



Aviation Investigation Final Report

Location:	Pratt, Kansas	Accident Number:	CHI02LA206
Date & Time:	July 22, 2002, 10:40 Local	Registration:	N60747
Aircraft:	Air Tractor AT-401B	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The aerial application flight descended into the corn crops that the pilot was spraying before impacting the ground. The pilot was attempting to roundout and level the airplane at an altitude of 5-10 feet above the corn when he noticed the airplane settling into the corn. He then added power and pitched the nose up slightly, but the descent continued into the corn and terrain. No mechanical anomalies were noted 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 pilot's failure to maintain terrain clearance. A factor was low altitude flight.

Findings

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

Findings

1. (F) ALTITUDE - LOW - PILOT IN COMMAND
2. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND
3. TERRAIN CONDITION - GROUND

Factual Information

On July 22, 2002, at 1040 central daylight time, an Air Tractor AT-401B, N60747, operated by Farmers Spraying Service Inc., was substantially damaged when it impacted terrain during an approach to a cornfield. Visual meteorological conditions prevailed at the time of the accident. The 14 CFR Part 137 aerial application flight was not operating on a flight plan. The airline transport pilot was uninjured. The local flight originated from the Pratt Industrial Airport (PTT), Pratt, Kansas, at 1028.

The pilot stated in a written statement that he departed to spray a cornfield field located about 4.3 nautical miles northwest of PTT. Upon his arrival at the cornfield, he determined that the wind was from the northeast about 10 mph from smoke, which he placed over his pivot point. Cumulus clouds were forming with high humidity and a slightly gusty breeze. He observed power lines bordering the west and south sides of the corn field. He decided to spray the field in a north/south race track pattern. He set up for a shallow downline coming over the power lines on his second lap or fourth pass over the field with his airspeed increasing through 95 mph (30-32 inches of manifold pressure and 2,175 rpm). He began to roundout 5-10 feet above the corn, but the airplane continued its downline. He then added full power and pitched up slightly, but the airplane settled into the corn.

Inspection of the accident site by the Federal Aviation Administration revealed the airplane contacted the corn crops about 309 feet north of the south power lines. The wreckage path consisted of the left spray boom located about 513 feet north of the power lines, a ground scar located about 792 feet north of the power lines, and the airplane which was 1,143 feet north of the power lines. The airplane was upright and facing towards the southwest. The airplane sustained damage to the rear fuselage, tail section and landing gear. The outboard sections of the propeller were curled backwards. Flight control and engine continuity was confirmed.

The pilot stated that he had about 300 gallons of CAPTURE 2EC chemical and estimated that there were 232 gallons remaining at the time of the accident. He also reported the fuel tanks were about 2/3 full.

The Great Bend, Kansas, Automated Weather Observing Station, located about 35 nautical miles north-northwest, recorded at 1055: wind 360 at 11 knots gusting to 15 knots; temperature 24 degrees Celsius (C); altimeter setting 30.05 inches of mercury. The station elevation is 1,887 feet. The density altitude was about 3,264 feet.

Pilot Information

Certificate:	Airline transport; Commercial	Age:	35, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	May 13, 2002
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	May 13, 2002
Flight Time:	5400 hours (Total, all aircraft), 1505 hours (Total, this make and model), 5380 hours (Pilot In Command, all aircraft), 149 hours (Last 90 days, all aircraft), 89 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Air Tractor	Registration:	N60747
Model/Series:	AT-401B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	1000
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	January 14, 2002 Annual	Certified Max Gross Wt.:	6000 lbs
Time Since Last Inspection:	227.6 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1835.6 Hrs	Engine Manufacturer:	Pratt & Whitney
ELT:		Engine Model/Series:	R1340
Registered Owner:	FARMERS SPRAYING SERVICE INC	Rated Power:	600 Horsepower
Operator:		Operating Certificate(s) Held:	
Operator Does Business As:		Operator Designator Code:	WDPG

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	GBD,1887 ft msl	Distance from Accident Site:	35 Nautical Miles
Observation Time:	10:55 Local	Direction from Accident Site:	335°
Lowest Cloud Condition:	Scattered / 1500 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 2200 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	11 knots / 15 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	360°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.04 inches Hg	Temperature/Dew Point:	24°C / 21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Pratt, KS (PTT)	Type of Flight Plan Filed:	None
Destination:	(PTT)	Type of Clearance:	None
Departure Time:	10:28 Local	Type of Airspace:	Class G

Airport Information

Airport:	Pratt Industrial Airport PTT	Runway Surface Type:	
Airport Elevation:	1952 ft msl	Runway Surface Condition:	
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	37.640476,-98.730567(est)

Administrative Information

Investigator In Charge (IIC):	GALLO, MITCH
Additional Participating Persons:	James O Badhorse; Federal Aviation Administration; Wichita, KS
Original Publish Date:	September 30, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=55272

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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](#).