Aviation Investigation Final Report

Location:	SUTHERLIN, Oregon	**Accident Number:**	SEA98LA028
Date & Time:	January 23, 1998, 13:25 Local	**Registration:**	N8422P
Aircraft:	Piper PA-24-250	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that while in cruise flight, the airframe began to pick up light rime ice. The pilot elected to return to his departure point and was cleared to descend to a lower altitude. After the flight descended to the lower altitude, the engine was unable to maintain full power and began to run rough. The aircraft was unable to maintain altitude to reach the airport and the pilot elected to land the airplane on an open field. During the gear up landing to the soft field, the airplane collided with a berm and barb wire fence. After the aircraft was recovered, it was determined that the engine was in a condition to be test run. A new propeller was installed, a battery was connected, and a fuel supply was rigged. The engine was started and ran normally at idle power until the engine was warmed up. The engine was then run to 1700 RPM and a magneto check was accomplished. The oil temperature, oil pressure, EGT, and suction were all within normal parameters. The inlet air box was severely damaged during the accident sequence. The alternate air door would operate only part way open, however, the hinge was clear and free. The air filter was a foam filter that was in good condition, with no sign of deterioration or blockage.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Loss of engine power for an undetermined reason.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: CRUISE

Findings
1. WEATHER CONDITION - ICING CONDITIONS
2. (C) REASON FOR OCCURRENCE UNDETERMINED

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

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - ROLL

Findings
3. TERRAIN CONDITION - SOFT

Factual Information

On January 23, 1998, at 1325 Pacific standard time, a Piper PA 24-250, N8422P, operated by the pilot as a 14 CFR Part 91 personal flight, collided with the terrain and subsequently a fence during a forced landing in an open field two miles east of Sutherlin, Oregon. Instrument meteorological conditions prevailed at the time and an instrument flight rules flight plan was filed. The airplane was substantially damaged and the commercial pilot and his passenger were not injured. The flight had departed from Eugene, Oregon, about one hour and ten minutes prior to the accident.

During a telephone interview and subsequent written statement, the pilot reported that while cruising at 11,000 feet in light cirrus clouds, the airplane began to pick up light rime icing. The pilot stated that he decided to turn around and return to Eugene. Air traffic control cleared the flight to descend to 8,000 feet. The pilot reported that while at 8,000 feet, the engine was unable to obtain more that 15 inches of manifold pressure and was running rough. The pilot notified air traffic control that he was experiencing engine problems and asked to descend further. Air traffic control cleared the flight to descend to 7,000 feet and when terrain permitted, the flight was cleared to descend to 6,000 feet. At 6,000 feet, the airframe ice began to melt, however, the engine continued to operate at partial power. The aircraft was unable to maintain altitude and after the flight cleared the clouds, the pilot selected an open field for a forced landing. The airplane touched down, gear-up, in a soft field. The airplane collided with a berm and barb wire fence before coming to rest.

The aircraft was recovered from the field and transported to a maintenance facility in Roseburg, Oregon. The engine was cleaned to remove mud. It was determined that the engine was in a condition to be test run. The propeller was replaced, a battery was installed, and a fuel supply was rigged. A Federal Aviation Administration Inspector from the Portland, Oregon, Flight Standards District Office was present for the engine run. The inspector reported that the electric fuel boost pump was switched on, with positive results, and indicated a 20 PSI output. The electric boost pump was then switched off and the starter was engaged. The engine started without difficulty and idled normally. After the engine was warmed up, the engine was run-up to 1700 RPM and a magneto check was accomplished. The oil temperature, oil pressure, EGT, and suction pressure were all within normal parameters. The engine was then shut down and secured.

The inlet air box was severely damaged during the accident sequence. The alternate air door would operate only part way open, however, the hinge was clear and free. The air filter was a foam Brackett filter that was in good condition, with no sign of deterioration or blockage.

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	53,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane single-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	December 5, 1997
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	4050 hours (Total, all aircraft), 222 hours (Total, this make and model), 3708 hours (Pilot In Command, all aircraft), 34 hours (Last 90 days, all aircraft), 6 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N8422P
Model/Series:	PA-24-250 PA-24-250	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	24-3672
Landing Gear Type:	Retractable - Tricycle	**Seats:**	0
Date/Type of Last Inspection:	September 2, 1997 Annual	**Certified Max Gross Wt.:**	2900 lbs
Time Since Last Inspection:	43 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	5513 Hrs	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	TIO-540-C
Registered Owner:	DONALD S. BROWN	**Rated Power:**	250 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Scattered / 3000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	Unknown	**Visibility (RVR):**	
Wind Speed/Gusts:	15 knots / 30 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	220°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	10°C
Precipitation and Obscuration:	Light - None - Rain		
Departure Point:	EUGENE , OR (EUG)	**Type of Flight Plan Filed:**	IFR
Destination:	SACRAMENTO , CA (MHR)	**Type of Clearance:**	IFR
Departure Time:	12:15 Local	**Type of Airspace:**	Class E

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:	1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	43.410938,-123.109573(est)

Administrative Information

Investigator In Charge (IIC):	Eckrote, Debra
Additional Participating Persons:	JARVIS COCHRAN; HILLSBORO , OR
Original Publish Date:	December 8, 1998
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=42748