



# Aviation Investigation Final Report

<b>Location:</b>	HELENA, Montana	<b>Accident Number:</b>	DEN90LA105
<b>Date &amp; Time:</b>	May 6, 1990, 11:14 Local	<b>Registration:</b>	N8679X
<b>Aircraft:</b>	CESSNA C-180E	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

THE COMMERCIAL PILOT WAS MAKING HIS FOURTH LANDING OF THE MORNING. THE AIRCRAFT TOUCHED DOWN ON THE MAIN LANDING GEAR AS PLANNED AND THEN HE LET THE TAIL WHEEL TOUCH DOWN ON THE RUNWAY. HE IMMEDIATELY FELT A VIBRATION AND HE LIFTED THE TAIL WHEEL BACK OFF OF THE RUNWAY. AFTER THE TAIL WHEEL CAME OFF THE RUNWAY HE LOST CONTROL OF THE AIRCRAFT AND IT GROUND-LOOPED. THE INVESTIGATION REVEALED THAT THE TAIL WHEEL BEARING AND PIVOT WAS WORN. IN ADDITION, THE RIGHT RUDDER BRAKE PEDAL RETURN SPRING WAS FOUND SEPARATED FROM THE ATTACHMENT BRACKET.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE MALFUNCTION OF THE TAIL WHEEL ASSEMBLY.

### Findings

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

#### Findings

1. (C) FLT CONTROL SYST, RUDDER CONTROL ATTACH POINTS - DISCONNECTED
2. (C) LANDING GEAR, TAILWHEEL ASSEMBLY - WORN



## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	38, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	October 19, 1989
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2140 hours (Total, all aircraft), 1000 hours (Total, this make and model), 2040 hours (Pilot In Command, all aircraft), 65 hours (Last 90 days, all aircraft), 37 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	CESSNA	<b>Registration:</b>	N8679X
<b>Model/Series:</b>	C-180E C-180E	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	18051079
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	October 4, 1989 Annual	<b>Certified Max Gross Wt.:</b>	2650 lbs
<b>Time Since Last Inspection:</b>	60 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	4000 Hrs	<b>Engine Manufacturer:</b>	CONTINENTAL
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	O-470R
<b>Registered Owner:</b>	MELVIN O. TIENSVOLD	<b>Rated Power:</b>	230 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	HLN ,3873 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	11:20 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Scattered / 6500 ft AGL	<b>Visibility</b>	40 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	4 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	260°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	22°C / 3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>		<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	10:45 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>	HELENA REGIONAL HLN	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	3873 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	27	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	9000 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>	46.530456,-112.21054(est)

## Administrative Information

**Investigator In Charge (IIC):** Tranter, Verlin

**Additional Participating Persons:**

**Original Publish Date:** September 15, 1992

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.ntsb.gov/Docket?ProjectID=17926>

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