Aviation Investigation Final Report

Location:	CORVALLIS, Oregon	**Accident Number:**	SEA95LA204
Date & Time:	September 4, 1995, 12:05 Local	**Registration:**	N8865K
Aircraft:	STINSON 108-1	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	3 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

AFTER DEPARTING RUNWAY 17 THE PILOT REMAINED IN THE PATTERN FOR A TOUCH-AND-GO. UPON TOUCHDOWN AT 70 MPH, ON CENTERLINE, THE RIGHT MAIN LANDING GEAR COLLAPSED. POSTCRASH EXAMINATION REVEALED THAT THE FOUR RETAINING PINS WHICH HOLD THE RIGHT MAIN LANDING GEAR SHOCK STRUT RETAINER CAP HAD SHEARED ALLOWING THE STRUT TO SEPARATE FROM THE GEAR STRUT. NO PRE-EXISTING FATIGUE WAS OBSERVED ON THE PINS. THE AIRCRAFT HAD BEEN GROUND-LOOPED 14.3 HOURS PREVIOUS TO THIS ACCIDENT.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: SHEARING OF THE RIGHT MAIN LANDING GEAR SHOCK STRUT RETAINER CAP RETAINING PINS.

Findings

Occurrence #1: MAIN GEAR COLLAPSED
Phase of Operation: LANDING - ROLL

Findings
1. (C) LANDING GEAR,MAIN GEAR SHOCK ABSORBING STRUT - SEPARATION
2. (C) MISCELLANEOUS,DOWEL/PIN - SHEARED

Factual Information

On September 4, 1995, approximately 1205 hours Pacific daylight time, a Stinson 108-1, N8865K, sustained substantial damage when the right main landing gear collapsed during the landing roll on runway 17 at the Corvallis Municipal Airport, Corvallis, Oregon. The private pilot and two passengers were uninjured. Visual meteorological conditions existed and no flight had been filed. The flight, which was personal and local, was to have been operated under 14CFR91, and originated from Corvallis approxi- mately 15 minutes earlier.

The pilot reported that he departed runway 17 at Corvallis and remained in the pattern with the intent of conducting a single touch-and-go landing on the same runway before departing the airport. He indicated that he flew a normal 70 mph approach and touched down on the "centerline on (the) 1000 foot square (runway fixed distance markings) (and) began (a) slight (10 degree) drift to l(eft)." He reported that the "plane responded poorly" and that the "plane lifted (the) left wing (or lowered the right wing) as (the) gear leg with (the) piston from (the) oleo lifted (the) right seat from (its) track" (refer to attached NTSB Form 6120.1/2).

The pilot also reported in a separate NASA ASRS report that inspection of the runway revealed "rubber marks from (the) wheel up the runway suggesting that the right tire was scuffing and perhaps turned inward from at or very near (the) touchdown" (refer to photograph 1).

Post crash examination revealed that the four retaining pins for the right main landing gear's shock strut retainer (cap) had sheared (refer to photograph 2). Gross examination of the pins revealed no evidence of fatigue.

The pilot reported to an FAA inspector that he had purchased the aircraft one week previous to the accident and that a total of 14.3 hours had been logged in the previous year since the time the aircraft had been previously ground looped.

Pilot Information

Certificate:	Private	**Age:**	62,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Glider	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	October 17, 1994
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	1212 hours (Total, all aircraft), 5 hours (Total, this make and model), 1045 hours (Pilot In Command, all aircraft), 46 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	STINSON	**Registration:**	N8865K
Model/Series:	108-1 108-1	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Utility	**Serial Number:**	108-1865
Landing Gear Type:	Tailwheel	**Seats:**	4
Date/Type of Last Inspection:	August 23, 1995 Annual	**Certified Max Gross Wt.:**	2230 lbs
Time Since Last Inspection:	5 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1294 Hrs	**Engine Manufacturer:**	FRANKLIN
ELT:	Installed, not activated	**Engine Model/Series:**	6A4-165-BC
Registered Owner:	TAYLOR, WILLIAM, M.	**Rated Power:**	165 Horsepower
Operator:		**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:	CVO ,246 ft msl	**Distance from Accident Site:**	
Observation Time:	11:56 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Scattered / 3100 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	100°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	22°C / 10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(CVO)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	11:50 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	CORVALLIS MUNICIPAL CVO	**Runway Surface Type:**	Asphalt
Airport Elevation:	246 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	17	**IFR Approach:**	None
Runway Length/Width:	5065 ft / 150 ft	**VFR Approach/Landing:**	Touch and go;Traffic pattern

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:**	44.460475,-123.34011(est)

Administrative Information

Investigator In Charge (IIC):	Mccreary, Steven
Additional Participating Persons:	LOU SANDERS; HILLSBORO , OR
Original Publish Date:	February 14, 1996
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=42240