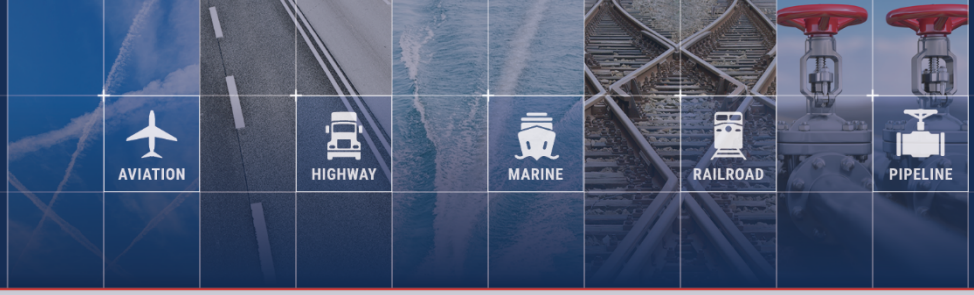

Aviation Investigation Final Report

Location:	MARIPOSA, California	**Accident Number:**	LAX92LA237
Date & Time:	June 7, 1992, 07:19 Local	**Registration:**	N5007L
Aircraft:	BELL 222	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General aviation - Ferry		

Analysis

THE PILOT STARTED THE HELICOPTER'S ENGINES ON AN INTENDED FLIGHT PRIOR TO THE ACCIDENT FLIGHT. A FIREMAN SAW SPARKS COMING FROM THE RIGHT ENGINE AND NOTIFIED THE PILOT. IN HIS WRITTEN STATEMENT THE PILOT SAID HE SHUT THE ENGINES DOWN AND CANCELLED THE FLIGHT. A MEDICAL CREW MEMBER ABOARD THE HELICOPTER SAID HE SAW SPARKS COMING FROM THE ENGINE EXHAUST AND NOTICED THE ENGINE TEMPERATURE 'READING WELL ABOVE NORMAL.' HE ALSO SAID HE SAW THE ENGINE'S CHIP DETECTOR LIGHT ILLUMINATE. HE SAID THE PILOT 'PLAYED WITH THE THROTTLES A LITTLE BIT TO TRY TO GET THE TEMPERATURE UNDER CONTROL.' THE PILOT SHUT THE ENGINES DOWN AND THE NON-FLYING CREW MEMBERS RETURNED TO THEIR HOME BASE VIA GROUND TRANSPORTATION. THE NEXT MORNING THE PILOT ATTEMPTED TO FERRY THE AIRCRAFT WITH ONE ENGINE. THE PILOT STARTED THE RIGHT ENGINE AND PERFORMED A TAKEOFF WITH BOTH ENGINES RUNNING. AFTER TAKEOFF, THE RIGHT ENGINE'S TEMPERATURE ROSE AND THE PILOT SHUT THE ENGINE DOWN. THE HELICOPTER COULD NOT FLY ADEQUATELY WITH THE POWER FROM THE LEFT ENGINE AND ALTITUDE COULD NOT BE MAINTAINED. THE HELICOPTER COLLIDED WITH A TREE AND THEN THE GROUND. EXAMINATION OF THE RIGHT ENGINE REVEALED EXTENSIVE HEAT DAMAGE TO THE GAS PRODUCER TURBINE WHEEL WITH 20-30% DETERIORATION OF ALL BLADES.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT DECISION TO TAKEOFF AND FLY WITH A KNOWN DEFICIENCY IN ONE OF THE HELICOPTER'S ENGINES.

Findings

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

Findings
1. 1 ENGINE
2. TURBINE ASSEMBLY,TURBINE WHEEL - OVERTEMPERATURE
3. TURBINE ASSEMBLY,TURBINE WHEEL - ERODED
4. (C) OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT - INTENTIONAL - PILOT IN COMMAND

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

Findings
5. AIRCRAFT PERFORMANCE,ENGINE OUT CAPABILITY - EXCEEDED

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

Findings
6. OBJECT - TREE(S)

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
7. TERRAIN CONDITION - GROUND

Factual Information

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	45,Male
Airplane Rating(s):	Single-engine land; Multi-engine sea	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	Helicopter	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	October 9, 1991
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	15000 hours (Total, all aircraft), 400 hours (Total, this make and model), 15000 hours (Pilot In Command, all aircraft), 158 hours (Last 90 days, all aircraft), 28 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	**Registration:**	N5007L
Model/Series:	222 222	**Aircraft Category:**	Helicopter
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	47008
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	May 25, 1992 Annual	**Certified Max Gross Wt.:**	7579 lbs
Time Since Last Inspection:	21 Hrs	**Engines:**	2 Turbo shaft
Airframe Total Time:	6453 Hrs	**Engine Manufacturer:**	LYCOMING
ELT:	Not installed	**Engine Model/Series:**	LTS 101-650C3
Registered Owner:	ROGERS HELICOPTERS, INC.	**Rated Power:**	615 Horsepower
Operator:	ROGERS HELICOPTERS, INC.	**Operating Certificate(s) Held:**	On-demand air taxi (135)
Operator Does Business As:		**Operator Designator Code:**	CUCA

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:	Clear	**Visibility**	5 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	13°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(NONE)	**Type of Flight Plan Filed:**	None
Destination:	FRESNO , CA (FAT)	**Type of Clearance:**	None
Departure Time:	07:15 Local	**Type of Airspace:**	Class G

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 Minor	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	37.490547,-120.000579(est)

Administrative Information

Investigator In Charge (IIC):	Childress, Richard
Additional Participating Persons:	JIM MURRAY; FRESNO , CA
Original Publish Date:	September 14, 1993
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=27641