



Aviation Investigation Final Report

Location:	Holcomb, Kansas	Accident Number:	DEN06LA097
Date & Time:	July 13, 2006, 09:40 Local	Registration:	N4422S
Aircraft:	Air Tractor AT-301	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

Prior to departure from the private asphalt airstrip, the airplane contained 50 gallons of fuel and 150 gallons of chemical. Approximately 70 feet above ground level (agl) during initial takeoff climb, the engine "started to miss and backfire, causing a loss of climb power." Due to power lines in the airplane's flight path, the pilot reduced throttle, extended full flaps, and initiated a forced landing to a field. During the forced landing, the airplane "landed fast," and impacted soft, rolling terrain. The magnetos were functionally tested and mechanical continuity throughout the engine was confirmed. The reason for the partial loss of engine power was not determined.

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 for undetermined reasons. A contributing factor was the lack of suitable terrain for the forced landing.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

- ENGINE ASSEMBLY - FAILURE,PARTIAL
- (C) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING

Findings

3. (F) TERRAIN CONDITION - NONE SUITABLE

Factual Information

On July 13, 2006, approximately 0940 central daylight time, an Air Tractor AT-301 single-engine agricultural airplane, N4422S, sustained substantial damage during a forced landing following a partial loss of engine power during initial take-off climb near Holcomb, Kansas. The commercial pilot, who was the sole occupant, was not injured. The airplane was registered to and operated by a private individual. Visual meteorological conditions prevailed, and a flight plan was not filed for the Title 14 Code of Federal Regulations Part 137 aerial application flight. The flight was originating at the time of the accident.

According to the pilot, prior to departure from the private asphalt airstrip, the airplane contained 50 gallons of fuel and 150 gallons of chemical. Approximately 70 feet above ground level (agl) during initial takeoff climb, the engine "started to miss and backfire, causing a loss of climb power." Due to power lines in the airplane's flight path, the pilot reduced throttle, extended full flaps, and initiated a forced landing to a field. During the forced landing, the airplane "landed fast," and impacted soft, rolling terrain.

Examination of the airplane by a local mechanic revealed the fuselage was bent and the main landing gear crushed aft. The magnetos were functionally tested with no anomalies noted, and mechanical continuity throughout the engine was confirmed. The reason for the partial loss of engine power was not determined.

Pilot Information

Certificate:	Commercial	Age:	45, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	March 1, 2006
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	August 1, 2004
Flight Time:	2900 hours (Total, all aircraft), 100 hours (Total, this make and model), 2812 hours (Pilot In Command, all aircraft), 450 hours (Last 90 days, all aircraft), 200 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Air Tractor	Registration:	N4422S
Model/Series:	AT-301	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	301-0082
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	March 1, 2006 Annual	Certified Max Gross Wt.:	4300 lbs
Time Since Last Inspection:	16 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	6045 Hrs at time of accident	Engine Manufacturer:	Pratt & Whitney
ELT:	Not installed	Engine Model/Series:	R-1340-AN-1
Registered Owner:	Shawn D. Stapleton	Rated Power:	600 Horsepower
Operator:		Operating Certificate(s) Held:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	GCK,2891 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	09:30 Local	Direction from Accident Site:	90°
Lowest Cloud Condition:	Few / 3000 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/ 0 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.8 inches Hg	Temperature/Dew Point:	27°C / 18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Holcomb, KS	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	09:40 Local	Type of Airspace:	

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:	38.097778,-100.96083

Administrative Information

Investigator In Charge (IIC):	Sauer, Aaron
Additional Participating Persons:	Verle Engel; Federal Aviation Administration; Wichita, KS
Original Publish Date:	December 28, 2006
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=64105

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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](#).