



# National Transportation Safety Board Aviation Accident Data Summary

<b>Location:</b>	Childress, TX	<b>Accident Number:</b>	DFW06CA158
<b>Date &amp; Time:</b>	06/01/2006, 1306 CDT	<b>Registration:</b>	N70AF
<b>Aircraft:</b>	Ayres S2R-600	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Analysis

While in cruise flight, the 19,620-hour commercial pilot lost control of the rudder pedals and experienced trouble maintaining directional control of the single-engine, turbine powered agricultural airplane. The pilot reported that "he dumped his chemical load at a safe location" and elected to discontinue the aerial application flight. The pilot proceed to a larger airport for a landing. The pilot added that he made several attempts to land as he was having trouble keeping the airplane aligned with runway 35 unless he maintained a much higher than normal airspeed on final approach. On his final attempt, the pilot was able to land, but as the airplane slowed down, it veered off the right side of the 5,949-foot long, by 75-foot wide asphalt runway. Following the loss of control, the left wing of the airplane collided with a tractor. A Federal Aviation Administration (FAA) safety inspector performed an on-scene examination of the airplane and found that the rudder horn was corroded and had completely separated. According to the pilot, the rudder horn is covered by fabric and it was difficult to inspect during a preflight inspection. The pilot added that even though the operator has a procedure in place to wash the airplane after spraying corrosive chemicals, he suggested that somehow chemicals had made contact with the rudder horn which caused the corrosion. At the time of the last 100 hour inspection, which was completed less than 11 days prior to the mishap, the tailwheel-equipped airplane had accumulated a total of 11,107.8 hours since new. The wind at the time of the accident was reported from 030 degrees at 8 knots.

## Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inability to maintain directional control while landing due to the failure of the rudder horn due to corrosion.

## Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation: MANEUVERING - AERIAL APPLICATION

### Findings

1. (C) FLIGHT CONTROL, RUDDER VATOR ATTACHMENT - CORRODED  
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Occurrence #2: LOSS OF CONTROL - ON GROUND/WATER  
Phase of Operation: LANDING - ROLL

### Findings

2. (C) DIRECTIONAL CONTROL - NOT POSSIBLE - PILOT IN COMMAND  
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Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT  
Phase of Operation: LANDING - ROLL

### Findings

#### 3. OBJECT - VEHICLE

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	63
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Instrument Rating(s):</b>	None
<b>Other Aircraft Rating(s):</b>	None	<b>Instructor Rating(s):</b>	
<b>Flight Time:</b>	19620 hours (Total, all aircraft), 2540 hours (Total, this make and model), 120 hours (Last 90 days, all aircraft), 45 hours (Last 30 days, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	Ayres	<b>Registration:</b>	N70AF
<b>Model/Series:</b>	S2R-600	<b>Engines:</b>	1 Reciprocating
<b>Operator:</b>	Goff's Flying Service	<b>Engine Manufacturer:</b>	Garrett
<b>Air Carrier Operating Certificate:</b>	None	<b>Engine Model/Series:</b>	TPE-331
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

### Meteorological Information and Flight Plan

<b>Observation Facility, Elevation:</b>	CDS	<b>Weather Information Source:</b>	Weather Observation Facility
<b>Conditions at Accident Site:</b>	Visual Conditions	<b>Lowest Ceiling:</b>	None
<b>Condition of Light:</b>	Day	<b>Wind Speed/Gusts, Direction:</b>	8 knots, 30°
<b>Temperature:</b>	27°C / 14°C	<b>Visibility</b>	10 Miles
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Paducah, TX (3F6)	<b>Destination:</b>	Childress, TX (CDS)

### Airport Information

<b>Airport:</b>	ChildressMunicipal Airport (CDS)	<b>Runway Surface Type:</b>	
<b>Runway Used:</b>	040	<b>Runway Surface Condition:</b>	
<b>Runway Length/Width:</b>			

### 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>	N/A	<b>Aircraft Explosion:</b>	

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Leah D Yeager	<b>Adopted Date:</b>	10/03/2006
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.		
<b>Investigation Docket:</b>	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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