



# Aviation Investigation Final Report

<b>Location:</b>	PULLMAN, Washington	<b>Accident Number:</b>	SEA96LA159
<b>Date &amp; Time:</b>	July 16, 1996, 06:45 Local	<b>Registration:</b>	N9336R
<b>Aircraft:</b>	Cessna                      A188B	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Serious
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Analysis

The pilot stated that he was spraying a field to the north and south with a light wind from the northwest and wind shear from different directions. He reported that as he was spraying south toward a small ridge, the airplane suddenly settled. The airplane collided with terrain, just below the top of a ridge, then it bounced and became airborne. The pilot tried to recover; however, the engine was no longer responding. The airplane then stalled and again collided with the terrain, flat on its belly. The pilot reported that there was no mechanical failure or malfunction with the airplane at the time of the accident.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: failure of the pilot to maintain terrain clearance during a swath run. Factors relating to the accident were: unfavorable (variable) wind conditions, low airspeed, and uneven terrain.

## Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: MANEUVERING - AERIAL APPLICATION

### Findings

1. (F) WEATHER CONDITION - UNFAVORABLE WIND
2. (F) WEATHER CONDITION - VARIABLE WIND
3. (F) AIRSPEED - LOW - PILOT IN COMMAND

4. (F) TERRAIN CONDITION - ROUGH/UNEVEN
5. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

## Factual Information

On July 16, 1996, at 0645 Pacific daylight time, a Cessna A188B, N9336R, registered to and operated by the pilot as a 14 CFR Part 137 aerial application flight, collided with the terrain while maneuvering near Pullman, Washington. Visual meteorological conditions prevailed at the time and no flight plan was filed for the local flight. The airplane was substantially damaged and the commercial pilot, the sole occupant, was seriously injured. The flight had departed from Pullman approximately ten minutes prior to the accident.

In a written statement, the pilot reported that he was spraying an insecticide north and south over a pea field with a light wind from the northwest, and wind shear conditions from different directions. The pilot stated that he began a spray run to the south, toward a small ridge, when that the airplane suddenly settled to the ground and the airplane collided with the ridge just below the top. The airplane bounced and became airborne. The pilot tried to recover, however, the engine was no longer responding. The pilot stated that the airplane "stalled" and again collided with the terrain flat on its belly.

After the accident, the pilot reported that there were no mechanical failures or malfunctions with the airplane at the time of the accident.

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	56, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	April 1, 1996
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2800 hours (Total, all aircraft), 800 hours (Total, this make and model), 2700 hours (Pilot In Command, all aircraft), 350 hours (Last 90 days, all aircraft), 105 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N9336R
<b>Model/Series:</b>	A188B A188B	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Restricted (Special)	<b>Serial Number:</b>	18802243T
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	March 31, 1996 Annual	<b>Certified Max Gross Wt.:</b>	3300 lbs
<b>Time Since Last Inspection:</b>	400 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	4400 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	IO-540-S1A5
<b>Registered Owner:</b>	SAGER, ARTHUR W.	<b>Rated Power:</b>	300 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	PUW ,2551 ft msl	<b>Distance from Accident Site:</b>	7 Nautical Miles
<b>Observation Time:</b>	06:45 Local	<b>Direction from Accident Site:</b>	90°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	20 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	0°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	18°C / 8°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	PULLMAN , WA (PUW )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	06:35 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Serious	<b>Latitude, Longitude:</b>	46.66954,-117.959327(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Eckrote, Debra
<b>Additional Participating Persons:</b>	LES EDMONDS; SPOKANE , WA
<b>Original Publish Date:</b>	May 23, 1997
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=42421">https://data.ntsb.gov/Docket?ProjectID=42421</a>

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