



Aviation Investigation Final Report

Location:	TROUTDALE, Oregon	Accident Number:	SEA92LA218
Date & Time:	September 29, 1992, 15:10 Local	Registration:	N8274C
Aircraft:	PIPER PA-22-135	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

WHILE IN CRUISE THE ENGINE BEGAN RUNNING ROUGH AND VIBRATING. THE PILOT, UNABLE TO MAINTAIN ALTITUDE DUE TO THE POWER LOSS, EXECUTED A FORCED LANDING ONTO AN UNEVEN FIELD DURING WHICH THE NOSE GEAR STRUT FOLDED AFT DUE TO OVERLOAD AND THE AIRCRAFT NOSED OVER. SUBSEQUENT DISASSEMBLY OF THE ENGINE REVEALED THAT THE NUMBER 3 CYLINDER EXHAUST VALVE HAD SEPARATED AT THE NECK JUST BENEATH THE BASE OF THE VALVE HEAD.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: SEPARATION OF THE NUMBER 3 CYLINDER EXHAUST VALVE HEAD AND OVERLOADING OF THE NOSE GEAR STRUT. A FACTOR CONTRIBUTING TO THE ACCIDENT WAS THE UNEVEN TERRAIN.

Findings

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

Findings

1. (C) ENGINE ASSEMBLY, VALVE, EXHAUST - SEPARATION

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: NOSE OVER

Phase of Operation: LANDING - ROLL

Findings

2. LANDING GEAR, NOSE GEAR STRUT - OVERLOAD
3. (F) TERRAIN CONDITION - ROUGH/UNEVEN

Factual Information

Pilot Information

Certificate:	Private	Age:	59, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	July 23, 1991
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	420 hours (Total, all aircraft), 72 hours (Total, this make and model), 391 hours (Pilot In Command, all aircraft), 41 hours (Last 90 days, all aircraft), 18 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N8274C
Model/Series:	PA-22-135 PA-22-135	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	22-2349
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	August 24, 1992 Annual	Certified Max Gross Wt.:	1950 lbs
Time Since Last Inspection:	22 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2573 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-290-D2
Registered Owner:	MCBRIDE, EDWARD U.	Rated Power:	135 Horsepower
Operator:	MCBRIDE, EDWARD U.	Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	TTD ,35 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	14:46 Local	Direction from Accident Site:	270°
Lowest Cloud Condition:	Scattered / 8000 ft AGL	Visibility	35 miles
Lowest Ceiling:	Broken / 25000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	17 knots / 26 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	80°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	23°C / 7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	VANCOUVER , WA (59S)	Type of Flight Plan Filed:	None
Destination:	(59S)	Type of Clearance:	None
Departure Time:	14:45 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	45.520317,-122.349945(est)

Administrative Information

Investigator In Charge (IIC):	Mccreary, Steven
Additional Participating Persons:	DALE L MORRIS; HILLSBORO , OR
Original Publish Date:	September 14, 1993
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=42913

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).