



# Aviation Investigation Final Report

<b>Location:</b>	Colome, South Dakota	<b>Accident Number:</b>	CEN13LA375
<b>Date &amp; Time:</b>	June 26, 2013, 18:25 Local	<b>Registration:</b>	N3168X
<b>Aircraft:</b>	AIR TRACTOR INC AT-301	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Low altitude operation/event	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Analysis

The pilot reported that, during the start of his third spray pass, he cleared the telephone wires located at the edge of the field. Once over the field, he immediately noticed the engine power reduce. He attempted to pull back on the control stick to gain altitude, but the airplane's tail and right wing struck the field. During the forced landing roll, the right landing gear collapsed, and the airplane nosed over. No water was found in the fuel system, and the weather conditions were not conducive for carburetor icing. A postaccident engine run was conducted, and no anomalies were observed 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 loss of engine power for reasons that could not be determined because a postaccident engine run revealed no anomalies that would have precluded normal operation.

## Findings

<b>Not determined</b>	(general) - Unknown/Not determined
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## Factual Information

### History of Flight

<b>Maneuvering-low-alt flying</b>	Low altitude operation/event (Defining event)
<b>Landing-landing roll</b>	Nose over/nose down

On June 26, 2013, about 1825, an Air Tractor AT-301, N3168X, sustained substantial damage during a forced landing to a field near Colome, South Dakota, after a loss of engine power. The commercial pilot, the sole occupant, was not injured. The airplane was registered to and operated by Semper Fi Aviation LLC under the provisions of the 14 Code of Federal Regulations Part 137 as an aerial application flight. Visual meteorological conditions prevailed at the time of the accident, and no flight plan was filed. The flight originated from the Winner Regional Airport (ICR), Winner, South Dakota, about 1720.

The pilot reported that on the start of his third spray pass, he cleared the telephone wires located on the southwest corner of the field, and entered the field flying 95 knots indicated airspeed. The engine instrument gauges indicated 33 inches of manifold air pressure (MAP) at 2,100 rpm. He stated that he "immediately noticed a reduction in power." He attempted to pull back on the control stick to gain altitude, but the airplane's tail and right wing struck the field. During the forced landing rollout, the right landing gear collapsed and the airplane rolled onto its nose.

An airplane and powerplant-rated (A&P) mechanic ran the engine while it was still attached to the airframe. The mechanic ran the engine to 32 inches of MAP at 2,100 rpm, and then pulled the power back to 30 inches of MAP. He was unable to run the engine at full power (36 inches of MAP at 2,200 rpm) due to the vibration from the bent propeller and collapsed landing gear. He reported that the engine ran normally without anomalies.

No water was found in the fuel system and the weather conditions were not conducive for carburetor icing.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	47
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Single
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Unknown
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	May 13, 2013
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	February 17, 2012
<b>Flight Time:</b>	1389 hours (Total, all aircraft), 1057 hours (Total, this make and model), 96 hours (Last 90 days, all aircraft), 70 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	AIR TRACTOR INC	<b>Registration:</b>	N3168X
<b>Model/Series:</b>	AT-301	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1984	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Restricted (Special)	<b>Serial Number:</b>	301-0566
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	May 13, 2013 Annual	<b>Certified Max Gross Wt.:</b>	
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	6898 Hrs as of last inspection	<b>Engine Manufacturer:</b>	P&W
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	R1340 SERIES
<b>Registered Owner:</b>	SEMPER FI AVIATION LLC	<b>Rated Power:</b>	600 Horsepower
<b>Operator:</b>	SEMPER FI AVIATION LLC	<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>	ABR,1302 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	17:53 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Few	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	9 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	210°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.78 inches Hg	<b>Temperature/Dew Point:</b>	31°C / 14°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Winner, SD (ICR )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Colome, SD	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	17:20 Local	<b>Type of Airspace:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<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 None	<b>Latitude, Longitude:</b>	43.376667,-99.858886

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Silliman, James
<b>Additional Participating Persons:</b>	James Badhorse; FAA Rapid City FSDO; Rapid City, SD
<b>Original Publish Date:</b>	February 10, 2014
<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=87313">https://data.ntsb.gov/Docket?ProjectID=87313</a>

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