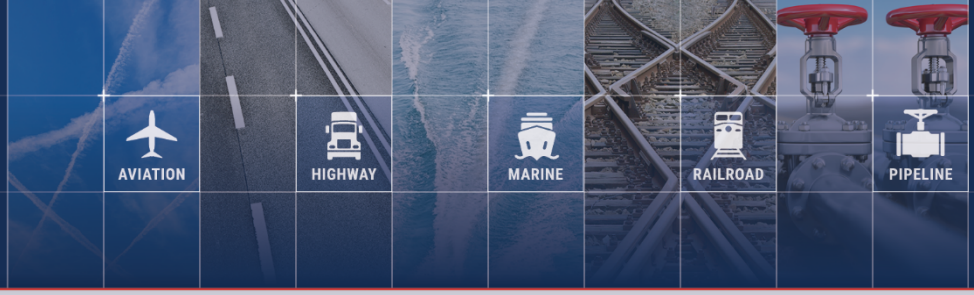

Aviation Investigation Final Report

Location:	Goldsby, Oklahoma	**Accident Number:**	CEN23LA152
Date & Time:	April 8, 2023, 18:30 Local	**Registration:**	N48PS
Aircraft:	Vans RV6	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (partial)	**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Shortly after takeoff, the pilot experienced a partial loss of engine power and turned back to the airport to land. During the “tight” left traffic pattern, the left wing contacted the runway and the pilot lost control of the airplane, resulting in substantial damage to the left wing, fuselage, and vertical stabilizer.

Postaccident examination of the engine found the No. 1 electronic ignition lead was loose and detached from the ignition coil. Additionally, the ignition coil package mount bolt was loose, which would have allowed the grouping to vibrate during engine operation.

Probable Cause and Findings

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

The engine electronic ignition system became disconnected, which resulted in a partial loss of engine power.

Findings

Aircraft	Ignition system wiring - Malfunction

Factual Information

History of Flight

Initial climb	Loss of engine power (partial) (Defining event)
Landing-flare/touchdown	Hard landing
Landing-landing roll	Runway excursion

On April 8, 2023, about 1830 central standard time, an amateur-built Vans RV-6A airplane, N48PS, was substantially damaged when it was involved in an accident near Goldsby, Oklahoma. The pilot sustained minor injuries. The airplane was operated under the provisions of Title 14 *Code of Federal Regulations* Part 91 as a personal flight.

The local flight departed runway 13 at the David Jay Perry Airport, Goldsby, Oklahoma. The pilot stated that, about 8-10 seconds after he rotated the airplane, the engine made loud popping/banging sounds and he experienced a reduction in engine power. He maneuvered the airplane to land on runway 13 in a “tight” left traffic pattern. During the landing, the left wing contacted the runway and the airplane landed hard. The pilot lost control of the airplane as it departed the runway and rolled inverted. Substantial damage was sustained to the left wing, fuselage, and to the horizontal and vertical stabilizers.

Postaccident examination of the engine found that it was equipped with a Champion Slick impulse magneto that sparked the lower bank of aviation spark plugs and an electronic ignition system that sparked the upper bank of automotive spark plugs. The No. 1 electronic ignition lead was loose and detached from the ignition coil. Additionally, the ignition coil package mount bolt was loose, which would have allowed the grouping to vibrate during engine operation.

Pilot Information

Certificate:	Private	**Age:**	44,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	5-point
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	May 20, 2022
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	April 29, 2022
Flight Time:	512.4 hours (Total, all aircraft), 40 hours (Total, this make and model), 364.4 hours (Pilot In Command, all aircraft), 0.3 hours (Last 90 days, all aircraft), 0.3 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Vans	**Registration:**	N48PS
Model/Series:	RV6 A	**Aircraft Category:**	Airplane
Year of Manufacture:	2017	**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	25349
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:	August 17, 2022 Condition	**Certified Max Gross Wt.:**	1650 lbs
Time Since Last Inspection:	8 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	219 Hrs at time of accident	**Engine Manufacturer:**	Superior
ELT:	C126 installed, activated, did not aid in locating accident	**Engine Model/Series:**	XP-360-B1C2
Registered Owner:	On file	**Rated Power:**	180 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KOUN,1182 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	18:49 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	8 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	140°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.07 inches Hg	**Temperature/Dew Point:**	22°C / -3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Goldsby, OK	**Type of Flight Plan Filed:**	None
Destination:	Goldsby, OK	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	Class D

Airport Information

Airport:	DAVID JAY PERRY 1K4	**Runway Surface Type:**	Concrete
Airport Elevation:	1168 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	13	**IFR Approach:**	None
Runway Length/Width:	3004 ft / 60 ft	**VFR Approach/Landing:**	Forced landing;Full stop

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	35.155068,-97.470394(est)

Administrative Information

Investigator In Charge (IIC):	Aguilera, Jason
Additional Participating Persons:	Thomas LaNou; FAA FSDO; Oklahoma City, OK
Original Publish Date:	March 28, 2024
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=107044