



Aviation Investigation Final Report

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| Location: | LLANO, California | Accident Number: | LAX99LA285 |
| Date & Time: | August 23, 1999, 15:10 Local | Registration: | N8013K |
| Aircraft: | Burkhart Grob G 103 TWIN II | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 1 None |
| Flight Conducted Under: | Part 91: General aviation - Instructional | | |

Analysis

As the student pilot began his landing flare approximately 10 feet above the runway surface, he observed a dust devil move onto the runway directly in front of him. He applied down elevator control but the glider ascended about 50 feet above the ground into the dust devil. The glider stalled and landed hard on the runway, then ground looped. Ground witnesses observed a 'large and violent dust devil' touching down on the runway in the path of the landing glider just as it was in the landing flare.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's encounter with a sudden and violent dust devil, which caused the student pilot to lose control of the aircraft during the landing flare/touchdown.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. (C) WEATHER CONDITION - DUST DEVIL/WHIRLWIND
2. (C) WEATHER CONDITION - UPDRAFT
3. AIRCRAFT CONTROL - NOT POSSIBLE - PILOT IN COMMAND

Occurrence #2: HARD LANDING

Phase of Operation: DESCENT - UNCONTROLLED

Findings

4. STALL - ENCOUNTERED - PILOT IN COMMAND

5. (C) AIRCRAFT CONTROL - NOT POSSIBLE - PILOT IN COMMAND

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

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

6. GROUND LOOP/SWERVE - ENCOUNTERED - PILOT IN COMMAND

Factual Information

On August 23, 1999, at 1510 hours Pacific daylight time, a Burkhart Grob G 103 Twin II, N8013K, landed hard after encountering a dust devil while landing at the Crystal Gliderport in Llano, California. The glider, operated by Great Western Soaring School, Llano, was substantially damaged. The student glider pilot, who held a private pilot certificate with an airplane single engine land rating, was not injured. The local area instructional flight was conducted under the provisions of 14 CFR Part 91 and had originated from the Crystal Gliderport at 1349. Visual meteorological conditions prevailed and no flight plan was filed.

The pilot reported that he was preparing to land on runway 25, and that the tetrahedron indicated the wind was coming straight down the runway. As he was flaring approximately 10 feet above the runway surface, he observed a dust devil move onto the runway directly in front of him. He applied down elevator control but the glider ascended about 50 feet above the ground into the dust devil. The pilot stated that the glider stalled and landed hard on the runway numbers. The glider's right wing tip caught on the ground and the glider ground looped 180 degrees on the runway. During this process, the empennage broke off at the aft fuselage boom just forward of the fin. The tail wheel and nose wheel tires blew out.

Ground witnesses provided statements that were consistent in the observation that a "large and violent dust devil" touched down on the runway in the path of the landing glider just as it was in the landing flare.

Pilot Information

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| Certificate: | Private | Age: | 43, Male |
| Airplane Rating(s): | Single-engine land | Seat Occupied: | Front |
| Other Aircraft Rating(s): | None | Restraint Used: | |
| Instrument Rating(s): | None | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | None None | Last FAA Medical Exam: | |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | |
| Flight Time: | 136 hours (Total, all aircraft), 13 hours (Total, this make and model), 28 hours (Pilot In Command, all aircraft), 13 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft), 1 hour (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

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|--------------------------------------|------------------------------|---------------------------------------|----------|
| Aircraft Make: | Burkhart Grob | Registration: | N8013K |
| Model/Series: | G 103 TWIN II G 103 TWIN | Aircraft Category: | Glider |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 3702 |
| Landing Gear Type: | Tailwheel | Seats: | 2 |
| Date/Type of Last Inspection: | July 5, 1999 Annual | Certified Max Gross Wt.: | 1279 lbs |
| Time Since Last Inspection: | 84 Hrs | Engines: | Unknown |
| Airframe Total Time: | 884 Hrs | Engine Manufacturer: | |
| ELT: | Not installed | Engine Model/Series: | |
| Registered Owner: | DOUGLAS TURNER | Rated Power: | |
| Operator: | GREAT WESTERN SOARING SCHOOL | Operating Certificate(s) Held: | None |
| Operator Does Business As: | | Operator Designator Code: | |

Meteorological Information and Flight Plan

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|---|----------------------------------|---|-------------------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | PMD ,2543 ft msl | Distance from Accident Site: | 16 Nautical Miles |
| Observation Time: | 14:53 Local | Direction from Accident Site: | 300° |
| Lowest Cloud Condition: | Clear | Visibility | 10 miles |
| Lowest Ceiling: | Unknown | Visibility (RVR): | |
| Wind Speed/Gusts: | 21 knots / 25 knots | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | 250° | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | 29 inches Hg | Temperature/Dew Point: | 37°C / 10°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | (L01) | Type of Flight Plan Filed: | None |
| Destination: | | Type of Clearance: | None |
| Departure Time: | 13:49 Local | Type of Airspace: | Class E |

Airport Information

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|-----------------------------|------------------------|----------------------------------|---------------------------|
| Airport: | CRYSTAL GLIDERPORT L01 | Runway Surface Type: | Asphalt |
| Airport Elevation: | 3420 ft msl | Runway Surface Condition: | Dry |
| Runway Used: | 25 | IFR Approach: | None |
| Runway Length/Width: | 4500 ft / 250 ft | VFR Approach/Landing: | Full stop;Traffic pattern |

Wreckage and Impact Information

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|----------------------------|--------|-----------------------------|----------------------------|
| Crew Injuries: | 1 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 None | Latitude, Longitude: | 34.490081,-117.770576(est) |

Administrative Information

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| Investigator In Charge (IIC): | Mars, Noelani |
| Additional Participating Persons: | LADD SCOTT; VAN NUYS , CA |
| Original Publish Date: | August 14, 2001 |
| Last Revision Date: | |
| Investigation Class: | Class |
| Note: | |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=47233 |

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](#).