



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	POINT LOOKOUT, MO	<b>Accident Number:</b>	CHI98LA234
<b>Date &amp; Time:</b>	07/01/1998, 1330 CDT	<b>Registration:</b>	N5643L
<b>Aircraft:</b>	American Aviation Corp. (AAC) AA-1TW	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The pilot stated that during the landing roll the tailwheel began to vibrate. The vibration increased and the airplane made a 'sharp yaw to the left.' After about 30 degrees of turn, the right landing gear attach bracket bolts sheared and the right wing contacted the runway. The airplane then skidded to the right side of the runway and exited the runway tail first. Inspection of the airplane revealed the right arm of the tailwheel had failed approximately 1' from the center of the arm. Corrosion was present on the factured surface.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the failure of the tailwheel assembly due to corrosion. A factor associated with the accident was the overload failure of the right main landing gear.

## Findings

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

### Findings

1. (C) LANDING GEAR, TAILWHEEL ASSEMBLY - CORRODED
  2. (C) LANDING GEAR, TAILWHEEL ASSEMBLY - FAILURE
  3. DIRECTIONAL CONTROL - NOT POSSIBLE - PILOT IN COMMAND
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Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER  
Phase of Operation: LANDING - ROLL

### Findings

4. (F) LANDING GEAR, MAIN GEAR ATTACHMENT - OVERLOAD

## Factual Information

On July 1, 1998, at 1330 central daylight time, an American Yankee AA1-1TW, N5643L, impacted the terrain following a loss of directional control during a landing roll on runway 29 (3,539' x 100') at the Clark Airport, Point Lookout, Missouri. The ATP pilot and passenger were not injured and the airplane sustained substantial damage. The airplane was being operated as a personal flight under 14 CFR part 91 when the accident occurred. The flight originated Cape Girardeau, Missouri, at 1145. Visual meteorological conditions prevailed and no flight plan was filed.

The pilot stated that during the landing roll, following a 3-point landing, the tailwheel began to vibrate. He reported the vibration increased and the airplane made a "sharp yaw to the left." After about 30 degrees of turn, the right landing gear attach bracket bolts sheared and the right wing contacted the runway. The airplane then skidded to the right side of the runway and exited the runway tail first.

Inspection of the runway by the Clark Airport Operations Supervisor revealed tail wheel skid marks were present on the runway for a length in excess of 150 yards.

Inspection of the airplane by an Inspector from the Kansas City Federal Aviation Administration Flight Standards District Office revealed the right arm of the tailwheel had failed approximately 1" from the center of the arm. Corrosion was present on the factured surface.

## Pilot Information

<b>Certificate:</b>	Airline Transport	<b>Age:</b>	60, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane Single-engine	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	12/11/1997
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	26445 hours (Total, all aircraft), 153 hours (Total, this make and model), 25112 hours (Pilot In Command, all aircraft), 206 hours (Last 90 days, all aircraft), 54 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	American Aviation Corp. (AAC)	Registration:	N5643L
Model/Series:	AA-1TW AA-1TW	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	43
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	04/01/1998, Annual	Certified Max Gross Wt.:	1500 lbs
Time Since Last Inspection:	28 Hours	Engines:	1 Reciprocating
Airframe Total Time:	2236 Hours	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-235-C2C
Registered Owner:	JAMES N. MAHLE	Rated Power:	108 hp
Operator:	JAMES N. MAHLE	Operating Certificate(s) Held:	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	SGF, 938 ft msl	Distance from Accident Site:	45 Nautical Miles
Observation Time:	1454 CDT	Direction from Accident Site:	350°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	Calm /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	27°C / 21°C
Precipitation and Obscuration:			
Departure Point:	CAPE GIRARDEAU, MO (CGI)	Type of Flight Plan Filed:	None
Destination:	POINT LOOKOUT, MO (PLK)	Type of Clearance:	None
Departure Time:	1145 CDT	Type of Airspace:	Class D

## Airport Information

Airport:	CLARK AIRPORT (PLK)	Runway Surface Type:	Asphalt
Airport Elevation:	938 ft	Runway Surface Condition:	Dry
Runway Used:	29	IFR Approach:	None
Runway Length/Width:	3539 ft / 100 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>	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>	

## Administrative Information

<b>Investigator In Charge (IIC):</b>	PAMELA S SULLIVAN	<b>Report Date:</b>	02/15/2001
<b>Additional Participating Persons:</b>	STEVE DAVIS; KANSAS CITY, MO		
<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](#).