



National Transportation Safety Board Aviation Accident Final Report

Location:	ALBANY, GA	Accident Number:	ATL89FA188
Date & Time:	08/02/1989, 1516 EDT	Registration:	N11TP
Aircraft:	BEECH 70	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	6 Fatal
Flight Conducted Under:	Part 91: General Aviation - Business		

Analysis

DURING TAKEOFF, THE ACFT ROLLED ABRUPTLY TO THE RIGHT AFTER LIFT-OFF. SUBSEQUENTLY, THE RIGHT WINGTIP STRUCK THE SURFACE, THEN THE ACFT CARTWHEELED & CRASHED. THE FUSELAGE WAS DESTROYED BY A POST-CRASH FIRE. AN EXAM OF THE ENGS REVEALED THAT THE RIGHT ENG SUPERCHARGER INTERMEDIATE DRIVE GEAR SHAFT HAD BECOME WORN & ONE OF ITS GEAR TEETH HAD FAILED FROM FATIGUE. THERE WAS EVIDENCE THAT AN OUT-OF-MESH CONDITION OCCURRED, WHICH RESULTED IN A PARTIAL LOSS OF ENG POWER DURING TAKEOFF. ALSO, THE ACFT WAS ESTIMATED TO BE 679 LBS OVER ITS MAX CERTIFIED GROSS WEIGHT. DENSITY ALT WAS CALCULATED TO BE ABOUT 2000 FT.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE FATIGUE FAILURE OF THE SUPERCHARGER INTERMEDIATE DRIVE GEAR SHAFT (GEAR TOOTH), WHICH RESULTED IN A PARTIAL LOSS OF POWER, AND THE PILOT'S INITIATION OF LIFT-OFF BEFORE REACHING VMC AIRSPEED. FACTORS RELATED TO THE ACCIDENT WERE: THE WORN INTERMEDIATE DRIVE GEAR SHAFT, THE PILOT'S OPERATION OF THE AIRCRAFT ABOVE ITS MAXIMUM CERTIFIED GROSS WEIGHT LIMIT, AND THE HIGH DENSITY ALTITUDE.

Findings

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

Findings

1. (F) ACCESSORY DRIVE ASSY,DRIVE GEAR - WORN
2. (C) ACCESSORY DRIVE ASSY,DRIVE GEAR - FATIGUE

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

3. (F) AIRCRAFT WEIGHT AND BALANCE - EXCEEDED - PILOT IN COMMAND
4. (F) WEATHER CONDITION - HIGH DENSITY ALTITUDE
5. (C) LIFT-OFF - PREMATURE - PILOT IN COMMAND
6. (C) AIRSPEED(VMC) - NOT ATTAINED - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: TAKEOFF

Factual Information

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	43, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane Single-engine	Toxicology Performed:	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	04/24/1989
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	5000 hours (Total, all aircraft), 35 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BEECH	Registration:	N11TP
Model/Series:	70 70	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	LB-12
Landing Gear Type:	Retractable - Tricycle	Seats:	8
Date/Type of Last Inspection:	06/30/1989, Annual	Certified Max Gross Wt.:	8200 lbs
Time Since Last Inspection:	10 Hours	Engines:	2 Reciprocating
Airframe Total Time:	4310 Hours	Engine Manufacturer:	LYCOMING
ELT:	Installed	Engine Model/Series:	IGSO-480-A1E6
Registered Owner:	RAINBOW PROPERTIES, INC.	Rated Power:	340 hp
Operator:	D.L. PORTER CONSTRUCTION, INC.	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ABY, 196 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1521 EDT	Direction from Accident Site:	0°
Lowest Cloud Condition:	Scattered / 3500 ft agl	Visibility	6 Miles
Lowest Ceiling:	Broken / 10000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	260°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	33° C / 23° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	IFR
Destination:	AKRON, OH (CAK)	Type of Clearance:	IFR
Departure Time:	1516 EDT	Type of Airspace:	Class D

Airport Information

Airport:	SOUTHWEST GEORGIA RGNL (ABY)	Runway Surface Type:	Asphalt
Airport Elevation:	196 ft	Runway Surface Condition:	Dry
Runway Used:	34	IFR Approach:	None
Runway Length/Width:	5200 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	SCOTT STRICKLAND	Report Date:	04/15/1991
Additional Participating Persons:	DON ELAM; WASHINGTON, DC SAM FLEMING; ATLANTA, GA BOBBY WASHINGTON; ATLANTA, GA KEN GARDNER; WICHITA, KS		
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 pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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