



# Aviation Investigation Final Report

<b>Location:</b>	HEBER CITY, Utah	<b>Accident Number:</b>	SEA94LA172
<b>Date &amp; Time:</b>	July 5, 1994, 16:17 Local	<b>Registration:</b>	CGPUR
<b>Aircraft:</b>	PITTS S1	<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 STATED THAT HE LANDED SOMEWHAT HARD ON THE MAIN LANDING GEAR, RECORDING 2 G'S ON HIS ACCELEROMETER. THE RIGHT MAIN LANDING GEAR WHEEL AND AXLE SEPARATED AND THE LANDING GEAR STRUT COLLAPSED. POST-CRASH INSPECTION REVEALED THAT THE FOUR ATTACHMENT BOLTS WERE EXCESSIVELY WORN AND WERE APPARENTLY IMPROPERLY TORQUED.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FAILURE OF MAIN LANDING GEAR AXLE HARDWARE. FACTORS INCLUDE COLLAPSE OF MAIN LANDING GEAR STRUT.

## Findings

Occurrence #1: MAIN GEAR COLLAPSED  
Phase of Operation: LANDING - ROLL

### Findings

1. (C) LANDING GEAR, AXLE - SEPARATION
2. (F) LANDING GEAR, MAIN GEAR STRUT - OVERLOAD

## Factual Information

On July 5, 1994, approximately 1617 mountain daylight time, an experimental Pitts S-1 was substantially damaged during roll out when the right wheel/axle attachment hardware failed after landing at Heber City, Utah. The private pilot, who owned the aircraft, was uninjured. Visual meteorological conditions prevailed for the flight, which originated at Heber City at 1601. There was no fire and no report of an ELT actuating.

FAA inspectors noted that the nuts and bolts securing the axle to the aircraft were excessively worn, and indicated that the nuts had sheared their threads before separating. The pilot noted that four 1/4-20 bolts failed, causing wheel separation and subsequent gear failure, and indicated that the bolts had not been correctly torqued.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	38, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Front
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<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 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	894 hours (Total, all aircraft), 820 hours (Pilot In Command, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	PITTS	<b>Registration:</b>	CGPUR
<b>Model/Series:</b>	S1 S1	<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>	R-2
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	
<b>Date/Type of Last Inspection:</b>	Annual	<b>Certified Max Gross Wt.:</b>	
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-360-A1A
<b>Registered Owner:</b>	BRIAN BENNETT	<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>	BURKE, JONATHON	<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>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Scattered / 5000 ft AGL	<b>Visibility</b>	30 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	18 knots / 40 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	210°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	26°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>	None
<b>Departure Time:</b>	16:01 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	HEBER VALLEY 36U	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	5632 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	21	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	6900 ft / 75 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>		<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>	40.429176,-111.189704(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Stockhill, Michael
<b>Additional Participating Persons:</b>	GRANT    PEARSOLL; SALT LAKE CITY , UT
<b>Original Publish Date:</b>	December 2, 1994
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=41969">https://data.ntsb.gov/Docket?ProjectID=41969</a>

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