



# National Transportation Safety Board

## Aviation Accident Data Summary

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<b>Location:</b>	Ainsworth, IA	<b>Accident Number:</b>	CEN09LA403
<b>Date &amp; Time:</b>	07/01/2009, 1246 CDT	<b>Registration:</b>	N60015
<b>Aircraft:</b>	AYRES S2R-G6	<b>Injuries:</b>	1 Serious
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

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### Analysis

The airplane experienced a loss of engine power while maneuvering at a low altitude during an aerial application flight. The pilot was unable to regain engine power after he turned the boost pump on and moved the throttle control to the full forward position. He then performed a forced landing on terraced terrain. A postaccident engine examination revealed evidence of continued rotation when the airplane impacted the ground. Examination of the fuel control unit (FCU) revealed that the bellows spring was fractured and the overspeed governor ball head bearing retainer was fragmented. Pieces of the fragmented retainer were found within the flow divider and fuel manifold. An unidentified contaminant was observed on the bearing race shoulder which misaligned the ball head bearing. The FCU was reportedly overhauled in 2003, but there were no component or aircraft records indicating the FCU's maintenance and installation since its manufacture. A search of the Federal Aviation Administration's service difficulty database did not specifically cite failures of the ball head bearing retainer, and the failures that were listed did not indicate the nature of those failures. The FCU manufacturer reported having no record of failures of the ball head bearing retainer; however, the repair facility that overhauled the FCU reported they had seen failures of the ball head bearing retainer.

### Flight Events

Maneuvering-low-alt flying - Powerplant sys/comp malf/fail  
Maneuvering-low-alt flying - Fuel contamination  
Maneuvering-low-alt flying - Loss of engine power (partial)  
Emergency descent - Loss of engine power (partial)  
Landing-flare/touchdown - Collision with terr/obj (non-CFIT)

### Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be:  
A component failure of the fuel control unit, which resulted in a loss of engine power.

### Findings

Aircraft-Aircraft power plant-Engine fuel and control-Fuel controlling system-Failure - C  
Organizational issues-Support/oversight/monitoring-Documentation/record keeping-(general)-Not specified

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	39
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land; Single-engine Sea	<b>Instrument Rating(s):</b>	Airplane
<b>Other Aircraft Rating(s):</b>		<b>Instructor Rating(s):</b>	None
<b>Flight Time:</b>	6550 hours (Total, all aircraft), 65 hours (Total, this make and model), 6500 hours (Pilot In Command, all aircraft), 135 hours (Last 90 days, all aircraft), 62 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	AYRES	<b>Registration:</b>	N60015
<b>Model/Series:</b>	S2R-G6	<b>Engines:</b>	1 Turbo Prop
<b>Operator:</b>	Air Advantage Inc	<b>Engine Manufacturer:</b>	Garrett
<b>Air Carrier Operating Certificate:</b>		<b>Engine Model/Series:</b>	TPE331
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Meteorological Information and Flight Plan

<b>Observation Facility, Elevation:</b>	AWG, 754 ft msl	<b>Weather Information Source:</b>	Weather Observation Facility
<b>Conditions at Accident Site:</b>	Visual Conditions	<b>Lowest Ceiling:</b>	Broken / 4000 ft agl
<b>Condition of Light:</b>	Day	<b>Wind Speed/Gusts, Direction:</b>	8 knots, 310°
<b>Temperature:</b>	21° C / 16° C	<b>Visibility</b>	10 Miles
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Washington, IA (AWG)	<b>Destination:</b>	Ainsworth, IA

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Mitchell F Gallo	<b>Adopted Date:</b>	09/19/2011
<b>Investigation Docket:</b>	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=74181">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=74181</a>		

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