



# Aviation Investigation Final Report

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<b>Location:</b>	San Martin, California	<b>Accident Number:</b>	GAA17CA367
<b>Date &amp; Time:</b>	June 24, 2017, 17:15 Local	<b>Registration:</b>	N524BF
<b>Aircraft:</b>	Cessna 182	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Fuel starvation	<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Skydiving		

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## Analysis

The pilot reported that he departed for a parachute jump flight with 12 gallons of fuel onboard. He added that, after the parachute jumpers exited the airplane about 10,500 ft mean sea level (msl), he initiated a left spiraling descent back to the airport. He further added that he "heard and felt the engine start [to] quiet down as if it was shutting down." He then began to make right descending turns and verified that the fuel selector was in the "both" position. He added that the cylinder head temperature was decreasing, so he switched back to left descending turns and that the "fuel starvation due to banking happened two more times."

The pilot reported that he entered left downwind about 4,000 ft msl, pushed the throttle and mixture controls full forward, and determined that the "engine wasn't producing much power." He added that, during short final, he realized the airplane was too low, so he landed the airplane on a highway "on-ramp." During the forced landing, the airplane impacted a guard rail and a post.

The airplane sustained substantial damage to the fuselage and both wings.

The pilot reported that he "suspected engine power loss due to fuel exhaustion."

During a postaccident examination, the Federal Aviation Administration inspector drained about 12 gallons of fuel from both wing tanks and the gascolator. In the Description section of the Cessna 182A Owner's Manual, it states that there are 1.5 gallons of unusable fuel per fuel tank (3 gallons) and that, when not in level flight, there are an additional 3.5 gallons of unusable fuel per fuel tank (10 gallons).

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's failure to attain a proper glidepath on approach for landing, which resulted in an impact with a guard rail and post. Contributing to the accident was the pilot's failure to ensure that sufficient fuel was onboard for nonlevel flight, which resulted in fuel starvation.

## Findings

<b>Personnel issues</b>	Aircraft control - Pilot
<b>Aircraft</b>	Descent/approach/glide path - Attain/maintain not possible
<b>Aircraft</b>	Fuel - Fluid level
<b>Personnel issues</b>	Fuel planning - Pilot
<b>Environmental issues</b>	Fence/fence post - Contributed to outcome

## Factual Information

### History of Flight

<b>Enroute-descent</b>	Fuel starvation (Defining event)
<b>Emergency descent</b>	Landing area undershoot
<b>Emergency descent</b>	Collision with terr/obj (non-CFIT)

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	30, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Single
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Lap only
<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 With waivers/limitations	<b>Last FAA Medical Exam:</b>	April 4, 2017
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	February 14, 2017
<b>Flight Time:</b>	(Estimated) 434 hours (Total, all aircraft), 78 hours (Total, this make and model), 334 hours (Pilot In Command, all aircraft), 78 hours (Last 90 days, all aircraft), 38 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N524BF
<b>Model/Series:</b>	182 A	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1957	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	34331
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	2950 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	CONT MOTOR
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	O-470 SERIES
<b>Registered Owner:</b>	THINKING CAP AVIATION LLC	<b>Rated Power:</b>	230 Horsepower
<b>Operator:</b>	San Jose Skydiving 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>	KE16,283 ft msl	<b>Distance from Accident Site:</b>	0 Nautical Miles
<b>Observation Time:</b>	00:15 Local	<b>Direction from Accident Site:</b>	162°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	6 knots /	<b>Turbulence Type Forecast/Actual:</b>	/ None
<b>Wind Direction:</b>	150°	<b>Turbulence Severity Forecast/Actual:</b>	/ N/A
<b>Altimeter Setting:</b>	29.92 inches Hg	<b>Temperature/Dew Point:</b>	25°C / 15°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	SAN MARTIN, CA (E16 )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	San Martin, CA (E16 )	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	16:45 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	SAN MARTIN E16	<b>Runway Surface Type:</b>	Concrete
<b>Airport Elevation:</b>	283 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing;Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<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>	1 Minor	<b>Latitude, Longitude:</b>	37.087223,-121.599166(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Benhoff, Kathryn
<b>Additional Participating Persons:</b>	Wilbert J Robinson; FAA; San Jose, CA
<b>Original Publish Date:</b>	September 7, 2017
<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=95440">https://data.nts.gov/Docket?ProjectID=95440</a>

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