



# Aviation Investigation Final Report

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<b>Location:</b>	Chandler, Arizona	<b>Accident Number:</b>	WPR11CA470
<b>Date &amp; Time:</b>	September 28, 2011, 11:11 Local	<b>Registration:</b>	N8056B
<b>Aircraft:</b>	Piper PA-28RT-201	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Hard landing	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

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## Analysis

While on the downwind leg of the traffic pattern, the certified flight instructor (CFI) and pilot-undergoing-instruction (PUI) completed the landing checklist, but delayed the landing gear extension because they were conducting a 180-degree power-off approach. On final approach, as they were preparing to extend the landing gear, the air traffic controller told them to conduct a go-around because the landing gear was not extended. They extended the landing gear, and the CFI verified three green lights. He then requested permission to land and the tower controller cleared the airplane to land. As the airplane approached the runway, a high sink rate developed. The CFI told the PUI to add power, and the CFI simultaneously started to move the throttle control forward. The CFI said that his hand slipped past the PUI's hand, and he reached again to push the throttle forward when the airplane touched down hard on the runway. They aborted the landing, conducted a low approach to verify the position of the landing gear, and landed uneventfully. A postaccident examination revealed rib damage to the left wing. The CFI reported no preimpact mechanical malfunctions or failures with the airplane that would have precluded normal operation.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The certified flight instructor's and pilot-undergoing-instruction's improper flare, which resulted in a hard landing.

## Findings

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<b>Aircraft</b>	Descent/approach/glide path - Not attained/maintained
<b>Personnel issues</b>	Task monitoring/vigilance - Instructor/check pilot
<b>Personnel issues</b>	Aircraft control - Flight crew

## Factual Information

### History of Flight

<b>Landing-flare/touchdown</b>	Hard landing (Defining event)
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### Flight instructor Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	54, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	November 1, 2010
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	August 31, 2010
<b>Flight Time:</b>	7514 hours (Total, all aircraft), 179 hours (Total, this make and model), 7214 hours (Pilot In Command, all aircraft), 89 hours (Last 90 days, all aircraft), 36 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

### Student pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	35, Female
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	November 18, 2010
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	July 6, 2010
<b>Flight Time:</b>	531 hours (Total, all aircraft), 46 hours (Total, this make and model), 291 hours (Pilot In Command, all aircraft), 11 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N8056B
<b>Model/Series:</b>	PA-28RT-201	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	28R-8218011
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	July 21, 2011 Annual	<b>Certified Max Gross Wt.:</b>	2750 lbs
<b>Time Since Last Inspection:</b>	37 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	5397 Hrs at time of accident	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	C91 installed, not activated	<b>Engine Model/Series:</b>	IO-360-C1C6
<b>Registered Owner:</b>	CHANDLER AIR SERVICE INC	<b>Rated Power:</b>	200 Horsepower
<b>Operator:</b>	CHANDLER AIR SERVICE INC	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	CHD,1243 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	10:47 Local	<b>Direction from Accident Site:</b>	0°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	30 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	3 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	31°C / 10°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Chandler, AZ (CHD )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Chandler, AZ (CHD )	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	10:55 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Chandler Municipal Airport CHD	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	1243 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	04L	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	4870 ft / 75 ft	<b>VFR Approach/Landing:</b>	Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<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>	33.26889,-111.811111

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Dunks, Kristi
<b>Additional Participating Persons:</b>	Ernest Copeland; Federal Aviation Administration; Scottsdale, AZ
<b>Original Publish Date:</b>	December 1, 2011
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=81919">https://data.nts.gov/Docket?ProjectID=81919</a>

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