



Aviation Investigation Final Report

Location:	Great Bend, North Dakota	Accident Number:	CEN23LA377
Date & Time:	August 15, 2023, 10:45 Local	Registration:	N9082C
Aircraft:	AIR TRACTOR INC AT-502	Aircraft Damage:	Substantial
Defining Event:	Hard landing	Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The pilot reported that he had completed an aerial application with the airplane and was in a turn when the engine lost power. The pilot said he advanced the power lever to full but there was no engine response. The pilot attempted a forced landing on a nearby county road. The airplane landed hard on the road surface, bounced back in the air and floated some distance before settling back on the road. The airplane then veered off the road, went through a ditch, and came to rest in an adjacent farm field. The airplane sustained substantial damage to the left and right tubular clusters where the main landing gear attach.

The pilot later reported that, after reviewing speed and altitude data from one of the airplane's track logs, his recollection of the event did not match what the data showed. He stated that, "The log shows no loss of airspeed that would indicate a loss of power before the initial impact with the ground." He went on to state that he was no longer confident that his original recollection that there was a power loss was accurate and that this incident was likely caused by pilot error.

An examination of the airplane's fuel control unit (FCU) and fuel pump showed black material in the vicinity of the Py orifice inlet. The manufacturer identified the material as soft debris similar to fluorocarbon and most likely from the packing (O-ring) used on the P3 air inlet fitting. The debris' size and location did not completely obstruct the inlet and would have allowed for air passage into the FCU, hence not hindering its operability. A bench test of the fuel control unit and fuel pump showed the unit and pump performed normally.

No other preaccident failures or malfunctions with the airplane were found that would have precluded normal operations.

Probable Cause and Findings

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

The pilot’s hard landing on a road and subsequent loss of control, resulting in the airplane impacting a ditch.

Findings	
Personnel issues	Incorrect action performance - Pilot
Aircraft	Directional control - Not attained/maintained
Personnel issues	Perception - Pilot

Factual Information

History of Flight

Landing	Hard landing (Defining event)
Landing-landing roll	Loss of control on ground

On August 15, 2023, about 1045 central daylight time, an Air Tractor Inc AT-502, N9082C, was substantially damaged when it was involved in an accident near Great Bend, North Dakota. The pilot was not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 137 agricultural flight.

The pilot reported that he had completed an aerial application with the airplane and was in a turn when the engine lost power. The pilot said he advanced the power lever to full but there was no engine response. The pilot attempted a forced landing on a nearby county road. The airplane landed hard on the road surface, bounced back in the air and floated some distance before settling back on the road. The airplane then veered off the road, went through a ditch, and came to rest in an adjacent farm field. The pilot recalled that he heard the engine noise tone and volume change as the airplane slowed. He also remembered seeing the torque needle reducing to near 500 and falling. He said he didn’t see if it eventually reached zero, but it did not increase as he advanced the power lever. At that point his focus was getting the airplane on the ground safely.

In a subsequent statement, the pilot reported that after reviewing speed and altitude data from one of the airplane’s track logs, his recollection of the event didn’t match what the data showed. He stated that, “The log shows no loss of airspeed that would indicate a loss of power before the initial impact with the ground.” He went on to state that he was no longer confident that his original recollection that there was a power loss was accurate. “With this new information it would appear to me that this incident was likely caused by pilot error. It has become evident to me that my memory of the event in that moment are patchy, scrambled, and likely inaccurate.”

The airplane sustained damage to the propeller, engine, and the main landing gear. Both fuel tank gauges showed half full of fuel. A postaccident examination of the airplane showed substantial damage to the left and right tubular clusters where the main landing gear attach.

The airplane’s fuel control unit (FCU) and fuel pump were retained for further examination. An examination of the FCU showed black material in the vicinity of the Py orifice inlet. The manufacturer identified the material as soft debris similar to fluorocarbon and most likely from the packing (O-ring) used on the P3 air inlet fitting. Per the manufacturer, the debris’ size and

location did not completely obstruct the inlet and would have allowed for air passage into the FCU, hence not hindering its operability.

A bench test of the fuel control unit and fuel pump showed the unit and pump performed normally. No other preaccident mechanical failures or malfunctions were found with the airplane that would have precluded normal operations.

Pilot Information

Certificate:	Commercial	Age:	39, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	5-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	January 10, 2023
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	March 24, 2023
Flight Time:	1949 hours (Total, all aircraft), 477 hours (Total, this make and model), 1940 hours (Pilot In Command, all aircraft), 449 hours (Last 90 days, all aircraft), 200 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	AIR TRACTOR INC	Registration:	N9082C
Model/Series:	AT-502	Aircraft Category:	Airplane
Year of Manufacture:	1992	Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	502-0193
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	August 9, 2023 Annual	Certified Max Gross Wt.:	9200 lbs
Time Since Last Inspection:	132 Hrs	Engines:	1 Turbo prop
Airframe Total Time:	5062 Hrs at time of accident	Engine Manufacturer:	P&W
ELT:	Not installed	Engine Model/Series:	PT6A-34AG
Registered Owner:	WILBUR-ELLIS AIR LLC	Rated Power:	750 Horsepower
Operator:	Dakota Air Spray	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:	KBWP, 968 ft msl	Distance from Accident Site:	8 Nautical Miles
Observation Time:	10:35 Local	Direction from Accident Site:	52°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	12 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	240°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.05 inches Hg	Temperature/Dew Point:	24°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Wahpeton, ND (BWP)	Type of Flight Plan Filed:	None
Destination:	Wahpeton, ND (BWP)	Type of Clearance:	None
Departure Time:	09:30 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	46.152, -96.764(est)

Administrative Information

Investigator In Charge (IIC):	Folkerts, Michael
Additional Participating Persons:	Perry Ochsner; Federal Aviation Administration; Fargo, ND Helen Tsai; Transportation Safety Board of Canada; Gatineau
Original Publish Date:	May 14, 2024
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=192923

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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](#).