



# Aviation Investigation Final Report

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<b>Location:</b>	Redmond, Oregon	<b>Accident Number:</b>	SEA01LA137
<b>Date &amp; Time:</b>	July 19, 2001, 13:08 Local	<b>Registration:</b>	N8901C
<b>Aircraft:</b>	Piper PA-20-135	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

Upon arrival at Redmond, the pilot was instructed to enter traffic for runway 28. On his first landing attempt, he bounced "moderately" and decided to go around. He reported that on his second approach, winds had increased and were variable. He stated that on this approach, the flare and initial rollout went well but that "the continuing rollout swerved to the left and did not respond well to correction." The pilot therefore decided to go around again, stating in his accident report: "Although I was unsure at the time whether I made contact or avoided a runway light, evidence on the aircraft indicates that a contact did occur." The pilot reported that at this point, he contacted the tower and told them that he was having trouble with crosswind on runway 28. The control tower then offered runway 4. The pilot stated that on the third approach, "I placed the aircraft with good speed control at the center of the runway while holding against a moderate crosswind from the left", but that "Within a few feet...a crosswind (seemingly quartering tailwind) from the right lifted the right wing", and that the aircraft then "arced immediately to the left" and subsequently ground looped at low speed. The aircraft's tailwheel collapsed during the ground loop. The pilot stated that at the approximate time of the accident, "two windsocks were visible indicating moderately strong winds in 180 degree opposite directions on the same runway." According to a special weather observation taken at Redmond at 1310, winds were variable between 280 and 010 degrees true at 8 knots.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate compensation for wind conditions during landing. A factor was variable winds.

## Findings

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Occurrence #1: TAIL GEAR COLLAPSED

Phase of Operation: LANDING

Findings

1. (F) WEATHER CONDITION - VARIABLE WIND
2. (C) COMPENSATION FOR WIND CONDITIONS - INADEQUATE - PILOT IN COMMAND

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Occurrence #2: DRAGGED WING, ROTOR, POD, FLOAT OR TAIL/SKID

Phase of Operation: LANDING

## Factual Information

On July 19, 2001, approximately 1308 Pacific daylight time, a Piper PA-20-135 airplane, N8901C, was substantially damaged in a ground loop during landing on runway 4 at Roberts Field, Redmond, Oregon. The private pilot, whose application to register the aircraft in his name was pending with the FAA, and one passenger were not injured in the accident. Visual meteorological conditions were reported at Redmond in a special observation taken at 1310. The aircraft was on a visual flight rules (VFR) flight plan from Pullman, Washington, to Ashland, Oregon, and according to the pilot, the aircraft departed its last departure point of Pendleton, Oregon, about 1030.

The pilot stated that upon arrival at Redmond, he was instructed to enter traffic for runway 28 (7,006 feet by 100 feet grooved asphalt, according to the U.S. Government Airport/Facility Directory [A/FD].) The pilot stated that on his first landing attempt, he "bounced moderately and decided to go around and re-land to work on better landing technique." He reported that on his second approach, winds had increased and were variable. He stated that on this approach, the flare and initial rollout went well but that "the continuing rollout swerved to the left and did not respond well to correction." The pilot stated that he therefore decided to go around again, and stated: "Although I was unsure at the time whether I made contact or avoided a runway light, evidence on the aircraft indicates that a contact did occur." The pilot reported that at this point, he contacted the tower and told them that he was having some trouble with crosswind on runway 28. The control tower then offered runway 4 (7,040 feet by 150 feet grooved asphalt, per the A/FD.) The pilot stated that on the third approach, "I placed the aircraft with good speed control at the center of the runway while holding against a moderate crosswind from the left." He reported that "Within a few feet, however, a crosswind (seemingly quartering tailwind) from the right lifted the right wing", and that the aircraft then "arced immediately to the left." The pilot stated that he believed he was holding full right rudder at this point, but that the plane did not respond, with differential braking being "initially impossible or ineffective as the plane was on left main gear only." He reported that "The plane slowed and did its final swing at a low rate of speed (8-10 mph)." He stated that the tailwheel then began castering and then collapsed to the left, stating that "A bolt holder on the side of a shackle caging the spring had failed with side-load." The pilot stated that at the approximate time of the accident, "two windsocks were visible indicating moderately strong winds in 180 degree opposite directions on the same runway." According to a special weather observation taken at Redmond at 1310, winds were variable between 280 and 010 degrees true at 8 knots.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	57, 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>	
<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 3 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	July 24, 2000
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	July 24, 2000
<b>Flight Time:</b>	200 hours (Total, all aircraft), 22 hours (Total, this make and model), 129 hours (Pilot In Command, all aircraft), 25 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N8901C
<b>Model/Series:</b>	PA-20-135	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	20-1032
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	July 3, 2001 Annual	<b>Certified Max Gross Wt.:</b>	1950 lbs
<b>Time Since Last Inspection:</b>	19.4 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1625.8 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>		<b>Engine Model/Series:</b>	O-290-D2
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	135 Horsepower
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	RDM,3077 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	13:10 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Few / 10000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	8 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.94 inches Hg	<b>Temperature/Dew Point:</b>	24°C / 7°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Pendleton, OR (PDT )	<b>Type of Flight Plan Filed:</b>	VFR
<b>Destination:</b>	(RDM )	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	10:30 Local	<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	Roberts Field RDM	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	3077 ft msl	<b>Runway Surface Condition:</b>	Unknown
<b>Runway Used:</b>	04	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	7040 ft / 150 ft	<b>VFR Approach/Landing:</b>	Full stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	44.25991,-121.219268(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Nesemeier, Gregg
<b>Additional Participating Persons:</b>	Mike Robertson; FAA - Portland FSDO; Hillsboro, OR
<b>Original Publish Date:</b>	February 20, 2002
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	The NTSB traveled to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=52769">https://data.ntsb.gov/Docket?ProjectID=52769</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).