



# National Transportation Safety Board Aviation Accident Data Summary

<b>Location:</b>	SUGAR GROVE, IL	<b>Accident Number:</b>	CHI98LA089
<b>Date &amp; Time:</b>	02/01/1998, 1515 CST	<b>Registration:</b>	N830JT
<b>Aircraft:</b>	CHINESE A/F AERO IND DEV CTR PL-1B	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

## Analysis

The pilot said the airplane's '...engine stopped...' during initial climbout from takeoff. He said the fuel boost pump was 'ON' and that he checked the throttle and mixture for proper position. The pilot said he turned to avoid colliding with power lines and a road. He said the engine started and ran for about 3-seconds when the airplane was about 25 ft above the ground. The pilot said he banked the airplane toward runway 09, and the engine stopped a second time. He said he '...leveled the wings and let [the] plane settle in.' On-scene investigation revealed no preaccident mechanical anomaly with the airframe or engine that would have prevented flight. The spark plugs were black and sooty. The pilot said moderate rain was falling, and the temperature and dew point were 36 and 34 deg Fahrenheit, respectively. According to icing probability charts, the airplane was operating in conditions conducive to severe carburetor icing at cruise power. The airplane did not have a conventional carburetor heat system. Heat for the carburetor was obtained from the engine oil cooler that was about 14-inches forward and above the carburetor. Air flowing through the oil cooler was used to prevent carburetor ice by heating the carburetor's exterior.

## Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: inadequate design of the carburetor heat system by the manufacturer, and subsequent carburetor ice, which resulted in loss of engine power and a forced landing. Factors relating to the accident were: carburetor icing (weather) conditions, and obstructions and uneven terrain in the emergency landing area.

## Findings

Occurrence #1: LOSS OF ENGINE POWER  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. (F) WEATHER CONDITION - CARBURETOR ICING CONDITIONS
2. (C) ANTI-ICE/DEICE SYSTEM,CARBURETOR/HEAT - INADEQUATE
3. (C) ACFT/EQUIP,INADEQUATE DESIGN - MANUFACTURER
4. (C) FUEL SYSTEM,CARBURETOR - ICE

Occurrence #2: FORCED LANDING  
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: EMERGENCY LANDING

#### Findings

5. (F) TERRAIN CONDITION - HIGH OBSTRUCTION(S)
6. MANEUVER TO AVOID OBSTRUCTIONS - PERFORMED - PILOT IN COMMAND
7. (F) TERRAIN CONDITION - ROUGH/UNEVEN

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	58
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Instrument Rating(s):</b>	Airplane
<b>Other Aircraft Rating(s):</b>	None	<b>Instructor Rating(s):</b>	None
<b>Flight Time:</b>	803 hours (Total, all aircraft), 196 hours (Total, this make and model), 2 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	CHINESE A/F AERO IND DEV CTR	<b>Registration:</b>	N830JT
<b>Model/Series:</b>	PL-1B PL-1B	<b>Engines:</b>	1 Reciprocating
<b>Operator:</b>	JOSEPH L. LESCH	<b>Engine Manufacturer:</b>	Lycoming
<b>Operating Certificate(s) Held:</b>	None	<b>Engine Model/Series:</b>	O-320-E2A
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

### Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual Conditions	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	ARR, 706 ft msl	<b>Weather Information Source:</b>	Weather Observation Facility
<b>Lowest Ceiling:</b>	Overcast / 2300 ft agl	<b>Wind Speed/Gusts, Direction:</b>	10 knots / , 180°
<b>Temperature:</b>	2° C	<b>Visibility</b>	4 Miles
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	(ARR)	<b>Destination:</b>	(ARR)

### Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Latitude, Longitude:</b>			

## Administrative Information

Investigator In Charge (IIC): FRANK S GATTOLIN Adopted Date: 05/29/1998

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](mailto: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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