2 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The private pilot reported that, before departure, he performed an engine run-up with carburetor heat applied, and no anomalies were noted. The pilot departed for the personal local flight, and when the airplane reached about 100 ft above ground level, the engine power decreased from 2,400 to 1,600 rpm, so he executed a forced landing to a field.

A postaccident examination of the airplane and engine revealed that the throttle body separated from the air intake manifold due to overload likely associated with impact. The fuel nozzle and primary venturi were missing from the carburetor and were not located. Although the engine could likely have started without these components installed, it is unlikely that it could have produced much more than idle power. Sliding marks on the sides of the throttle body revealed evidence of contact with the legs of the primary venturi. The contact marks had areas free of black deposits whereas areas adjacent to the marks were covered with deposits, indicating that a primary venturi had been installed until recently. The deposits on either side of the marks were not disturbed, indicating that the primary venturi did not rotate out of position; therefore, the primary venturi either fractured in service or was separated and lost from the throttle body after the carburetor was disassembled during the initial postaccident examination.

The Federal Aviation Administration had previously issued an airworthiness directive (AD), which required that the accident make and model carburetor be inspected at each annual, 100-hour, or progressive inspection to determine if the primary venturi was loose or missing. According to the maintenance logbooks, the last inspection conducted in accordance with the AD occurred about 1.5 months and 1 flight hour before the accident.

Although the weather conditions at the time of the accident were conducive to the formation of carburetor icing at cruise power, it is not likely that carburetor ice caused the venturi or fuel nozzle to break because the pilot had used carburetor heat during the run up and the engine was operating at takeoff power. The accident is consistent with a loss of engine power due to the carburetor's primary venturi, fuel nozzle, or both separating after takeoff. The reason for the separation could not be determined.

Flight Events

Initial climb - Loss of engine power (partial)
Emergency descent - Collision with terr/obj (non-CFIT)

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

A loss of engine power due to the carburetor's primary venturi, fuel nozzle, or both separating after takeoff.

Findings

Aircraft-Aircraft systems-Fuel system-Fuel distribution-Damaged/degraded - C

Pilot Information

Certificate:	Private	**Age:**	60
Airplane Rating(s):	Single-engine Land	**Instrument Rating(s):**	None
Other Aircraft Rating(s):	None	**Instructor Rating(s):**	None
Flight Time:	455 hours (Total, all aircraft), 77 hours (Total, this make and model), 445 hours (Pilot In Command, all aircraft), 6 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	GLOBE	**Registration:**	N78067
Model/Series:	GC 1B NO SERIES	**Engines:**	1 Reciprocating
Operator:	On file	**Engine Manufacturer:**	Continental Motors
Operating Certificate(s) Held:	None	**Engine Model/Series:**	C145-2
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:	KSTP, 711 ft msl	**Weather Information Source:**	Weather Observation Facility
Lowest Ceiling:	Overcast / 1600 ft agl	**Wind Speed/Gusts, Direction:**	8 knots / , 90°
Temperature:	3°C	**Visibility**	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Lake Elmo, MN (21D)	**Destination:**	Lake Elmo, MN (21D)

Airport Information

Airport:	LAKE ELMO (21D)	**Runway Surface Type:**	Asphalt
Runway Used:	04	**Runway Surface Condition:**	Soft; Vegetation
Runway Length/Width:	2496 ft / 75 ft		

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Minor	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Latitude, Longitude:	45.001389, -92.845278 (est)		

Administrative Information

Investigator In Charge (IIC):	Joshua D Lindberg	**Adopted Date:**	10/03/2016
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=92431		