



# Aviation Investigation Final Report

<b>Location:</b>	Tahoka, Texas	<b>Accident Number:</b>	CEN17LA190
<b>Date &amp; Time:</b>	May 4, 2017, 14:00 Local	<b>Registration:</b>	N144HF
<b>Aircraft:</b>	AIR TRACTOR INC AT 502	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>	Loss of engine power (partial)	<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Analysis

The commercial pilot of the aerial application flight reported that he had flown several flights in the morning and the airplane was operating normally. Before the final flight of the day, while the airplane was being loaded with product, he heard a noise, but all engine gauges appeared normal. He taxied down the runway and took off. About 30 ft above the ground, the airplane started making more noise and the engine was surging. The pilot attempted to add more power, but the engine did not respond. As the pilot was about to dump the chemical load, the airplane veered to the left and impacted the ground. After the pilot exited the airplane, a postcrash fire ensued. Detailed examination of the engine was not possible due to the severe fire damage.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The partial loss of engine power during takeoff for reasons that could not be determined based on the available information.

## Findings

<b>Aircraft</b>	(general) - Failure
<b>Not determined</b>	(general) - Unknown/Not determined



## Factual Information

### History of Flight

<b>Takeoff</b>	Loss of engine power (partial) (Defining event)
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On May 4, 2017, about 1400 central daylight time, an Air Tractor AT-502B, N144HF, was destroyed by a post-crash fire following a partial loss of engine power after takeoff from the Bar-T Airport (2F4), near Tahoka, Texas. The commercial pilot sustained minor injuries. The aircraft registered to Wilmington Trust Company, Wilmington, Delaware, and operated by Plains Aerial Applications, Olton, Texas, under the provisions of Title 14 *Code of Federal Regulations* Part 137 as an aerial application flight. Visual meteorological conditions prevailed in the vicinity and no flight plan was filed. The flight originated from 2F4, Tahoka, Texas, and its intended destination was to a local field to apply chemicals.

The pilot reported that he had flown several aerial application flights in the morning and the airplane was operating normally. Prior to the final flight of the day, while the airplane was being loaded with chemicals, he heard a noise, but all engine gauges appeared to indicate that everything was normal. He taxied down runway 35, applied power, and took off. The engine gauges indicated turbine inlet temperature of 8,000° and propeller RPM 2,200. About 30 feet above the ground, the airplane plane started making a noise and the engine was surging. The pilot attempted to add more power, but the engine was not responding, and he tried to keep the airplane flying. Just as the pilot was going to dump the chemical load, the airplane veered to the left and hit the ground. After the pilot exited the airplane, a post-crash fire ensued.

A witness at the airport saw the airplane takeoff and fly about 1/2 way down the runway. He stated that the airplane touched down on its left wheel and became airborne again. He saw the airplane past the departure end of the runway and it was losing altitude. He then saw the left wing tilting down and the airplane impacted the ground.

Detailed examination of the engine was not possible due to the severe fire damage. No additional information on the accident was available.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	57, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Single
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	4-point
<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>	November 15, 2016
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	(Estimated) 2000 hours (Total, all aircraft), 300 hours (Total, this make and model), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	AIR TRACTOR INC	<b>Registration:</b>	N144HF
<b>Model/Series:</b>	AT 502 UNDESIGNAT	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1989	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Restricted (Special)	<b>Serial Number:</b>	502-0068
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	May 30, 2016 Annual	<b>Certified Max Gross Wt.:</b>	5280 lbs
<b>Time Since Last Inspection:</b>	300 Hrs	<b>Engines:</b>	1 Turbo prop
<b>Airframe Total Time:</b>	11090 Hrs at time of accident	<b>Engine Manufacturer:</b>	P&W
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	PT6-A-34AG
<b>Registered Owner:</b>	WILMINGTON TRUST CO TRUSTEE	<b>Rated Power:</b>	650 Horsepower
<b>Operator:</b>	Plains Aerial Applications	<b>Operating Certificate(s) Held:</b>	Agricultural aircraft (137)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	ODYG

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	LBB,3250 ft msl	<b>Distance from Accident Site:</b>	35 Nautical Miles
<b>Observation Time:</b>	13:53 Local	<b>Direction from Accident Site:</b>	360°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	13 knots / 23 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	20°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.21 inches Hg	<b>Temperature/Dew Point:</b>	21°C / 1°C
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Tahoka, TX (2F4)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Tahoka, TX (2F4)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	14:00 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>	T-Bar Airport 2F4	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	3126 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	35	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3278 ft / 50 ft	<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Destroyed
<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 Minor	<b>Latitude, Longitude:</b>	33.18111,-101.819442(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Lemishko, Alexander
<b>Additional Participating Persons:</b>	Robert A Smith; FAA FSDO; Lubbock, TX
<b>Original Publish Date:</b>	April 13, 2020
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=95200">https://data.ntsb.gov/Docket?ProjectID=95200</a>

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](#).