



# Aviation Investigation Final Report

<b>Location:</b>	San Andreas, California	<b>Accident Number:</b>	LAX05CA287
<b>Date &amp; Time:</b>	September 1, 2005, 16:15 Local	<b>Registration:</b>	N1644M
<b>Aircraft:</b>	Cessna A185E	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	4 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The airplane encountered a dust devil during the takeoff ground roll, then it veered off the runway, and collided with a berm. About 600 feet into the takeoff ground roll the airplane veered to the left and continued in that direction even with the pilot's counteractive control input. During the event, the pilot reduced the power, the right main landing gear sheared off, and the airplane came to rest on the right wing and horizontal stabilizer. Witnesses informed the pilot that they observed a dust devil approach the airplane during takeoff roll. The pilot reported experiencing no anomalies with the airframe or engine prior to the event.

## 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 directional control of the airplane upon encountering a dust devil during the takeoff roll.

### Findings

Occurrence #1: ON GROUND/WATER ENCOUNTER WITH WEATHER  
Phase of Operation: TAKEOFF - ROLL/RUN

#### Findings

1. WEATHER CONDITION - DUST DEVIL/WHIRLWIND

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

Phase of Operation: TAKEOFF - ROLL/RUN

Findings

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

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

Phase of Operation: TAKEOFF - ROLL/RUN

Findings

3. TERRAIN CONDITION - BERM

## Factual Information

On September 1, 2005 at 1615 Pacific daylight time, a Cessna A185E airplane, N1644M, was substantially damaged when it impacted terrain during the takeoff roll at the Calaveras County Airport, San Andreas, California. The private pilot and three passengers were not injured. The pilot operated the airplane under the provisions of 14 CFR Part 91 as a personal flight. Visual meteorological conditions prevailed and a flight plan had not been filed for the local flight. The flight was departing at the time of the accident.

According to the pilot's written statement, the airplane was 600 feet down the 3,603-foot-runway (runway 31) when the airplane encountered a dust devil. The airplane veered to the left, and the pilot added full right rudder to counteract the left movement. The airplane was thrust left and upward onto the left wing. The pilot reduced power and then the right main landing gear impacted an earthen berm and sheared the landing gear. The airplane came to rest on the right wing, engine cowling, and right horizontal stabilizer (all of which were structurally damage).

Witnesses approached the pilot following the accident and informed him they observed a dust devil approach the airplane during the takeoff roll. The pilot indicated that there were no anomalies with the airframe or the engine prior to the event.

The pilot reported accumulating a total of 1,200 hours of flight time, of which 300 hours were accumulated in the same make and model as the accident airplane.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	39, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<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>	September 1, 2003
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1200 hours (Total, all aircraft), 300 hours (Total, this make and model), 5 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N1644M
<b>Model/Series:</b>	A185E	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	18501847
<b>Landing Gear Type:</b>	Tailwheel	<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>	Continental
<b>ELT:</b>		<b>Engine Model/Series:</b>	IO-520D
<b>Registered Owner:</b>	Skyline Holdings, Inc.	<b>Rated Power:</b>	
<b>Operator:</b>	Casey M. Long	<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>	SCK	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	16:55 Local	<b>Direction from Accident Site:</b>	
<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>	8 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	310°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.79 inches Hg	<b>Temperature/Dew Point:</b>	33°C / 11°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	San Andreas, CA (CPU )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	16:15 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Calaveras County CPU	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	1320 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	31	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3603 ft / 60 ft	<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	3 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	
<b>Total Injuries:</b>	4 None	<b>Latitude, Longitude:</b>	38.14611,-120.648056

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Charnon, Nicole
<b>Additional Participating Persons:</b>	Federal Aviation Administration; Oakland, CA
<b>Original Publish Date:</b>	December 20, 2005
<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=62397">https://data.nts.gov/Docket?ProjectID=62397</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](#).