

# **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:** 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)

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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)

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#### **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

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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**

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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:		

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## **Aircraft and Owner/Operator Information**

Aircraft Make:	Cessna	Registration:	N127DD
All Claft Make.	Cessila	Registration.	NIZ/DD
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:	
<b>Lowest Cloud Condition:</b>	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

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## **Airport Information**

Airport:	Snohomish Co (Paine Field) PAE	Runway Surface Type:	Asphalt
Airport Elevation:	606 ft msl	<b>Runway Surface Condition:</b>	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

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#### **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:	<u>Class</u>
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=59087

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, "accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person" (Title 49 Code of Federal Regulations section 831.4). Assignment of fault or legal liability is not relevant to the NTSB's statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 United States Code section 1154(b)). A factual report that may be admissible under 49 United States Code section 1154(b) is available here.

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