



Aviation Investigation Final Report

Location:	SAN MATEO, California	Accident Number:	LAX88LA017
Date & Time:	October 16, 1987, 16:03 Local	Registration:	N9097P
Aircraft:	PIPER PA-24-260	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

WHILE OVER THE OCEAN, THE PILOT NOTED THAT THE ENGINE DID NOT SOUND RIGHT AND THAT THE OIL PRESSURE INDICATION HAD DROPPED TO ZERO. SHORTLY AFTERWARD, THE ENGINE BEGAN TO VIBRATE VIOLENTLY AND SEIZED. THE PILOT PLANNED FOR A FORCED LANDING TO AN OPEN FIELD BECAUSE OF TRAFFIC ON HIGHWAYS. THE PILOT ELECTED TO MAKE AN INTENTIONAL WHEELS-UP LANDING ON UPSLOPING TERRAIN, RESULTING IN A HARD LANDING. EXAMINATION OF THE ENGINE DISCLOSED ABOUT 2 HANDFULS OF METAL FLAKES IN THE OIL SUMP WITH THE OIL PUMP PICKUP SCREEN CLOGGED BY METAL FLAKES. THERE WERE NO METAL FLAKES IN THE ENGINE OIL FILTER. THE NO 6 CONNECTING ROD HAD FAILED AND PENETRATED THE ENGINE CASE. THE EVIDENCE INDICATED THAT THE ENGINE FAILURE WAS INITIATED BY THE FAILURE OF A CONNECTING ROD BEARING. THE ENGINE HAD BEEN OPERATED 23 HOURS SINCE THE MOST RECENT ANNUAL INSPECTION.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) ENGINE ASSEMBLY,BEARING - FAILURE,TOTAL
2. (C) ENGINE ASSEMBLY,CRANKCASE - CONTAMINATION
3. (C) LUBRICATING SYSTEM,OIL FILTER/SCREEN - BLOCKED(TOTAL)
4. (C) FLUID,OIL - STARVATION
5. (C) ENGINE ASSEMBLY,CONNECTING ROD - OVERTEMPERATURE
6. ENGINE ASSEMBLY,CONNECTING ROD - FAILURE,TOTAL

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: HARD LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

7. (F) TERRAIN CONDITION - NONE SUITABLE
8. (F) TERRAIN CONDITION - UPHILL
9. WHEELS UP LANDING - INTENTIONAL - PILOT IN COMMAND

Factual Information

Pilot Information

Certificate:	Private	Age:	49, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	February 24, 1986
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	4039 hours (Total, all aircraft), 2070 hours (Total, this make and model), 4000 hours (Pilot In Command, all aircraft), 12 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N9097P
Model/Series:	PA-24-260 PA-24-260	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	244573
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	December 26, 1986 Annual	Certified Max Gross Wt.:	3200 lbs
Time Since Last Inspection:	23 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2464 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	IO-540-D4A5
Registered Owner:	GRAHAM, GEORGE R	Rated Power:	260 Horsepower
Operator:	GRAHAM, GEORGE R.	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:	PAO ,5 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	15:45 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered	Visibility	5 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	340°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	19°C / 13°C
Precipitation and Obscuration:	N/A - None - Haze		
Departure Point:	PALO ALTO , CA (PAO)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	VFR
Departure Time:	15:45 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;Straight-in

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 1 None	Latitude, Longitude:	37.449268,-122.100334(est)

Administrative Information

Investigator In Charge (IIC):	Eckrote, Debra
Additional Participating Persons:	HAL CACCAMISE; SAN FRANCISCO , CA
Original Publish Date:	April 24, 1989
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=25886

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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](#).