



# National Transportation Safety Board Aviation Accident Final Report

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|--------------------------------|--------------------------------------|-------------------------|--------------------|
| <b>Location:</b>               | ENUMCLAW, WA                         | <b>Accident Number:</b> | SEA91FA025         |
| <b>Date &amp; Time:</b>        | 11/29/1990, 1110 PST                 | <b>Registration:</b>    | N13UW              |
| <b>Aircraft:</b>               | PIPER PA31                           | <b>Aircraft Damage:</b> | Destroyed          |
| <b>Defining Event:</b>         |                                      | <b>Injuries:</b>        | 4 Serious, 1 Minor |
| <b>Flight Conducted Under:</b> | Part 91: General Aviation - Personal |                         |                    |

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## Analysis

DURING A CROSS COUNTRY FLIGHT, THE PILOT FAILED TO PLAN FOR THE EFFECTS OF KNOWN ADVERSE WEATHER, INCLUDING STRONG WINDS ALOFT AND MOUNTAIN WAVE ACTIVITY. THE PILOT OVERFLEW SEVERAL POSSIBLE FUEL STOPS, CONTINUING ON TOWARD THE DESTINATION UNTIL THE FUEL WAS EXHAUSTED. THE AIRPLANE COLLIDED WITH HEAVILY WOODED TERRAIN AFTER THE LOSS OF POWER TO BOTH ENGINES.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FUEL EXHAUSTION DUE TO INADEQUATE PREFLIGHT PLANNING AND PREPARATIONS, AND POOR INFLIGHT PLANNING AND DECISIONS. THE PILOT ELECTED TO FLY INTO KNOWN ADVERSE WEATHER CONDITIONS, AND DID NOT CALCULATE FUEL CONSUMPTION FOR THE PLANNED FLIGHT.

## Findings

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Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL  
Phase of Operation: CRUISE - NORMAL

### Findings

1. (C) FLUID,FUEL - EXHAUSTION
  2. (F) FUEL CONSUMPTION CALCULATIONS - NOT PERFORMED - PILOT IN COMMAND
  3. (C) PREFLIGHT PLANNING/PREPARATION - INADEQUATE - PILOT IN COMMAND
  4. (C) IN-FLIGHT PLANNING/DECISION - POOR - PILOT IN COMMAND
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Occurrence #2: FORCED LANDING  
Phase of Operation: DESCENT - EMERGENCY

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Occurrence #3: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: DESCENT - EMERGENCY

### Findings

5. (F) OBJECT - TREE(S)

## Factual Information

### Pilot Information

|                                  |  |  |            |
|----------------------------------|--|--|------------|
| <b>Certificate:</b>              | Private  | <b>Age:</b>                              | 46, Male   |
| <b>Airplane Rating(s):</b>       | Multi-engine Land; Single-engine Land  | <b>Seat Occupied:</b>                    | Unknown    |
| <b>Other Aircraft Rating(s):</b> | None   | <b>Restraint Used:</b>                   | Seatbelt   |
| <b>Instrument Rating(s):</b>     | Airplane   | <b>Second Pilot Present:</b>             | No         |
| <b>Instructor Rating(s):</b>     |  | <b>Toxicology Performed:</b>             | No         |
| <b>Medical Certification:</b>    | Class 3 Valid Medical--no waivers/lim.   | <b>Last FAA Medical Exam:</b>            | 10/18/1990 |
| <b>Occupational Pilot:</b>       |  | <b>Last Flight Review or Equivalent:</b> |            |
| <b>Flight Time:</b>              | 638 hours (Total, all aircraft), 559 hours (Total, this make and model), 482 hours (Pilot In Command, all aircraft), 20 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft) |  |            |

### Aircraft and Owner/Operator Information

|                                      |                        |                                       |                 |
|--------------------------------------|------------------------|---------------------------------------|-----------------|
| <b>Aircraft Make:</b>                | PIPER                  | <b>Registration:</b>                  | N13UW           |
| <b>Model/Series:</b>                 | PA31 PA31              | <b>Aircraft Category:</b>             | Airplane        |
| <b>Year of Manufacture:</b>          |                        | <b>Amateur Built:</b>                 | No              |
| <b>Airworthiness Certificate:</b>    |                        | <b>Serial Number:</b>                 | 31-512          |
| <b>Landing Gear Type:</b>            | Retractable - Tricycle | <b>Seats:</b>                         | 6               |
| <b>Date/Type of Last Inspection:</b> | Unknown                | <b>Certified Max Gross Wt.:</b>       | 6500 lbs        |
| <b>Time Since Last Inspection:</b>   | 0 Hours                | <b>Engines:</b>                       | 2 Reciprocating |
| <b>Airframe Total Time:</b>          |                        | <b>Engine Manufacturer:</b>           | LYCOMING        |
| <b>ELT:</b>                          | Installed, activated   | <b>Engine Model/Series:</b>           | TIO-540-J2BD    |
| <b>Registered Owner:</b>             |                        | <b>Rated Power:</b>                   | 350 hp          |
| <b>Operator:</b>                     | BRAMWELL, STEVEN T     | <b>Operating Certificate(s) Held:</b> | None            |

## Meteorological Information and Flight Plan

|                                  |                         |   |                   |
|----------------------------------|-------------------------|---|-------------------|
| Conditions at Accident Site:     | Instrument Conditions   | Condition of Light:                     | Day               |
| Observation Facility, Elevation: | BOE, 18 ft msl          | Distance from Accident Site:            | 30 Nautical Miles |
| Observation Time:                | 1100 PST                | Direction from Accident Site:           | 284°              |
| Lowest Cloud Condition:          | Scattered / 1500 ft agl | Visibility                              | 4 Miles           |
| Lowest Ceiling:                  | Broken / 3500 ft agl    | Visibility (RVR):                       | 0 ft              |
| Wind Speed/Gusts:                | 15 knots / 25 knots     | Turbulence Type<br>Forecast/Actual:     | /                 |
| Wind Direction:                  | 225°                    | Turbulence Severity<br>Forecast/Actual: | /                 |
| Altimeter Setting:               |                         | Temperature/Dew Point:                  | -18°C / -18°C     |
| Precipitation and Obscuration:   |                         |   |                   |
| Departure Point:                 | PROVO, UT (PVU)         | Type of Flight Plan Filed:              | IFR               |
| Destination:                     | EVERETT, WA (PAE)       | Type of Clearance:                      | IFR               |
| Departure Time:                  | 0743 MST                | Type of Airspace:                       |                   |

## Wreckage and Impact Information

|                     |                    |                      |           |
|---------------------|--------------------|----------------------|-----------|
| Crew Injuries:      | 1 Serious          | Aircraft Damage:     | Destroyed |
| Passenger Injuries: | 3 Serious, 1 Minor | Aircraft Fire:       | None      |
| Ground Injuries:    | N/A                | Aircraft Explosion:  | None      |
| Total Injuries:     | 4 Serious, 1 Minor | Latitude, Longitude: |           |

## Administrative Information

|                                   |  |              |            |
|-----------------------------------|--|--------------|------------|
| Investigator In Charge (IIC):     | DEBRA J ECKROTE  | Report Date: | 11/23/1992 |
| Additional Participating Persons: | HAROLD HUTCHINS; SEATTLE, WA   |              |            |
| 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 <a href="mailto:pubinquiry@ntsb.gov">pubinquiry@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> . |              |            |

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).