



# Aviation Investigation Final Report

<b>Location:</b>	SHELBY, Mississippi	<b>Accident Number:</b>	MIA88LA258
<b>Date &amp; Time:</b>	August 19, 1988, 10:30 Local	<b>Registration:</b>	N73089
<b>Aircraft:</b>	AIR TRACTOR AT-301A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Analysis

WHILE ON AN AERIAL APPLICATION FLT DURING THE GROUND ROLL TO TAKEOFF, THE FORWARDMOST OF TWO MAIN GEAR CLAMP BLOCK BOLTS OF THE RT MAIN LANDING GEAR FAILED. THE GEAR TRAILED AFT. THE INBOARD MAIN GEAR LARGE BOLT FAILED. THE ACFT TRAVELLED OFF THE RWY INTO A SOY BEAN FIELD AND NOSED OVER. EXAMINATION OF THE BOLTS REVEALED NO EVIDENCE OF PRE-EXISTING FAILURE. ACCORDING TO THE ACFT MAINTENANCE MANUAL BOTH THE FAILED BOLTS SHOULD BE REPLACED AT A MAXIMUM OF 600 HRS & A MINIMUM OF 300 HRS, DEPENDING ON THE GENERAL LANDING FIELD CONDITIONS. ACCORDING TO THE OPERATOR OF THE ACFT, BOTH BOLTS HAD ACCUMULATED APRX 670 HRS SINCE REPLACEMENT.

## Probable Cause and Findings

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

### Findings

Occurrence #1: MAIN GEAR COLLAPSED  
Phase of Operation: TAKEOFF - ROLL/RUN

#### Findings

1. (C) LANDING GEAR,MAIN GEAR ATTACHMENT - OVERLOAD
2. (C) MAINTENANCE,REPLACEMENT - NOT PERFORMED - COMPANY/OPERATOR MANAGEMENT

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Occurrence #2: LOSS OF CONTROL - ON GROUND/WATER  
Phase of Operation: TAKEOFF - ROLL/RUN

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Occurrence #3: NOSE OVER  
Phase of Operation: TAKEOFF - ROLL/RUN

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	31, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Center
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	March 25, 1988
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	5000 hours (Total, all aircraft), 2000 hours (Total, this make and model), 5000 hours (Pilot In Command, all aircraft), 250 hours (Last 90 days, all aircraft), 100 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>	N73089
<b>Model/Series:</b>	AT-301A AT-301A	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Restricted (Special)	<b>Serial Number:</b>	301-0634
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	5000 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	2000 Hrs	<b>Engine Manufacturer:</b>	P&W
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	R-1340
<b>Registered Owner:</b>	FINLEY BRUNETTI, JR.	<b>Rated Power:</b>	600 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	
<b>Operator Does Business As:</b>	SHELBY AIR 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>	GWO ,155 ft msl	<b>Distance from Accident Site:</b>	41 Nautical Miles
<b>Observation Time:</b>	10:53 Local	<b>Direction from Accident Site:</b>	124°
<b>Lowest Cloud Condition:</b>	Scattered / 3000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Broken / 25000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	10 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	220°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	32°C / 23°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>		<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	10:30 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<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 None	<b>Latitude, Longitude:</b>	33.949874,-90.760383(est)

## Administrative Information

**Investigator In Charge (IIC):** Monville, Timothy

**Additional Participating Persons:**

**Original Publish Date:** July 26, 1989

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=32230>

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