



# Aviation Investigation Final Report

---

<b>Location:</b>	Gueydan, Louisiana	<b>Accident Number:</b>	CEN14LA255
<b>Date &amp; Time:</b>	May 27, 2014, 08:30 Local	<b>Registration:</b>	N602RR
<b>Aircraft:</b>	AIR TRACTOR INC AT 602	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control in flight	<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

---

## Analysis

A witness reported observing the airplane make a downwind turn that would re-align it with the field the pilot was spraying. The airplane then entered a descent and struck 30-ft-high power lines before impacting the ground about 30 ft forward of the power lines in a left-wing-low, steep nose-down attitude, which was consistent with the airplane stalling before it impacted the power lines. The pilot was known to make steep, high-G turns when spraying fields.

The day before the accident, the pilot flew the accident airplane, and it struck a bird, which damaged the right wing's leading edge. A mechanic inspected the wing and deemed the damage to be minor; the pilot agreed and subsequently flew the damaged airplane for about 12 hours. A company pilot reported that he heard the pilot comment over the radio during an application pass later that same day that the wing was starting to open up where the bird had impacted it. Even with this knowledge, the pilot continued to fly the airplane. The company pilot also stated that he had looked at the airplane on the morning of the accident and noted that several rivets were missing around the damaged area and that he would not have flown the airplane in that condition; however, he did not share his concerns with the pilot or the operator. Due to impact and postimpact fire damage, it could not be determined if the damaged wing contributed to the accident; however, the spar was undamaged.

The pilot's wife stated that he was not taking any medications and that he was in good health but that he did use marijuana recreationally on the weekends only. The accident occurred on a Tuesday. Although postaccident toxicology tests detected a low level of marijuana in the pilot's blood and lung, it is unlikely that it impaired his performance on the day of the accident.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:  
The pilot's failure to maintain airplane control, which resulted in a stall and subsequent collision with power lines.

## Findings

<b>Personnel issues</b>	Aircraft control - Pilot
<b>Aircraft</b>	(general) - Not attained/maintained
<b>Personnel issues</b>	Decision making/judgment - Pilot

## Factual Information

### History of Flight

<b>Maneuvering-low-alt flying</b>	Collision with terr/obj (non-CFIT)
<b>Maneuvering-low-alt flying</b>	Loss of control in flight (Defining event)

On May 27, 2014, about 0835 central daylight time, an Air Tractor AT-602, N602RR, collided with power lines and terrain while spraying a rice field in Gueydan, Louisiana. The commercial pilot was fatally injured and the airplane was destroyed. The airplane was registered to and operated by Klondike Aviation LLC. Visual meteorological conditions prevailed and no flight plan was filed for the aerial spraying flight conducted under 14 Code of Federal Regulations Part 137.

A witness reported that he was driving his tractor parallel to the field the airplane was spraying. He was headed north and the wind was from the south between 15 and 25 knots. The witness said the airplane passed by him going to the south, crossed over the power lines and made a long, sweeping left turn to the north. The witness said the airplane had plenty of time and space to set up for his next pass. When the airplane was headed back toward the north, it was in a descent. The witness said it then struck the power lines and immediately nosed over into the ground. He saw a puff of white smoke followed by a puff of black smoke when the airplane struck the power lines. He then called 911 and responded to the scene.

A Federal Aviation Administration (FAA) inspector performed an on-scene examination of the airplane. According to the inspector, the airplane impacted the ground about 30 feet north of a set of about 30-foot-tall power lines and came to rest on its right side about 100 feet forward of the power lines. The airplane was facing toward the north and contacted the ground in a left wing low, steep nose down attitude. All major components of the airplane were accounted for at the accident site. A post-impact fire consumed most of the wings and fuselage from the cockpit toward the vertical fin.

A postaccident examination of the airplane wreckage was conducted by the National Transportation Safety Board Investigator-in-Charge (NTSB IIC) on July 15, 2014. Both wings were badly damaged. The leading edge skin and ribs for both wings had disintegrated from the wing root to about 4 feet from the wing tip due to thermal exposure. The leading edge skin that remained attached to the wing near the tip was compressed into the spar. Deep scoring marks, consistent with impact with a power line cable, were noted along the length of the left wing spar. The scoring began at the wing root and extended out about 9 feet toward the wing tip. The scoring was more pronounced at the wing root and faded off toward the tip. The tail section did not burn and was displaced up about 25 degrees. The flight control surfaces on the tail sustained minor impact damage except for the leading edge of the right horizontal stabilizer, which exhibited some leading edge impact damage. Flight control continuity for the elevator and rudder could not be confirmed due to fire damage; however, continuity was established for both the left and right ailerons. The flap actuator revealed the flaps were extended about 14 degrees at the time of impact. The airplane was equipped with an AmSafe airbag system. Due to fire damage, it could not be determined if the airbags had deployed. The onboard SATLOC GPS unit also sustained extensive fire damage and no data could be retrieved from the unit.

The pilot's wife stated that her husband had struck a bird the day before the accident in the accident airplane. He took a picture of the damage and sent it to her. The photo depicted a 2-foot-wide area of damage to the leading edge of the right wing (station 160.0). The leading edge was pushed into the wing toward the ribs and spar.

According to the operator, after the pilot reported the bird strike he finished his spray jobs and then brought the airplane back to the hangar. A company mechanic inspected the wing and determined it was only minor damage. The pilot agreed and felt it was safe to fly the airplane. The pilot then flew the airplane for another 12 hours that day without incident. That same day, after the pilot returned to spraying, a company pilot heard the pilot comment over the radio that the area of damaged wing was "coming apart." This concerned the company pilot and he looked at the airplane the following morning. He said there were several rivets missing in the area where the bird struck the wing and that he wouldn't have flown the airplane in that condition. The company pilot said he did not share his concerns with the pilot or the operator. He was also asked to describe the pilot's flying technique. He said, "[The pilot] would turn his aircraft flat and pull a lot of G's. He made the comment that he would pull the snot out of his nose in his downwind turns. The day of the accident he was on a downwind turn, and the air was not good that morning."

The area where the bird struck the right wing was examined. The leading edge skin and ribs were consumed by fire. The spar sustained thermal damage, but was otherwise undamaged. As a result, the extent of the damage from the bird strike and subsequent flights after the wing was damaged could not be fully determined and if it contributed to the accident.

An autopsy of the pilot was not conducted at the discretion of the Louisiana - Vermilion County Parish - Coroner in Abbeville, Louisiana.

Toxicological testing was conducted by the FAA Accident Research Laboratory in Oklahoma City, Oklahoma. The specimens tested positive for the following:

Tetrahydrocannabinol (Marihuana) detected in Lung

Tetrahydrocannabinol (Marihuana) detected in Blood (Cavity)

Tetrahydrocannabinol (Marihuana) detected in Kidney

0.0623 (ug/ml, ug/g) Tetrahydrocannabinol Carboxylic Acid (Marihuana) detected in Kidney

0.0259 (ug/ml, ug/g) Tetrahydrocannabinol Carboxylic Acid (Marihuana) detected in Blood (Cavity)

0.0079 (ug/ml, ug/g) Tetrahydrocannabinol Carboxylic Acid (Marihuana) detected in Lung

According to the pilot's wife, the pilot was a recreational user of marijuana on the weekends only. The accident occurred on a Tuesday. The wife also said her husband was not taking any medications and was in relatively good health. However, she and another company pilot both said the pilot was unusually quiet and she said that he also seemed aggravated on the morning of the accident. Neither of them knew why he was acting that way.

The weather conditions at Abbeville Chris Crusta Memorial Airport (IYA), Abbeville, Louisiana, about 25 miles east of the accident site at 0835, was reported as wind from 160 degrees at 13 knots gusting to 17 knots, visibility 10 miles, scattered clouds at 1,800 feet, broken clouds at 2,800 feet, overcast ceiling at 3,700 feet, temperature 30 degrees C, dew point 24 degrees C, and a barometric pressure setting of 30.04 inches of mercury.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	39
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Center
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	5-point
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 2 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	February 11, 2014
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	January 30, 2014
<b>Flight Time:</b>	14300 hours (Total, all aircraft), 300 hours (Total, this make and model), 300 hours (Last 90 days, all aircraft), 150 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	AIR TRACTOR INC	<b>Registration:</b>	N602RR
<b>Model/Series:</b>	AT 602 NO SERIES	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2011	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Restricted (Special)	<b>Serial Number:</b>	602-1197
<b>Landing Gear Type:</b>	Unknown	<b>Seats:</b>	
<b>Date/Type of Last Inspection:</b>	May 9, 2014 100 hour	<b>Certified Max Gross Wt.:</b>	
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	Turbo prop
<b>Airframe Total Time:</b>	1435 Hrs as of last inspection	<b>Engine Manufacturer:</b>	P&W CANADA
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	PT6A-65AG
<b>Registered Owner:</b>	KLONDIKE AVIATION LLC	<b>Rated Power:</b>	
<b>Operator:</b>		<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>	IYA,16 ft msl	<b>Distance from Accident Site:</b>	25 Nautical Miles
<b>Observation Time:</b>	08:35 Local	<b>Direction from Accident Site:</b>	270°
<b>Lowest Cloud Condition:</b>	Scattered / 1800 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Broken / 2800 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	13 knots / 17 knots	<b>Turbulence Type Forecast/Actual:</b>	/ None
<b>Wind Direction:</b>	160°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.04 inches Hg	<b>Temperature/Dew Point:</b>	30°C / 24°C
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Gueydan, LA	<b>Type of Flight Plan Filed:</b>	
<b>Destination:</b>	Gueydan, LA	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Unknown

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal	<b>Latitude, Longitude:</b>	29.966667,-92.567222

## Administrative Information

**Investigator In Charge (IIC):** Yeager, Leah

**Additional Participating Persons:**

**Original Publish Date:** March 17, 2015

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.ntsb.gov/Docket?ProjectID=89285>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).