



Aviation Investigation Final Report

Location:	CLEWISTON, Florida	Accident Number:	ATL97LA127
Date & Time:	August 29, 1997, 13:30 Local	Registration:	N7307C
Aircraft:	Air Tractor AT-301	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

While on an aerial application flight, the pilot reported that the engine started shaking. The airplane was soon unable to maintain altitude, so the pilot attempted a forced landing in a soft field. After touching down, the airplane sank into the soft field, and it nosed over. According to the FAA inspector, the engine had a crack in the #8 cylinder head which led to the loss of power.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The crack in the #8 cylinder head which led to the loss of power. A factor was the soft terrain.

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF
Phase of Operation: MANEUVERING - AERIAL APPLICATION

Findings

1. (C) ENGINE ASSEMBLY,CYLINDER - CRACKED

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

Occurrence #3: NOSE OVER
Phase of Operation: EMERGENCY LANDING

Findings

2. (F) TERRAIN CONDITION - SOFT

Factual Information

On August 29, 1997, about 1330 eastern daylight time, a Air Tractor AT-301, N7307C, lost engine power and executed a forced landing into a field near Clewiston, Florida. The airplane was operated by Story Aviation, Inc. under the provisions of Title 14 CFR Part 137, and visual flight rules. Visual meteorological conditions prevailed at the time of the accident. No flight plan was filed for this aerial application flight. The commercial pilot was not injured, and the airplane was substantially damaged. The local flight originated from a private strip in Clewiston, Florida about 1330.

According to the pilot, he was spraying a field with fertilizer when the aircraft's engine started shaking. He stated it quickly became worse until he did not have enough power to maintain altitude. He dumped his load of fertilizer and attempted to land in an open field. After touchdown, the airplane's wheels sank into the soft field, and the airplane nosed over.

According to a FAA inspector, the #8 cylinder head had cracked through the spark plug hole. This led to a loss of engine power.

Pilot Information

Certificate:	Commercial	Age:	55, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Center
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:	January 14, 1997
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	9215 hours (Total, all aircraft), 2110 hours (Total, this make and model), 8980 hours (Pilot In Command, all aircraft), 242 hours (Last 90 days, all aircraft), 70 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Air Tractor	Registration:	N7307C
Model/Series:	AT-301 AT-301	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	301-0616
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	July 22, 1997 100 hour	Certified Max Gross Wt.:	5000 lbs
Time Since Last Inspection:	72 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	5473 Hrs	Engine Manufacturer:	P&W
ELT:	Not installed	Engine Model/Series:	R-1340-AN-1
Registered Owner:	STORY AVIATION, INC.	Rated Power:	600 Horsepower
Operator:		Operating Certificate(s) Held:	
Operator Does Business As:		Operator Designator Code:	NGFG

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	PBI ,19 ft msl	Distance from Accident Site:	60 Nautical Miles
Observation Time:	11:53 Local	Direction from Accident Site:	90°
Lowest Cloud Condition:	Unknown	Visibility	10 miles
Lowest Ceiling:	Broken / 25000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	100°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	31°C / 21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	13:30 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	Soft
Runway Used:	0	IFR Approach:	
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:	26.750097,-80.929466(est)

Administrative Information

Investigator In Charge (IIC): Hicks, Preston

Additional Participating Persons: RAY BAHAMONDE;
REGAN H CAMPBELL;

Original Publish Date: January 7, 1998

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.ntsb.gov/Docket?ProjectID=3895>

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