Aviation Investigation Final Report

Location:	Oshkosh, Wisconsin	**Accident Number:**	CEN09LA463
Date & Time:	July 25, 2009, 12:30 Local	**Registration:**	N56SP
Aircraft:	PILGRIM SAMUEL W JR RV-6	**Aircraft Damage:**	Substantial
Defining Event:	Sys/Comp malf/fail (non-power)	**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that during the landing roll the right rudder pedal welds failed. The airplane turned to the left into the wind and departed the left side of the runway. Because he had no right rudder or right brake authority, the pilot applied left rudder and brake in order to avoid a ditch which paralleled the runway. The right main gear collapsed and the firewall was damaged. Inspection of the airplane revealed the left seat, right rudder pedal had failed. The rudder pedals were tubular and the upper welds where the vertical tubes are connected to the cross-member had failed.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the rudder pedal which resulted in the pilot's inability to maintain directional control of the aircraft.

Findings

Aircraft	Rudder control system - Failure
Aircraft	Directional control - Attain/maintain not possible

Factual Information

History of Flight

Landing-landing roll	Sys/Comp malf/fail (non-power) (Defining event)
Landing-landing roll	Loss of control on ground
Landing-landing roll	Collision with terr/obj (non-CFIT)
Landing-landing roll	Landing gear collapse

On July 25, 2009, at 1230 central daylight time, an amateur built experimental RV-6, experienced a rudder pedal failure which resulted in a loss of directional control and a landing gear collapse while landing at the Whitman Airport, Oshkosh, Wisconsin. The pilot and passenger were not injured. The airplane was substantially damaged. The personal flight was operating under Title 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed. The flight departed from the Muscatine Municipal Airport (MUT), Muscatine, Iowa, at 1100.

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Pilot Information

Certificate:	Airline transport	**Age:**	58,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:**	No
Instructor Rating(s):	Airplane single-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	March 21, 2008
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	January 1, 2008
Flight Time:	15000 hours (Total, all aircraft), 400 hours (Total, this make and model), 12000 hours (Pilot In Command, all aircraft), 44 hours (Last 90 days, all aircraft), 22 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PILGRIM SAMUEL W JR	**Registration:**	N56SP
Model/Series:	RV-6	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	23088
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	March 31, 2009 Condition	**Certified Max Gross Wt.:**	1600 lbs
Time Since Last Inspection:	17 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	670 Hrs as of last inspection	**Engine Manufacturer:**	LYCOMING
ELT:	Installed, not activated	**Engine Model/Series:**	O-360-A1A
Registered Owner:	BERRY DAMON R	**Rated Power:**	180 Horsepower
Operator:	BERRY DAMON R	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	OSH,789 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	12:27 Local	**Direction from Accident Site:**	0°
Lowest Cloud Condition:	Few / 4000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	15 knots / 21 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	280°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.67 inches Hg	**Temperature/Dew Point:**	24°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Muscatine, IA (MUT)	**Type of Flight Plan Filed:**	None
Destination:	Oshkosh, WI (OSH)	**Type of Clearance:**	VFR
Departure Time:	11:00 Local	**Type of Airspace:**	Class C

Airport Information

Airport:	Witman Regional Airport OSH	**Runway Surface Type:**	Asphalt
Airport Elevation:	0 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	36L	**IFR Approach:**	None
Runway Length/Width:	8002 ft / 150 ft	**VFR Approach/Landing:**	Full stop

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:**	43.985,-88.561668(est)

Administrative Information

Investigator In Charge (IIC):	Sullivan, Pamela
Additional Participating Persons:	Wesley Harari; FAA; Milwaukee, WI
Original Publish Date:	November 9, 2009
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=74372