Aviation Investigation Final Report

Location:	Del Norte, Colorado	**Accident Number:**	DEN06LA076
Date & Time:	May 12, 2006, 16:45 Local	**Registration:**	N41827
Aircraft:	Piper PA-46-350P	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	4 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

The pilot had been taught to fly a "high and hot final" approach. He made his final approach to runway 26 at 85 KIAS (knots indicated airspeed) with 2 notches of flap deployed. When the airplane was about a mile from the runway, the engine "barked." The pilot enrichened the mixture slightly and the engine ran smoothly. When the airplane was about 150 yards from the runway threshold, it "fell," or began to sink excessively in a nose high attitude. The pilot attributed this sudden descent to windshear. The airplane "landed hard and bounced." The pilot retracted the landing gear (because there was a ditch ahead and he thought it would be better to hit the ditch with the landing gear up) and added power to abort the landing. The airplane touched down again, swerved 90 degrees, and skidded to a halt on the dirt. Post-accident examination revealed no airplane or engine discrepancies. ASOS-observed weather, recorded 36 miles southeast of the accident site, indicated the wind was from 240 degrees at 11 knots, gusting to 15 knots.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's failure to maintain airspeed, resulting in an inadvertent stall and impact with terrain during a power-on landing. Contributing factors were the pilot's improper recovery from a bounced landing, and windshear.

Findings

Occurrence #1: HARD LANDING
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
1. POWER ON LANDING
2. (C) AIRSPEED - LOW
3. ALTITUDE - LOW
4. (C) STALL - INADVERTENT - PILOT IN COMMAND
5. (F) WEATHER CONDITION - WINDSHEAR

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: LANDING - ABORTED

Findings
6. (F) RECOVERY FROM BOUNCED LANDING - IMPROPER - PILOT IN COMMAND
7. GO-AROUND - ATTEMPTED - PILOT IN COMMAND
8. GEAR RETRACTION - INITIATED - PILOT IN COMMAND
9. TERRAIN CONDITION - DITCH

Factual Information

On May 12, 2006, approximately 1645 mountain daylight time, a Piper PA-46-350P, N41827, piloted by a private pilot, was substantially damaged during a hard landing at Del Norte Municipal and County Airport (8V1), Del Norte, Colorado. Visual meteorological conditions prevailed at the time of the accident. The personal cross-country flight was being conducted under the provisions of Title 14 Code of Federal Regulations Part 91 without a flight plan. The pilot and 3 passengers on board the airplane were not injured. The flight originated at Fort Worth Meacham International Airport (FTW), Fort Worth, Texas, approximately 1330 central daylight time.

According to a telephone interview with an FAA inspector and a written statement submitted along with his accident report, the pilot said he had been taught to fly a "high and hot final" approach. He said he made his final approach to runway 26 at 85 KIAS (knots indicated airspeed) with 2 notches of flap deployed. When the airplane was about a mile from the runway, the engine "barked." The pilot said he enrichened the mixture slightly and the engine ran smoothly. When the airplane was about 150 yards from the runway threshold, it "fell," or began to sink excessively in a nose high attitude. The pilot attributed this sudden descent to windshear. The airplane "landed hard and bounced." The pilot said he retracted the landing gear (because there was a ditch ahead and he thought it would be better to hit the ditch with the landing gear up). He said the landing gear did not retract. He added power to abort the landing, but the engine did not respond. The airplane touched down again, swerved 90 degrees, and skidded to a halt on the dirt.

A pilot-witness told the FAA inspector that the wind was about 5-10 knots down the runway with no gusts. He said there were some convective clouds in the area. He saw the airplane on a long, low final approach, and the engine was at a high power setting. The witness did not hear any unusual noises from the engine. When the airplane was just short of the runway, it began to sink excessively in a high pitch attitude. It landed "very hard" about 200 feet beyond the runway threshold, and rolled on its nose wheel ("wheel barrowing"). He witness heard power applied "as if the pilot was attempting a go-around." The engine sounded like it was producing "good" power. After the hard landing and bounce, he saw the landing gear retracting. The airplane touched down again and went off the right side of the runway about 2,400 feet from the threshold. It swerved 90 degrees to the right and came to rest facing north.

An airline transport pilot-witness watched as the airplane turn onto a 5-mile final approach. The approach appeared to him to be normal and stable. "At 25 feet agl (above ground level), the aircraft pitched up and began a very high rate of descent." The witness said the airplane hit the ground first with its left, then the right, then nose gear. He said the airplane did not bounce. He heard power added "in an attempt to go-around.." The airplane "accelerated down

the runway, but [the pilot] was unable to maintain directional control," and the airplane went off the right side of the runway.

The FAA inspector reported finding ground impact marks about 200 feet past the runway threshold. "After one bounce of about 200 feet horizontally (as measured by tire tracks) it came back onto the runway and began a slow swerve to the right," departing the runway 2,400 feet from the threshold. The inspector reported finding right wing leading edge damage. Both main landing gears appeared to be nearly retracted. The nose gear could not be seen. The top portion of the left main gear strut protruded through the top of the left wing. A metal post was impaled in the left horizontal stabilizer. All three composite propeller blades were cracked.

On May 31, 2006, the airplane and engine was examined at Beegles Aircraft Aervice, Greeley, Colorado. No discrepancies were noted.

On April 25, 2006, mechanics changed the airplane's oil change and conducted an engine mount inspection to comply with Piper Service Bulletin 1103B. They found a broken engine mount. The break was "clean" and consistent with an overload failure. The engine mount, which had been installed on October 2, 2002, and was replaced with a newer, stronger, and redesigned engine mount as suggested by the service bulletin.

According to Pan Am International Flight Academy- SimCom, the pilot took initial Malibu/Mirage training in 2000, and recurrency training in 2001. He did not attend their academy in 2002. The last time he attended their recurrency training was in May 2003.

ASOS-observed weather, recorded 36 miles southeast of the accident site, indicated the wind was from 240 degrees at 11 knots, gusting to 15 knots.

Pilot Information

Certificate:	Private	**Age:**	52,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Without waivers/limitations	**Last FAA Medical Exam:**	August 1, 2004
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	May 1, 2003
Flight Time:	1691 hours (Total, all aircraft), 735 hours (Total, this make and model), 34 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N41827
Model/Series:	PA-46-350P	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	4636308
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	May 1, 2006 Annual	**Certified Max Gross Wt.:**	4300 lbs
Time Since Last Inspection:	4 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1018 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	TIO-540-AE2A
Registered Owner:	Boenker, Boenker, Wansing and Dill, Inc.	**Rated Power:**	350 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	ALS,7949 ft msl	**Distance from Accident Site:**	32 Nautical Miles
Observation Time:	16:45 Local	**Direction from Accident Site:**	115°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	11 knots / 15 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	240°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.06 inches Hg	**Temperature/Dew Point:**	23°C / -9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Fort Worth, TX (FTW)	**Type of Flight Plan Filed:**	None
Destination:	Del Norte, CO (8V1)	**Type of Clearance:**	None
Departure Time:	13:30 Local	**Type of Airspace:**	

Airport Information

Airport:	Del Norte Municipal & County 8V1	**Runway Surface Type:**	Asphalt
Airport Elevation:	7949 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	26	**IFR Approach:**	Unknown
Runway Length/Width:	3775 ft / 49 ft	**VFR Approach/Landing:**	Straight-in

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	3 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	4 None	**Latitude, Longitude:**	37.670627,-106.349372(est)

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	Stephanie Wells; FAA Flight Standards District Office; Denver, CO
Original Publish Date:	November 29, 2006
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=63691