



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Moneta, VA	<b>Accident Number:</b>	NYC02LA128
<b>Date &amp; Time:</b>	07/01/2002, 1200 EDT	<b>Registration:</b>	N5921H
<b>Aircraft:</b>	Piper PA-16	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The pilot reported that during landing roll, the tailwheel-equipped airplane abruptly veered to the left and departed the runway. The pilot regained directional control after the airplane had swerved about 60 degrees from the runway. In the process of returning to the runway, the right main landing gear struck an earthen berm about 16 inches high, and the airplane nosed over. Examination of the airplane revealed that the tail wheel side spring, between the rudder horn and tailwheel, on the right side of the tail wheel assembly, was disconnected, and the clip which held the spring in place was missing.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of a clip and subsequent loss of the spring on the right side of the tail wheel assembly, for undetermined reasons, which led to a loss of directional control. A factor was the berm.

## Findings

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Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation: LANDING - ROLL

### Findings

1. (C) LANDING GEAR, TAILWHEEL - DISCONNECTED  
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Occurrence #2: LOSS OF CONTROL - ON GROUND/WATER  
Phase of Operation: LANDING - ROLL

### Findings

2. DIRECTIONAL CONTROL - NOT POSSIBLE - PILOT IN COMMAND  
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Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT  
Phase of Operation: LANDING - ROLL

### Findings

3. (F) TERRAIN CONDITION - DIRT BANK/RISING EMBANKMENT

## Factual Information

On July 1, 2002, about 1200 eastern daylight time, a Piper PA-16, N5921H, was substantially damaged while landing at Smith Mountain Lake Airport (W91), Moneta, Virginia. The certificated private pilot was not injured. Visual meteorological conditions prevailed for the personal flight, which originated at Culpeper Regional Airport (CJR), Culpeper, Virginia. No flight plan had been filed for the flight that was conducted under 14 CFR Part 91.

The pilot stated:

"...Approach to Smith Mountain Lake was normal. On roll-out aircraft started left hand turn and exited hard surface. Regained control, [airplane] pointed about 60 degrees from centerline. Started turn back to runway when right wheel struck a mound of dirt about 16 inches high. Aircraft went over onto it back. Found right hand link from tailwheel to rudder horn missing."

In a follow-up telephone interview, the pilot described the left turn as abrupt, with no indication of a problem prior to the turn.

According to an inspector from the Federal Aviation Administration (FAA), examination of the airplane revealed that the clip which held the tail wheel spring to the tail wheel on the right side of the tail wheel assembly, was missing, and the spring was disconnected. A search of the runway failed to find the clip. The FAA inspector also reported that the vertical stabilizer and rudder were bent. The right wing was bent at the fuselage attach point, and the right wing strut was bent.

Runway 05 was 3,050 feet long, 50 feet wide, and had an asphalt surface.

The closest recorded weather was Roanoke Regional/Woodrum Field Airport (ROA), Roanoke, Virginia, located 23 nautical miles northwest of the accident site. The reported winds at 1154, were variable at 3 knots.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	65, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	10/24/2001
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	11/03/2001
<b>Flight Time:</b>	329 hours (Total, all aircraft), 31 hours (Total, this make and model), 329 hours (Pilot In Command, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N5921H
Model/Series:	PA-16	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	16-542
Landing Gear Type:	Tailwheel	Seats:	4
Date/Type of Last Inspection:	10/13/2001, Annual	Certified Max Gross Wt.:	1650 lbs
Time Since Last Inspection:	35.8 Hours	Engines:	1 Reciprocating
Airframe Total Time:	2188.7 Hours at time of accident	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-320
Registered Owner:	On file	Rated Power:	150 hp
Operator:	On file	Operating Certificate(s) Held:	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ROA, 1176 ft msl	Distance from Accident Site:	23 Nautical Miles
Observation Time:	1154 EDT	Direction from Accident Site:	313°
Lowest Cloud Condition:	Scattered / 4500 ft agl	Visibility	6 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	Variable	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.2 inches Hg	Temperature/Dew Point:	29° C / 19° C
Precipitation and Obscuration:			
Departure Point:	Culpeper, VA (CJR)	Type of Flight Plan Filed:	None
Destination:	Moneta, VA (W91)	Type of Clearance:	None
Departure Time:	1030 EDT	Type of Airspace:	Class G

## Airport Information

Airport:	Smith Mountain Lake (W91)	Runway Surface Type:	Asphalt
Airport Elevation:	892 ft	Runway Surface Condition:	Dry
Runway Used:	5	IFR Approach:	None
Runway Length/Width:	3058 ft / 50 ft	VFR Approach/Landing:	Full Stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<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>	37.107778, -79.592500

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Robert L Hancock	<b>Report Date:</b>	05/01/2003
<b>Additional Participating Persons:</b>	John Phelps; Federal Aviation Inspector; Richmond, VA		
<b>Publish Date:</b>			
<b>Investigation Docket:</b>	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).