



# Aviation Investigation Final Report

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|                                |                                      |                         |             |
|--------------------------------|--------------------------------------|-------------------------|-------------|
| <b>Location:</b>               | Redlands, California                 | <b>Accident Number:</b> | LAX01LA131  |
| <b>Date &amp; Time:</b>        | March 31, 2001, 11:33 Local          | <b>Registration:</b>    | N8158K      |
| <b>Aircraft:</b>               | Stinson 108-1                        | <b>Aircraft Damage:</b> | Substantial |
| <b>Defining Event:</b>         |                                      | <b>Injuries:</b>        | 1 Serious   |
| <b>Flight Conducted Under:</b> | Part 91: General aviation - Personal |                         |             |

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## Analysis

Prior to taking off for the accident flight the fuel tanks had been refueled. While cruising about 13 minutes later, the pilot experienced a total loss of engine power. The pilot reported that no vibration was felt prior to the power loss. In an attempt at restoring engine power, the pilot applied the carburetor heat, changed the mixture setting, and repositioned the ignition key. None of his actions were successful, and he made a forced landing about 1.5 miles north-northeast of his destination. During the landing rollout in rough terrain, the airplane collided with a berm. The airplane was subsequently examined. During the teardown inspection of the engine and accessories, no evidence of any preimpact malfunction was noted. Both the carburetor finger screen and the gascolator fuel screen were observed clear. The magnetos were functional. The carburetor heat control worked. The reason for the non-mechanical total loss of engine power was not determined. The airplane was manufactured in 1946.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A total loss of engine power during cruise flight over rough terrain for undetermined non-mechanical reasons.

## Findings

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Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL  
Phase of Operation: CRUISE

### Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED - NOT IDENTIFIED - UNKNOWN  
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Occurrence #2: FORCED LANDING  
Phase of Operation: EMERGENCY DESCENT/LANDING

### Findings

2. REMEDIAL ACTION - ATTEMPTED - PILOT IN COMMAND  
3. REMEDIAL ACTION - NOT SUCCESSFUL - PILOT IN COMMAND  
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Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER  
Phase of Operation: LANDING - ROLL

### Findings

4. (F) TERRAIN CONDITION - BERM

## Factual Information

On March 31, 2001, about 1133 hours Pacific standard time, a Stinson 108-1, N8158K, experienced a total loss of engine power during cruise flight. The pilot made a forced landing about 1.5 miles north-northeast of the Redlands Municipal Airport, Redlands, California. During the landing rollout, the airplane collided with a dirt berm. The airplane was substantially damaged, and the private pilot was seriously injured. The personal flight was performed under 14 CFR Part 91. Visual meteorological conditions prevailed, and no flight plan was filed. The flight originated from Banning about 1120.

The pilot reported to the National Transportation Safety Board investigator that he had purchased the airplane a few weeks prior to the accident flight, and he was familiar with its operation. Prior to taking off on the accident flight, both of the wing fuel tanks had been filled. The pilot also stated that no vibration was felt prior to the loss of engine power. In an attempt at restoring power, he applied the carburetor heat, changed the mixture setting, and repositioned the ignition key. However, none of his actions were successful in restoring power to his airplane's engine. Thereafter, he made a forced landing on the underlying rough terrain. A deputy sheriff responded to the accident site. The sheriff reported to the Safety Board investigator that upon arrival he observed fuel streaming from the wing tanks of the impact-damaged airplane.

The airplane was manufactured in 1946. The airplane was subsequently recovered, inspected, and partially repaired by a Federal Aviation Administration certificated airframe and powerplant mechanic. The mechanic who performed the work verbally reported to the Safety Board investigator that the engine was completely torn down. No evidence of any preimpact malfunction was noted. The accessories were also examined, and no evidence of malfunction was noted. Both the carburetor finger screen and the gascolator fuel screen were observed clear. The magnetos were functional. The carburetor heat control worked. One of the propeller blades was noted bent in an aft direction indicating the crankshaft was not rotating during the impact sequence. The mechanic indicated that he could not ascertain the reason for the non-mechanical total loss of engine power.

## Pilot Information

|                                  |   |  |                  |
|----------------------------------|---|--|------------------|
| <b>Certificate:</b>              | Private   | <b>Age:</b>                              | 59, Male         |
| <b>Airplane Rating(s):</b>       | Single-engine land  | <b>Seat Occupied:</b>                    | Unknown          |
| <b>Other Aircraft Rating(s):</b> | None  | <b>Restraint Used:</b>                   |                  |
| <b>Instrument Rating(s):</b>     | None  | <b>Second Pilot Present:</b>             | No               |
| <b>Instructor Rating(s):</b>     | None  | <b>Toxicology Performed:</b>             | No               |
| <b>Medical Certification:</b>    | Class 3 With waivers/limitations  | <b>Last FAA Medical Exam:</b>            | January 25, 2001 |
| <b>Occupational Pilot:</b>       | UNK   | <b>Last Flight Review or Equivalent:</b> | March 19, 2001   |
| <b>Flight Time:</b>              | 436 hours (Total, all aircraft), 182 hours (Total, this make and model), 14 hours (Last 90 days, all aircraft), 14 hours (Last 30 days, all aircraft) |  |                  |

## Aircraft and Owner/Operator Information

|                                      |                              |                                       |                 |
|--------------------------------------|------------------------------|---------------------------------------|-----------------|
| <b>Aircraft Make:</b>                | Stinson                      | <b>Registration:</b>                  | N8158K          |
| <b>Model/Series:</b>                 | 108-1                        | <b>Aircraft Category:</b>             | Airplane        |
| <b>Year of Manufacture:</b>          |                              | <b>Amateur Built:</b>                 |                 |
| <b>Airworthiness Certificate:</b>    | Normal                       | <b>Serial Number:</b>                 | 108-1158        |
| <b>Landing Gear Type:</b>            | Tailwheel                    | <b>Seats:</b>                         | 4               |
| <b>Date/Type of Last Inspection:</b> | February 19, 2001 Unknown    | <b>Certified Max Gross Wt.:</b>       | 2100 lbs        |
| <b>Time Since Last Inspection:</b>   | 17 Hrs                       | <b>Engines:</b>                       | 1 Reciprocating |
| <b>Airframe Total Time:</b>          | 3508 Hrs at time of accident | <b>Engine Manufacturer:</b>           | Franklin        |
| <b>ELT:</b>                          | Installed, not activated     | <b>Engine Model/Series:</b>           | 6A4-150-B3      |
| <b>Registered Owner:</b>             | Chester M. Ugalde            | <b>Rated Power:</b>                   | 150 Horsepower  |
| <b>Operator:</b>                     | John Sultzbaugh              | <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> | BUO,2219 ft msl                  | <b>Distance from Accident Site:</b>         | 13 Nautical Miles |
| <b>Observation Time:</b>                | 11:50 Local                      | <b>Direction from Accident Site:</b>        | 120°              |
| <b>Lowest Cloud Condition:</b>          | Scattered / 25000 ft AGL         | <b>Visibility</b>                           | 25 miles          |
| <b>Lowest Ceiling:</b>                  | None                             | <b>Visibility (RVR):</b>                    |                   |
| <b>Wind Speed/Gusts:</b>                | 7 knots /                        | <b>Turbulence Type Forecast/Actual:</b>     | /                 |
| <b>Wind Direction:</b>                  | 360°                             | <b>Turbulence Severity Forecast/Actual:</b> | /                 |
| <b>Altimeter Setting:</b>               |                                  | <b>Temperature/Dew Point:</b>               | 26°C / 14°C       |
| <b>Precipitation and Obscuration:</b>   | No Obscuration; No Precipitation |   |                   |
| <b>Departure Point:</b>                 | BANNING, CA (BNG )               | <b>Type of Flight Plan Filed:</b>           | None              |
| <b>Destination:</b>                     | REDLANDS, CA (L12 )              | <b>Type of Clearance:</b>                   | None              |
| <b>Departure Time:</b>                  | 11:20 Local                      | <b>Type of Airspace:</b>                    | Class G           |

## Airport Information

|                             |                         |                                  |                |
|-----------------------------|-------------------------|----------------------------------|----------------|
| <b>Airport:</b>             | Riverside Municipal RAL | <b>Runway Surface Type:</b>      | Asphalt        |
| <b>Airport Elevation:</b>   | 818 ft msl              | <b>Runway Surface Condition:</b> | Dry            |
| <b>Runway Used:</b>         | 26                      | <b>IFR Approach:</b>             | None           |
| <b>Runway Length/Width:</b> | 4505 ft / 75 ft         | <b>VFR Approach/Landing:</b>     | Forced landing |

## Wreckage and Impact Information

|                            |           |                             |                       |
|----------------------------|-----------|-----------------------------|-----------------------|
| <b>Crew Injuries:</b>      | 1 Serious | <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 Serious | <b>Latitude, Longitude:</b> | 34.109443,-117.139999 |

## Administrative Information

|  |   |
|--|---|
| <b>Investigator In Charge (IIC):</b>     | Pollack, Wayne  |
| <b>Additional Participating Persons:</b> | Tony Constanza; WP-FSDO; Riverside, CA  |
| <b>Original Publish Date:</b>            | June 3, 2002  |
| <b>Last Revision Date:</b>               |   |
| <b>Investigation Class:</b>              | <a href="#">Class</a>   |
| <b>Note:</b>                             | The NTSB traveled to the scene of this accident.  |
| <b>Investigation Docket:</b>             | <a href="https://data.ntsb.gov/Docket?ProjectID=51997">https://data.ntsb.gov/Docket?ProjectID=51997</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](#).