



Aviation Investigation Final Report

Location:	SAN MARTIN, California	Accident Number:	LAX96LA126
Date & Time:	March 2, 1996, 13:11 Local	Registration:	N69SW
Aircraft:	WORTHINGTON	BD-5B	Aircraft Damage: Substantial
Defining Event:		Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

According to the pilot, the airplane was in the initial takeoff climb from runway 32, when the engine lost power. He attempted a landing on a freeway median, but the airplane collided with a sign and fence posts. During an investigation, the instrument panel toggle switch, marked 'ignition,' would not stay in the up (on) position. Removal of the switch revealed that its plastic back casing was broken with no impact damage or deformation noted in the surrounding structure. The mechanic, who removed the switch, stated that it was installed excessively tight on the panel. After being removed from the panel, the switch would stay in the up (on) position. The engine was then successfully started and operationally checked.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot/builder's improper installation (overtorque) of the ignition switch on the instrument panel, which caused an internal switch failure and subsequent malfunction of the ignition system.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) IGNITION SYSTEM,IGNITION SWITCH - FAILURE

2. (C) MAINTENANCE, INSTALLATION - IMPROPER - OWNER/BUILDER
3. (C) IGNITION SYSTEM - DISABLED

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: EMERGENCY LANDING

Findings

4. OBJECT - SIGN
5. OBJECT - FENCE

Factual Information

On March 2, 1996, at 1311 hours Pacific standard time, a homebuilt experimental Worthington BD-5B airplane, N69SW, collided with ground obstructions during a forced landing on a freeway median near San Martin, California. The forced landing was precipitated by a total loss of power during the takeoff initial climb from the South County Airport. The aircraft was owned and operated by the pilot and was beginning a local area personal flight. Visual meteorological conditions prevailed at the time and no flight plan was filed. The aircraft incurred substantial damage and the certificated private pilot, the sole occupant, sustained serious injuries.

According to the pilot, the Honda engine-powered airplane was in the takeoff initial climb from runway 32 when the engine failed. The pilot was attempting a landing on a freeway median and collided with a sign and fence posts.

FAA inspectors from the San Jose, California, Flight Standards District Office examined the aircraft and supervised a test engine run. The reporting inspector noted that the instrument panel toggle switch marked "ignition" would not stay in the up (on) position. An A & P mechanic then removed the switch from the panel. The inspector stated that the plastic back casing of the switch was broken with no impact damage or deformation found in the surrounding structure. The mechanic who removed the switch stated that it was installed "excessively tight into the panel." After removal from the panel, the switch would stay in the up (on) position. The engine was then successfully started and run, with throttle and mixture control authority demonstrated.

Pilot Information

Certificate:	Private	Age:	32,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Center
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	November 1, 1994
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	400 hours (Total, all aircraft), 38 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	WORTHINGTON	Registration:	N69SW
Model/Series:	BD-5B BD-5B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	001
Landing Gear Type:	Retractable - Tricycle	Seats:	1
Date/Type of Last Inspection:	Annual	Certified Max Gross Wt.:	1100 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	38 Hrs	Engine Manufacturer:	Honda
ELT:	Not installed	Engine Model/Series:	
Registered Owner:	SEAN T. WORTHINGTON	Rated Power:	
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	SJC ,58 ft msl	Distance from Accident Site:	25 Nautical Miles
Observation Time:	12:48 Local	Direction from Accident Site:	310°
Lowest Cloud Condition:	Scattered / 15000 ft AGL	Visibility	15 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/ None	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	21°C / 8°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(Q99)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	13:10 Local	Type of Airspace:	Class E

Airport Information

Airport:	SOUTH COUNTY AIRPORT Q99	Runway Surface Type:	Asphalt
Airport Elevation:	281 ft msl	Runway Surface Condition:	Dry
Runway Used:	32	IFR Approach:	None
Runway Length/Width:	3100 ft / 75 ft	VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	37.099609,-121.600082(est)

Administrative Information

Investigator In Charge (IIC): Rich, Jeff

Additional Participating Persons: ANTHONY COSTANZA; SAN JOSE , CA
BRENT A MORROW; SAN JOSE , CA

Original Publish Date: September 19, 1996

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=29383>

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](#).