



# Aviation Investigation Final Report

<b>Location:</b>	Malta, Illinois	<b>Accident Number:</b>	CHI02CA224
<b>Date &amp; Time:</b>	July 26, 2002, 08:30 Local	<b>Registration:</b>	N2326S
<b>Aircraft:</b>	Air Tractor AT-301	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Analysis

On July 26, 2002, at approximately 0930 central daylight time, an Air Tractor AT-301, N2326S, piloted by a commercial pilot, was substantially damaged during a forced landing following a loss of engine power. The airplane was engaged in agricultural application work under 14 CFR Part 137 at the time of the accident. The airplane departed at 0800 cdt from runway 18 (2,800 feet x 80 feet, turf) at the Hendrickson Flying Service Airport (IL93), Creston, Illinois. Hendrickson is a private airport located ten (10) miles west of Dekalb Taylor Municipal Airport (DKB). The accident occurred approximately two (2) miles northeast of Hendrickson Flying Service Airport. The flight intended to return to Hendrickson following completion of its agricultural application work. Visual meteorological conditions prevailed at the time of the accident. The pilot sustained minor injuries.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The probable cause of this accident was fuel exhaustion, due to a failure to properly compute initial fuel quantity and/or fuel consumption.

## Findings

Occurrence #1: LOSS OF ENGINE POWER  
Phase of Operation: MANEUVERING - AERIAL APPLICATION

Findings

1. (C) FLUID,FUEL - EXHAUSTION
2. (C) FUEL CONSUMPTION CALCULATIONS - INADEQUATE - PILOT IN COMMAND

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

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Occurrence #3: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: EMERGENCY LANDING

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Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: EMERGENCY LANDING

## Factual Information

On July 26, 2002, at approximately 0930 central daylight time, an Air Tractor AT-301, N2326S, piloted by a commercial pilot, was substantially damaged during a forced landing following a loss of engine power. The airplane was engaged in agricultural application work under 14 CFR Part 137 at the time of the accident. The airplane departed at 0800 cdt from runway 18 (2,800 feet x 80 feet, turf) at the Hendrickson Flying Service Airport (IL93), Creston, Illinois. Hendrickson is a private airport located ten (10) miles west of Dekalb Taylor Municipal Airport (DKB). The accident occurred approximately two (2) miles northeast of Hendrickson Flying Service Airport. The flight intended to return to Hendrickson following completion of its agricultural application work. Visual meteorological conditions prevailed at the time of the accident. The pilot sustained minor injuries.

The pilot stated: "I took off at 8:00am from Hendrickson Flying Service strip with a load of spray material. . . . After spraying 3 fields I headed back to HFS, 4 miles NE of HFS low fuel psi light came on and no fuel psi on gauge, engine quit. I had been ferrying at 600 ft agl and had already started reducing manifold pressure for descent. When engine quit I had no where to go but in field corn at 9:30am."

Examination of the aircraft after the accident revealed no evidence of fuel in the tanks. The fuel pump inlet hose and carburetor fuel line were removed. No evidence of fuel was found in the fuel pump hose. A small amount of fuel was found in the carburetor fuel line.

The pilot holds a commercial pilot certificate with an airplane -- single-engine land rating. His second class medical certificate was issued on March 12, 2002. He has accumulated 2,362 hours total time, of which 338 hours are in the same make and model as the accident aircraft. He reported flying 238 hours in the last 90 days.

The Air Tractor AT-301, S/N 301-0381, involved in the accident had accumulated 7,960 hours total time. An annual inspection was completed on June 12, 2002, and had been flown 83 hours since then. The Pratt & Whitney R-1340 series engine installed had accumulated 1,041 hours since overhaul. The pilot did not report any malfunctions or failures with the airplane or engine either prior to, or at the time of, the accident.

Weather conditions at the scene were reported by the pilot as 1,500 agl overcast, with three (3) miles visibility, and south-west winds at five (5) knots. The Dekalb Taylor Municipal Airport (DKB) AWOS, located eight (8) miles east-southeast of the accident site, at 0924 cdt, reported conditions as clear, seven (7) miles visibility in haze, and winds from 240 degrees at four (4) knots.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	40, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Single
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	March 12, 2002
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	January 2, 2002
<b>Flight Time:</b>	2362 hours (Total, all aircraft), 338 hours (Total, this make and model), 2227 hours (Pilot In Command, all aircraft), 238 hours (Last 90 days, all aircraft), 83 hours (Last 30 days, all aircraft), 10 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Air Tractor	<b>Registration:</b>	N2326S
<b>Model/Series:</b>	AT-301	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Restricted (Special)	<b>Serial Number:</b>	301-0381
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	June 12, 2002 Annual	<b>Certified Max Gross Wt.:</b>	
<b>Time Since Last Inspection:</b>	83.2 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	7960.7 Hrs at time of accident	<b>Engine Manufacturer:</b>	Pratt & Whitney
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	R1340-S3N1G
<b>Registered Owner:</b>	Hendrickson Flying Service Inc.	<b>Rated Power:</b>	600 Horsepower
<b>Operator:</b>	Hendrickson Flying Service Inc.	<b>Operating Certificate(s) Held:</b>	
<b>Operator Does Business As:</b>	Hendrickson Flying Service Inc.	<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	DKB,915 ft msl	<b>Distance from Accident Site:</b>	8 Nautical Miles
<b>Observation Time:</b>	09:24 Local	<b>Direction from Accident Site:</b>	100°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	7 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	4 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	240°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.88 inches Hg	<b>Temperature/Dew Point:</b>	26°C / 20°C
<b>Precipitation and Obscuration:</b>	N/A - None - Haze		
<b>Departure Point:</b>	Creston, IL (IL93)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	08:00 UTC	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	Hendrickson Flying Service IL93	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	889 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	18	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	2800 ft / 80 ft	<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Minor	<b>Latitude, Longitude:</b>	41.983333,-88.900001

## Administrative Information

<b>Investigator In Charge (IIC):</b>	SORENSEN, TIM
<b>Additional Participating Persons:</b>	Bob Luna; FAA-DuPage FSDO; West Chicago, IL
<b>Original Publish Date:</b>	September 9, 2002
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=55352">https://data.nts.gov/Docket?ProjectID=55352</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).