



Aviation Investigation Final Report

Location:	Partridge, Kansas	Accident Number:	CEN18LA356
Date & Time:	August 29, 2018, 13:23 Local	Registration:	N3164K
Aircraft:	Air Tractor AT 301	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The commercial pilot reported that he had been flying for about 1 hour and was returning to the airport when the engine lost total power while the airplane was about 1,000 ft above ground level (agl). Although the engine momentarily regained power twice, for about 3 seconds each time when he used the manual fuel pump, the airplane continued to lose altitude. He attempted to land on a road but was unable to properly align the airplane's flightpath with the road. The airplane stalled about 20 ft agl, contacted the road, and bounced before coming to rest in an adjacent field, which resulted in substantial damage to the left wing. A postaccident engine examination did not reveal any evidence of preimpact mechanical malfunctions or failures 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 total loss of engine power for reasons that could not be determined based on the available evidence.

Findings

Not determined	(general) - Unknown/Not determined
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Factual Information

History of Flight

Enroute	Loss of engine power (total) (Defining event)
Emergency descent	Off-field or emergency landing

On August 29, 2018, about 1323 central daylight time, an Air Tractor AT-301 airplane, N3164K, was substantially damaged during a forced landing following a loss of engine power near Partridge, Kansas. The pilot was not injured. The airplane was registered to and operated by Ag Air Services Inc. as a Title 14 Code of Federal Regulations Part 137 aerial application flight. Day visual meteorological conditions prevailed. The flight was not operated on a flight plan. The local flight originated from the Hutchison Regional Airport (HUT) about 1220.

The pilot reported that he had been flying for about 1 hour and was returning to the airport when the engine lost power. The airplane was about 1,000 ft above ground level (agl) at the time. He noted that the engine regained power momentarily twice – for about 3 seconds each time – when he used the manual fuel pump. However, the airplane continued to lose altitude and he abandoned further restart attempts to focus on the forced landing. He attempted to land on a road, but he was unable to properly align the airplane's flight path with the remaining altitude. The airplane aerodynamically stalled about 20 ft agl, contacted the road, and bounced before coming to rest in an adjacent agricultural field. The airplane sustained damage to the left wing.

The operator recovered the airplane from the accident site. He stated that 29 gallons of fuel was drained from the airplane during recovery.

A postrecovery engine examination performed by Federal Aviation Administration inspectors did not reveal any anomalies consistent with a preaccident failure or malfunction. The engine driven fuel pump was removed and tested. It operated normally when operated with an electric drill. The airframe fuel screens were intact and free of debris or sediment. The airplane was not equipped with an electric fuel pump. The only backup fuel pump was the manual pump.

Pilot Information

Certificate:	Commercial	Age:	24,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	December 11, 2017
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	December 26, 2017
Flight Time:	548 hours (Total, all aircraft), 208215 hours (Total, this make and model), 512 hours (Pilot In Command, all aircraft), 207 hours (Last 90 days, all aircraft), 105 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Air Tractor	Registration:	N3164K
Model/Series:	AT 301 No Series	Aircraft Category:	Airplane
Year of Manufacture:	1984	Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	301-0535
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	March 20, 2018 Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:	200 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	6578.2 Hrs at time of accident	Engine Manufacturer:	Pratt & Whitney
ELT:	Not installed	Engine Model/Series:	R1340-AN1
Registered Owner:		Rated Power:	600 Horsepower
Operator:		Operating Certificate(s) Held:	Agricultural aircraft (137)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	HUT,1543 ft msl	Distance from Accident Site:	12 Nautical Miles
Observation Time:	13:52 Local	Direction from Accident Site:	60°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.09 inches Hg	Temperature/Dew Point:	27°C / 18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Hutchinson, KS (HUT)	Type of Flight Plan Filed:	None
Destination:	Hutchinson, KS (HUT)	Type of Clearance:	None
Departure Time:	12:30 Local	Type of Airspace:	Class G

Airport Information

Airport:	Hutchinson Regional HUT	Runway Surface Type:	
Airport Elevation:	1543 ft msl	Runway Surface Condition:	Vegetation
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

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:	37.979442,-98.105003(est)

Administrative Information

Investigator In Charge (IIC):	Sorensen, Timothy
Additional Participating Persons:	Robert Nash; FAA Flight Standards; Wichita, KS
Original Publish Date:	November 19, 2019
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=98187

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).