



National Transportation Safety Board Aviation Accident Final Report

Location:	BEND, OR	Accident Number:	SEA98LA058
Date & Time:	04/01/1998, 1540 PST	Registration:	N1069D
Aircraft:	Cessna 195A	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Instructional		

Analysis

During the landing roll, when the dual student allowed the tailwheel aircraft to drift too close to the right side of the runway, the instructor applied left rudder and left brake. As he took this corrective action, the left main gear leg fractured and separated from the aircraft. NTSB examination of the fracture surface revealed that two fatigue cracks had initiated in corrosion pits created where the gear leg rubbed against the gear leg clamping system. The two cracks eventually combined to become one, and when loads were applied during the landing roll, an overstress separation stemming from the fatigue fracture region occurred.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Separation by fracture of the left main gear leg, as the result of fatigue cracks that initiated in corrosion pits on the gear leg surface.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: LANDING - ROLL

Findings

1. (C) LANDING GEAR,MAIN GEAR - SEPARATION
2. (C) LANDING GEAR,MAIN GEAR - FRACTURED
3. (C) LANDING GEAR,MAIN GEAR - FATIGUE
4. (C) LANDING GEAR,MAIN GEAR - CORRODED
5. LANDING GEAR,MAIN GEAR - OVERLOAD

Occurrence #2: MAIN GEAR COLLAPSED
Phase of Operation: LANDING - ROLL

Factual Information

On April 1, 1998, approximately 1540 Pacific standard time, the left main gear of a Cessna 195A, N1069D, separated from the aircraft during the landing roll at Bend Municipal Airport, Bend, Oregon. The certified flight instructor and his student, who is a private pilot, were not injured, but the aircraft, which was owned by the student, sustained substantial damage. The 14 CFR Part 91 instructional flight, which had been in the air for about 40 minutes, was being operated in visual meteorological conditions. No flight plan had been filed, and there was no report of an ELT transmission.

According to the CFI, the student, who had recently purchased the aircraft, allowed the aircraft to drift toward the right edge of the runway during the landing roll. At the point where it looked like additional corrective action was necessary, the instructor took control and applied left brake and left rudder. At that point the left main gear leg fractured where it protrudes from the gear leg attach box.

NTSB examination of the fracture surface revealed that two separate fatigue cracks had initiated in an area of corrosion generated by the gear leg rubbing on the gear leg clamping system. These two cracks had combined and formed a united crack front. When loads were applied to the gear leg during the landing roll, an overstress separation stemming from the fatigue fracture region occurred.

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	46, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Single-engine	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	07/07/1997
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	3833 hours (Total, all aircraft), 200 hours (Total, this make and model), 3520 hours (Pilot In Command, all aircraft), 2 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N1069D
Model/Series:	195A 195A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	7681
Landing Gear Type:	Tailwheel	Seats:	5
Date/Type of Last Inspection:	09/03/1997, Annual	Certified Max Gross Wt.:	3350 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	2400 Hours	Engine Manufacturer:	Jacobs
ELT:	Installed, not activated	Engine Model/Series:	755-A2
Registered Owner:	JERRY W. ROZELLE	Rated Power:	300 hp
Operator:	JERRY W. ROZELLE	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0000	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	20 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	Variable	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	16 °C
Precipitation and Obscuration:			
Departure Point:	(S07)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1500 PST	Type of Airspace:	Class G

Airport Information

Airport:	BEND MUNICIPAL AIRPORT (S07)	Runway Surface Type:	Asphalt
Airport Elevation:	3453 ft	Runway Surface Condition:	Dry
Runway Used:	34	IFR Approach:	None
Runway Length/Width:	5000 ft / 100 ft	VFR Approach/Landing:	Full Stop; Traffic Pattern

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	ORRIN K ANDERSON	Report Date:	02/15/2001
Additional Participating Persons:	ALLEN SHELBY		
Publish Date:			
Investigation Docket:	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 pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.ntsbt.gov/pubdms/ .		

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