



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Maricopa, Arizona	<b>Accident Number:</b>	WPR13LA161
<b>Date &amp; Time:</b>	March 25, 2013, 13:00 Local	<b>Registration:</b>	N33SV
<b>Aircraft:</b>	OWENS VELOCITY 173	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of engine power (total)	<b>Injuries:</b>	3 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The pilot reported that, after about 30 minutes in cruise flight, the engine began to run roughly, followed by a loss of power. The pilot attempted to restart the engine twice but was unsuccessful. He then initiated an emergency landing on a dirt road. During the landing roll, the left wing struck an irrigation pipe, which resulted in the airplane departing the road and coming to rest in a field.

A postaccident engine examination revealed that the engine was modified with an Ellison throttle body under an experimental, amateur-built airworthiness certificate. Attempts to run the engine with the Ellison throttle body installed were unsuccessful. Once the throttle body was removed, the engine successfully started. An examination and teardown of the throttle body did not reveal any anomalies that would have caused the throttle body to malfunction.

## Probable Cause and Findings

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

A loss of engine power for reasons that could not be determined because postaccident examination of the throttle body revealed no anomalies that would have precluded normal operation.

## Findings

Not determined	(general) - Unknown/Not determined
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# Factual Information

## History of Flight

Enroute-cruise	Loss of engine power (total) (Defining event)
Landing-landing roll	Collision with terr/obj (non-CFIT)

On March 25, 2013, about 1300 mountain standard time, an experimental Owens Velocity 173 airplane, N33SV, experienced a loss of engine power during cruise flight and the pilot made a forced landing on a dirt road near Maricopa, Arizona. The pilot/owner operated the airplane under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. The pilot and two passengers were not injured; the airplane sustained substantial damage to the wings and fuselage. Visual meteorological conditions prevailed for the local area flight that departed the Pegasus Airpark, Queen Creek, Arizona, about 1230. No flight plan had been filed.

The pilot reported that the airplane was airborne for about 30 minutes when the engine began to run rough followed by a loss power. He attempted twice to restart the engine, but was unsuccessful. The pilot identified a dirt road as a landing spot and performed an emergency landing. During the landing rollout the airplane struck an irrigation pipe, departed the road, and came to rest in an open field.

Postaccident examination revealed that the fuel tanks contained 20 gallons of fuel; additionally, the engine controls and fuel selector continuity were established. The ignition system, primary fuel system, and drive train were examined and found to be functioning normally. After several unsuccessful attempts were made to start the engine with the modified Ellison throttle body attached, the throttle body was then removed and the engine started successfully. An examination of the throttle body revealed no anomalies that would have precluded normal operation.

## Pilot Information

<b>Certificate:</b>	Airline transport	<b>Age:</b>	53
<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>	Unknown
<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 1 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	November 20, 2012
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	October 31, 2012
<b>Flight Time:</b>	(Estimated) 23000 hours (Total, all aircraft), 210 hours (Total, this make and model), 11000 hours (Pilot In Command, all aircraft), 135 hours (Last 90 days, all aircraft), 45 hours (Last 30 days, all aircraft), 0.5 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	OWENS	<b>Registration:</b>	N33SV
<b>Model/Series:</b>	VELOCITY 173	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	DMO 209
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	June 26, 2012 Condition	<b>Certified Max Gross Wt.:</b>	2400 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	450 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-360-EXP
<b>Registered Owner:</b>	Christopher D Mager	<b>Rated Power:</b>	200 Horsepower
<b>Operator:</b>	Christopher D Mager	<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>	CGZ,1464 ft msl	<b>Distance from Accident Site:</b>	21 Nautical Miles
<b>Observation Time:</b>	13:15 Local	<b>Direction from Accident Site:</b>	125°
<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>	/ None	<b>Turbulence Type Forecast/Actual:</b>	/ Unknown
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.96 inches Hg	<b>Temperature/Dew Point:</b>	25°C / -7°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Queen Creek, AZ (5AZ3)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Queen Creek, AZ (5AZ3)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	12:30 Local	<b>Type of Airspace:</b>	Unknown

## Airport Information

<b>Airport:</b>	Pegasus Airpark 5AZ3	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	1450 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	2 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	3 None	<b>Latitude, Longitude:</b>	33.044166,-111.983612

## Administrative Information

**Investigator In Charge (IIC):** Cornejo, Tealeye

**Additional Participating Persons:** Eric J Hasslachner; Federal Aviation Administration; Scottsdale, AZ

**Original Publish Date:** October 19, 2015

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=86501>

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