



Aviation Investigation Final Report

Location:	PALO ALTO, California	Accident Number:	LAX00LA117
Date & Time:	March 5, 2000, 12:27 Local	Registration:	N43412
Aircraft:	Piper PA-46-310	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane landed approximately 2 feet short of the runway, and then struck the lip of the pavement, which sheered off the left main gear. The gear itself hung onto the trunnion by the brake lines until the airplane came to rest, approximately 600 feet down the runway. Additionally, the airplane struck a taxiway sign with the left wing while it was traveling down the runway. The pilot told investigators that he was planning on landing on runway 30 and was using 85 knots as his target speed. He said that about 100 feet agl he noticed that he had an excessive sink rate and noticed that his airspeed was about 97 knots. He decided to trade his airspeed to cut the sink rate and said by the time he noticed it wasn't working, he was already on the ground.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to obtain/maintain the proper visual glide path resulting in an undershoot and collision with the runway edge.

Findings

Occurrence #1: UNDERSHOOT
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

1. (C) PROPER GLIDEPATH - NOT OBTAINED/MAINTAINED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

2. AIRPORT/FACILITIES - EXPOSED RUNWAY LIP/EDGE

Factual Information

On March 5, 2000, at 1227 hours Pacific standard time, a Piper PA-46-310, N43412, collided with terrain short of runway 30 at Palo Alto, California. The airplane, owned and operated by the pilot, sustained substantial damage. The airline transport pilot and his passenger were not injured. No flight plan was filed for the pleasure flight. The flight was operating under 14 CFR Part 91, and visual meteorological conditions prevailed at the time of the accident. The flight had departed from Santa Rosa, California, at 1115, and was destined for Palo Alto.

According to the pilot, the airplane landed approximately 2 feet short of the runway, and then struck the lip of the pavement, which sheered off the left main gear. The gear itself hung onto the trunnion by the brake lines until the airplane came to rest approximately 600 feet down the runway. Additionally, the airplane struck a taxiway sign with the left wing while it was traveling down the runway.

The pilot told investigators that he was planning on landing on runway 30 and was using 85 knots as his target speed. He said that about 100 feet agl he noticed that he had an excessive sink rate and noticed that his airspeed was about 97 knots. He decided to trade his airspeed to cut the sink rate and said by the time he noticed it wasn't working, he was already on the ground.

Pilot Information

Certificate:	Airline transport; Flight engineer; Flight instructor	Age:	58, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Glider	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	November 3, 1999
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	10000 hours (Total, all aircraft), 2000 hours (Total, this make and model), 10000 hours (Pilot In Command, all aircraft), 150 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N43412
Model/Series:	PA-46-310 PA-46-310	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	8408034
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	July 2, 1999 Annual	Certified Max Gross Wt.:	4200 lbs
Time Since Last Inspection:	66 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1923 Hrs	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	TSIO520 BE1G
Registered Owner:	JOSEPH J. GRZEBIK	Rated Power:	310 Horsepower
Operator:	JOSEPH J. GRZEBIK	Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KPA ,3 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	13:30 Local	Direction from Accident Site:	300°
Lowest Cloud Condition:	Scattered / 2000 ft AGL	Visibility	7 miles
Lowest Ceiling:	Overcast / 3000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	12 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	310°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	10°C / 4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	SANTA ROSA , CA (STS)	Type of Flight Plan Filed:	None
Destination:	(PAO)	Type of Clearance:	VFR
Departure Time:	11:15 Local	Type of Airspace:	Class D

Airport Information

Airport:	PALO ALTO PAO	Runway Surface Type:	Asphalt
Airport Elevation:	3 ft msl	Runway Surface Condition:	Dry
Runway Used:	30	IFR Approach:	None
Runway Length/Width:	2500 ft / 65 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	37.449569,-122.099311(est)

Administrative Information

Investigator In Charge (IIC):	Childress, Deborah
Additional Participating Persons:	CINDY JESCH; SAN JOSE , CA
Original Publish Date:	July 17, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=48783

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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](#).