



# Aviation Investigation Final Report

---

<b>Location:</b>	Port Angeles, Washington	<b>Accident Number:</b>	SEA06CA157
<b>Date &amp; Time:</b>	August 5, 2006, 11:30 Local	<b>Registration:</b>	N347JP
<b>Aircraft:</b>	Piggott Bearhawk	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

---

## Analysis

The pilot said that he had done several stop-and-go landings; he then made a full stop for a respite. When he taxied out for his next departure on runway 08, he experienced no steering problems. As he took off, the airplane vibrated briefly. The pilot performed another landing and had a firm touchdown. He said the aircraft immediately veered left and full right rudder had no effect. He said that his feet had slipped off the aircraft's toe brakes during the landing, so differential braking was not possible. The right main landing gear collapsed, and the right wing and aileron were bent. Postaccident examination of the tail wheel assembly revealed that the clevis which connected the left tail wheel spring to the wheel's steering arm was missing. Additionally, serpentine skid marks were found on the runway that appeared to be the result of a tailwheel shimmy. The pilot reported that the wind during his first landing was from 350 degrees at 6 knots.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of directional control as a result of the disconnected tail wheel steering system, which led to an inadvertent ground loop during the landing roll.

## Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: TAKEOFF - ROLL/RUN

### Findings

1. (C) LANDING GEAR,STEERING SYSTEM - DISCONNECTED

-----

Occurrence #2: LOSS OF CONTROL - ON GROUND/WATER

Phase of Operation: LANDING - ROLL

### Findings

2. (C) DIRECTIONAL CONTROL - NOT POSSIBLE - PILOT IN COMMAND

3. (C) GROUND LOOP/SWERVE - INADVERTENT - PILOT IN COMMAND

-----

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING - ROLL

### Findings

4. TERRAIN CONDITION - RUNWAY

## Factual Information

On August 5, 2006, at approximately 1130 Pacific daylight time, a Piggott Bearhawk experimental homebuilt airplane, N347JP, was substantially damaged during a ground loop event while landing at William R. Fairchild International Airport (CLM), Port Angeles, Washington. The airline transport pilot, the sole occupant on board, was not injured. The airplane was being operated under Title 14 CFR Part 91. Visual meteorological conditions prevailed for the personal local flight which had originated approximately 5 minutes before the accident. The pilot had not filed a flight plan.

The pilot said that he had done several stop-and-go landings; he then made a full stop for a respite. When he taxied out for his next departure on runway 08, he experienced no steering problems. As he took off, the airplane vibrated briefly. The pilot performed another landing and had a firm touch down. He said the aircraft immediately veered left and full right rudder had no effect. He said that his feet had slipped off the aircraft's toe brakes during the landing, so differential braking was not possible. The right main landing gear collapsed, and the right wing and aileron were bent.

Postaccident examination of the tail wheel assembly revealed that the clevis which connected the left tail wheel spring to the wheel's steering arm was missing. Additionally, serpentine skid marks were found on the runway that appeared to be the result of a tail wheel shimmy. The pilot reported that the wind during his first landing was from 350 degrees at 6 knots.

### Pilot Information

<b>Certificate:</b>	Airline transport; Commercial; Flight instructor	<b>Age:</b>	72, 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	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 With waivers/limitations	<b>Last FAA Medical Exam:</b>	June 1, 2005
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	November 1, 2005
<b>Flight Time:</b>	8218 hours (Total, all aircraft), 4 hours (Total, this make and model), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piggott	<b>Registration:</b>	N347JP
<b>Model/Series:</b>	Bearhawk	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	347
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	Condition	<b>Certified Max Gross Wt.:</b>	2400 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	50 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-540
<b>Registered Owner:</b>	Daniel E. Donovan	<b>Rated Power:</b>	235 Horsepower
<b>Operator:</b>		<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>	CLM,291 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	11:53 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	6 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	350°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.09 inches Hg	<b>Temperature/Dew Point:</b>	19°C / 10°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Port Angeles, WA (CLM )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Sequim, WA (W28 )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	11:25 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Fairchild Inter Arpt CLM	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	291 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	08	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	6347 ft / 150 ft	<b>VFR Approach/Landing:</b>	Stop and go

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	48.020793,-123.819519(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Struhsaker, James
<b>Additional Participating Persons:</b>	Patrick Paden; FAA FSDO; Seattle, WA
<b>Original Publish Date:</b>	November 29, 2006
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=64305">https://data.nts.gov/Docket?ProjectID=64305</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](#).