



# National Transportation Safety Board Aviation Accident Final Report

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|-------------------------|----------------------|-------------------------|-------------|
| <b>Location:</b>        | GRAFTON, WV          | <b>Accident Number:</b> | BFO90LA031  |
| <b>Date &amp; Time:</b> | 03/01/1990, 1000 EST | <b>Registration:</b>    | N65538      |
| <b>Aircraft:</b>        | CESSNA 152           | <b>Aircraft Damage:</b> | Substantial |
| <b>Defining Event:</b>  |                      | <b>Injuries:</b>        | 1 None      |

**Flight Conducted Under:** Part 91: General Aviation - Instructional

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## Analysis

THE PILOT WAS PRACTICING AIRWORK DURING A SOLO TRAINING FLT, WHEN A PARTIAL LOSS OF POWER OCCURRED. HE APPLIED CARB HEAT AND POWER WAS TEMPORARILY RESTORED BEFORE IT DECREASED AGAIN. UNABLE TO MAINTAIN POWER, THE PLT SELECTED A FIELD FOR A FORCED LANDING. THE FIELD HAD A STEEP SLOPE. DURING THE LANDING, THE NOSE GEAR CONTACTED THE TERRAIN FIRST AND THE AIRPLANE NOSED OVER. DURING TESTS, THE CARB HEAT OPERATED NORMALLY. TEMP AND DEW POINT AT THE TIME OF THE ACCIDENT WERE 31 DEGS F AND 22 DEGS F, RESPECTIVELY. ACCORDING TO CARB ICE PROBABILITY CHARTS, THIS CONDITION WAS CONDUCTIVE TO CARB ICE DURING GLIDE POWER SETTINGS.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S IMPROPER USE OF CARBURETOR HEAT, WHEN OPERATING AT REDUCED POWER IN CONDITIONS WHICH WERE CONDUCTIVE TO CARBURETOR ICE.

## Findings

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Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - NONMECHANICAL  
Phase of Operation: MANEUVERING

### Findings

1. (F) WEATHER CONDITION - CARBURETOR ICING CONDITIONS
2. (C) CARBURETOR HEAT - DELAYED - PILOT IN COMMAND
3. FUEL SYSTEM,CARBURETOR - ICE

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Occurrence #2: FORCED LANDING  
Phase of Operation: DESCENT - EMERGENCY

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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: LANDING - FLARE/TOUCHDOWN

### Findings

4. TERRAIN CONDITION - MOUNTAINOUS/HILLY

## Factual Information

### Pilot Information

|                                  |  |  |                            |
|----------------------------------|--|--|----------------------------|
| <b>Certificate:</b>              | Student  | <b>Age:</b>                              | 23, Male                   |
| <b>Airplane Rating(s):</b>       | None   | <b>Seat Occupied:</b>                    | Left                       |
| <b>Other Aircraft Rating(s):</b> | None   | <b>Restraint Used:</b>                   | Seatbelt, Shoulder harness |
| <b>Instrument Rating(s):</b>     | None   | <b>Second Pilot Present:</b>             | No                         |
| <b>Instructor Rating(s):</b>     | None   | <b>Toxicology Performed:</b>             | No                         |
| <b>Medical Certification:</b>    | Class 1 Valid Medical--no waivers/lim.   | <b>Last FAA Medical Exam:</b>            | 08/14/1989                 |
| <b>Occupational Pilot:</b>       |  | <b>Last Flight Review or Equivalent:</b> |                            |
| <b>Flight Time:</b>              | 17 hours (Total, all aircraft), 17 hours (Total, this make and model), 1 hours (Pilot In Command, all aircraft), 17 hours (Last 90 days, all aircraft), 17 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft) |  |                            |

### Aircraft and Owner/Operator Information

|                                      |                          |                                       |                 |
|--------------------------------------|--------------------------|---------------------------------------|-----------------|
| <b>Aircraft Make:</b>                | CESSNA                   | <b>Registration:</b>                  | N65538          |
| <b>Model/Series:</b>                 | 152 152                  | <b>Aircraft Category:</b>             | Airplane        |
| <b>Year of Manufacture:</b>          |                          | <b>Amateur Built:</b>                 | No              |
| <b>Airworthiness Certificate:</b>    | Utility                  | <b>Serial Number:</b>                 | 15281603        |
| <b>Landing Gear Type:</b>            | Tricycle                 | <b>Seats:</b>                         | 2               |
| <b>Date/Type of Last Inspection:</b> | 11/14/1989, 100 Hour     | <b>Certified Max Gross Wt.:</b>       | 1670 lbs        |
| <b>Time Since Last Inspection:</b>   | 95 Hours                 | <b>Engines:</b>                       | 1 Reciprocating |
| <b>Airframe Total Time:</b>          | 4907 Hours               | <b>Engine Manufacturer:</b>           | LYCOMING        |
| <b>ELT:</b>                          | Installed, not activated | <b>Engine Model/Series:</b>           | O-235-L2C       |
| <b>Registered Owner:</b>             | KCI ENTERPRISES, INC.    | <b>Rated Power:</b>                   | 110 hp          |
| <b>Operator:</b>                     | KCI ENTERPRISES, INC.    | <b>Operating Certificate(s) Held:</b> | None            |

## Meteorological Information and Flight Plan

|                                  |                      |   |                   |
|----------------------------------|----------------------|---|-------------------|
| Conditions at Accident Site:     | Visual Conditions    | Condition of Light:                     | Day               |
| Observation Facility, Elevation: | CKB, 1203 ft msl     | Distance from Accident Site:            | 15 Nautical Miles |
| Observation Time:                | 0948 EST             | Direction from Accident Site:           | 270°              |
| Lowest Cloud Condition:          | Clear / 0 ft agl     | Visibility                              | 15 Miles          |
| Lowest Ceiling:                  | None / 0 ft agl      | Visibility (RVR):                       | 0 ft              |
| Wind Speed/Gusts:                | 8 knots /            | Turbulence Type<br>Forecast/Actual:     | /                 |
| Wind Direction:                  | 170°                 | Turbulence Severity<br>Forecast/Actual: | /                 |
| Altimeter Setting:               | 30 inches Hg         | Temperature/Dew Point:                  | -1° C / -6° C     |
| Precipitation and Obscuration:   |                      |   |                   |
| Departure Point:                 | CLARKSBURG, WV (CKB) | Type of Flight Plan Filed:              | None              |
| Destination:                     |                      | Type of Clearance:                      | None              |
| Departure Time:                  | 0930 EST             | Type of Airspace:                       | Class G           |

## Wreckage and Impact Information

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

## Administrative Information

|                                   |  |              |            |
|-----------------------------------|--|--------------|------------|
| Investigator In Charge (IIC):     | PAMELA S KLECKNER  | Report Date: | 09/04/1992 |
| Additional Participating Persons: | D TOWNSEND; CHARLESTON, WV   |              |            |
| 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](#).