



Aviation Investigation Final Report

Location:	Kelso Valley, California	Accident Number:	WPR20LA259
Date & Time:	August 9, 2020, 08:00 Local	Registration:	N2ZE
Aircraft:	Rutan VARI EZE	Aircraft Damage:	Destroyed
Defining Event:	Fuel related	Injuries:	1 Serious, 1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot departed with 16 gallons of fuel (about 3 hours of flight time) on board for the local flight. About one hour after the departure, the engine experienced a loss of engine power. He switched the fuel selector from the wing tank position to the center tank position, and the engine regained power for 30 seconds before it lost power again. The pilot manipulated the fuel selector two more times only to experience an additional 20 seconds of regained engine power. The pilot then executed an emergency landing during which the fuselage was substantially damaged.

A postaccident examination of the airplane revealed the left-wing fuel cap was not secured to the fuel tank and both wing fuel tanks were empty. The pilot's failure to secure the left wing fuel cap likely created a leak in the fuel system which would have exhausted the fuel supply sooner than the pilot planned for and resulted in a loss of power.

Probable Cause and Findings

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

The pilot's failure to secure the fuel cap, which resulted in a total loss of engine power due to fuel exhaustion.

Findings

Personnel issues	Forgotten action/omission - Pilot
Aircraft	Fuel - Fluid level

Factual Information

History of Flight

Enroute	Fuel related (Defining event)
Enroute	Loss of engine power (total)
Landing-landing roll	Collision during takeoff/land

On August 9, 2020, at 0800 Pacific daylight time, a Page/Le Master, Vari-eze experimental airplane, N2ZE, was destroyed when it was involved in an accident near Kelso Valley, California. The pilot was seriously injured, and the passenger sustained a minor injury. The airplane was operated as a Title 14 *Code of Federal Regulations* (CFR) Part 91 personal flight.

The pilot stated he departed California City Municipal Airport (L71), California City, California, with 16 gallons of fuel (about 3 hours of flight time) on board. About 1 hour after the departure, the engine experienced a loss of engine power. The pilot switched the fuel selector from the wing tank position to the center tank position, and the engine regained power for 30 seconds before it lost power. The pilot manipulated the fuel selector from the center tank to the wing tank and back to center tank only to experience an additional 20 seconds of regained engine power. The pilot then decided to execute an emergency landing during which the fuselage was substantially damaged.

The pilot reported the loss of engine power was due to “a lack of fuel.” He also reported that he last flew the airplane about 6 months before the accident, and he performed the maintenance on the airplane.

A postaccident examination of the airplane revealed the left-wing fuel cap was not secured to the fuel tank and both wing fuel tanks were empty. The fuel filter bowl was also empty, and the filter was absent of any debris.

Pilot Information

Certificate:	Airline transport; Commercial; Flight engineer; Flight instructor	Age:	55, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	December 6, 2019
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	3156 hours (Total, all aircraft), 10 hours (Total, this make and model), 22 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft)		

Passenger Information

Certificate:		Age:	Male
Airplane Rating(s):		Seat Occupied:	Rear
Other Aircraft Rating(s):		Restraint Used:	4-point
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Rutan	Registration:	N2ZE
Model/Series:	VARI EZE No Series	Aircraft Category:	Airplane
Year of Manufacture:	1984	Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	522
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	July 15, 2020 Condition	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Continental
ELT:	Not installed	Engine Model/Series:	O-200 SERIES
Registered Owner:	On file	Rated Power:	100 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:	L71	Distance from Accident Site:	40 Nautical Miles
Observation Time:	06:50 Local	Direction from Accident Site:	140°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	20°C
Precipitation and Obscuration:			
Departure Point:	California City, CA (L71)	Type of Flight Plan Filed:	None
Destination:	California City, CA (L71)	Type of Clearance:	None
Departure Time:	07:00 Local	Type of Airspace:	Military operation area

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 Serious, 1 Minor	Latitude, Longitude:	35.447776,-118.071945(est)

Administrative Information

Investigator In Charge (IIC):	Smith, Maja
Additional Participating Persons:	Richard Ramirez; FSDO; Las Vegas, NV
Original Publish Date:	July 12, 2022
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=101761

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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](#).