



## National Transportation Safety Board Aviation Accident Factual Report

---

<b>Location:</b>	Van Wert, OH	<b>Accident Number:</b>	CEN19LA303
<b>Date &amp; Time:</b>	09/04/2019, 1735 EDT	<b>Registration:</b>	N111JC
<b>Aircraft:</b>	Phantom Aeronautics X-1	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Powerplant sys/comp malf/fail	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

---

On September 4, 2019, about 1735 eastern daylight time, a Phantom Aeronautics X-1 light-sport airplane, N111JC, was substantially damaged during a forced landing following a loss of engine power near Van Wert, Ohio. The pilot was not injured. The airplane was registered to and operated by private individuals as a Title 14 *Code of Federal Regulations* Part 91 personal flight. Visual meteorological conditions prevailed, and the flight was not operated on a flight plan. The local flight originated from the Van Wert County Airport (VNW), Van Wert, Ohio, about 1730.

The pilot reported that the engine lost power about 5 minutes into the flight. He noticed that the forward carburetor of the dual-carburetor equipped engine had become separated from the intake socket. He executed a forced landing to a bean field, resulting in damage to the left-wing spar. The pilot reported that he had completed a preflight inspection and did not observe any anomalies.

A postaccident examination confirmed that the forward carburetor was separated from the socket. The aft carburetor remained attached to the aft socket and both carburetors remained secured to the intake silencer (airbox). Visual examination did not reveal any other anomalies with respect to the engine assembly.

Further examination revealed that the installed socket did not match an exemplar socket provided by the engine manufacturer's representative. Specifically, the installed socket had a step at the end mating to the carburetor inlet which was not present on the exemplar socket. In addition, the intake silencer was not supported except by the forward and aft sockets. There was no independent method of support.

The engine installation manual noted that the intake silencer "must not influence the position of the carburetor" and that it needed to be supported accordingly. No further guidance was provided by the manual.

Aircraft maintenance records indicated the engine was rebuilt in July 2017 at 948.6 hours airframe total time. The engine total time when rebuilt was 424.0 hours. The air intake silencer

was installed in July 2018 at 972.7 hours airframe time (448.1 hours engine time). On April 21, 2019, at 976.4 hours airframe total time (451.8 hours engine time), the spark plugs and carburetor boots were replaced, and the carburetors were synchronized. A condition inspection was also completed at that time. The airplane was sold to the accident owner in June 2019. The final maintenance entry noted replacement of the spark plugs on August 8, 2019, at 1,003.0 hours airframe time (478.6 hours engine time).

The engine manufacturer provided operators with a daily and preflight inspection checklist. The daily inspection checklist advised operators to check carburetor sockets for cracks and secure attachment. It also included a check for security and condition of the intake silencer and air filter.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	32, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Single
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Without Waivers/Limitations	<b>Last FAA Medical Exam:</b>	04/21/2017
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	04/16/2019
<b>Flight Time:</b>	104 hours (Total, all aircraft), 7 hours (Total, this make and model), 61 hours (Pilot In Command, all aircraft), 23 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Phantom Aeronautics	Registration:	N111JC
Model/Series:	X-1	Aircraft Category:	Airplane
Year of Manufacture:	1994	Amateur Built:	No
Airworthiness Certificate:	Experimental	Serial Number:	94-0143
Landing Gear Type:	Tricycle	Seats:	1
Date/Type of Last Inspection:	04/21/2019, Condition	Certified Max Gross Wt.:	720 lbs
Time Since Last Inspection:	26 Hours	Engines:	1 Reciprocating
Airframe Total Time:	1003 Hours as of last inspection	Engine Manufacturer:	Rotax
ELT:	Not installed	Engine Model/Series:	503
Registered Owner:	On file	Rated Power:	50 hp
Operator:	On file	Operating Certificate(s) Held:	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	VNW, 787 ft msl	Distance from Accident Site:	2 Nautical Miles
Observation Time:	1735 EDT	Direction from Accident Site:	120°
Lowest Cloud Condition:		Visibility	10 Miles
Lowest Ceiling:	Overcast / 4400 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	350°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.08 inches Hg	Temperature/Dew Point:	23°C / 15°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Van Wert, OH (VNW)	Type of Flight Plan Filed:	None
Destination:	Van Wert, OH (VNW)	Type of Clearance:	None
Departure Time:	1730 EDT	Type of Airspace:	Class G

## Airport Information

Airport:	Van Wert County (VNW)	Runway Surface Type:	N/A
Airport Elevation:	787 ft	Runway Surface Condition:	Vegetation
Runway Used:	N/A	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced Landing

## 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
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	40.881667, -84.644167

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Timothy Sorensen
<b>Additional Participating Persons:</b>	Paul Gillenwater; FAA Flight Standards; Columbus, OH
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=100194">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=100194</a>