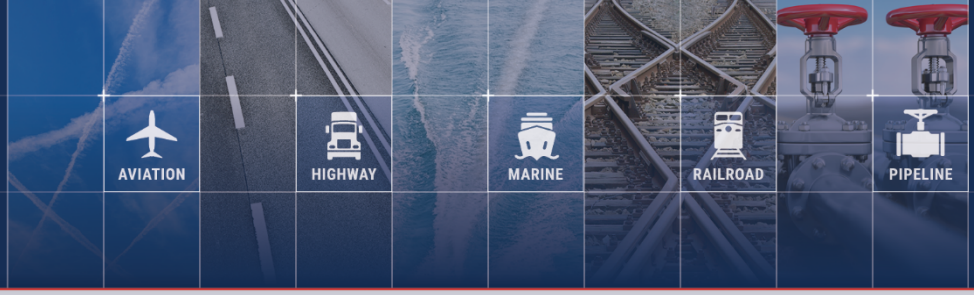

Aviation Investigation Final Report

Location:	PRAY, Montana	**Accident Number:**	SEA95LA218
Date & Time:	September 15, 1995, 13:15 Local	**Registration:**	N11JW
Aircraft:	CESSNA 180	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE PILOT LINED UP ON THE 6,000-FOOT-LONG, 30-FOOT-WIDE, MACADAM ROAD FOR LANDING AFTER BEING ADVISED BY RADIO OF CALM WINDS. UPON TOUCHDOWN THE TAILWHEEL BEGAN TO SHIMMY AND THE AIRCRAFT COMMENCED A RIGHT DRIFT WHICH WAS CORRECTED WITH LEFT RUDDER/STEERING. ONCE ESTABLISHED ON CENTERLINE THE PILOT APPLIED RIGHT RUDDER/STEERING WITHOUT EFFECT. THE AIRCRAFT ROLLED OFF THE LEFT SIDE OF THE SLOPED ROAD DURING WHICH THE LEFT MAIN LANDING GEAR IMPACTED A ROCK. THE LEFT GEAR SUBSEQUENTLY COLLAPSED. THE PILOT REPORTED OBSERVING A WINDSOCK INDICATION OF A LEFT QUARTERING TAILWIND IMMEDIATELY FOLLOWING THE LANDING. POSTCRASH EXAMINATION REVEALED A MECHANICAL MALFUNCTION WITHIN THE TAILWHEEL STEERING MECHANISM PREVENTING RIGHT TAILWHEEL STEERING.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE LOSS OF DIRECTIONAL CONTROL DUE TO THE LOSS OF RIGHT TAILWHEEL STEERING. FACTORS IN THE ACCIDENT WERE: A LEFT QUARTERING CROSSWIND AND THE SLOPED SIDE OF THE ROAD.

Findings

Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER
Phase of Operation: LANDING - ROLL

Findings
1. (C) LANDING GEAR,STEERING SYSTEM - FAILURE,PARTIAL
2. (C) DIRECTIONAL CONTROL - NOT POSSIBLE - PILOT IN COMMAND
3. (F) WEATHER CONDITION - CROSSWIND
4. (F) TERRAIN CONDITION - ROADWAY/HIGHWAY

Occurrence #2: GEAR COLLAPSED
Phase of Operation: LANDING - ROLL

Findings
5. (F) TERRAIN CONDITION - ROCK(S)/BOULDER(S)
6. LANDING GEAR,MAIN GEAR - OVERLOAD

Factual Information

On September 15, 1995, approximately 1315 hours mountain daylight time, a Cessna 180, N11JW, being flown by an airline transport pilot, was substantially damaged when the left main landing gear collapsed following a loss of control on landing roll on a paved road near Pray, Montana. The pilot and her husband were unin- jured. Visual meteorological conditions existed and no flight plan had been filed. The flight, which was personal, was to have been operated under 14CFR91, and originated from Nampa, Idaho, approximately 1030.

The pilot reported that she lined up on the 6,000 foot long by 30 foot wide macadam road for landing headed approximately 150 degrees after receiving a radio call of calm winds and "touched down harder than normal and the tailwheel started to shimmy immediately." She reported that the aircraft began a right drift on rollout which she corrected with left rudder/tailwheel steering and that once back on the centerline she applied right rudder/tailwheel steering to track on the centerline but perceived no effect. The aircraft continued its left drift and the left wheel encountered an approximate three foot downslope area at the edge of the road and began sliding downhill. The pilot reported that "while the aircraft was sliding, it struck a rock causing the left gear to fold" (refer to attached NTSB Form 6120.1/2). The pilot reported that subsequent to the landing she observed a windsock indicating a right quartering crosswind of 10-15 knots from the north and that a pilot who landed immediately beforehand reported the winds as changing direction drastically.

Post crash examination of the aircraft's tailwheel steering system by an FAA inspector revealed that the steering mechanism functioned normally for commanded left turns but that mechanical wearing and a bent compression spring prevented commanded right turns (refer to attachment).

Pilot Information

Certificate:	Airline transport; Flight instructor	**Age:**	54,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:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	December 30, 1994
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	3471 hours (Total, all aircraft), 558 hours (Total, this make and model), 3281 hours (Pilot In Command, all aircraft), 54 hours (Last 90 days, all aircraft), 24 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	**Registration:**	N11JW
Model/Series:	180 180	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	32278
Landing Gear Type:	Tailwheel	**Seats:**	4
Date/Type of Last Inspection:	March 21, 1995 Annual	**Certified Max Gross Wt.:**	2550 lbs
Time Since Last Inspection:	76 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	3069 Hrs	**Engine Manufacturer:**	CONTINENTAL
ELT:	Installed, not activated	**Engine Model/Series:**	O-470K
Registered Owner:	MATHIAS, LINDA, B.	**Rated Power:**	230 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:	LVM ,4656 ft msl	**Distance from Accident Site:**	23 Nautical Miles
Observation Time:	13:47 Local	**Direction from Accident Site:**	10°
Lowest Cloud Condition:	Unknown	**Visibility**	30 miles
Lowest Ceiling:	Broken / 16000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	17 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	260°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	26°C / -3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	NAMPA , ID (S67)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	10:30 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:**	Full stop;Straight-in

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:**	45.309974,-110.760467(est)

Administrative Information

Investigator In Charge (IIC):	Mccreary, Steven
Additional Participating Persons:	ARMANDE J DEMONTIGNY; HELENA , MT
Original Publish Date:	April 18, 1996
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=42249