



Aviation Investigation Final Report

Location:	Cambridge, Kansas	Accident Number:	CHI04CA224
Date & Time:	August 12, 2004, 10:00 Local	Registration:	N2353W
Aircraft:	Air Tractor AT-301	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The aerial application airplane sustained substantial damage on impact with a tree and terrain during initial climb. The pilot's accident report stated, "When I first powered up the engine, I thought it seemed a bit rough running, but soon it straightened up. I looked down, at the manifold pressure to see if the blower was producing, and it was at 36 inches, which was normal for this aircraft. At this point, I concluded that the engine was okay and seemed to be producing adequate power. The takeoff roll was as I had expected, with rotation and liftoff at about the point it should have been. Then, the AT 301 seemed to settle back to the runway, with the tail wheel hitting first, which put the main gear back on the runway. With this bounce the AT 301 went back into the air, and I thought I was going to carry the load on out. There was no time left at this point to shut down, and I thought it was going to fly. Just after crossing the end of the runway, the plane lost altitude with the left wing catching a tree, which tore off the left aileron and immediately put me on the ground, hitting with the left wing and engine first." An on-scene examination of the wreckage revealed no pre-impact anomalies. The pilot's safety recommendation stated, "If I had an engine analyzer which could have told of a cylinder that was not up to standard - there would not have been any take off attempted. From now on any ag aircraft I fly I will have my left hand resting on the dump on take off."

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot not jettisoning his chemical load during initial climb with the reported loss of airplane performance. Factors were the reported loss of aircraft performance and the tree.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (F) OBJECT - TREE(S)
2. (C) LOAD JETTISON - NOT PERFORMED - PILOT IN COMMAND
3. (F) AIRCRAFT PERFORMANCE - LOSS, PARTIAL

Factual Information

On August 12, 2004, about 1000 central daylight time, an Air Tractor, AT-301, N2353W, operated by a commercial pilot, sustained substantial damage on impact with a tree and terrain during initial climb from a private airport near Cambridge, Kansas. The aerial application flight was operating under 14 CFR Part 137. Visual meteorological conditions prevailed at the time of the accident. No flight plan was on file. The pilot reported minor injuries. The local flight was originating at the time of the accident.

The pilot's accident report stated:

When I first powered up the engine, I thought it seemed a bit rough running, but soon it straightened up. I looked down, at the manifold pressure to see if the blower was producing, and it was at 36 inches, which was normal for this aircraft. At this point, I concluded that the engine was okay and seemed to be producing adequate power. The takeoff roll was as I had expected, with rotation and liftoff at about the point it should have been. Then, the AT 301 seemed to settle back to the runway, with the tail wheel hitting first, which put the main gear back on the runway. With this bounce the AT 301 went back into the air, and I thought I was going to carry the load on out. There was no time left at this point to shut down, and I thought it was going to fly. Just after crossing the end of the runway, the plane lost altitude with the left wing catching a tree, which tore off the left aileron and immediately put me on the ground, hitting with the left wing and engine first. The impact spun the aircraft around counterclockwise. The tail hit and the engine came off, which passed through the left wing, severing about 5 - 6 feet off. The plane skidded backwards about 50 feet to a stop, crumpling the tail section. I received minor injuries, and was fully aware during the entire flight.

A Federal Aviation Administration Inspector performed an on-scene examination of the wreckage. No pre-impact anomalies were detected during that examination.

The pilot's safety recommendation stated:

If I had an engine analyzer which could have told of a cylinder that was not up to standard - there would not have been any take off attempted. From now on any ag aircraft I fly I will have my left hand resting on the dump on take off.

Pilot Information

Certificate:	Commercial	Age:	52, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Center
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	May 6, 2004
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	May 15, 2003
Flight Time:	3656 hours (Total, all aircraft), 34 hours (Total, this make and model), 34 hours (Last 90 days, all aircraft), 34 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Air Tractor	Registration:	N2353W
Model/Series:	AT-301	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	301-0394
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	July 15, 2004 Annual	Certified Max Gross Wt.:	5000 lbs
Time Since Last Inspection:	40 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3257 Hrs at time of accident	Engine Manufacturer:	Pratt & Whitney
ELT:	Not installed	Engine Model/Series:	R-1340
Registered Owner:	WARNER AG AIR L C	Rated Power:	600 Horsepower
Operator:		Operating Certificate(s) Held:	
Operator Does Business As:	Warner Ag Air LLC	Operator Designator Code:	W2WG

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	WLD,1160 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	09:45 Local	Direction from Accident Site:	220°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Broken / 6000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	4 knots / 0 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	150°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.14 inches Hg	Temperature/Dew Point:	18°C / 14°C
Precipitation and Obscuration:			
Departure Point:	Cambridge, KS	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	10:00 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	37.316665,-96.883331

Administrative Information

Investigator In Charge (IIC):	Malinowski, Edward
Additional Participating Persons:	Verle Engel; Federal Aviation Administration; Wichita, KS
Original Publish Date:	October 28, 2004
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=59939

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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](#).