



# Aviation Investigation Final Report

<b>Location:</b>	Cottonwood, California	<b>Accident Number:</b>	WPR23LA074
<b>Date &amp; Time:</b>	December 17, 2022, 11:00 Local	<b>Registration:</b>	N9YA
<b>Aircraft:</b>	ROYSE RALPH L GLASAIR	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Fuel starvation	<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The pilot reported that, during the takeoff, the fuel tank selector was mistakenly set to the auxiliary tank. Five minutes later the auxiliary tank ran out of gas, which resulted in a total loss of engine power. The pilot switched to the main tank; however, there was insufficient altitude available for a recovery. The airplane struck terrain about 100 ft short of the runway, which substantially damaged the left and right wings. The pilot reported that there were no preaccident mechanical malfunctions or failures with the airplane 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 pilot's fuel mismanagement which resulted in fuel starvation and a total loss of engine power.

## Findings

<b>Aircraft</b>	Fuel - Fluid management
<b>Personnel issues</b>	Use of policy/procedure - Pilot
<b>Personnel issues</b>	Incorrect action selection - Pilot

## Factual Information

### History of Flight

Takeoff	Fuel starvation (Defining event)
Landing	Landing area undershoot
Landing	Collision with terr/obj (non-CFIT)

### Pilot Information

Certificate:	Commercial	Age:	77,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	Airplane	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	BasicMed None	Last FAA Medical Exam:	
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	September 1, 2022
Flight Time:	3094 hours (Total, all aircraft), 190 hours (Total, this make and model)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	ROYSE RALPH L	<b>Registration:</b>	N9YA
<b>Model/Series:</b>	GLASAIR	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1986	<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	582R
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	April 29, 2022 Condition	<b>Certified Max Gross Wt.:</b>	2200 lbs
<b>Time Since Last Inspection:</b>	0 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	2327 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	C91 installed, activated, aided in locating accident	<b>Engine Model/Series:</b>	IO-360-B1A
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	160
<b>Operator:</b>	On file	<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>	KRDD, 501 ft msl	<b>Distance from Accident Site:</b>	10 Nautical Miles
<b>Observation Time:</b>	17:53 Local	<b>Direction from Accident Site:</b>	10°
<b>Lowest Cloud Condition:</b>	Clear / 0 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None / 0 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	6 knots /	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	350°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.15 inches Hg	<b>Temperature/Dew Point:</b>	9°C / -3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Redding, CA (RDD)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	10:30 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	Flying N Ranch Airport CA04	<b>Runway Surface Type:</b>	Dirt
<b>Airport Elevation:</b>	530 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	16	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	2600 ft / 150 ft	<b>VFR Approach/Landing:</b>	Straight-in

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Minor	<b>Latitude, Longitude:</b>	40.342991,-122.33936(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Salazar, Fabian
<b>Additional Participating Persons:</b>	Robert Senseney; Federal Aviation Administration
<b>Original Publish Date:</b>	April 27, 2023
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 4</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=106496">https://data.ntsb.gov/Docket?ProjectID=106496</a>

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