



Aviation Investigation Final Report

Location:	VERO BEACH, Florida	Accident Number:	MIA95LA227
Date & Time:	September 21, 1995, 08:00 Local	Registration:	N7304C
Aircraft:	AIR TRACTOR AT-301A	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 137: Agricultural		

Analysis

THE PILOT STATED THAT, WHILE DUSTING WITH SULFUR, AN EXPLOSION OCCURRED THAT BLEW THE LID OFF OF THE HOPPER, FOLLOWED BY AN IN-FLIGHT FIRE. WHILE MANEUVERING FOR AN EMERGENCY LANDING, THE AIRPLANE COLLIDED WITH TREES, CAME TO REST INVERTED, AND A POSTCRASH FIRE ENSUED. EXAMINATION OF THE AIRPLANE RECORDS REVEALED NO ENTRY THAT AIRWORTHINESS DIRECTIVE 48-34-02, REQUIRING 5 FIRE PREVENTION MEASURES (LOCATION OF ENGINE EXHAUST, BONDING OF FUSELAGE, AGITATOR BEARING DESIGN/MAINTENANCE, HOPPER GATE CONSTRUCTION/MATERIAL, AND FIRE RESISTANT LOWER FUSELAGE), HAD BEEN COMPLIED WITH.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FAILURE OF COMPANY MAINTENANCE PERSONNEL TO COMPLY WITH A REQUIRED AIRWORTHINESS DIRECTIVE, RESULTING IN AN IN-FLIGHT FIRE AND EMERGENCY LANDING. CONTRIBUTING TO THE ACCIDENT WAS THE LACK OF SUITABLE TERRAIN FOR THE FORCED LANDING.

Findings

Occurrence #1: FIRE
Phase of Operation: MANEUVERING - AERIAL APPLICATION

Findings

1. (C) SPRAY/DUSTING EQUIPMENT - IMPROPER
2. (C) MAINTENANCE, COMPLIANCE WITH AD - NOT COMPLIED WITH - COMPANY MAINTENANCE PERSONNEL
3. SPRAY/DUSTING EQUIPMENT - EXPLODED

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

4. (F) TERRAIN CONDITION - NONE SUITABLE
5. OBJECT - TREE(S)

Factual Information

On September 21, 1995, about 0800 eastern daylight time, N7304C, an Air Tractor AT-301A, operated by Indian River Flying Service experienced a hopper fire in flight and crashed in Vero Beach, Florida, while on a 14 CFR Part 137 agricultural flight. Instrument meteorological conditions prevailed at the time and no flight plan was filed for the local flight. The pilot received minor injuries and the airplane was destroyed by fire. The flight had originated about 20 minutes earlier.

The pilot reported and a witness observed the hopper catch on fire in flight. The pilot executed an emergency landing to a road between trees in an orange grove. The hopper was filled with sulfur dust.

Examination of the airplane's logbooks by an FAA inspector produced no recorded entries of compliance with Airworthiness Directive(AD) 48-34-02, which is applicable to all aircraft engaged in sulfur dusting. This AD lists five fire prevention measures that must be complied with before engaging in sulfur dusting operations. The following measures are:[1] location of engine exhaust,[2] bonding of fuselage,[3] agitator bearing design/maintenance,[4] hopper gate construction/material,[5] fire resistant lower fuselage.

Pilot Information

Certificate:	Commercial	Age:	37, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Center
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	October 31, 1994
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	10320 hours (Total, all aircraft), 1500 hours (Total, this make and model), 10270 hours (Pilot In Command, all aircraft), 35 hours (Last 90 days, all aircraft), 17 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	AIR TRACTOR	Registration:	N7304C
Model/Series:	AT-301A AT-301A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	301-0597
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	March 6, 1995 Annual	Certified Max Gross Wt.:	5000 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	3176 Hrs	Engine Manufacturer:	P&W
ELT:		Engine Model/Series:	R-1340-AN1
Registered Owner:	INDIAN RIVER FLYING SERVICE	Rated Power:	600 Horsepower
Operator:	INDIAN RIVER FLYING SERVICE INC	Operating Certificate(s) Held:	
Operator Does Business As:	AERIAL APPLICATION	Operator Designator Code:	5015

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Day
Observation Facility, Elevation:	VRB ,25 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	07:50 Local	Direction from Accident Site:	80°
Lowest Cloud Condition:	Clear	Visibility	2 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	330°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	24°C / 23°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	, FL (X52)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	08:15 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	In-flight
Ground Injuries:	N/A	Aircraft Explosion:	In-flight
Total Injuries:	1 Minor	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC): Alston, Andrew

Additional Participating Persons: SCOTT STRICKLAND; ORLANDO , FL

Original Publish Date: February 8, 1996

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.ntsb.gov/Docket?ProjectID=37828>

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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](#).