



# Aviation Investigation Final Report

<b>Location:</b>	Three Rocks, California	<b>Accident Number:</b>	WPR23LA333
<b>Date &amp; Time:</b>	August 31, 2023, 19:15 Local	<b>Registration:</b>	N61373
<b>Aircraft:</b>	AYRES CORPORATION S2R-T34	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Aerodynamic stall/spin	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Analysis

The pilot reported that the airplane's hopper had been loaded with 300 gallons of water. During the takeoff roll, the airplane did not accelerate as expected so he initiated the emergency dump procedure to jettison the water. The airplane became airborne and the pilot maintained a high angle of attack to climb over trees near the end of the runway. The airplane subsequently experienced an aerodynamic stall, descended into an adjacent field, and impacted terrain. The left wing, right aileron, and elevator sustained substantial damage. The pilot said he suspected the airplane performance was affected by density altitude and he reported that there were no preaccident mechanical malfunctions or failures 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 airplane's exceedance of the critical angle of attack, resulting in an aerodynamic stall and impact with terrain.

## Findings

<b>Aircraft</b>	Airspeed - Not attained/maintained
<b>Aircraft</b>	Angle of attack - Capability exceeded
<b>Personnel issues</b>	Aircraft control - Pilot
<b>Personnel issues</b>	Monitoring equip/instruments - Pilot

## Factual Information

### History of Flight

Takeoff	Aerodynamic stall/spin (Defining event)
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### Pilot Information

Certificate:	Commercial; Flight instructor	Age:	42,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	Glider; Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Helicopter; Instrument airplane	Toxicology Performed:	
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	March 10, 2023
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	May 23, 2022
Flight Time:	(Estimated) 7610 hours (Total, all aircraft), 40 hours (Total, this make and model), 7450 hours (Pilot In Command, all aircraft), 230 hours (Last 90 days, all aircraft), 51 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	AYRES CORPORATION	<b>Registration:</b>	N61373
<b>Model/Series:</b>	S2R-T34	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1996	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Restricted (Special)	<b>Serial Number:</b>	T34-216
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	July 11, 2023 100 hour	<b>Certified Max Gross Wt.:</b>	9950 lbs
<b>Time Since Last Inspection:</b>	64 Hrs	<b>Engines:</b>	1 Turbo prop
<b>Airframe Total Time:</b>	14692 Hrs at time of accident	<b>Engine Manufacturer:</b>	Pratt & Whitney
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	PT6-34
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	750 Horsepower
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	Agricultural aircraft (137)

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KNLC, 234 ft msl	<b>Distance from Accident Site:</b>	19 Nautical Miles
<b>Observation Time:</b>	18:56 Local	<b>Direction from Accident Site:</b>	111°
<b>Lowest Cloud Condition:</b>	Few / 6000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>		<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	15 knots /	<b>Turbulence Type Forecast/Actual:</b>	/ None
<b>Wind Direction:</b>	240°	<b>Turbulence Severity Forecast/Actual:</b>	/ N/A
<b>Altimeter Setting:</b>	29.63 inches Hg	<b>Temperature/Dew Point:</b>	34°C / 0°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Corcoran, CA (43CN)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Three Rocks, CA	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	18:30 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	none - private farm strip N/A	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	350 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>	Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	36.44355,-120.31049

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Blocher, Kristyn
<b>Additional Participating Persons:</b>	Jeremy Alexander; Federal Aviation Administration; Fresno, CA
<b>Original Publish Date:</b>	December 7, 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.nts.gov/Docket?ProjectID=193010">https://data.nts.gov/Docket?ProjectID=193010</a>

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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](#).