



Aviation Investigation Final Report

Location:	RICHVALE, California	Accident Number:	LAX91LA137
Date & Time:	March 18, 1991, 16:30 Local	Registration:	N9894
Aircraft:	SIKORSKY H-19/S55	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

THE PILOT STATED THAT HE WAS DISPENSING HIS 20TH LOAD OF INSECT SPRAY OVER ALMOND TREES. DURING A SWATH RUN THE ENGINE LOST POWER AND THE HELICOPTER IMPACTED THE TREES AND THEN THE GROUND. THE ENGINE'S NUMBER 4 CYLINDER INTAKE VALVE KEEPER FAILED.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE FAILURE OF THE ENGINE'S NUMBER 4 CYLINDER INTAKE VALVE KEEPER. TREES UNDER THE HELICOPTER AT THE TIME OF THE LOSS OF ENGINE POWER WERE FACTORS IN THE ACCIDENT.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: MANEUVERING - AERIAL APPLICATION

Findings
1. (C) ENGINE ASSEMBLY, VALVE, INTAKE - OPEN

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: DESCENT - EMERGENCY

Findings

2. (F) OBJECT - TREE(S)

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Factual Information

Pilot Information

Certificate:	Commercial	Age:	41, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	December 12, 1990
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	1756 hours (Total, all aircraft), 1276 hours (Total, this make and model), 1445 hours (Pilot In Command, all aircraft), 141 hours (Last 90 days, all aircraft), 118 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	SIKORSKY	Registration:	N9894
Model/Series:	H-19/S55 H-19/S55	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:		Serial Number:	55998
Landing Gear Type:		Seats:	1
Date/Type of Last Inspection:	January 2, 2000 Unknown	Certified Max Gross Wt.:	7500 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	WRIGHT
ELT:	Not installed	Engine Model/Series:	R-1300
Registered Owner:		Rated Power:	800 Horsepower
Operator:	AVAG, INC.	Operating Certificate(s) Held:	
Operator Does Business As:		Operator Designator Code:	NIEG

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	CNO ,238 ft msl	Distance from Accident Site:	19 Nautical Miles
Observation Time:	15:46 Local	Direction from Accident Site:	327°
Lowest Cloud Condition:	Scattered / 3000 ft AGL	Visibility	40 miles
Lowest Ceiling:	Overcast / 20000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	-18°C / -18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	16:25 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:	Forced landing

Wreckage and Impact Information

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:	39.479099,-121.839874(est)

Administrative Information

Investigator In Charge (IIC):	Wall, James
Additional Participating Persons:	DEL PATNO; SACRAMENTO , CA
Original Publish Date:	March 31, 1993
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=27142

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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](#).