



Aviation Investigation Final Report

Location:	NUEVO, California	Accident Number:	LAX92FA064
Date & Time:	December 6, 1991, 15:30 Local	Registration:	N614LS
Aircraft:	GLASAIR SH-2R	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Other work use		

Analysis

THE AIRPLANE COLLIDED WITH RUGGED TERRAIN AFTER A LOSS OF ENGINE POWER. IT STRUCK THE NORTH FACE OF 20 DEG SLOPE OF AN EAST-WEST RIDGE, JUST BELOW THE CREST. THE AIRPLANE THEN SLID ABOUT 20 FT DOWN THE SLOPE WHERE A POST-IMPACT FIRE DESTROYED THE PLANE. AN EXAM OF THE ENGINE SPARK PLUGS REVEALED THE #1 & #3 CYLINDER SPARK PLUG GAPS WERE BRIDGED WITH CINDER-LIKE DEPOSITS WITH METALLIC GLOBULES STARTING TO FILL THE FIRING END CAVITY & WORN CENTER ELECTRODES. ACCORDING TO THE SPARK PLUG MANUFACTURER, SEVERELY FOULED PLUGS WILL OPERATE COLDER CAUSING MISFIRES, AND WILL ALSO MISFIRE AT HIGHER POWER BECAUSE OF THE CONDUCTIVE NATURE OF THE DEPOSITS AT ELEVATED TEMPS. BRIDGED GAPS WILL SHORT OUT THE SPARK PLUG. SUCH A MALFUNCTIONED PLUG WILL MISFIRE AT ALL POWER SETTINGS IN A MANNER SIMILAR TO A OIL FOULED PLUG. BRIDGED GAPS BRIDGED BY BEADED LEAD GLOBULE WILL NOT CLEAR UP BY ENGINE OPERATION & CAN BE CORRECTED ONLY BY REPLACING THE MALFUNCTIONING SPARK PLUG WITH A SERVICEABLE UNIT. THE ACDNT TIME WAS ESTD BE AT 1530 PST.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE FAILURE OF THE PILOT TO PERFORM PREVENTATIVE MAINTENANCE ON THE AIRPLANE'S POWERPLANT WHICH RESULTED IN A LOSS OF PERFORMANCE DURING AN UNKNOWN PHASE OF OPERATION. CONTRIBUTING TO THE ACCIDENT WAS FOULED SPARK PLUGS AND THE PARTIAL LOSS OF AIRCRAFT PERFORMANCE.

Findings

Occurrence #1: LOSS OF ENGINE POWER

Phase of Operation: UNKNOWN

Findings

1. SINGLE ENGINE AIRCRAFT
 2. (F) AIRCRAFT PERFORMANCE - LOSS, PARTIAL
 3. (F) IGNITION SYSTEM, SPARK PLUG - FOULED
 4. (C) MAINTENANCE - NOT PERFORMED - PILOT IN COMMAND
-

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: UNKNOWN

Findings

5. TERRAIN CONDITION - ROUGH/UNEVEN

Factual Information

Pilot Information

Certificate:	Commercial	Age:	62, Male
Airplane Rating(s):	Single-engine land; Single-engine sea	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	September 11, 1990
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	2030 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	GLASAIR	Registration:	N614LS
Model/Series:	SH-2R SH-2R	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	763
Landing Gear Type:	Retractable - Tricycle	Seats:	2
Date/Type of Last Inspection:	April 12, 1991 Annual	Certified Max Gross Wt.:	1800 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	O-360-B1E
Registered Owner:	SABER, LLOYD E.	Rated Power:	180 Horsepower
Operator:	SABER, LLOYD E.	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:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Unknown	Visibility	5 miles
Lowest Ceiling:	Unknown	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	REDLANDS , CA (L12)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	00:00 Local	Type of Airspace:	

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	Wilcox, Thomas
Additional Participating Persons:	JARED WEAVER; RIVERSIDE , CA DAN ALLISON; RIVERSIDE , CA CHARLES LITTLE; CHINO , CA
Original Publish Date:	April 23, 1993
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=27394

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](#).