



# National Transportation Safety Board Aviation Accident Data Summary

<b>Location:</b>	Cave Junction, OR	<b>Accident Number:</b>	SEA04FA031
<b>Date &amp; Time:</b>	01/01/2004, 1835 PST	<b>Registration:</b>	N53505
<b>Aircraft:</b>	Piper PA-44-180	<b>Injuries:</b>	1 Fatal, 3 Serious
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

## Analysis

The two commercially certificated flying pilots, accompanied by an airline transport rated pilot and a second passenger, departed Oakland, California, en route to North Bend, Oregon. A weather briefing had been obtained indicating an AIRMET for rime icing from the freezing level to 18,000 feet. The aircraft departed late in the afternoon, climbed to 12,000 feet and occasionally climbed to 13,000 feet for short durations in order to remain VMC above a cloud layer. Night environmental conditions existed when both engines began losing power and the copilot radioed Seattle Center that the aircraft had encountered "way too much induction ice to the engines," declaring an emergency. The pilot-in-command reported the outside air temperature at the power loss was about -20 degrees Celsius and he immediately applied full carburetor heat and began trouble shooting the problem while descending back toward a nearby airport. Application of carburetor heat bypassed the ice blocked induction air filters allowing unfiltered, warmed air to flow directly to the carburetors. Remedial action by the crew failed to regain full power and the aircraft broke out of the cloud bases in heavy snow too far down the runway to effect a landing. The pilot then began a turn to line up and land on the adjacent highway just east of the runway during which the aircraft's right wing struck several trees and the aircraft impacted near the west edge of the highway a short distance beyond.

## Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Both the pilot-in-command and the co-pilot allowing the aircraft to enter into an area of adverse weather (icing conditions at low [-20 degrees C] temperatures) resulting in sequential induction icing, induction filter blockage, carburetor icing and the subsequent partial loss of power in both engines followed by tree impact and collision with terrain during an emergency descent/approach. Contributing factors were icing conditions, low temperatures, night conditions and trees.

## Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER  
Phase of Operation: CRUISE

### Findings

1. (F) WEATHER CONDITION - ICING CONDITIONS
2. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - INADVERTENT - PILOT IN COMMAND
3. (F) WEATHER CONDITION - TEMPERATURE,LOW
4. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - INADVERTENT - COPILOT/SECOND PILOT
5. (F) LIGHT CONDITION - NIGHT

Occurrence #2: LOSS OF ENGINE POWER(PARTIAL) - NONMECHANICAL

Phase of Operation: CRUISE

Findings

- 6. ALL ENGINES
  - 7. (C) RAM/INDUCTION AIR - ICE
  - 8. (C) INDUCTION AIR CONTROL,AIR FILTER/SCREEN - BLOCKED(PARTIAL)
  - 9. CARBURETOR HEAT - ACTIVATED - PILOT IN COMMAND
  - 10. (C) FUEL SYSTEM,CARBURETOR - ICE
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Occurrence #3: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

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Occurrence #4: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: APPROACH

Findings

- 11. (F) OBJECT - TREE(S)
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Occurrence #5: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: DESCENT - UNCONTROLLED

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Occurrence #6: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

- 12. TERRAIN CONDITION - GROUND

## Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	23
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Instrument Rating(s):</b>	Airplane
<b>Other Aircraft Rating(s):</b>	None	<b>Instructor Rating(s):</b>	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane
<b>Flight Time:</b>	390 hours (Total, all aircraft), 52 hours (Total, this make and model), 285 hours (Pilot In Command, all aircraft)		

## Co-Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	27
<b>Airplane Rating(s):</b>	Multi-engine Land; 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>	440 hours (Total, all aircraft), 55 hours (Total, this make and model), 283 hours (Pilot In Command, all aircraft)		

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<b>Other Aircraft Rating(s):</b>	None	<b>Instructor Rating(s):</b>	None
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## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N53505
<b>Model/Series:</b>	PA-44-180	<b>Engines:</b>	2 Reciprocating
<b>Operator:</b>	Auburn Flight Service, Inc.	<b>Engine Manufacturer:</b>	Lycoming
<b>Operating Certificate(s) Held:</b>	On-demand Air Taxi (135)	<b>Engine Model/Series:</b>	LO-360-A1H6
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Instrument Conditions	<b>Condition of Light:</b>	Night/Dark
<b>Observation Facility, Elevation:</b>	CEC, 57 ft msl	<b>Weather Information Source:</b>	Weather Observation Facility
<b>Lowest Ceiling:</b>	Broken / 3400 ft agl	<b>Wind Speed/Gusts, Direction:</b>	9 knots / , 280°
<b>Temperature:</b>	6°C	<b>Visibility</b>	10 Miles
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Oakland, CA (OAK)	<b>Destination:</b>	North Bend, OR (OTH)

## Airport Information

<b>Airport:</b>	Illinois Valley (3S4)	<b>Runway Surface Type:</b>	Asphalt
<b>Runway Used:</b>	36	<b>Runway Surface Condition:</b>	Unknown
<b>Runway Length/Width:</b>	5200 ft / 75 ft		

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal, 1 Serious	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	2 Serious	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Latitude, Longitude:</b>	42.094167, -123.682222		

## Administrative Information

**Investigator In Charge (IIC):** Steven A McCreary

**Adopted Date:** 10/28/2004

**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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