



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Tacoma, WA	<b>Accident Number:</b>	SEA06CA018
<b>Date &amp; Time:</b>	11/02/2005, 1700 PST	<b>Registration:</b>	N1959P
<b>Aircraft:</b>	Piper PA-24-250	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	3 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

After making contact with the tower, and being cleared for a left base entry, the pilot completed his before landing check and lowered the landing gear. He then tried to call the tower to report he was entering the base leg, but realized that his radio was not transmitting. The aircraft subsequently experienced a complete loss of electrical power, and the pilot was therefore unable to confirm the gear was down and locked, as the green Gear Down lights were unable to illuminate. The pilot then flew low over the runway until he felt the main wheels touch the runway surface, and then he executed a go-around. After completing the go-around, the pilot went around the pattern and executed what he thought was going to be a normal full stop landing. But just after the aircraft touched down, the landing gear folded back up into the wheel wells, and the aircraft skidded down the runway on its belly. The investigation later determined that the gear had not fully extended because of the loss of electrical power. It was also determined that although the aircraft's battery and alternator were capable of operating normally, the voltage regulating system had malfunctioned, thus allowing the battery to become almost fully discharged. The pilot did not use the emergency gear extension system/sequence to make sure of the position and condition of the landing gear, but instead trusted the gear to be fully down and locked just because he felt the tires touch the runway surface during the low pass.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The collapse of the landing gear due to the pilot's failure to use the emergency gear extension system after his aircraft experienced a complete loss of electrical power. Factors include the malfunction of the voltage regulating system, which lead to the almost total discharge of the battery.

## Findings

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Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation: CRUISE

### Findings

1. (F) ELECTRICAL SYSTEM - MALFUNCTION  
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Occurrence #2: GEAR COLLAPSED  
Phase of Operation: LANDING - ROLL

### Findings

2. (C) GEAR EXTENSION - NOT VERIFIED - PILOT IN COMMAND

## Factual Information

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	66, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	
<b>Instructor Rating(s):</b>		<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 3	<b>Last FAA Medical Exam:</b>	04/01/2005
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	769 hours (Total, all aircraft), 98 hours (Total, this make and model)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N1959P
<b>Model/Series:</b>	PA-24-250	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	24419
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	
<b>Date/Type of Last Inspection:</b>		<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>		<b>Engine Model/Series:</b>	O-540-A1A5
<b>Registered Owner:</b>	Ronald G. Moore	<b>Rated Power:</b>	
<b>Operator:</b>	Ronald G. Moore	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>	Comanche Air, Inc.	<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:		Visibility	
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:			
Departure Point:	Spanaway, WA (150)	Type of Flight Plan Filed:	None
Destination:	Tacoma, WA (TIW)	Type of Clearance:	None
Departure Time:		Type of Airspace:	

## Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:		IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	
Total Injuries:	3 None	Latitude, Longitude:	47.268056, -122.578056

## Administrative Information

Investigator In Charge (IIC):	Orrin K Anderson	Report Date:	03/28/2006
Additional Participating Persons:			
Publish Date:			
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.		
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 <a href="mailto:pubinquiry@ntsb.gov">pubinquiry@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).