Aviation Investigation Final Report

Location:	Everett, Washington	**Accident Number:**	SEA04LA070
Date & Time:	April 17, 2004, 12:00 Local	**Registration:**	N127DD
Aircraft:	Cessna 195	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The flight instructor reported that the student pilot had accumulated about 10 hours of flight time since his recent purchase of the aircraft. After completing some air work, the flight returned to the airport to practice touch-and-go landings. Five landings had been accomplished without incident. During the landing roll for the sixth touch-and-go, the instructor stated that the aircraft started to pull to the right side. The instructor instructed the student to release the right brake and rudder, however, the aircraft "responded as if the student had increased the brake and rudder pressure." The instructor immediately applied full left rudder and braking action, and reduced power to idle, but he was unable to overcome the condition. The aircraft continued to skid toward the right side of the runway, in a side skipping action, which resulted in a partial ground loop. The aircraft came to rest on the side of the runway. After both pilots exited the aircraft to inspect for damage, they noted that when they attempted to move the tail back onto the runway, the aircraft would not move. It was also noted that the right side brake was "...very hot and smelled of hard braking when in fact we had not applied right brake during the roll out, and there were skid marks from both main gear wheels on the runway." A Federal Aviation Administration Inspector inspected the aircraft after it had been moved to a hangar. The Inspector reported that he did not observe any evidence of a mechanical failure or malfunction with the brake system and did not note any evidence of heat distress.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain directional control of the aircraft as a result of a locked main

gear brake during the landing roll. An inadvertent ground loop was a factor.

Findings

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

Findings
1. (C) LANDING GEAR,NORMAL BRAKE SYSTEM - LOCKED
2. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND(CFI)

Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - ROLL

Findings
3. TERRAIN CONDITION - RUNWAY
4. (F) GROUND LOOP/SWERVE - INADVERTENT - PILOT IN COMMAND(CFI)

Factual Information

On April 17, 2004, at 1200 Pacific daylight time, a Cessna 195, N127DD, ground looped during the landing roll at Snohomish County (Paine Field), Everett, Washington, during a 14 CFR Part 91 local instructional flight. Visual meteorological conditions prevailed at the time and no flight plan was filed. The aircraft was substantially damaged and neither the student pilot (registered owner of the aircraft) nor the flight instructor were injured. The flight departed from Paine Field about one hour and 15 minutes prior to the accident.

During a telephone interview and subsequent written statement, the flight instructor reported that the student pilot had accumulated about 10 hours of flight time since his recent purchase of the aircraft. After completing some air work, the flight returned to Paine Field to practice touch-and-go landings. Five landings had been accomplished without incident to runway 16 right. During the landing roll for the sixth touch-and-go, the instructor stated that the aircraft started to pull to the right side. The instructor instructed the student to release the right brake and rudder, however, the aircraft "responded as if the student had increased the brake and rudder pressure." The instructor immediately applied full left rudder and braking action, and reduced power to idle, but he was unable to overcome the condition. The aircraft continued to skid toward the right side of the runway, in a side skipping action, which resulted in a partial ground loop. The aircraft came to rest on the side of the runway.

The student pilot reported similar circumstances leading up to the accident.

After both pilots exited the aircraft to inspect for damage, they noted that when they attempted to move the tail back onto the runway, the aircraft would not move. It was also noted that the right side brake was "...very hot and smelled of hard braking when in fact we had not applied right brake during the roll out, and there were skid marks from both main gear wheels on the runway."

About one hour and thirty minutes after the accident, the aircraft was found to move without difficulty.

Post-accident inspection of the aircraft noted substantial lower fuselage wrinkles in the area just forward of the landing gear leg attach points.

A Federal Aviation Administration Inspector from the Seattle, Washington, Flight Standards District Office, inspected the aircraft after it had been moved to a hangar. The Inspector reported that he did not observe any evidence of a mechanical failure or malfunction with the brake system and did not note any evidence of heat distress.

The flight instructor reported that during a previous flight, the right side brake experienced a

similar occurrence. During this occurrence, the aircraft was able to exit the runway onto the taxiway. The instructor stated that the aircraft could not be taxied under its own power and was subsequently towed back to parking. The wheel brakes were checked by the owner's mechanic. The aircraft maintenance logbook indicated that on February 27, 2004, the brake cylinder "O" ring and insulators were replaced. The brake lines were also bled.

The aircraft had operated with no discrepancies noted for approximately 5.5 hours since the maintenance work was accomplished.

Flight instructor Information

Certificate:	Commercial; Flight instructor	**Age:**	72,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane single-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	November 12, 2003
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	October 30, 2003
Flight Time:	21372 hours (Total, all aircraft), 219 hours (Total, this make and model), 19665 hours (Pilot In Command, all aircraft), 120 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft)		

Student pilot Information

Certificate:		**Age:**	
Airplane Rating(s):		**Seat Occupied:**	
Other Aircraft Rating(s):		**Restraint Used:**	
Instrument Rating(s):		**Second Pilot Present:**	Yes
Instructor Rating(s):		**Toxicology Performed:**	No
Medical Certification:		**Last FAA Medical Exam:**	
Occupational Pilot:		**Last Flight Review or Equivalent:**	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N127DD
Model/Series:	195	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	7040
Landing Gear Type:	Tailwheel	**Seats:**	4
Date/Type of Last Inspection:	June 1, 2003 Annual	**Certified Max Gross Wt.:**	
Time Since Last Inspection:	29 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	2720 Hrs at time of accident	**Engine Manufacturer:**	Jacobs
ELT:	Installed, not activated	**Engine Model/Series:**	R755-S
Registered Owner:	James R. Grass	**Rated Power:**	
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	PAE,606 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	11:53 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Few / 2700 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	Broken / 5000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	240°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.96 inches Hg	**Temperature/Dew Point:**	11°C / 4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Everett, WA (PAE)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	10:45 Local	**Type of Airspace:**	Class D

Airport Information

Airport:	Snohomish Co (Paine Field) PAE	**Runway Surface Type:**	Asphalt
Airport Elevation:	606 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	16R	**IFR Approach:**	None
Runway Length/Width:	9010 ft / 150 ft	**VFR Approach/Landing:**	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	2 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	47.912776,-122.26667

Administrative Information

Investigator In Charge (IIC):	Eckrote, Debra
Additional Participating Persons:	John Gilbert; FAA-FSDO; Renton, WA
Original Publish Date:	September 1, 2004
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=59087