



National Transportation Safety Board Aviation Accident Final Report

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|--------------------------------|---|-------------------------|--------------------|
| Location: | LAWTON, OK | Accident Number: | DCA88MA059 |
| Date & Time: | 05/24/1988, 1454 EST | Registration: | N65DA |
| Aircraft: | EMBRAER EMB-110P | Aircraft Damage: | Destroyed |
| Defining Event: | | Injuries: | 2 Serious, 6 Minor |
| Flight Conducted Under: | Part 135: Air Taxi & Commuter - Scheduled | | |

Analysis

THE NUMBER 1 (LEFT) ENGINE FAILED DURING THE TAKEOFF FROM RUNWAY 35. IT WAS REPORTED THAT THE AIRCRAFT YAWED SHARPLY LEFT AND CLIMBED TO BETWEEN 50 AND 100 FEET AGL BEFORE IT BEGAN LOSING ALT. THE AIRCRAFT STRUCK THE GROUND AND CONTINUED TO MOVE FORWARD ON THE GROUND SEVERAL HUNDRED FEET UNTIL IT STRUCK THE AIRPORT PERIMETER FENCE. THE AIRCRAFT CAME TO REST 1,600 FEET WEST OF THE RUNWAY, ON A HEADING OF 290 DEGREES. A POST-CRASH FIRE DESTROYED THE CARGO AREA OF THE AIRCRAFT. EXAMINATION OF THE NO. 1 ENGINE REVEALED A COMPRESSOR TURBINE BLADE AIRFOIL SEPARATION. DISASSEMBLY OF THE PROPELLER ON THE NO. 1 ENGINE INDICATED THAT THE PROPELLER HAD AUTOFEATHERED NORMALLY AFTER THE ENGINE FAILED. THE CAPTAIN REPORTEDLY MADE THE TAKEOFF.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
NONE SUBMITTED

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. 1 ENGINE
2. (F) COMPRESSOR ASSEMBLY, BLADE - PREVIOUS DAMAGE
3. (F) COMPRESSOR ASSEMBLY, BLADE - OVERTEMPERATURE
4. (F) COMPRESSOR ASSEMBLY, BLADE - SEPARATION
5. PROPELLER FEATHERING - PERFORMED

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

6. (C) EMERGENCY PROCEDURE - IMPROPER - PILOT IN COMMAND
7. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND
8. OBJECT - FENCE

Factual Information

Pilot Information

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|----------------------------------|---|-------------------------------|----------------------------|
| Certificate: | Airline Transport | Age: | 31, Male |
| Airplane Rating(s): | Multi-engine Land; Single-engine Land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | Seatbelt, Shoulder harness |
| Instrument Rating(s): | Airplane | Second Pilot Present: | Yes |
| Instructor Rating(s): | None | Toxicology Performed: | Yes |
| Medical Certification: | Class 1 Valid Medical--no waivers/lim. | Last FAA Medical Exam: | 05/20/1988 |
| Occupational Pilot: | Last Flight Review or Equivalent: | | |
| Flight Time: | 2333 hours (Total, all aircraft), 483 hours (Total, this make and model), 1883 hours (Pilot In Command, all aircraft), 294 hours (Last 90 days, all aircraft), 85 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|--|---------------------------------------|----------------------------|
| Aircraft Make: | EMBRAER | Registration: | N65DA |
| Model/Series: | EMB-110P EMB-110P | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | No |
| Airworthiness Certificate: | Normal | Serial Number: | 110389 |
| Landing Gear Type: | Retractable - Tricycle | Seats: | 17 |
| Date/Type of Last Inspection: | 05/11/1988, Continuous Airworthiness | Certified Max Gross Wt.: | 13007 lbs |
| Time Since Last Inspection: | 84 Hours | Engines: | 2 Turbo Prop |
| Airframe Total Time: | 13005 Hours | Engine Manufacturer: | P&W |
| ELT: | Installed, activated, did not aid in locating accident | Engine Model/Series: | PT6A-34 |
| Registered Owner: | ATLANTIC SOUTHEAST AIRLINES | Rated Power: | 750 hp |
| Operator: | ATLANTIC SOUTHEAST AIRLINES | Operating Certificate(s) Held: | Commuter Air Carrier (135) |
| Operator Does Business As: | ASA | Operator Designator Code: | ASOA |

Meteorological Information and Flight Plan

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|----------------------------------|-------------------------|---|------------------|
| Conditions at Accident Site: | Visual Conditions | Condition of Light: | Day |
| Observation Facility, Elevation: | LAW, 1110 ft msl | Distance from Accident Site: | 0 Nautical Miles |
| Observation Time: | 1447 CDT | Direction from Accident Site: | 0° |
| Lowest Cloud Condition: | Scattered / 3500 ft agl | Visibility | 15 Miles |
| Lowest Ceiling: | None / 0 ft agl | Visibility (RVR): | 0 ft |
| Wind Speed/Gusts: | 10 knots / 18 knots | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 20° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 30 inches Hg | Temperature/Dew Point: | 26° C |
| Precipitation and Obscuration: | | | |
| Departure Point: | | Type of Flight Plan Filed: | IFR |
| Destination: | FORT WORTH, TX (DFW) | Type of Clearance: | IFR |
| Departure Time: | 0000 | Type of Airspace: | |

Airport Information

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|----------------------|--------------------|---------------------------|----------|
| Airport: | LAWTON MUNIC (LAW) | Runway Surface Type: | Concrete |
| Airport Elevation: | 1110 ft | Runway Surface Condition: | Dry |
| Runway Used: | 35 | IFR Approach: | None |
| Runway Length/Width: | 8600 ft / 150 ft | VFR Approach/Landing: | None |

Wreckage and Impact Information

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|---------------------|--------------------|----------------------|-----------|
| Crew Injuries: | 1 Serious, 1 Minor | Aircraft Damage: | Destroyed |
| Passenger Injuries: | 1 Serious, 5 Minor | Aircraft Fire: | On-Ground |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 2 Serious, 6 Minor | Latitude, Longitude: | |

Administrative Information

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|-----------------------------------|--|--------------|------------|
| Investigator In Charge (IIC): | BARRY STRAUCH | Report Date: | 12/29/1989 |
| Additional Participating Persons: | MANUAL 2 MONTEIRO; FT. LAUDERDALE, FL | | |
| Publish Date: | | | |
| Investigation Docket: | NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ . | | |

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).