



# Aviation Investigation Final Report

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<b>Location:</b>	BIG BEAR CITY, California	<b>Accident Number:</b>	LAX93FA141
<b>Date &amp; Time:</b>	March 7, 1993, 15:02 Local	<b>Registration:</b>	N2221G
<b>Aircraft:</b>	PIPER PA-32RT-300	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	2 Fatal, 4 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

DURING TAKEOFF, THE AIRPLANE WAS HEARD TO REDUCE POWER AT MID-FIELD, THEN FULL POWER WAS APPLIED. IT CLIMBED TO ABOUT 6 FT, SETTLED BACK ONTO THE RWY, CLIMBED AGAIN TO 6 FT, SETTLED AGAIN, THEN CONTINUED ITS TAKEOFF ROLL USING MOST OF THE 5,850-FT RWY UNTIL REACHING THE ARPT PERIMETER FENCE. IT CLIMBED TO ABOUT 20 FT AGL, THEN SETTLED INTO A HOUSE. THE DENSITY ALTITUDE WAS 7,800 FT. ENGINE EXAMINATION REVEALED THAT THE MAGNETO-TO-ENGINE TIMING WAS OFF, THE MAGNETO INTERNAL TIMING WAS OFF ON BOTH SETS OF POINTS, AND BOTH POINT GAPS WERE OFF. IN ADDITION, 5 OF THE 12 SPARK PLUGS WERE FOUND TO HAVE WORN ELECTRODES. ONE SPARK PLUG WAS NOT APPROVED FOR THE ENGINE. A 100-HR INSPECTION HAD BEEN COMPLETED ON 2/2/93, ABOUT 17 FLIGHT-HOURS BEFORE THE ACCIDENT.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A PARTIAL LOSS OF TAKEOFF POWER DUE TO INADEQUATE MAINTENANCE AND INSPECTION WHICH FAILED TO DETECT MAGNETO AND SPARK PLUG DEFICIENCIES. IN ADDITION, THE PILOT FAILED TO ABORT THE TAKEOFF AFTER TWO UNSUCCESSFUL ATTEMPTS TO GET AIRBORNE. FACTORS WHICH CONTRIBUTED TO THE ACCIDENT WERE: THE HIGH DENSITY ALTITUDE AND THE PILOT'S LACK OF PILOTING EXPERIENCE.

## Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF

Phase of Operation: TAKEOFF - ROLL/RUN

### Findings

1. (C) IGNITION SYSTEM,MAGNETO - INCORRECT
2. (C) IGNITION SYSTEM,IGNITION POINTS - INCORRECT
3. (C) IGNITION SYSTEM,SPARK PLUG - WORN
4. (C) IGNITION SYSTEM,SPARK PLUG - INCORRECT
5. (C) MAINTENANCE,100-HOUR INSPECTION - INADEQUATE - COMPANY MAINTENANCE PERSONNEL

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Occurrence #2: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

6. (F) WEATHER CONDITION - HIGH DENSITY ALTITUDE
7. (C) ABORTED TAKEOFF - NOT PERFORMED - PILOT IN COMMAND
8. (F) LACK OF TOTAL EXPERIENCE - PILOT IN COMMAND
9. OBJECT - RESIDENCE

## Factual Information

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	29, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Unknown
<b>Other Aircraft Rating(s):</b>	None	<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>	Yes
<b>Medical Certification:</b>	Class 3 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	October 4, 1991
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	85 hours (Total, all aircraft), 7 hours (Total, this make and model), 50 hours (Pilot In Command, all aircraft), 12 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	PIPER	<b>Registration:</b>	N2221G
<b>Model/Series:</b>	PA-32RT-300 PA-32RT-30	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	32R-7985049
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	February 2, 1993 100 hour	<b>Certified Max Gross Wt.:</b>	3600 lbs
<b>Time Since Last Inspection:</b>	17 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3083 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	IO-540-K1G5D
<b>Registered Owner:</b>	EFM VENTURE GROUP, INC.	<b>Rated Power:</b>	300 Horsepower
<b>Operator:</b>	CALIFORNIA WINGS	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	L35 ,6748 ft msl	<b>Distance from Accident Site:</b>	1 Nautical Miles
<b>Observation Time:</b>	15:00 Local	<b>Direction from Accident Site:</b>	75°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	5 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	70°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	14°C / -2°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	(L35 )	<b>Type of Flight Plan Filed:</b>	VFR
<b>Destination:</b>	SAN DIEGO , CA (MYF )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	15:00 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	BIG BEAR CITY L35	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	6748 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	8	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5850 ft / 75 ft	<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>	1 Fatal, 4 Serious	<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Fatal, 4 Serious	<b>Latitude, Longitude:</b>	34.259826,-116.840103(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Wilcox, Thomas
<b>Additional Participating Persons:</b>	DAN ALLISON; RIVERSIDE , CA CHARLES LITTLE; WILLIAMSPORT , PA
<b>Original Publish Date:</b>	August 18, 1994
<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=27826">https://data.ntsb.gov/Docket?ProjectID=27826</a>

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