



Aviation Investigation Final Report

Location:	HELENDALE, California	Accident Number:	LAX85FA122
Date & Time:	January 24, 1985, 15:45 Local	Registration:	N3983D
Aircraft:	PIPER PA-24-400	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

SHORTLY AFTER INITIATING AN ENROUTE LETDOWN, THE ACFT EXPERIENCED A CATASTROPHIC ENGINE FAILURE AT ABOUT 4,500 FT MSL. PLT SELECTED A ROAD FOR AN ATTEMPTED EMERGENCY LANDING, BUT A CAR TURNED ONTO THE ROAD IN FRONT OF HIM AND FORCED A DIVERSION TO A NEARBY FIELD. THE ACFT ENCOUNTERED BERMS, RUTS AND CLUMPS OF BUSHES AFTER TOUCHDOWN. EXAMINATION OF THE ENGINE REVEALED THAT THE NUMBER 6 CYLINDER CONNECTING ROD HAD FAILED NEAR THE CRANKSHAFT END WITH HIGH CYCLE FATIGUE EVIDENT OVER ABOUT 60% OF THE MATERIAL THICKNESS. EXAMINATION OF THE ACFT MAINTENANCE RECORDS DISCLOSED THAT SINCE MANUFACTURE IN 1964, THE ACFT HAD ACCRUED A TOTAL OF 1,299 HRS, WITH ONLY 109 HRS IN OPERATION SINCE 1976. LYCOMING PUBLICATIONS INDICATED THAT THE ROD HAD BEEN SUPERCEDED IN PRODUCTION SEVERAL TIMES, WITH THIS PARTICULAR PART NUMBER NOT ALLOWED FOR REUSE AT OVERHAUL. THE MANUFACTURERS RECOMMENDED OVERHAUL PERIOD IS 1,800 HRS OR 10 YEARS TIME IN SERVICE, WHICHEVER COMES FIRST.

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: DESCENT - NORMAL

Findings

1. (C) ENGINE ASSEMBLY,CONNECTING ROD - FAILURE,TOTAL
2. (F) MAINTENANCE - POOR - OTHER PERSON
3. (F) MAINTENANCE,ANNUAL INSPECTION - POOR - OTHER MAINTENANCE PERSONNEL
4. (C) MAINTENANCE,REPLACEMENT - NOT PERFORMED - OTHER PERSON

Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING - ROLL

Findings

5. (F) TERRAIN CONDITION - NONE SUITABLE

Factual Information

Pilot Information

Certificate:	Commercial	Age:	61, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	June 7, 1983
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	9997 hours (Total, all aircraft), 9 hours (Total, this make and model), 8331 hours (Pilot In Command, all aircraft), 8 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

Aircraft Make:	PIPER	Registration:	N3983D
Model/Series:	PA-24-400 PA-24-400	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	26-111
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	December 6, 1984 Annual	Certified Max Gross Wt.:	3600 lbs
Time Since Last Inspection:	11 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1299 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	IO-720-A1A
Registered Owner:	NORMAN D. NORRIS	Rated Power:	400 Horsepower
Operator:		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:	VCV ,2875 ft msl	Distance from Accident Site:	14 Nautical Miles
Observation Time:	15:55 Local	Direction from Accident Site:	183°
Lowest Cloud Condition:	Scattered / 4500 ft AGL	Visibility	60 miles
Lowest Ceiling:	Broken / 8000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	360°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	12°C / -6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	BOULDER CITY , NV (BLD)	Type of Flight Plan Filed:	None
Destination:	LANCASTER , CA (WJF)	Type of Clearance:	None
Departure Time:	14:45 Local	Type of Airspace:	Class E

Airport Information

Airport:		Runway Surface Type:	Dirt
Airport Elevation:	0 ft msl	Runway Surface Condition:	Dry;Rough
Runway Used:	0	IFR Approach:	None
Runway Length/Width:	0 ft / 0 ft	VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor	Latitude, Longitude:	34.740768,-117.350234(est)

Administrative Information

Investigator In Charge (IIC):	Rich, Jeff
Additional Participating Persons:	TED LACARA; RIVERSIDE , CA
Original Publish Date:	
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=24461

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](#).