



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Englewood, CO	<b>Accident Number:</b>	CEN16LA053
<b>Date &amp; Time:</b>	12/01/2015, 1950 MST	<b>Registration:</b>	N145VS
<b>Aircraft:</b>	PIPISTREL VIRUS	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of engine power (total)	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The commercial pilot was conducting a personal cross-country flight. The pilot reported that, while en route to the destination airport, he noted that the right tank's fuel level was not changing and that it did not appear that fuel was draining from the right tank. The fuel remaining in the left fuel tank was not adequate to complete the planned flight. The pilot chose to divert to a closer airport, and while he was preparing to land, the engine lost power. The pilot performed a forced landing to a field, during which the airplane nosed over and came to rest inverted.

Contaminants consistent with insects and leaves were recovered from the right fuel tank and fuel lines. The contamination had prevented the fuel from flowing from the right fuel tank to the engine and resulted in the loss of engine power. No other anomalies were noted that would have precluded normal operation.

## Probable Cause and Findings

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

The total loss of engine power due to fuel starvation as a result of contamination in the right fuel tank and fuel lines, which prevented fuel from flowing to the engine.

## Findings

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<b>Aircraft</b>	Fuel - Fluid condition (Cause) Fuel distribution - Not specified (Cause)
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## Factual Information

On December 1, 2015, about 1950 mountain standard time, a Pipistrel Virus motorglider, N145VS, was substantially damaged during a forced landing following a loss of engine power near Centennial Airport (KAPA), Englewood, Colorado. The commercial pilot and his passenger were not injured. The personal flight was conducted under the provisions of 14 Code of Federal Regulations Part 91 without a flight plan. Night visual meteorological conditions prevailed at the time of the accident. The cross country flight departed Sayre Municipal Airport (3O4), Sayre, Oklahoma, about 1710, was en route to Erie Municipal Airport (KEIK), Erie, Colorado, and diverted to KAPA.

While en route, the pilot assessed that the fuel level from right tank was not changing. It did not appear that fuel was draining from the right tank and the fuel remaining in the left fuel tank was not adequate to complete the flight as previously planned. The pilot requested to divert to KAPA and while preparing to land the engine lost power. The pilot performed a forced landing to a field during which the airplane nosed over and came to rest inverted. The lower fuselage and the engine mount were substantially damaged.

The airframe, engine, and fuel system were examined under the auspices of the National Transportation Safety Board investigator-in-charge. The sight gauges for the left and right fuel tanks and indicated capacity of the left and right fuel tanks were accurate. Visible contaminants, consistent with insect(s) and leaves, were recovered from the right fuel tank and fuel lines. Once the contaminants were removed fuel flowed freely from the right fuel tank. The examination of the engine, airframe, and remaining systems revealed no anomalies.

## History of Flight

Approach	Loss of engine power (total) (Defining event)
Landing-landing roll	Nose over/nose down

## Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial; Private	<b>Age:</b>	21
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Glider	<b>Restraint Used:</b>	4-point
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Glider	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 3 Without Waivers/Limitations	<b>Last Medical Exam:</b>	06/02/2011
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	06/15/2015
<b>Flight Time:</b>	510.4 hours (Total, all aircraft), 46 hours (Total, this make and model), 431.7 hours (Pilot In Command, all aircraft), 98 hours (Last 90 days, all aircraft), 36.9 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	PIPISTREL	<b>Registration:</b>	N145VS
<b>Model/Series:</b>	VIRUS NO SERIES	<b>Aircraft Category:</b>	Glider
<b>Year of Manufacture:</b>	2011	<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Experimental	<b>Serial Number:</b>	360 VSW 100 LSA
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	07/15/2015, Annual	<b>Certified Max Gross Wt.:</b>	1040 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	Rotax
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	
<b>Operator:</b>	On file	<b>Air Carrier Operating Certificate:</b>	None

## Meteorological Information and Flight Plan

Observation Facility, Elevation:	KAPA	Observation Time:	0753 MST
Distance from Accident Site:	2 Nautical Miles	Condition of Light:	Night
Direction from Accident Site:		Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Scattered / 8000 ft agl	Temperature/Dew Point:	1°C / -11°C
Lowest Ceiling:	Broken / 20000 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	4 knots, 210°	Visibility (RVR):	
Altimeter Setting:	30.03 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Sayre, OK (3O4)	Type of Flight Plan Filed:	VFR
Destination:	Denver, CO (KAPA)	Type of Clearance:	VFR
Departure Time:	1710 MST	Type of Airspace:	Class D

## Airport Information

Airport:	Centennial (KAPA)	Runway Surface Type:	Asphalt
Airport Elevation:	5885 ft	Runway Surface Condition:	Dry
Runway Used:	28	IFR Approach:	None
Runway Length/Width:	4800 ft / 75 ft	VFR Approach/Landing:	Forced Landing; Straight-in

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None		

## Administrative Information

Investigator In Charge (IIC):	Jennifer Rodi	Adopted Date:	10/03/2016
Additional Participating Persons:	Jack McLaughlin; Federal Aviation Administration; Denver, CO		
Publish Date:	10/03/2016		
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=92402">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=92402</a>		

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