



# Aviation Investigation Final Report

<b>Location:</b>	Scottsdale, Arizona	<b>Accident Number:</b>	LAX04CA289
<b>Date &amp; Time:</b>	August 10, 2004, 09:30 Local	<b>Registration:</b>	N8414E
<b>Aircraft:</b>	Piper PA-28-181	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Analysis

The airplane landed hard and veered off the runway. The student pilot was attempting a touch-and-go practice takeoff and landing. During the landing flare, the airplane's nose pitched up excessively, and he opted to execute a go-around. Before he could apply power, the nose dropped, and the propeller blades impacted the runway surface. The airplane bounced down the runway, veering to the left. The airplane continued off of the runway into a gravel area, and the pilot applied brake pressure, bringing the airplane to a stop. The pilot reported no preimpact mechanical malfunctions or failures with the airplane.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's misjudged flare, resulting in a stall and hard landing, and his failure to maintain directional control. The pilot's improper recovery from a bounced landing is a contributing factor.

## Findings

Occurrence #1: HARD LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. (C) FLARE - MISJUDGED - PILOT IN COMMAND
2. (C) AIRSPEED(VREF) - NOT MAINTAINED - PILOT IN COMMAND

3. STALL/MUSH - INADVERTENT - PILOT IN COMMAND

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Occurrence #2: LOSS OF CONTROL - ON GROUND/WATER

Phase of Operation: LANDING - ROLL

Findings

4. (C) RECOVERY FROM BOUNCED LANDING - INADEQUATE - PILOT IN COMMAND

5. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND

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Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING - ROLL

Findings

6. TERRAIN CONDITION - LOOSE GRAVEL/SANDY

## Factual Information

On August 10, 2004, about 0930 mountain standard time, a Piper PA-28-181, N8414E, experienced a hard landing and veered off the runway at the Scottsdale Airport, Scottsdale, Arizona. Sabena Airline Training Center was operating the rental airplane under the provisions of 14 CFR Part 91. The student pilot, the sole occupant, was not injured; the airplane sustained substantial damage. The local instructional flight originated from Scottsdale about 0855. Visual meteorological conditions prevailed, and a flight plan had not been filed.

In a written statement, the student pilot reported that he was attempting a touch-and-go practice takeoff and landing on runway 21, after completing several earlier in the flight. On final approach he configured the airplane with 40 degrees of wing flaps, and aligned the airplane on runway centerline. During the landing flare, the airplane's nose pitched up excessively, and he opted to execute a go-around. Before he could apply power, the nose dropped, and the propeller blades impacted the runway surface. The airplane bounced down the runway, veering to the left. The airplane continued off of the runway into a gravel area, and the pilot applied brake pressure, bringing the airplane to a stop. The pilot reported no preimpact mechanical malfunctions or failures with the airplane.

During the accident the airplane incurred damage to the firewall.

### Pilot Information

<b>Certificate:</b>	Student	<b>Age:</b>	22, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	
<b>Instructor Rating(s):</b>		<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3	<b>Last FAA Medical Exam:</b>	July 21, 2004
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	14 hours (Total, all aircraft), 14 hours (Total, this make and model), 14 hours (Last 90 days, all aircraft), 14 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N8414E
<b>Model/Series:</b>	PA-28-181	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	2843158
<b>Landing Gear Type:</b>	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-360-A4M
<b>Registered Owner:</b>	Intermountain Air LC	<b>Rated Power:</b>	
<b>Operator:</b>	Sabena Airline Training Center	<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>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>		<b>Visibility</b>	
<b>Lowest Ceiling:</b>		<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Scottsdale, AZ (SDL )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Scottsdale, AZ (SDL )	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	Scottsdale Airport SDL	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	21	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 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>	
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	33.620277,-111.910278

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Plagens, Howard
<b>Additional Participating Persons:</b>	Chris Clark; Federal Aviation Administration; Scottsdale, AZ
<b>Original Publish Date:</b>	October 28, 2004
<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=59887">https://data.nts.gov/Docket?ProjectID=59887</a>

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](#).