



National Transportation Safety Board Aviation Accident Data Summary

Location:	Boise, ID	Accident Number:	SEA02FA023
Date & Time:	01/02/2002, 1045 MST	Registration:	N132Z
Aircraft:	Beech 58P	Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Flight Test		

Analysis

Shortly after takeoff for an after maintenance test flight, the pilot noted a fire in the left engine. The pilot reduced power and landed the aircraft on the remaining runway without further incident. The engine and systems were shut down prior to the pilot and passenger evacuating the aircraft. Fire personnel responded and applied a small amount of foam on the engine, which was at the time, only smoking. Inspection of the engine revealed that the fire was contained to the accessory section of the engine. Heat distress was found to the outboard nacelle web assembly and the top wing skin under the nacelle was warped. Further inspection found that an electrical arc in the alternator wiring due to chafing against a pneumatic tube was responsible for the ignition of the fire. Accumulated fuel vapor from a fuel cell leak that was an on-going maintenance discrepancy for approximately three weeks preceding the accident, and eventually fixed, was most probable the source of the fuel.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Improper clearance between an alternator wire and a pneumatic line and fuel fumes. The alternator wire chafe and arcing were factors.

Findings

Occurrence #1: FIRE
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (F) ELECTRICAL SYSTEM,ELECTRIC WIRING - CHAFED
2. (F) ELECTRICAL SYSTEM,ELECTRIC WIRING - ARCING
3. (C) MISCELLANEOUS,BOLT/NUT/FASTENER/CLAMP/SPRING - CLEARANCE
4. (C) FLUID,FUEL - FUMES

Pilot Information

Certificate:	Airline Transport; Flight Instructor; Commercial	Age:	36
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane
Flight Time:	6701 hours (Total, all aircraft), 2100 hours (Total, this make and model), 3763 hours (Pilot In Command, all aircraft), 24 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N132Z
Model/Series:	58P	Engines:	2 Reciprocating
Operator:	US Department of Agriculture	Engine Manufacturer:	Continental
Operating Certificate(s) Held:	None	Engine Model/Series:	TSIO-520-WB3F
Flight Conducted Under:	Part 91: General Aviation - Flight Test		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:		Weather Information Source:	Pilot
Lowest Ceiling:	Overcast / 5000 ft agl	Wind Speed/Gusts, Direction:	/ , 150°
Temperature:	2°C	Visibility	10 Miles
Precipitation and Obscuration:			
Departure Point:	Boise, ID (BOI)	Destination:	

Airport Information

Airport:	Boise Air Terminal (Gowen Fld) (BOI)	Runway Surface Type:	Asphalt
Runway Used:	10R	Runway Surface Condition:	Dry
Runway Length/Width:	9763 ft / 150 ft		

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	In-Flight
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:			

Administrative Information

Investigator In Charge (IIC): Debra J Eckrote

Adopted Date: 11/04/2002

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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