



Aviation Investigation Final Report

Location:	Hearne, Texas	Accident Number:	FTW02LA245
Date & Time:	August 30, 2002, 13:15 Local	Registration:	N9193Y
Aircraft:	Air Tractor AT-401	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The pilot reported that he was defoliating a cotton field, starting on the south side working to the north, making alternate east and west spray passes, and that an oil pumping rig was located approximately 8 to 10 passes into the field. The pilot also stated that on all passes leading up to the pumping rig, he observed it not pumping, remaining off on the down stroke. As the airplane was making a pass on the north edge of the pumping rig in a westerly direction, the left wing obstructed the pilot's view of the obstacle. Subsequently, the left wing impacted the horse head on its upstroke, severing the outboard 6 to 8 feet of the wing. The pilot pulled the throttle back to idle and allowed the airplane to descend into the cotton field where it came to rest inverted. Oil company personnel at the accident site reported that oil pumping rigs are prevalent in the area. It was also reported that this particular pumping unit was on a timer and would shut off periodically.

Probable Cause and Findings

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

The pilot's failure to maintain clearance with a pump rig while maneuvering during an aerial application flight. A factor was the object.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: MANEUVERING - AERIAL APPLICATION

Findings

1. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND
2. (F) OBJECT - OTHER

Factual Information

On August 30, 2002, approximately 1315 central daylight time, an Air Tractor AT-401 agricultural airplane, N9193Y, was substantially damaged when it impacted an oil pumping rig while maneuvering near Hearne, Texas. The commercial pilot, who was the sole occupant, sustained minor injuries. The airplane was registered to and operated by Corpora Aerial Service, Inc., of Hearne, Texas. Visual meteorological conditions prevailed, and a flight plan was not filed for the 14 CFR Part 137 aerial application flight. The local flight departed a private airstrip near Hearne at 1300.

According to the Pilot/Operator Aircraft Accident Report (NTSB Form 6120.1/2), the pilot reported that he was conducting an aerial application flight defoliating a cotton field, starting on the south side working to the north, making alternate spray passes in an east to west direction. The pilot also reported that an oil pumping rig was located approximately 8 to 10 passes into the field. On all passes leading up to the area where the pumping rig was located, the pilot said he observed the unit "not pumping, and remaining off on the down stroke." The pilot further stated that while making a westerly spray pass on the north side of the pumping rig, he began a slow climb to clear the obstacle. The pilot reported that during the climb to clear the pumping rig his view was obstructed by the left wing, which subsequently impacted the rig's "horse head" on the up stroke, severing the outboard 6 to 8 feet of the wing. The pilot stated that the airplane began to roll violently to the left, and "determining that I could no longer maintain control of the airplane, I pulled the throttle back to idle and let the aircraft descend into the cotton field." The airplane impacted the ground in a left wing low, nose low attitude, separating the engine and severing the tail section. The airplane came to rest in an inverted position, and there was no post-impact fire.

According to an FAA inspector who traveled to the accident site and interviewed oil company personnel, oil pumping rigs were very prevalent in the area, and the "horse head" (portion of the pump which rises and lowers) can rise approximately 10 feet when in the pumping mode. It was also reported that this particular pumping unit was on a timer and would shut off periodically.

Pilot Information

Certificate:	Commercial	Age:	41,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--no waivers/lim.	Last FAA Medical Exam:	May 28, 2002
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	March 28, 2001
Flight Time:	6750 hours (Total, all aircraft), 4000 hours (Total, this make and model), 6750 hours (Pilot In Command, all aircraft), 250 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Air Tractor	Registration:	N9193Y
Model/Series:	AT-401	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	401-0932
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	July 1, 2002 Annual	Certified Max Gross Wt.:	4000 lbs
Time Since Last Inspection:	35 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2553 Hrs at time of accident	Engine Manufacturer:	Pratt & Whitney
ELT:	Not installed	Engine Model/Series:	R-1340
Registered Owner:	Corpora Aerial Service Inc.	Rated Power:	600 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	MSUG

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	15 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.95 inches Hg	Temperature/Dew Point:	33°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Hearne, TX	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	13:00 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	30.815277,-96.600555

Administrative Information

Investigator In Charge (IIC):	Little, Thomas
Additional Participating Persons:	James D Moore; Houston, Texas; Houston, TX
Original Publish Date:	April 29, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=55609

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](#).