



National Transportation Safety Board Aviation Accident Final Report

Location:	ANCHORAGE, AK	Accident Number:	ANC88FA100
Date & Time:	07/27/1988, 1817 AKD	Registration:	N482SA
Aircraft:	FAIRCHILD SA227-AT	Aircraft Damage:	Substantial
Defining Event:		Injuries:	8 None

Flight Conducted Under: Part 135: Air Taxi & Commuter - Scheduled

Analysis

DURING THE TAXI TO THE RUNWAY, THE FLIGHT CREW NOTED A VIBRATION IN THE AIRPLANE AND STOPPED TO CHECK THE TIRES, THINKING THAT THEY WERE UNDERINFLATED. NO OBVIOUS PROBLEM WAS SEEN, AND THEY ELECTED TO TAKEOFF. SHORTLY AFTER TAKEOFF, A FIRE ERUPTED IN THE LEFT MAIN GEAR WHEELWELL. THE PILOT RETURNED TO THE AIRPORT AND LANDED SAFELY. HOWEVER, THE AIRPLANE SUSTAINED EXTENSIVE DAMAGE TO THE LEFT WING AND AILERON CONTROL SYSTEM. EXAMINATION OF THE BRAKES REVEALED A COCKED THERMAL INSULATOR IN THE PISTON BORE. THERE WAS EVIDENCE THAT THE BRAKES WERE WORN, HAD BEEN DRAGING, THEN OVERHEATED; AND THAT THE TIRES HAD EXPLODED PRIOR TO THE FIRE. THE FIRE DAMAGE INDICATED THAT THE FIRE HAD STARTED NEAR THE BRAKES. AN ALUMINUM FITTING WAS USED AS PART OF THE HYDRAULIC BRAKE SYSTEM ON THE STEEL BRAKE HOUSING. THE EXAM INDICATED THAT THE FITTING HAD BEEN INSTALLED BUT COULD NOT BE FOUND AFTER THE FIRE. THE CREW SAID THAT THEY DELAYED LOWERING THE GEAR, IN CONTRADICTION TO THE CHECKLIST REQUIREMENT WHEN THE WHEELWELL AND WING OVERHEAT LIGHT IS ON.

Probable Cause and Findings

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

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: TAXI - TO TAKEOFF

Findings

1. (C) LANDING GEAR,NORMAL BRAKE SYSTEM - BINDING(MECHANICAL)
2. (C) ACFT/EQUIP,INADEQUATE AIRCRAFT COMPONENT - MANUFACTURER
3. (C) PROPER ASSISTANCE - NOT OBTAINED - PILOT IN COMMAND

Occurrence #2: FIRE
Phase of Operation: CLIMB

Findings

4. (C) LANDING GEAR,NORMAL BRAKE SYSTEM - OVERTEMPERATURE
5. (C) HYDRAULIC SYSTEM,FITTING - MELTED
6. (F) EMERGENCY PROCEDURE - NOT FOLLOWED - PILOT IN COMMAND

Factual Information

Pilot Information

Certificate:	Airline Transport	Age:	39, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	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:	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim.	Last Medical Exam:	06/09/1988
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	14800 hours (Total, all aircraft), 2650 hours (Total, this make and model), 12700 hours (Pilot In Command, all aircraft), 293 hours (Last 90 days, all aircraft), 145 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	FAIRCHILD	Registration:	N482SA
Model/Series:	SA227-AT SA227-AT	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	AC-482
Landing Gear Type:	Retractable - Tricycle	Seats:	20
Date/Type of Last Inspection:	07/24/1988, Continuous Airworthiness	Certified Max Gross Wt.:	14500 lbs
Time Since Last Inspection:	70 Hours	Engines:	2 Turbo Prop
Airframe Total Time:	10546 Hours	Engine Manufacturer:	GARRETT
ELT:	Installed, not activated	Engine Model/Series:	TPE-331-1146
Registered Owner:	PLM INTERNATIONAL, INC.	Rated Power:	1000 hp
Operator:	PENINSULA AIRWAYS	Air Carrier Operating Certificate:	Commuter Air Carrier (135); On-demand Air Taxi (135)
Operator Does Business As:	PENINSULA AIRWAYS	Operator Designator Code:	PNSA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ANC, 144 ft msl	Observation Time:	1820 ADT
Distance from Accident Site:	0 Nautical Miles	Direction from Accident Site:	0°
Lowest Cloud Condition:	Scattered / 6000 ft agl	Temperature/Dew Point:	17° C / 8° C
Lowest Ceiling:	None / 0 ft agl	Visibility	60 Miles
Wind Speed/Gusts, Direction:	16 knots/ 23 knots, 170°	Visibility (RVR):	0 ft
Altimeter Setting:	29 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	IFR
Destination:	DILLINGHAM, AK (DLG)	Type of Clearance:	IFR
Departure Time:	1735 ADT	Type of Airspace:	Class D; Class E

Airport Information

Airport:	ANCHORAGE INT'L (ANC)	Runway Surface Type:	Asphalt
Airport Elevation:	144 ft	Runway Surface Condition:	Dry
Runway Used:	14	IFR Approach:	None
Runway Length/Width:	10496 ft / 150 ft	VFR Approach/Landing:	Traffic Pattern

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	6 None	Aircraft Fire:	In-Flight
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	8 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	JAMES D LA BELLE	Adopted Date:	09/19/1989
Additional Participating Persons:	JAMES MICHELANGELO; ANCHORAGE, AK KENNETH BANZHAF; ANCHORAGE, AK		
Publish Date:			
Investigation Docket:	NTSB accident and incident docket 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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