



Aviation Investigation Final Report

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|--------------------------------|----------------------------|-------------------------|-------------|
| Location: | MUSCLE SHOALS, Alabama | Accident Number: | ATL91LA119 |
| Date & Time: | June 29, 1991, 11:09 Local | Registration: | N48430 |
| Aircraft: | CESSNA 188 | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 1 Serious |
| Flight Conducted Under: | Part 137: Agricultural | | |

Analysis

ACCORDING TO THE PILOT, APPROXIMATELY 40 GALLONS OF FUEL WAS ON BOARD THE AIRPLANE WHEN HE DEPARTED THE PRIVATE AIRSTRIP. ABOUT 35 MINUTES INTO THE SPRAYING OPERATION THE ENGINE LOST POWER DURING A SWATH RUN. THE AIRPLANE COLLIDED WITH 50 TO 75 FOOT TALL TREES ON THE DEPARTURE END OF THE FIELD, AND CRASHED IN AN ADJACENT FIELD 500 FEET BEYOND THE TREES. THE POST-CRASH EXAMINATION OF THE AIRPLANE FAILED TO REVEAL ANY PREIMPACT MECHANIAL PROBLEMS; THERE WAS A SUBSTANTIAL AMOUNT OF THE FUEL IN THE DAMAGED FUEL SYSTEM.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE LOSS OF ENGINE POWER FOR UNDETERMINED REASONS.

Findings

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

Findings
1. (C) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: FORCED LANDING

Phase of Operation: MANEUVERING - TURN TO LANDING AREA (EMERGENCY)

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: MANEUVERING - TURN TO LANDING AREA (EMERGENCY)

Findings
2. OBJECT - TREE(S)

Factual Information

Pilot Information

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|----------------------------------|---|--|---------------|
| Certificate: | Commercial | Age: | 50, 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: | April 2, 1991 |
| Occupational Pilot: | Yes | Last Flight Review or Equivalent: | |
| Flight Time: | 12000 hours (Total, all aircraft), 9000 hours (Total, this make and model), 75 hours (Last 90 days, all aircraft), 60 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|-------------------------|---------------------------------------|-----------------|
| Aircraft Make: | CESSNA | Registration: | N48430 |
| Model/Series: | 188 188 | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Restricted (Special) | Serial Number: | 188-02362T |
| Landing Gear Type: | Tailwheel | Seats: | 1 |
| Date/Type of Last Inspection: | January 2, 2000 Annual | Certified Max Gross Wt.: | 4000 lbs |
| Time Since Last Inspection: | | Engines: | 1 Reciprocating |
| Airframe Total Time: | | Engine Manufacturer: | CONTINENTAL |
| ELT: | Not installed | Engine Model/Series: | IO-520 |
| Registered Owner: | BROOKS AG SERVICE, INC. | Rated Power: | 300 Horsepower |
| Operator: | BROOKS AG SERVICE, INC. | Operating Certificate(s) Held: | |
| Operator Does Business As: | | Operator Designator Code: | |

Meteorological Information and Flight Plan

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|---|----------------------------------|---|------------------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | MSL ,550 ft msl | Distance from Accident Site: | 3 Nautical Miles |
| Observation Time: | 11:30 Local | Direction from Accident Site: | 145° |
| Lowest Cloud Condition: | Scattered / 2000 ft AGL | Visibility | 7 miles |
| Lowest Ceiling: | None | Visibility (RVR): | |
| Wind Speed/Gusts: | / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 0° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 30 inches Hg | Temperature/Dew Point: | 30°C / 22°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | TOWN CREEK , AL | Type of Flight Plan Filed: | None |
| Destination: | | Type of Clearance: | None |
| Departure Time: | 10:30 Local | Type of Airspace: | Class G |

Airport Information

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|-----------------------------|---|----------------------------------|----------------|
| 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

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|----------------------------|-----------|-----------------------------|---------------------------|
| Crew Injuries: | 1 Serious | Aircraft Damage: | Substantial |
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 Serious | Latitude, Longitude: | 34.739746,-87.640197(est) |

Administrative Information

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|--|---|
| Investigator In Charge (IIC): | Powell, Phillip |
| Additional Participating Persons: | BILL CLARK; BIRMINGHAM , AL |
| Original Publish Date: | March 31, 1993 |
| Last Revision Date: | |
| Investigation Class: | Class |
| Note: | |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=8425 |

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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](#).