



# Aviation Investigation Final Report

<b>Location:</b>	FAIRBANKS, Alaska	<b>Accident Number:</b>	ANC90LA037
<b>Date &amp; Time:</b>	March 6, 1990, 10:30 Local	<b>Registration:</b>	N2428C
<b>Aircraft:</b>	CESSNA 180	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

THE PLT RPRTD THAT THE RGT BRAKE FAILED DURING A LANDING & THE ACFT VEERED TO THE LEFT. SUBSEQUENTLY, THE ACFT CAME TO REST WITH THE RIGHT MAIN WHEEL BROKEN OFF. AN INVESTIGATION REVEALED THAT THE WRONG TYPE OF BOLTS WERE USED TO MOUNT THE AXLE TO THE GEAR LEG. ALSO, 4 ALIGNMENT SHIMS WERE USED BETWEEN THE AXLE & GEAR LEG; THE CESSNA SVC MANUAL ALLOWED FOR THE USE OF ONLY 3 SHIMS.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: IMPROPER INSTALLATION OF THE GEAR AXLE (USE OF IMPROPER BOLTS & THE WRONG NUMBER OF SHIMS), WHICH RESULTED IN A SUBSEQUENT FAILURE AND LOSS OF CONTROL DURING THE LANDING ROLL.

## Findings

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

### Findings

1. (C) LANDING GEAR,AXLE - IMPROPER
2. (C) MAINTENANCE,INSTALLATION - IMPROPER - OTHER MAINTENANCE PERSONNEL
3. (C) LANDING GEAR,AXLE - FAILURE,TOTAL
4. LANDING GEAR,NORMAL BRAKE SYSTEM - INOPERATIVE

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Occurrence #2: LOSS OF CONTROL - ON GROUND/WATER  
Phase of Operation: LANDING

Findings

- 5. DIRECTIONAL CONTROL - NOT POSSIBLE
- 6. GROUND LOOP/SWERVE - UNCONTROLLED

## Factual Information

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	46, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<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 2 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	June 2, 1989
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	900 hours (Total, all aircraft), 600 hours (Total, this make and model), 834 hours (Pilot In Command, all aircraft), 36 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	CESSNA	<b>Registration:</b>	N2428C
<b>Model/Series:</b>	180 180	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	30728
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	Annual	<b>Certified Max Gross Wt.:</b>	3300 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	CONTINENTAL
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-470
<b>Registered Owner:</b>	RONNIE STARR	<b>Rated Power:</b>	230 Horsepower
<b>Operator:</b>	STARR, RONNIE	<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 / 2700 ft AGL	<b>Visibility</b>	15 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	7 knots / 10 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	90°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	-16°C / -12°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	FORT YUKON , AK (FYU )	<b>Type of Flight Plan Filed:</b>	VFR
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	09:15 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	FAIRBANKS INTL FAI	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	434 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	1L	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	10300 ft / 150 ft	<b>VFR Approach/Landing:</b>	Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	64.810684,-147.720916(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Michelangelo, James
<b>Additional Participating Persons:</b>	JOHN Q GAMLE; FAIRBANKS , AK
<b>Original Publish Date:</b>	September 5, 1991
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=5341">https://data.nts.gov/Docket?ProjectID=5341</a>

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