



# National Transportation Safety Board Aviation Accident Final Report

---

<b>Location:</b>	WISE, VA	<b>Accident Number:</b>	BF091LA027
<b>Date &amp; Time:</b>	02/02/1991, 1050 EST	<b>Registration:</b>	N7816D
<b>Aircraft:</b>	PIPER PA-22-150	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

---

## Analysis

THE PILOT HAD JUST DEPARTED THE AIRPORT ON AN IFR FLIGHT AND WAS CLIMBING THROUGH 5,500 FEET WHEN THE AIRCRAFT SUDDENLY LOST SIGNIFICANT POWER. HE IMMEDIATELY PERFORMED THE EMERGENCY PROCEDURES FOR LOSS OF POWER BUT COULD NOT CORRECT THE SITUATION. WITH INSUFFICIENT POWER TO RETURN TO HIS DEPARTURE FIELD, HE ELECTED TO LAND ON A RECLAIMED STRIP MINE. ON TOUCHDOWN, THE NOSE LANDING GEAR BROKE AWAY AND THE AIRCRAFT TIPPED ON ITS NOSE AND CAME TO REST INVERTED CAUSING SUBSTANTIAL DAMAGE. SUBSEQUENT INSPECTION OF THE ENGINE REVEALED DAMAGE IN THE NUMBER THREE CYLINDER CAUSED BY A BROKEN EXHAUST VALVE.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE LOSS OF ENGINE POWER BROUGHT ON BY A FAILURE OF THE NUMBER THREE CLYINDER EXHAUST VALVE. CONTRIBUTING TO THE ACCIDENT WAS UNSUITABLE TERRAIN ON THE EMERGENCY LANDING FIELD.

## Findings

---

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF  
Phase of Operation: CLIMB - TO CRUISE

### Findings

1. (C) ENGINE ASSEMBLY, VALVE, EXHAUST - FAILURE, TOTAL  
-----

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

Occurrence #3: NOSE OVER  
Phase of Operation: LANDING - ROLL

### Findings

2. (C) TERRAIN CONDITION - ROUGH/UNEVEN

## Factual Information

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	06/20/1990
<b>Occupational Pilot:</b>	<b>Last Flight Review or Equivalent:</b>		
<b>Flight Time:</b>	347 hours (Total, all aircraft), 200 hours (Total, this make and model), 284 hours (Pilot In Command, all aircraft), 13 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	PIPER	<b>Registration:</b>	N7816D
<b>Model/Series:</b>	PA-22-150 PA-22-150	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	22-5462
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	03/01/1990, Annual	<b>Certified Max Gross Wt.:</b>	2000 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	O-320
<b>Registered Owner:</b>	ROBERT J SPERA	<b>Rated Power:</b>	150 hp
<b>Operator:</b>	ROBERT J SPERA	<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:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0000	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	20 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	Calm /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	2° C / -5° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	VFR/IFR
Destination:	KNOXVILLE, TN (DKX)	Type of Clearance:	IFR
Departure Time:	0000	Type of Airspace:	

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	ALBERT G REITAN	Report Date:	12/14/1992
Additional Participating Persons:	K. LEIGHTON; 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> .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).