



# Aviation Investigation Final Report

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<b>Location:</b>	SALINAS, California	<b>Accident Number:</b>	LAX95LA005
<b>Date &amp; Time:</b>	October 13, 1994, 05:40 Local	<b>Registration:</b>	N145HA
<b>Aircraft:</b>	HILLER UH-12E	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Serious
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

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## Analysis

ACCORDING TO THE OPERATOR, THIS WAS THE FIRST FLIGHT OF THE DAY FOR THE HELICOPTER. A GROUND LOADER CREWMAN WAS WATCHING THE APPLICATION RUN AND REPORTED THAT HE SAW WHITE SPARKS AND A FIRE IN THE AREA OF THE ENGINE, THEN THE HELICOPTER BEGAN TO SPIN AND FELL TO THE GROUND. A FIRE THEN ENVELOPED THE AIRCRAFT. AN FAA INSPECTOR RESPONDED TO THE ACCIDENT SITE AND EXAMINED THE HELICOPTER. HE REPORTED THAT DRIVE SYSTEM CONTINUITY WAS ESTABLISHED THROUGHOUT THE AIRCRAFT, AND THAT ALL ROTATING COMPONENTS OF THE MAIN AND TAIL ROTOR SYSTEMS WERE ACCOUNTED FOR IN THE WRECKAGE. THE ENGINE WAS EXAMINED IN DETAIL. THE ACCESSORY SECTION, ALL ACCESSORIES, THE CARBURETORS, MAGNETOS, PUMPS, AND ENGINE COMPARTMENT FUEL AND OIL LINES WERE COMPLETELY MELTED. THE NUMBER TWO CYLINDER HEAD SUSTAINED EXTREME HEAT DISTRESS WITH PARTIAL MELTING OF THE HEAD NOTED. THE VALVES, VALVE SPRINGS, ROCKER ARMS, AND VALVE SEATS FOR THE NUMBER TWO CYLINDER HEAD WERE PRESENT IN THE REMAINS OF THE HEAD. NO EVIDENCE WAS FOUND OF AN INTERNAL CATASTROPHIC FAILURE.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: an in-flight engine compartment fire for undetermined reasons.

## Findings

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Occurrence #1: FIRE

Phase of Operation: MANEUVERING - AERIAL APPLICATION

Findings

1. (C) ENGINE COMPARTMENT - FIRE
2. (C) REASON FOR OCCURRENCE UNDETERMINED

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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

## Factual Information

On October 13, 1994, at 0540 Pacific daylight time, a Hiller UH- 12E helicopter, N145HA, collided with the ground following a loss of control during an aerial application operation at Salinas, California. The helicopter was owned and operated by Helicair AG, Inc., of Salinas, California, and was applying chemicals under 14 CFR Part 137 of the Federal Aviation Regulations. Visual meteorological conditions prevailed at the time and no flight plan was filed. The helicopter was destroyed in the collision sequence and postcrash fire. The certificated commercial pilot, the sole occupant, sustained serious injuries. The flight originated at the Salinas airport on the morning of the accident at 0530 as a local aerial application flight.

According to the operator, this was the first flight of the day for the helicopter. A ground loader crewman was watching the application run and reported that he saw white sparks and a fire in the area of the engine, then the helicopter began to spin and fell to the ground. A fire then enveloped the aircraft.

An inspector from the Federal Aviation Administration (FAA) responded to the accident site and examined the helicopter. He reported that drive system continuity was established throughout the aircraft, and that all rotating components of the main and tail rotor systems were accounted for in the wreckage. He stated that he observed no obvious evidence of broken or severed oil or fuel lines in the engine compartment area.

Under the direction of the National Transportation Safety Board, a technical representative from Textron Lycoming Engines examined the powerplant. He reported that the accessory section, all accessories, the carburetors, magnetos, pumps, and engine compartment fuel and oil lines were completely melted. The number 2 cylinder head sustained extreme heat distress with partial melting of the head noted. The valves, valve springs, rocker arms, and valve seats for the number 2 cylinder head were

present in the remains of the head. The representative noted that he found no evidence of an internal catastrophic failure.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	35, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Center
<b>Other Aircraft Rating(s):</b>	Helicopter	<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 2 Valid Medical—no waivers/lim.	<b>Last FAA Medical Exam:</b>	October 21, 1993
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	8779 hours (Total, all aircraft), 3681 hours (Total, this make and model), 8402 hours (Pilot In Command, all aircraft), 167 hours (Last 90 days, all aircraft), 91 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	HILLER	<b>Registration:</b>	N145HA
<b>Model/Series:</b>	UH-12E UH-12E	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Restricted (Special)	<b>Serial Number:</b>	HA3045
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	September 27, 1994 100 hour	<b>Certified Max Gross Wt.:</b>	3100 lbs
<b>Time Since Last Inspection:</b>	28 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	6668 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	VO-540-C2A
<b>Registered Owner:</b>	HELICAIR AG, INC.	<b>Rated Power:</b>	340 Horsepower
<b>Operator:</b>	HELICAIR AG, INC.	<b>Operating Certificate(s) Held:</b>	
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	LSMG

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Dawn
<b>Observation Facility, Elevation:</b>	SNS ,84 ft msl	<b>Distance from Accident Site:</b>	1 Nautical Miles
<b>Observation Time:</b>	05:48 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	15 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	6 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	360°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	10°C / 9°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	(SNS )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	(SNS )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	05:30 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	In-flight
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	On-ground
<b>Total Injuries:</b>	1 Serious	<b>Latitude, Longitude:</b>	

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Rich, Jeff
<b>Additional Participating Persons:</b>	LESTER COLLINS; SAN JOSE , CA CHARLES LITTLE; CHINO , CA
<b>Original Publish Date:</b>	April 5, 1995
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=28959">https://data.ntsb.gov/Docket?ProjectID=28959</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](#).