



# Aviation Investigation Final Report

<b>Location:</b>	Llano, California	<b>Accident Number:</b>	LAX06CA189
<b>Date &amp; Time:</b>	June 3, 2006, 12:13 Local	<b>Registration:</b>	N4464P
<b>Aircraft:</b>	Burkhart Grob Flugzeugbau G103 Twin Astir	<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 glider landed hard on the runway and the empennage fractured from the remainder of the structure. On final approach, the glider entered a pilot induced oscillation. The glider then landed hard on the runway. The student pilot said that the glider did not have any mechanical failures or malfunctions during the flight.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the student pilot's failure to recover from a porpoise/pilot induced oscillation, which resulted in a hard landing.

## Findings

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

### Findings

1. (C) PORPOISE/PILOT-INDUCED OSCILLATION - NOT CORRECTED - PILOT IN COMMAND

## Factual Information

On June 3, 2006, at 1213 Pacific daylight time, a Burkhart Grob Flugzeugbau G103 Twin Astir glider, N4464P, landed hard on the runway at Crystal Airport, Llano, California. Great Western Soaring School, Inc., was operating the glider under the provisions of 14 CFR Part 91. The glider sustained substantial damage. The student pilot, the sole occupant, was not injured. Visual meteorological conditions prevailed, and no flight plan had been filed for the local area instructional flight.

The student pilot stated that as he entered onto the final leg of the traffic pattern, the glider began a pilot induced oscillation. When the glider touched down hard upon the runway, the empennage separated. There were no mechanical failures or malfunctions with the glider during the flight.

### Pilot Information

<b>Certificate:</b>	Student	<b>Age:</b>	61, 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>	None	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	40 hours (Total, all aircraft), 40 hours (Total, this make and model), 40 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Burkhart Grob Flugzeugbau	<b>Registration:</b>	N4464P
<b>Model/Series:</b>	G103 Twin Astir	<b>Aircraft Category:</b>	Glider
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	3823-K-82
<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>	0
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	
<b>ELT:</b>		<b>Engine Model/Series:</b>	
<b>Registered Owner:</b>	Gemsbok Systems, Inc.	<b>Rated Power:</b>	
<b>Operator:</b>	Great Western Soaring School, Inc.	<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>	Clear	<b>Visibility</b>	40 miles
<b>Lowest Ceiling:</b>	None	<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>	29.92 inches Hg	<b>Temperature/Dew Point:</b>	27°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Llano, CA (46CN)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Llano, CA (46CN)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Crystal Airport 46CN	<b>Runway Surface Type:</b>	Dirt
<b>Airport Elevation:</b>	3420 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	25	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	2700 ft / 32 ft	<b>VFR Approach/Landing:</b>	Traffic pattern

## 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>	34.485279,-117.832778

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Dunks, Kristi
<b>Additional Participating Persons:</b>	Ladd Scott; Federal Aviation Administration; Van Nuys, CA
<b>Original Publish Date:</b>	October 3, 2006
<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=63847">https://data.nts.gov/Docket?ProjectID=63847</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](#).