



Aviation Investigation Final Report

Location:	Greenville, Kentucky	Accident Number:	ERA23LA231
Date & Time:	May 15, 2023, 17:13 Local	Registration:	N8262
Aircraft:	CHARLES D WALKER WALKER CURTISS JN4D	Aircraft Damage:	Substantial
Defining Event:	Powerplant sys/comp malf/fail	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Shortly after takeoff during a personal flight, the pilot of the experimental amateur-built airplane reported that the engine lost all power suddenly. He was able to briefly restart the engine for several seconds after several attempts, but it lost power gain. He maneuvered for a forced landing to nearby field and the airplane's wings and fuselage were substantially damaged during the subsequent landing. Postaccident examination of the engine's ignition system revealed the power supply electrical wire from the distributor to the ignition module was separated at the connection at the distributor. Further, a secondary locking device was not present on the separated electrical connector. Thus, the separation of the electrical wire that powered the ignition module served as a single-point failure that disabled the ignition system.

Probable Cause and Findings

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

The separation of an electrical wire that powered the ignition module, rendering the ignition system inoperative, and resulting in the total loss of engine power.

Findings

Aircraft	Ignition system wiring - Failure
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Factual Information

History of Flight

Enroute	Powerplant sys/comp malf/fail (Defining event)
Enroute	Loss of engine power (total)
Emergency descent	Off-field or emergency landing
Landing-landing roll	Landing gear collapse

On May 15, 2023, about 1713 central daylight time, an experimental amateur-built Walker-Curtiss JN4D, N8262, was substantially damaged when it was involved in an accident near Greenville, Kentucky. The private pilot and pilot-rated passenger were not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot stated that three legs had been flown earlier that day with no reported engine issues. After landing at the third airport, he filled the fuel tank for his final flight leg and performed a preflight inspection of the airplane. The flight departed Madisonville Regional Airport (2I0), Madisonville, Kentucky, about 1700. About 10 minutes after takeoff, while flying at 1,500 ft above ground level (agl), the engine suddenly stopped “as if it were turned off.” He tried to restart the engine multiple times, and on the third attempt it started and operated to full power for about 10 seconds, and then it stopped again. He again tried to restart the engine but was unable. At that point the airplane was over rolling hills. He saw a logging road and a field, but initially opted to attempt to land on the logging road because recovery of the airplane might be easier. When the airplane got closer to the logging road, he saw stumps and opted to divert to the nearby field, which had been a strip mine. He performed a three-point landing in the field and the airplane skipped; after a second touchdown, something contacted the main landing gear, and it separated from the airplane. The airplane came to rest with the empennage twisted to the left, the right lower wing was torn off about 2 ft outboard from the wing root, and the landing gear were sheared off.

Operational testing of the engine ignition system following recovery of the airplane revealed electrical power to the distributor, but there was no electrical power from the distributor to the ignition module. Inspection of the distributor revealed that the female spade electrical terminal connector of the red colored (power) electrical wire was separated from the plastic connector and also from its mating male connector at the distributor. Close inspection of the female spade electrical connector and plastic connector revealed that there was no positive locking resistance of the female spade terminal electrical connector inside the plastic connector. The female spade electrical connector of the separated wire was placed on its mating male

connector at the distributor and the connection was tight. There was no secondary locking device on the electrical connector at the distributor to prevent a single-point failure.

Pilot Information

Certificate:	Private	Age:	76,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Rear
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	April 6, 2023
Occupational Pilot:	No	Last Flight Review or Equivalent:	March 26, 2023
Flight Time:	1115 hours (Total, all aircraft), 440 hours (Total, this make and model), 20 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft)		

Pilot-rated passenger Information

Certificate:		Age:	69,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	Glider; Helicopter	Restraint Used:	5-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	January 14, 2023
Occupational Pilot:	No	Last Flight Review or Equivalent:	January 14, 2023
Flight Time:	33310 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CHARLES D WALKER	Registration:	N8262
Model/Series:	WALKER CURTISS JN4D NO SERIES	Aircraft Category:	Airplane
Year of Manufacture:	2013	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	WC001
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	June 1, 2022 Condition	Certified Max Gross Wt.:	2600 lbs
Time Since Last Inspection:	47 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	413.1 Hrs as of last inspection	Engine Manufacturer:	General Motors
ELT:	Installed, activated	Engine Model/Series:	350
Registered Owner:	On file	Rated Power:	157 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:	KBWG, 523 ft msl	Distance from Accident Site:	42 Nautical Miles
Observation Time:	16:53 Local	Direction from Accident Site:	115°
Lowest Cloud Condition:	Scattered / 4900 ft AGL	Visibility	10 miles
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	Unknown / None
Wind Direction:	20°	Turbulence Severity Forecast/Actual:	Unknown / N/A
Altimeter Setting:	30.09 inches Hg	Temperature/Dew Point:	29°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Madisonville, KY (210)	Type of Flight Plan Filed:	None
Destination:	Bowling Green, KY (BWG)	Type of Clearance:	None
Departure Time:	17:00 Local	Type of Airspace:	Class E

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	37.256937,-87.215945(est)

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	Danny Gregory; FAA/FSDO; Louisville, KY
Original Publish Date:	June 5, 2024
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=174539

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).