Aviation Investigation Final Report

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

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

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

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

Certificate:	Private	**Age:**	57,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 24, 2000
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	July 24, 2000
Flight Time:	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

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

Meteorological Information and Flight Plan

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

Airport Information

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

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:**	44.25991,-121.219268(est)

Administrative Information

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